Building CSOC for the Biggest Airport in the World

Protecting Against the Riskiest 1% of Threats

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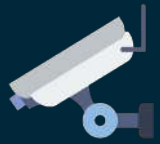
5000 Servers



40K IOT Devices

15+ Event-Based Integrations

6500 Network Devices

750 IT Rooms

IT & IOT Service Topology

150K Metrics Monitored

100K Events/Hour

TIE III
3 Data Centers

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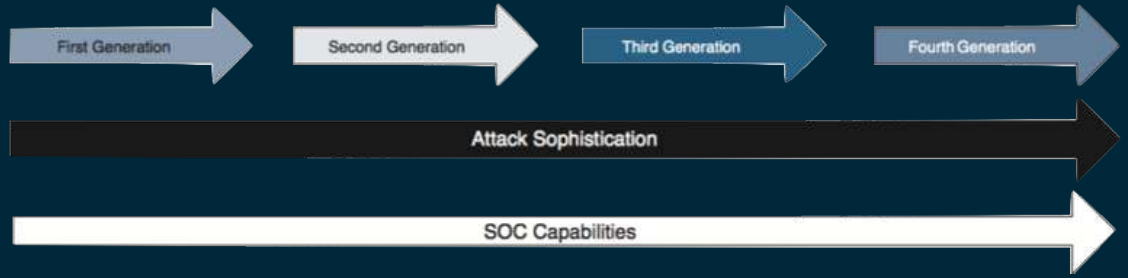
CSOC Generations



Full custom tailor-made next-gen CSOC design

Engineering

Operations

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“The first thing you need to do at your CSOC is to separate the Engineering and Operation teams with clear definition of their responsibilities. Threat hunters or incident responder will be not so happy, if she/he is doing vulnerability scanning or patch management”

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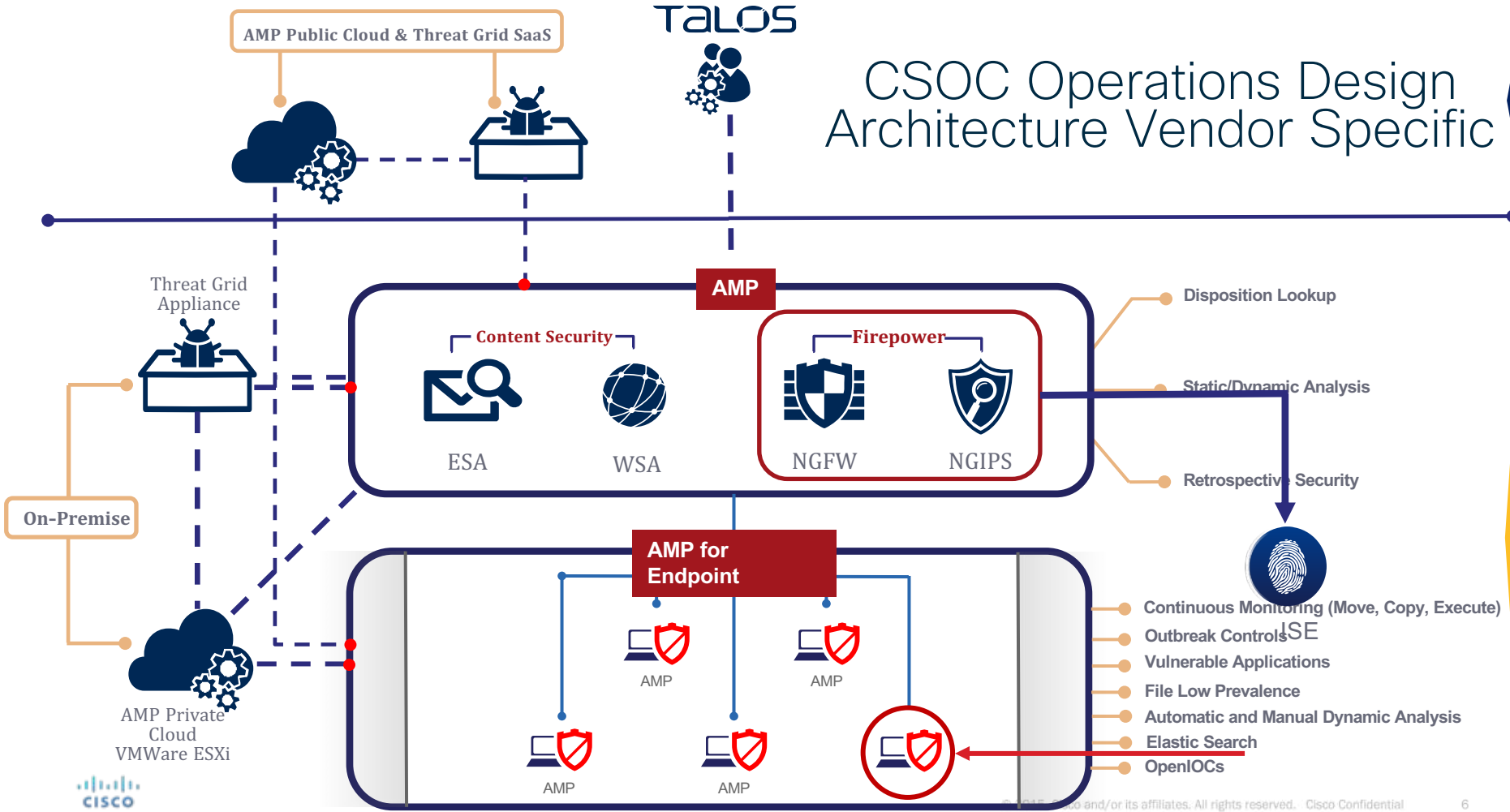
CSOC Operations Design Architecture Vendor Specific



