You don't get to choose the day the enemy decides to show up.

An image from the robbery at US Bank on Carr Street in Lakewood on Sept. 30 (credit: FBI)

http://denver.cbslocal.com/2015/11/19/scream-mask-robbers-stole-50000-from-1stbank-to-begin-their-crime-spree/

Are You Prepared To Face The Enemy?

Are Your Employees Prepared?

WANTED

FBI Top Ten Most Wanted…

"An enemy, Ender Wiggin," whispered the old man. "I am your enemy, the first one you've ever had who was smarter than you. There is no teacher but the enemy. ...” — Orson Scott Card, Ender's Game

Train Like You Fight

Casey Smith

@subTee

Physical Security

Robbery Training, Mock Robberies, Procedures, Alarms, Hold Up Alarms, Cameras, Camera Verification, Vaults, Rapid Response

How We Process Threat Intel

What would that look like if it happened to us?

Are we prepared?

Be the Threat You Hope to Never See

When We Think Assume Compromise…

- It means YOU ARE GOING TO GET ROBBED.
- Prepare for it…

Hunt The Hunter

Quarterly Exercises

Executive Buy In

Short Specific Missions

We Attack to Get Caught

-Spear Phishing

-Weaponized Documents

-Credential Theft

-Command And Control

1 - Spear Phishing

- Some PowerShell @150 LOC
- Cloud Linux Server - $.58 cents per hour…

- This is **NOT** as a test of Users.
- Rather our Security Team’s Response.

thanks, I am blocking isaihost.com

7:56 AM

- 1 of 1 items.

)7:00)	Website (count)	Display Details...	Disposition	B
07:56:42	http://upsdeliveryservice.isaihost.com		Block - URL Cat	

Distributed Hunting

Were we detected?
How?
How quickly?
Were we contained?
How did this get through our filters?
What was the impact?

What are the common attributes?

2 - Weaponized Documents

New File On Network

New File Suspicious Parent Process

New File Suspicious Path. Example Path Contains “.zip”

Suspicious Executions

- whoami
- ipconfig
- net use
- quser
- sethc


red canary
1
Cb
Process spawned by winword.exe
c:\windows\syswow64\cmd.exe ad7b9c14083b 2fba5948342b98
...
Cb
Process spawned by cmd.exe
c:\windows\syswow64\whoami.exe 0ebf71e3 65d9683afa999c473
...