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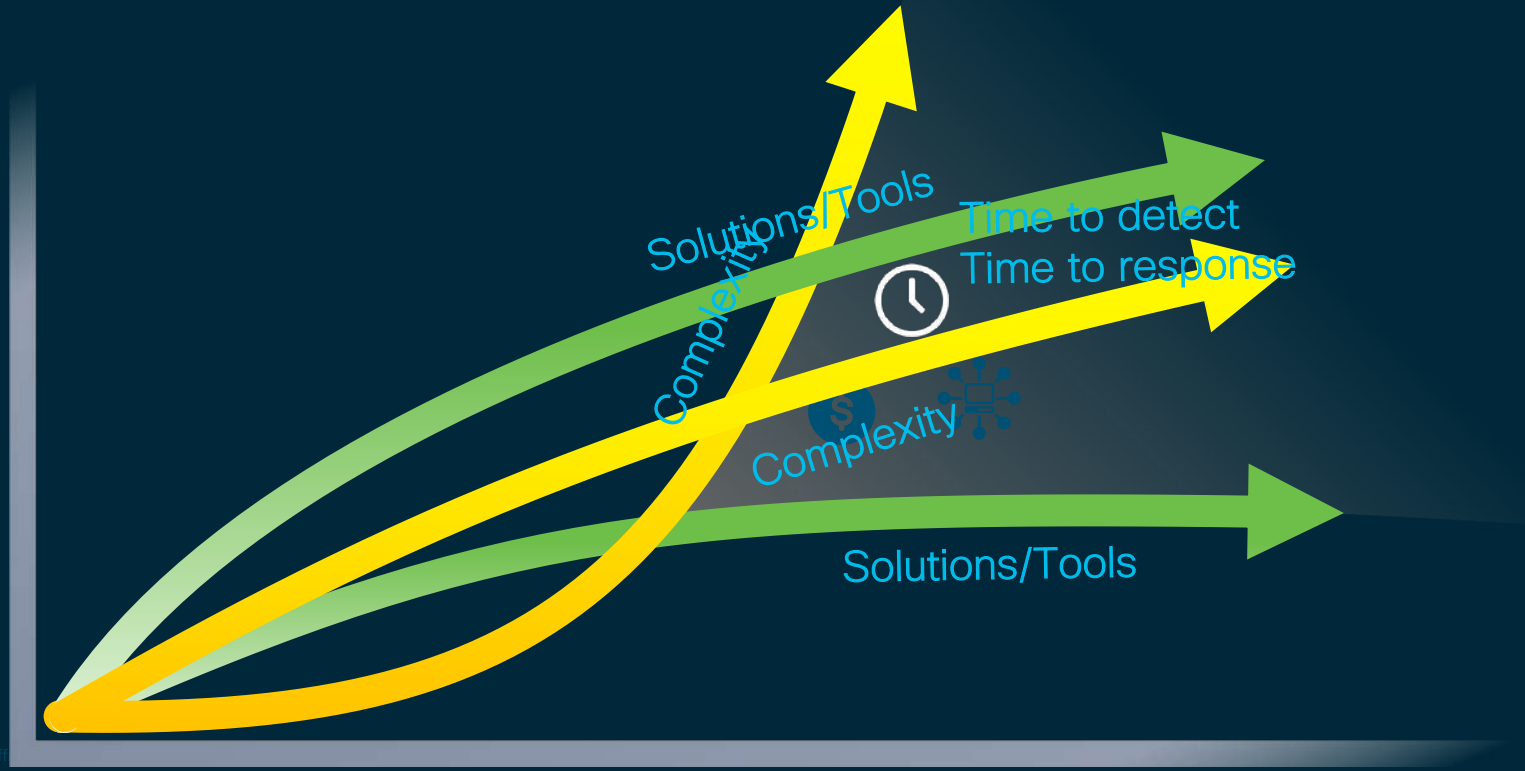
CISCO TALOS

CUSTOMER SITE

The Security Effectiveness Gap



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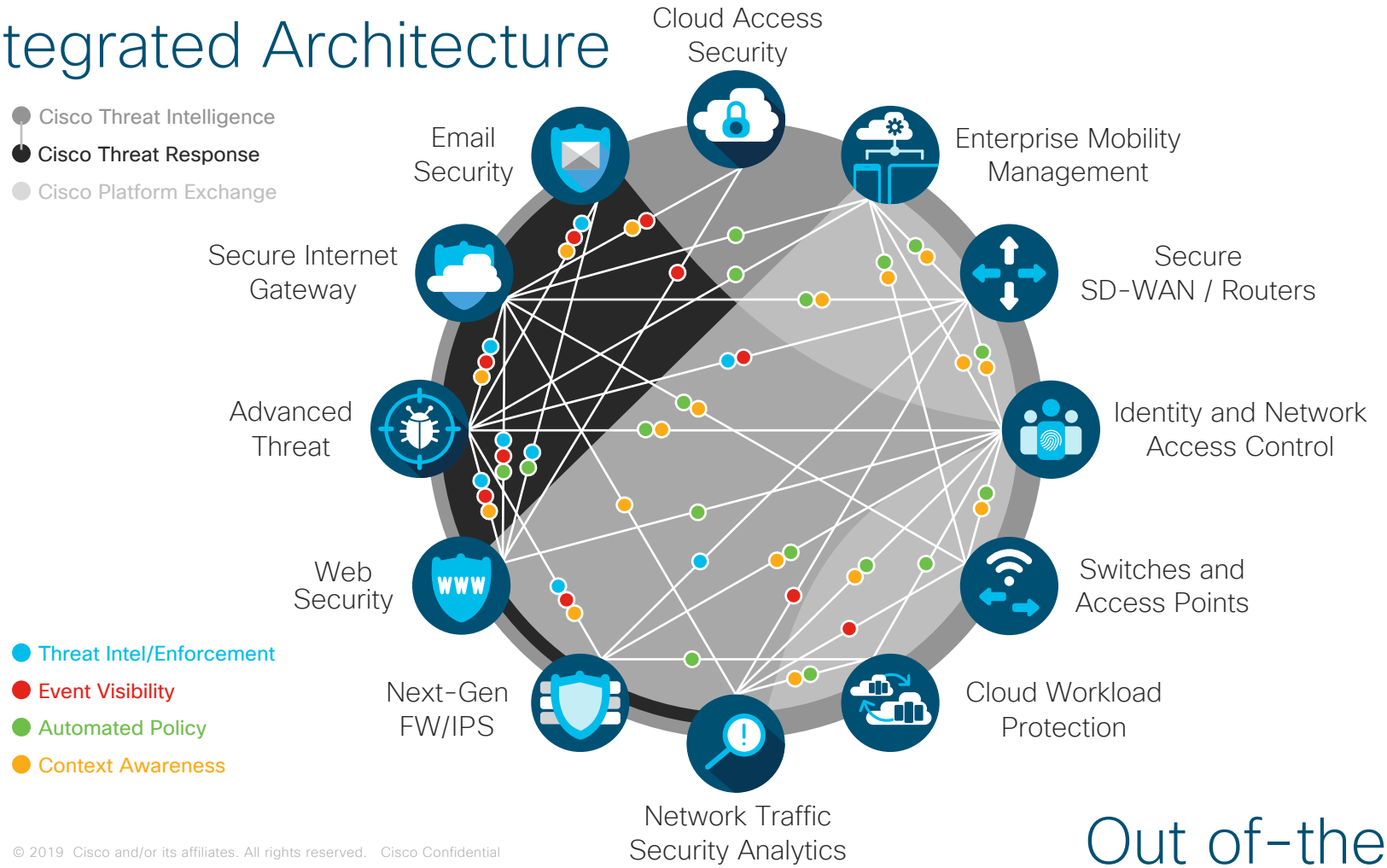
Integrated Architecture



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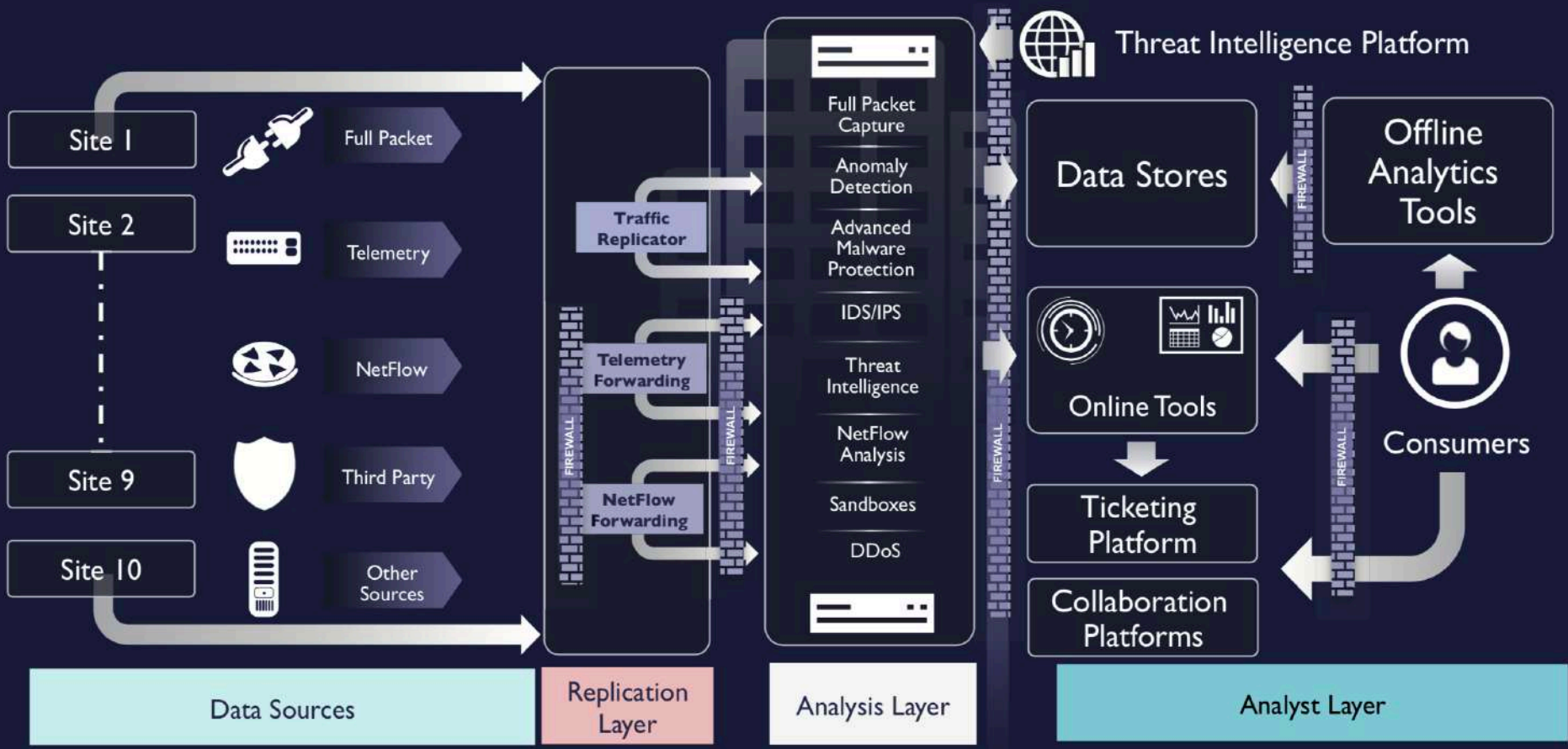
Out of-the box

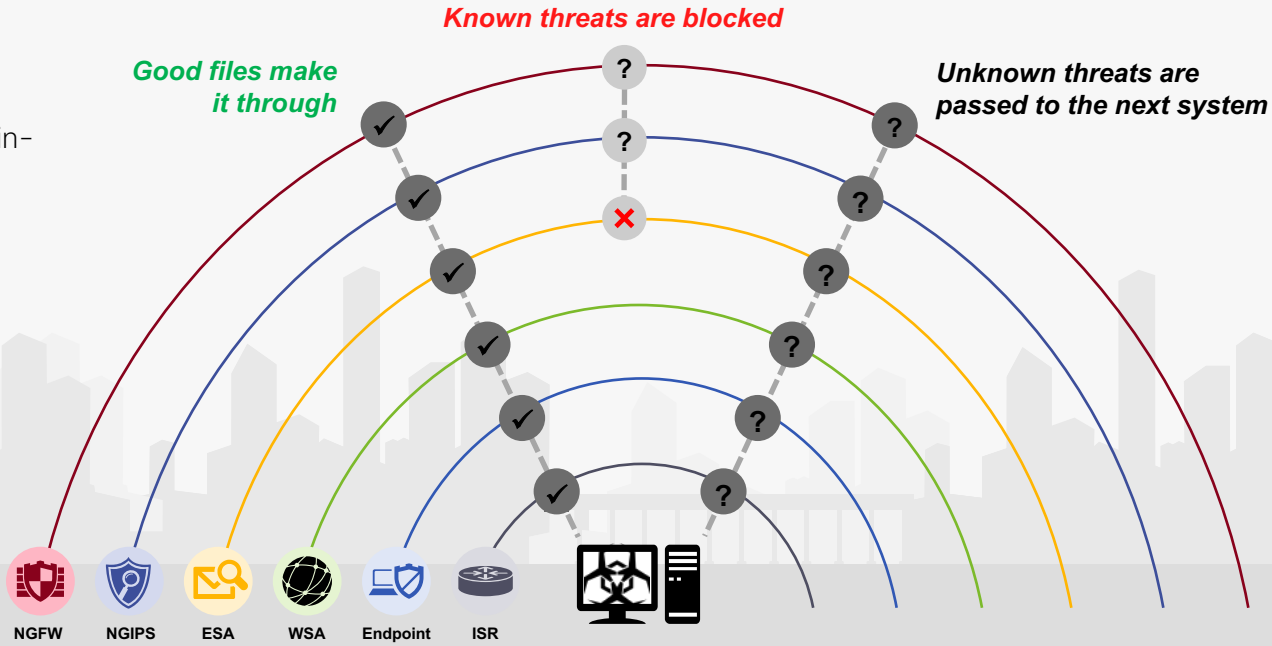
Example: Security Analytics for National Critical Infrastructure

CSOC Design Architecture



Why defense in-depth is BROKEN!

Current defense in-depth approach is built on binary detection



Single points of inspection have their limitations

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“If we are still blaming the CSOC Operation teams (incident responders, threat hunters and malware/digital forensic) people for breaches. Then we are doing a big mistake, remember human cannot protect against the threats! Technology/machines can do this to some level. So go and blame your technology!”