Instrumentation - Visibility

- Endpoint Executions
- New Unapproved Files
- Network Connections

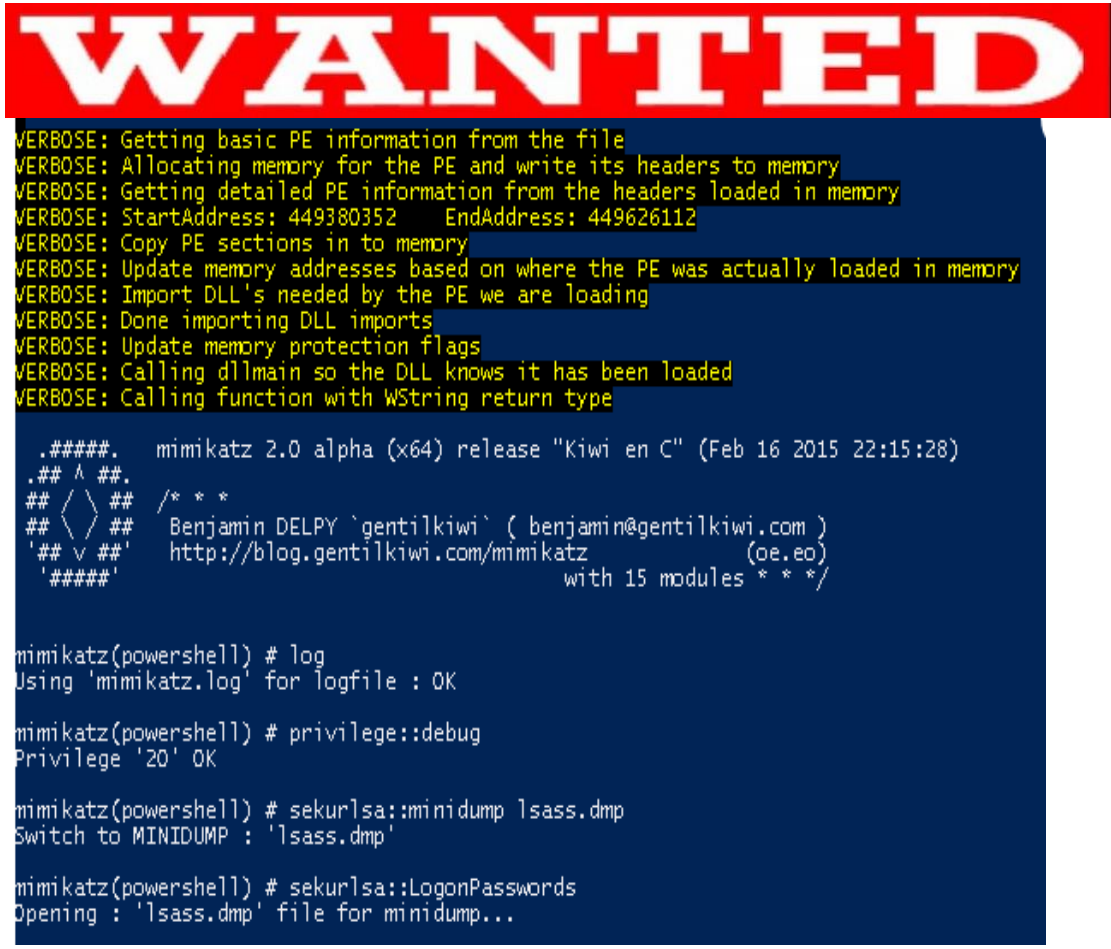
3 - Credential Theft

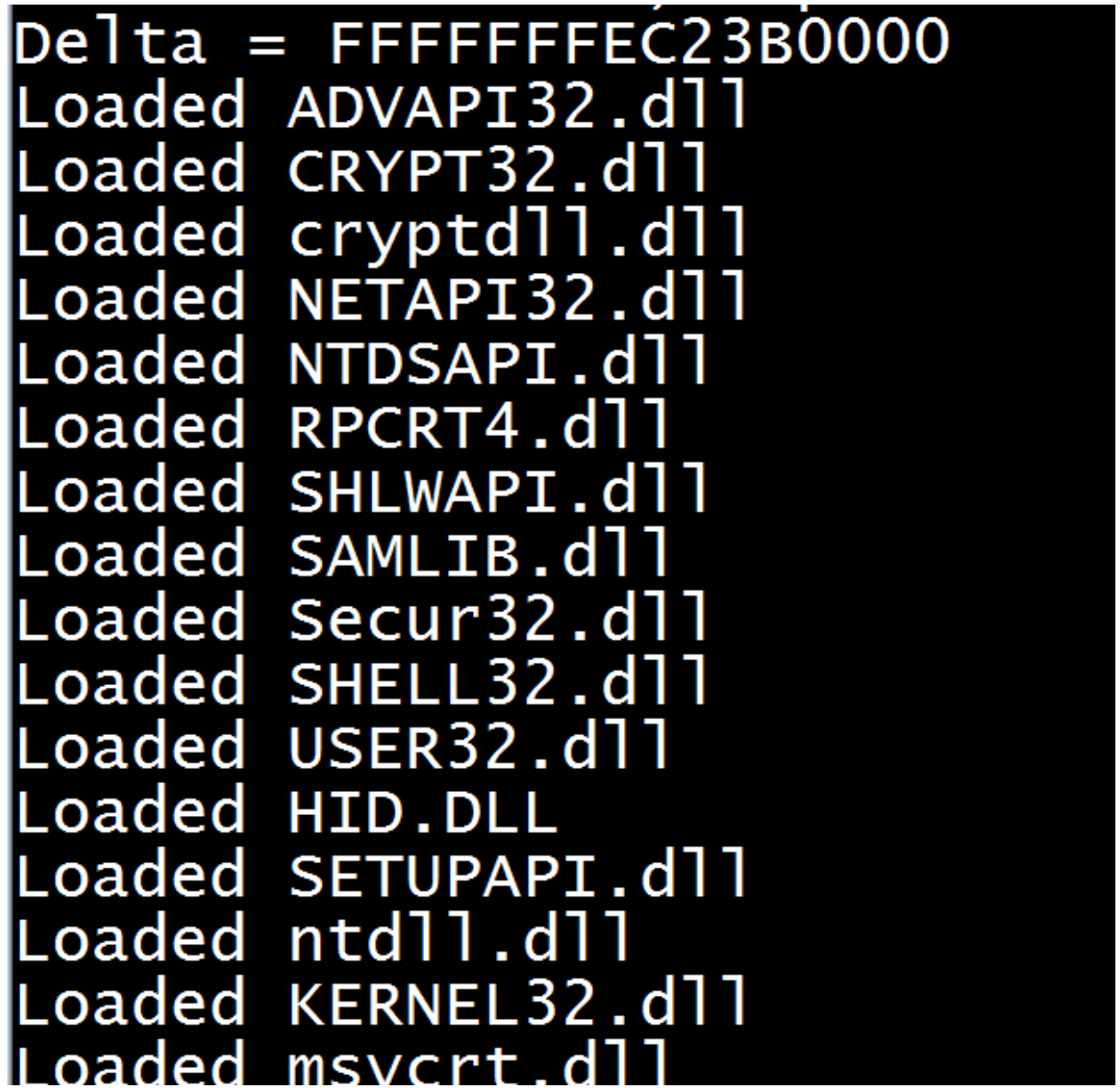
This one is very difficult without instrumentation

Some times it can be noisy

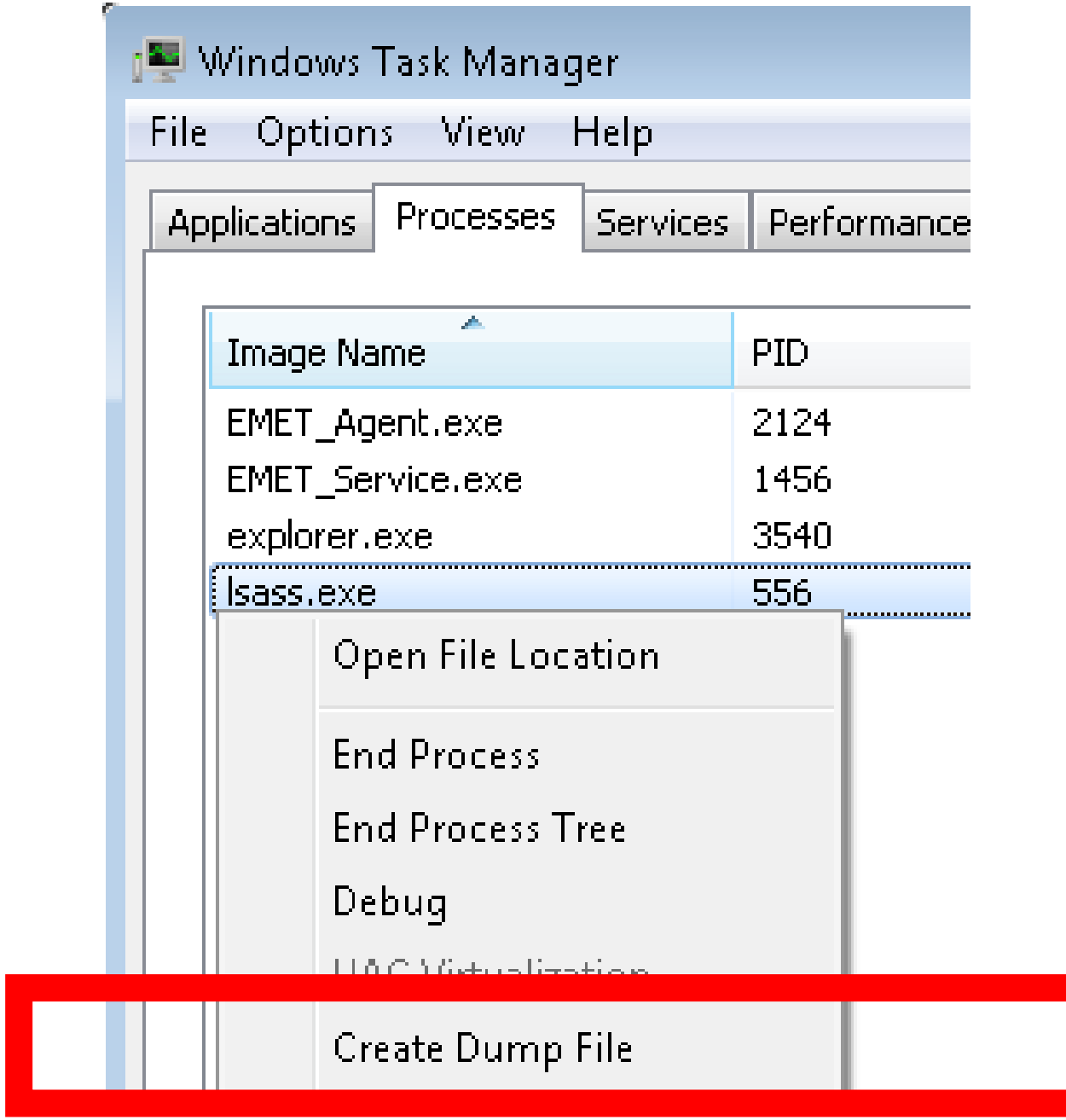
- Invoke-Mimikatz.ps1
- InstallUtil.exe – Katz.cs
  - Cross Process Events, Dll Loads