“Protection = Machines where Detection Response = Humans”

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Preventing Malware Attacks is **Ideal**

But What Happens if One is **Missed**?

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Most Security Solutions Block **99%** of Threats

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But what about the **1%** of threats you are missing?

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The **Most Dangerous 1%** of Threats **Try to Hide**

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Using Advanced Evasion Techniques

- Fileless malware
- Environmentally-aware malware
- Polymorphism
- Exploit legitimate processes

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Finding Them Is **Not Easy**

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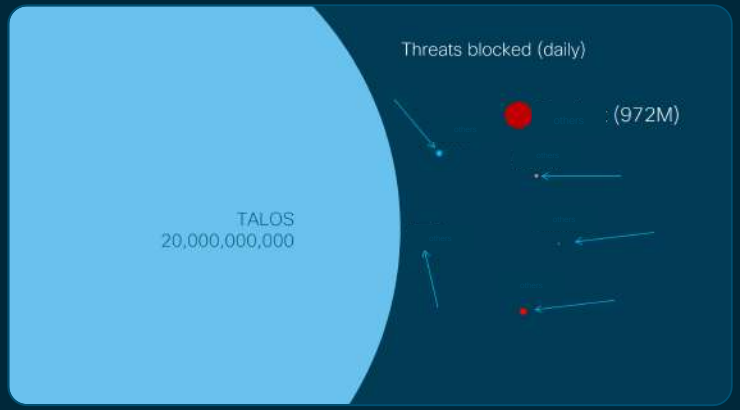
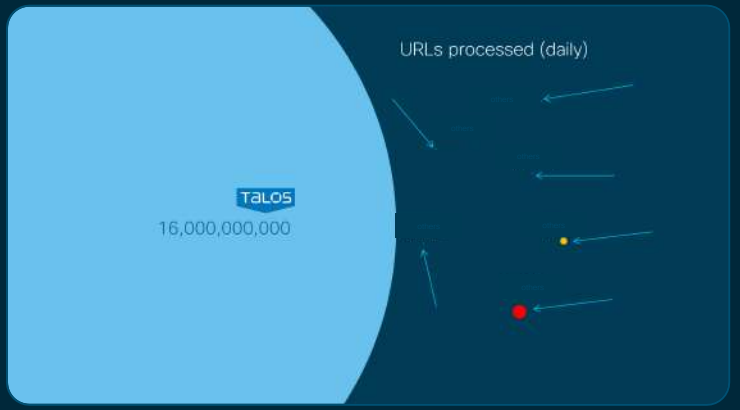
But how much is the 1% of threats you are missing?

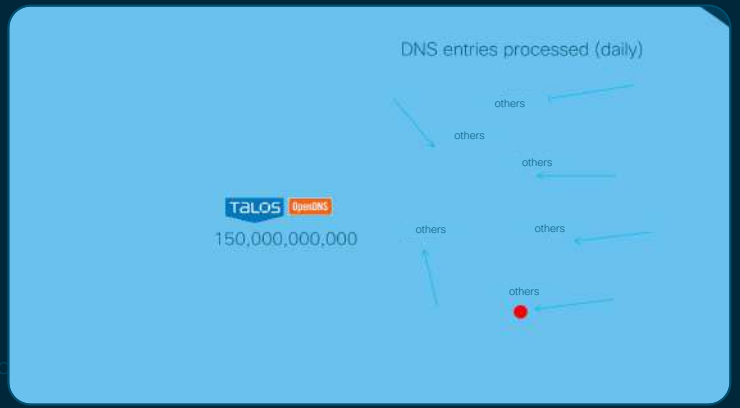
THREATS BLOCKED



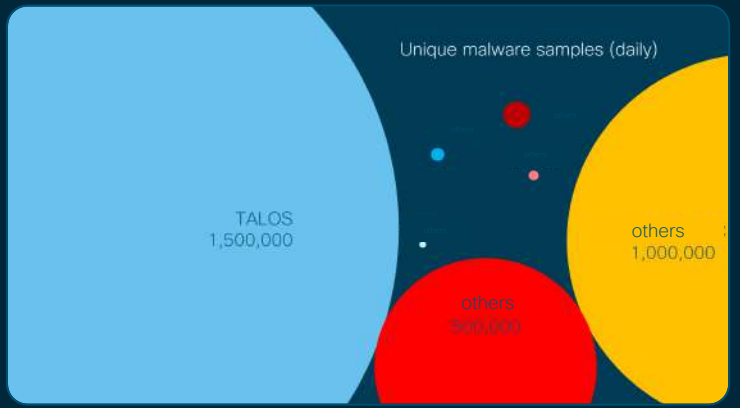
URLS PROCESSED



DNS ENTRIES PROCESSED



UNIQUE MALWARE SAMPLES



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It Takes a **Whole Lot of Time**

Security Analyst

- Large scale alerts
- Flood of false positives
- Lots of tools & tedious tasks

Incident Responder

- Sifting through disparate data
- Lack of contextual info
- Gather/present evidence

IT Security Director

- Budget & staffing constraints
- IP/asset protection
- Technology integration

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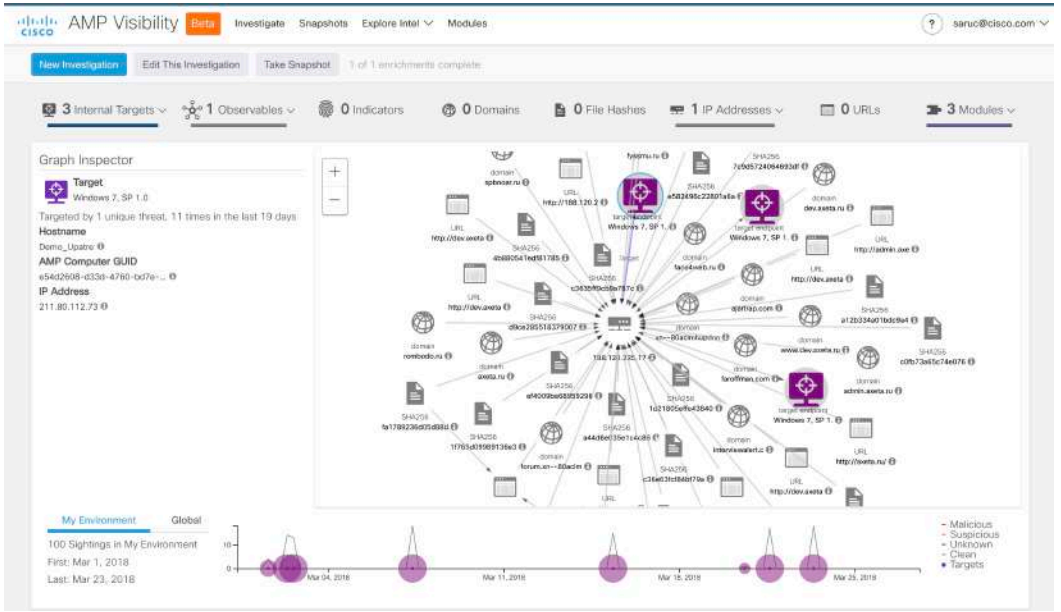
Automation & Orchestration

Key Issues at modern CSOC's: Excessive Alerts, Outdated Metrics, and Limited Integration Lead to Over-taxed SOCs

Figure 4: Most SOC analysts can only handle between 7-8 investigations in a day



Take Back Control of **Time**

Respond to incidents in
Hours not days or months

Proactively Hunt for the
riskiest 1% of threats

Find and fix the most vulnerable
endpoints before compromise

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Giving You **Time**

Focus on the Riskiest 1% of Threats

Stop Malware

Using multiple detection and protection mechanisms

Eliminate Blind Spots

The network and endpoint, working together across all operating systems

Discover Unknown Threats

With proactive threat hunting

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Stop Malware

Using multiple detection and protection mechanisms

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What to have..

Prevent

- Antivirus
- Fileless malware detection
- Cloud lookups (1:1, 1:many)
- Client Indicators of Compromise

Detect

- Static analysis
- Sandboxing
- Malicious Activity Protection
- Machine learning
- Device flow correlation
- Cloud Indicators of Compromise

Reduce Risk

- Vulnerable software
- Low prevalence
- Proxy log analysis

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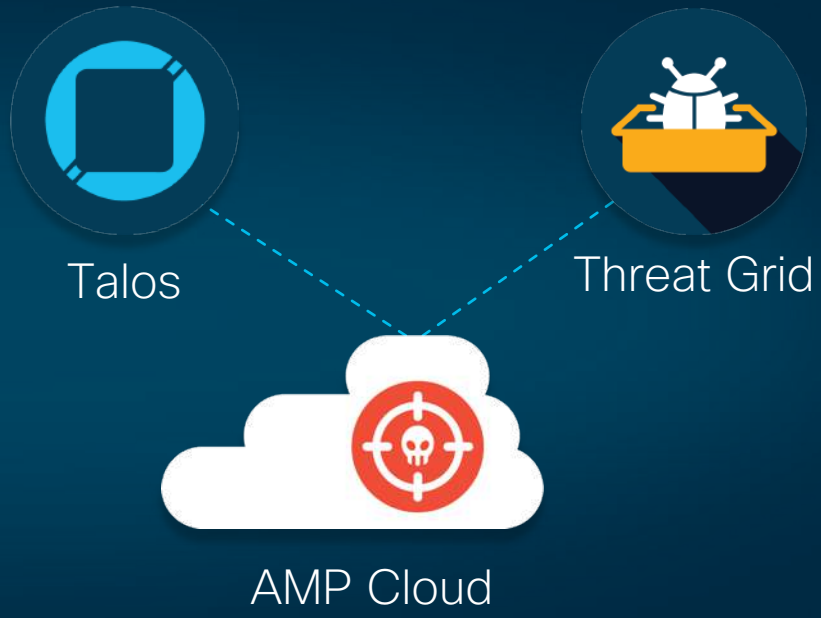
Cloud-based Analysis and Threat Intelligence

AMP cloud constantly updated with the latest threat intelligence and research to protect against advanced threats.



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Prevent Fileless Malware

Malware Has Evolved. We Need to Protect Against More than Just Files.

Monitor process activity and guard against attempts to hijack legitimate applications.

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Protect Against Ransomware

Malicious Activity Protection

- Monitor Process behavior at execution
- Tuned to detect tell-tale ransomware signs
- Quarantine and terminate associated files and processes
- Log and alert encryption attempt

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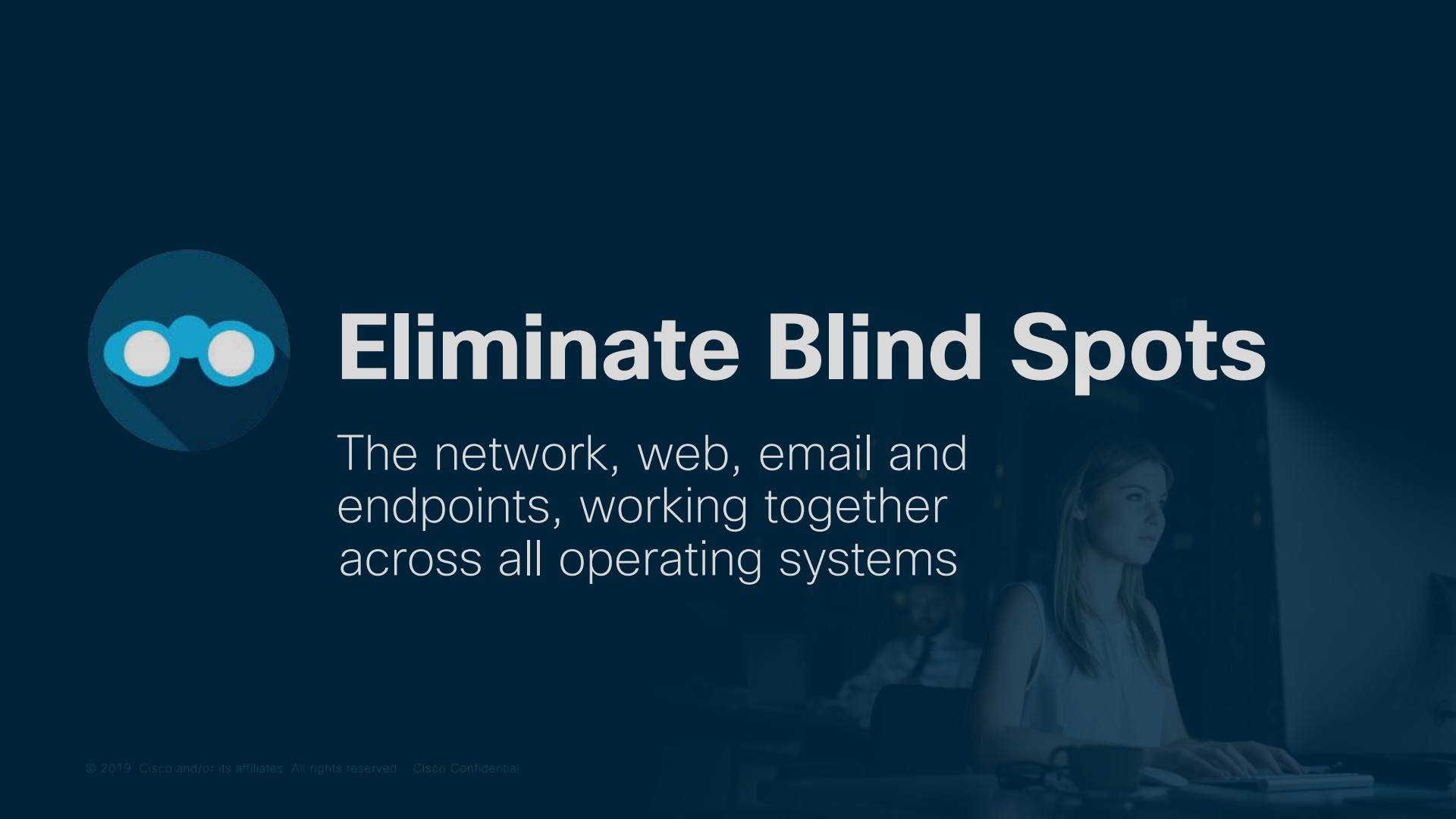
Eliminate Blind Spots