- Have you ever Actually Executed Mimikatz
  - To see the artifacts?




Delta = FFFFFFFEC23B0000
Loaded ADVAPI32.dll
Loaded CRYPT32.dll
Loaded cryptdll.dll
Loaded NETAPI32.dll
Loaded NTDSAPI.dll
Loaded RPCRT4.dll
Loaded SHLWAPI.dll
Loaded SAMLIB.dll
Loaded Secur32.dll
Loaded SHELL32.dll
Loaded USER32.dll
Loaded HID.DLL
Loaded SETUPAPI.dll
Loaded ntdll.dll
Loaded KERNEL32.dll
Loaded msvcrt.dll

Sometimes It Happens Offline



What are the Indicators?

	Type	Description		Search
GMT	crossproc	Opened handle with change access rights to c:\windows\system32\lsass.exe (4faaa369494a207617165dbfd10e34b5)		

4 - Command And Control

- Proxy Hunting
  - User-Agent Logging
  - MIME Type Downloads

- DNS Database
  - Extract All Domains From Proxy – QFD (Question-Focused Datasets)
  - “Have we ever seen…” Yes | No
  - 1 row per domain

After Action Reporting 1/2

- Did the defenders detect the attack?
  - If so, how fast did they respond?
- Did the defenders detect the attack in the way the Red Team expected?
  - If not, why not? And was their method of detection more or less successful?
- Walk through the logs together after the exercise to trace the steps of the attack.

Thanks Kai!

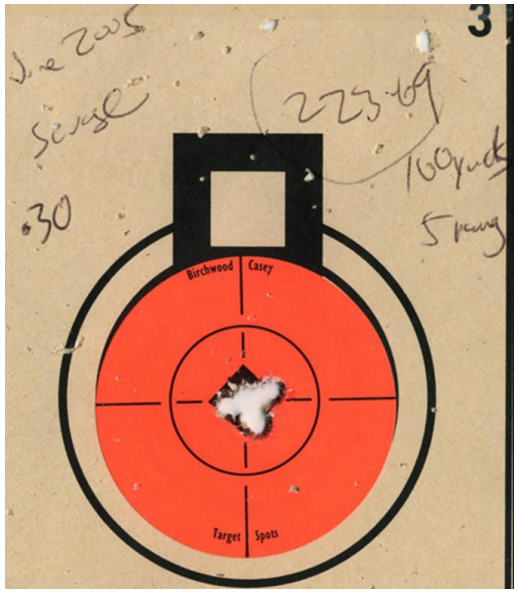
After Action Reporting 2/2

- Does the data in the logs and/or network traffic meet your expectations? Can you trace the attack as expected?
- What has to be done to react more effectively next time?
  - (Methods, training, tools)

How Do You Know Your Hunting Tactics…
Are Working?
Are Accurate?

We All Have Lots of Tools

Are They Sighted In Properly?



“I fear not the man who has practiced 10,000 kicks once, but I fear the man who has practiced one kick 10,000 times.” – *Bruce Lee*

References / Resources

Raphael Mudge -- @armitageHacker
https://www.youtube.com/watch?v=Mke74a9guNk

Sean Metcalf – https://adsecurity.org

Lee Holmes – PowerShell For Defenders
http://blogs.msdn.com/b/powershell/archive/2015/06/09/powershell-the-blue-team.aspx

HolisticInfosec Blog
http://holisticinfosec.blogspot.com/

Please Read:
“Left of Bang: How the Marine Corps' Combat Hunter Program Can Save Your Life” - Patrick Van Horne

People to Follow:

@jaredcatkinson
@mattifestation
@harmj0y

Questions?

Feedback and Suggestions Welcome.

Casey Smith

@subTee

Special Thanks to A, B, M, K You know who you are.