The network, web, email and endpoints, working together across all operating systems



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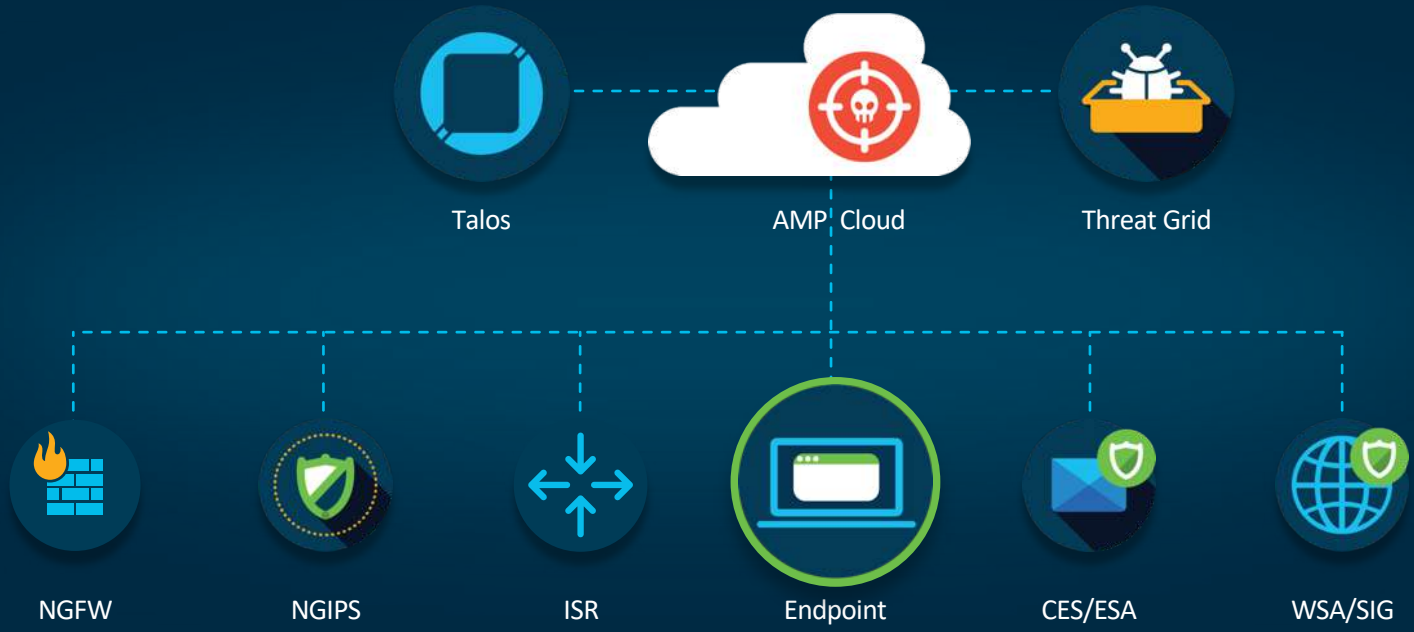
See Once, Block Everywhere

Share intelligence across network, web, email, and endpoints to see once, block everywhere.



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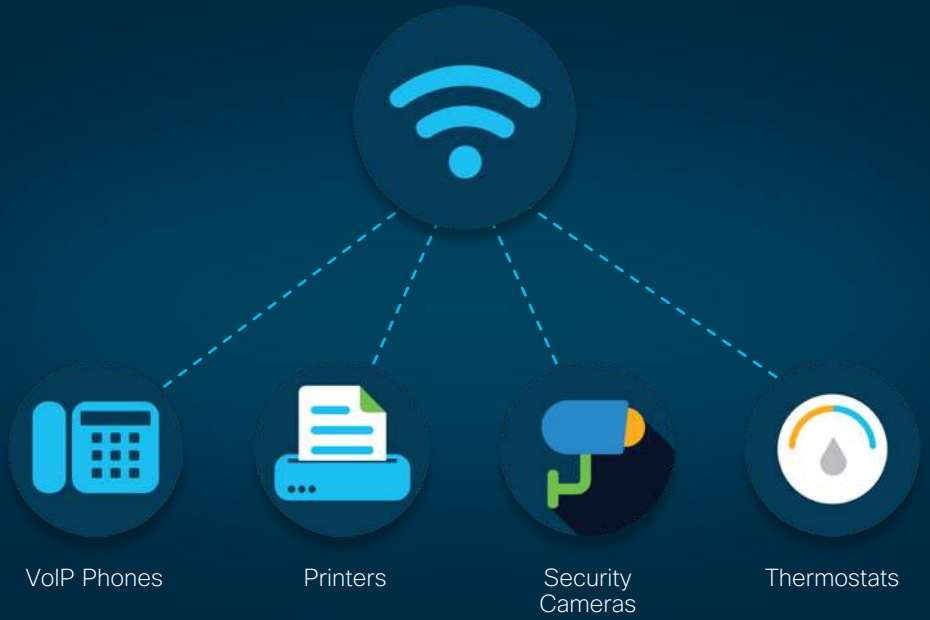
Agentless Detection with Proxy Analysis

Identify Anomalous Traffic Occurring Within Your Network



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Discover Unknown Threats

With proactive threat hunting

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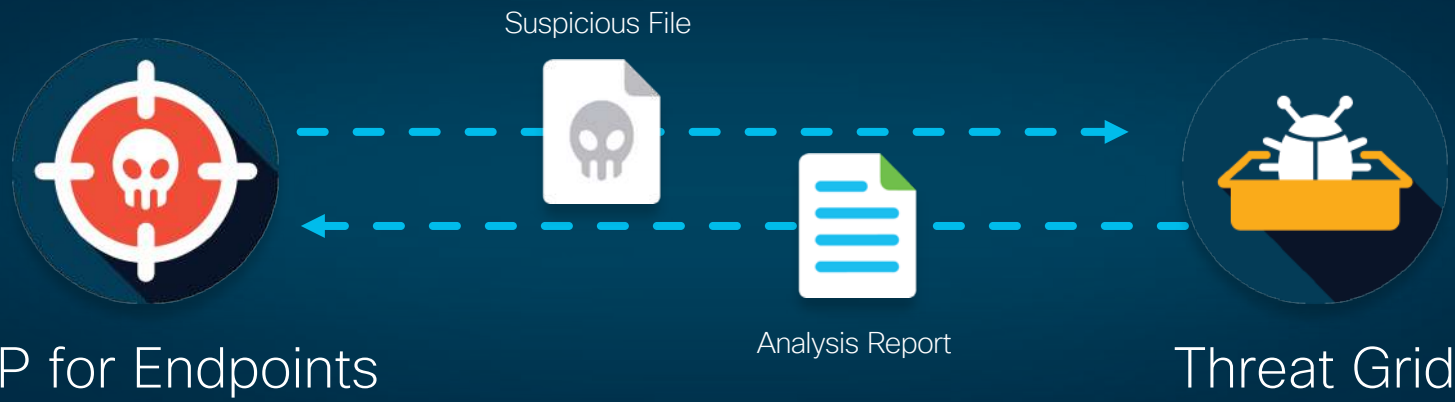
Dynamic and Behavioral Analysis with Sandboxing

Execute, analyze, and test malware behavior in order to discover previously unknown zero-day threats



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“How your expensive security solutions with expensive Threat Intelligence service can protect you from a "document.doc" with "macros enabled" that I just created? Threat intelligence will not protect you against zero-day malware and targeted attacks”

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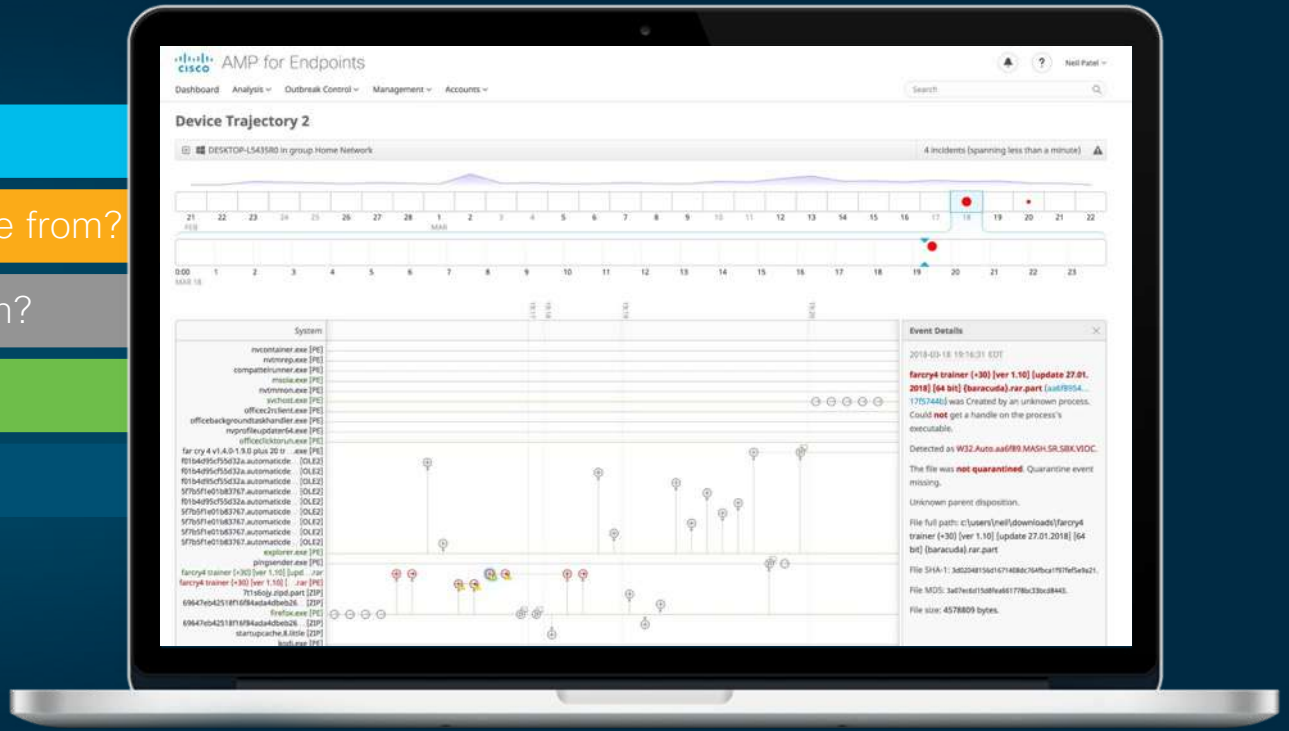
Capability to Continuous Monitoring

- What happened?
- Where did the malware come from?
- Where has the malware been?
- What is it doing?
- How do we stop it?



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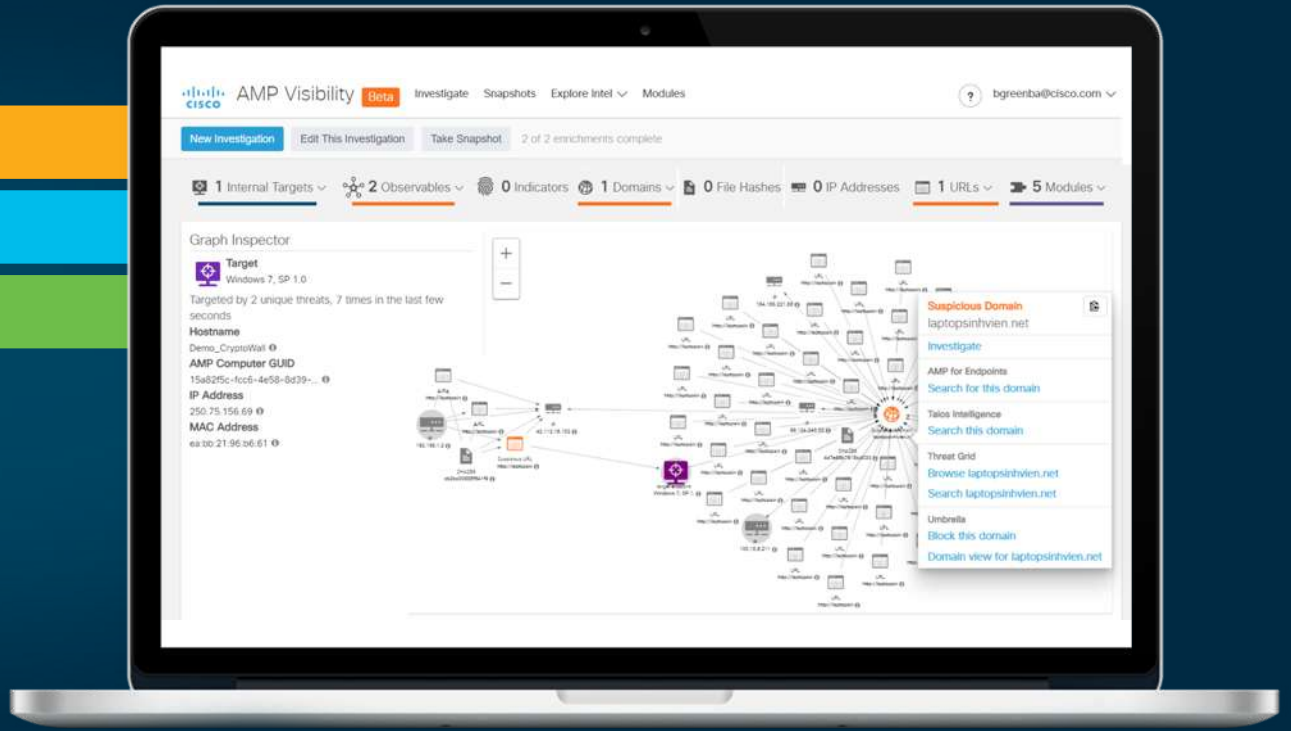
Capability to Perform In-depth Investigations

- Threat Hunting
- One Click Remediation
- Intelligence Correlation



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Why endpoints is in focus… again?

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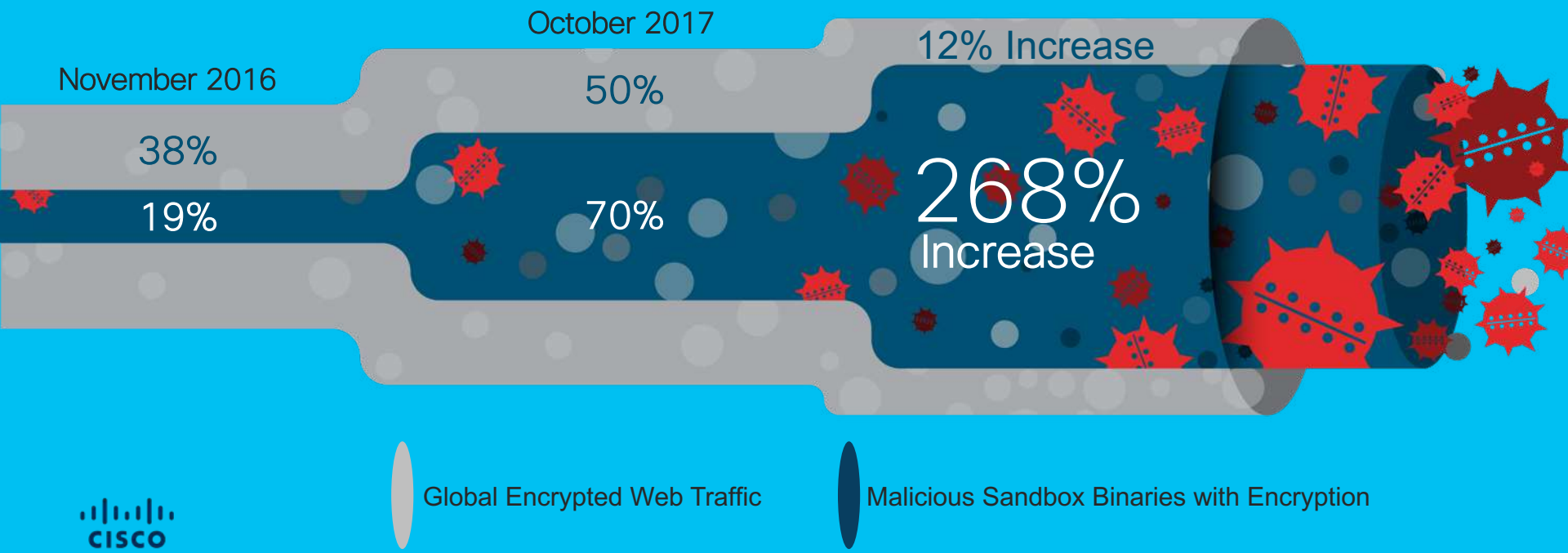
Malicious Binaries and Encryption

Attackers embrace encryption to conceal their command-and-control activity



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If You Can Only Get ONE Tool

- Many organizations can get *one* tool to start.
- Which one?
- How to decide?

If you need to start hunting ASAP, the first tool to get is an endpoint focused tool (**EDR** or its open source equivalents), because **"endpoints is where the attackers are"**

EDR allows you to review the most unambiguous attacker traces:
Execution, file actions, downloads, system actions, etc.

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AMP for Endpoints

Prevent attacks and block malware in real time

Continuously monitor all processes and activity

Accelerate investigations and remediate faster

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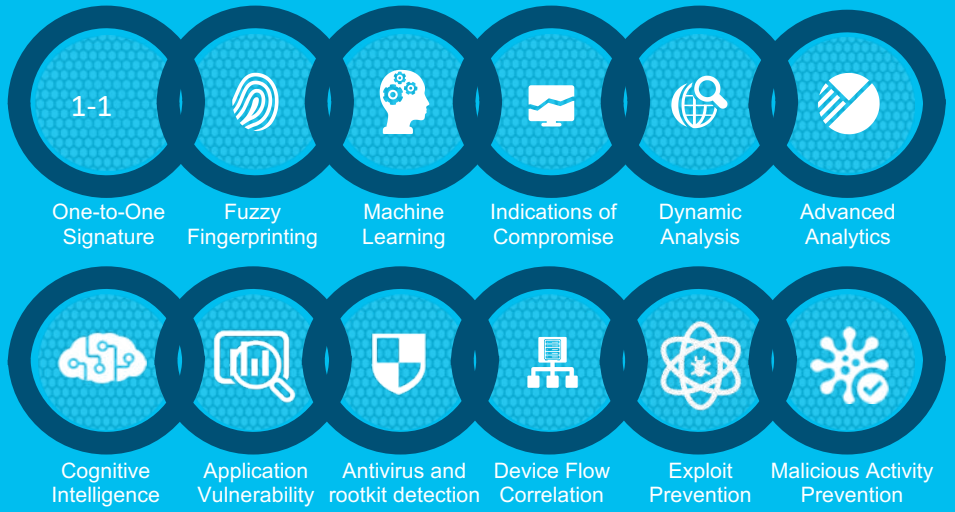
What is AMP for Endpoints?

Point-in-Time Detection – Plan A



All Prevention < 100%

Retrospective Security Plan B

Unique to AMP - Continuous Analysis & Retrospective Security

Cisco AMP

AMP **blocks** threats, but it trusts nothing

Hunting inside your environment

Continually exposing and **blocking**

Alerting via an **interactive, actionable history of events** that accelerates incident response

So AMP **records** events

And **continuously analyzes** each recorded event, testing it against the latest global threat intelligence

AMP **does the heavy lifting** that the IT team used to struggle with, **recapturing** 1,000s of hours each year

Demo time..

Thanks
Q/A

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