Security
The Security problem

CHANGING BUSINESS MODELS
Capture benefits of mobility, cloud and IoE

DYNAMIC THREAT LANDSCAPE
Protect against new and changing attack vectors

COMPLEXITY AND FRAGMENTATION
Simplify operations and reduce costs

Security
The Strategy – Threat Centric model

**Point Technologies does not work in today's Threat Landscape
Cisco addresses the full attack continuum**

BEFORE	DURING	AFTER
Policy & Control	*Identification & Block*	*Analysis & Remediation*
Control	Detect	Determine scope
Enforce	Block	Contain
Harden	Defend	Remediate

Cisco FirePower   New!

NGNAC *Cisco ISE*

Web *- Cisco WSA*

Email *- Cisco ESA*

Network *- Cisco Switches/WiFi/Routers, Open DNS & LANCOPE*

Cisco FirePower NGFW
Firewall evolution

Segmentation		Inspection	
Access Control	**App Control**	**Threat Prevention**	**Context Awareness**

Typical Firewall

Typical IPS

Typical NGFW (CheckPoint, Palo Alto…)

APP · Threat

NGSECURITY (Cisco FirePower) SOURCE*fire*

APP · Threat

Focused on apps, not threats

www.cisco.com/go/asafps
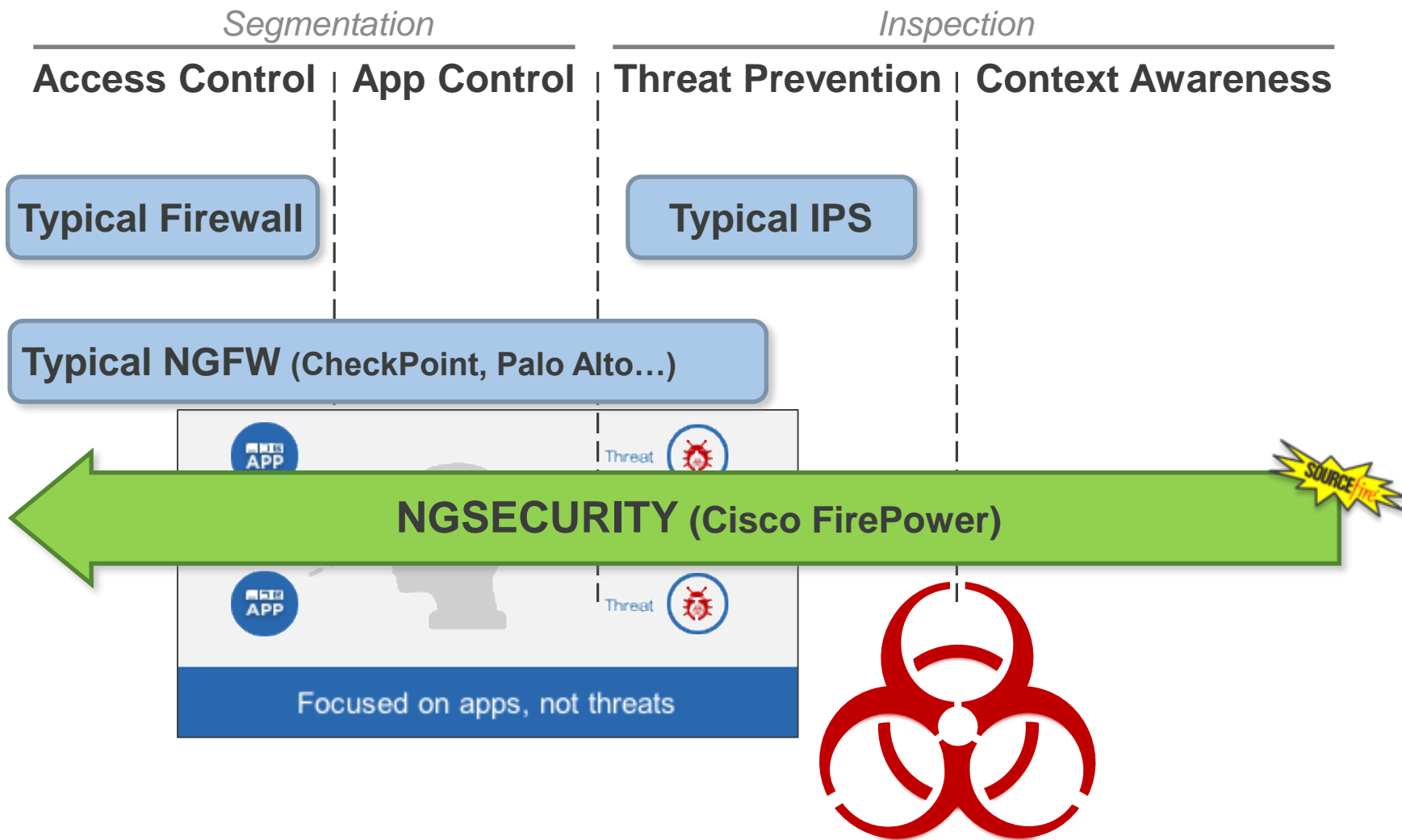
Cisco FirePower NGFW
Firewall evolution – Context Awareness

"You can't protect what you can't see"

Threats · Users · Application protocols · File transfers · Web applications · Command and control servers · Malware · Operating systems · Routers and switches · Network servers · Client applications · Mobile devices · Printers · VoIP phones

Typical IPS

Typical NGFW

Cisco FirePower NGFW
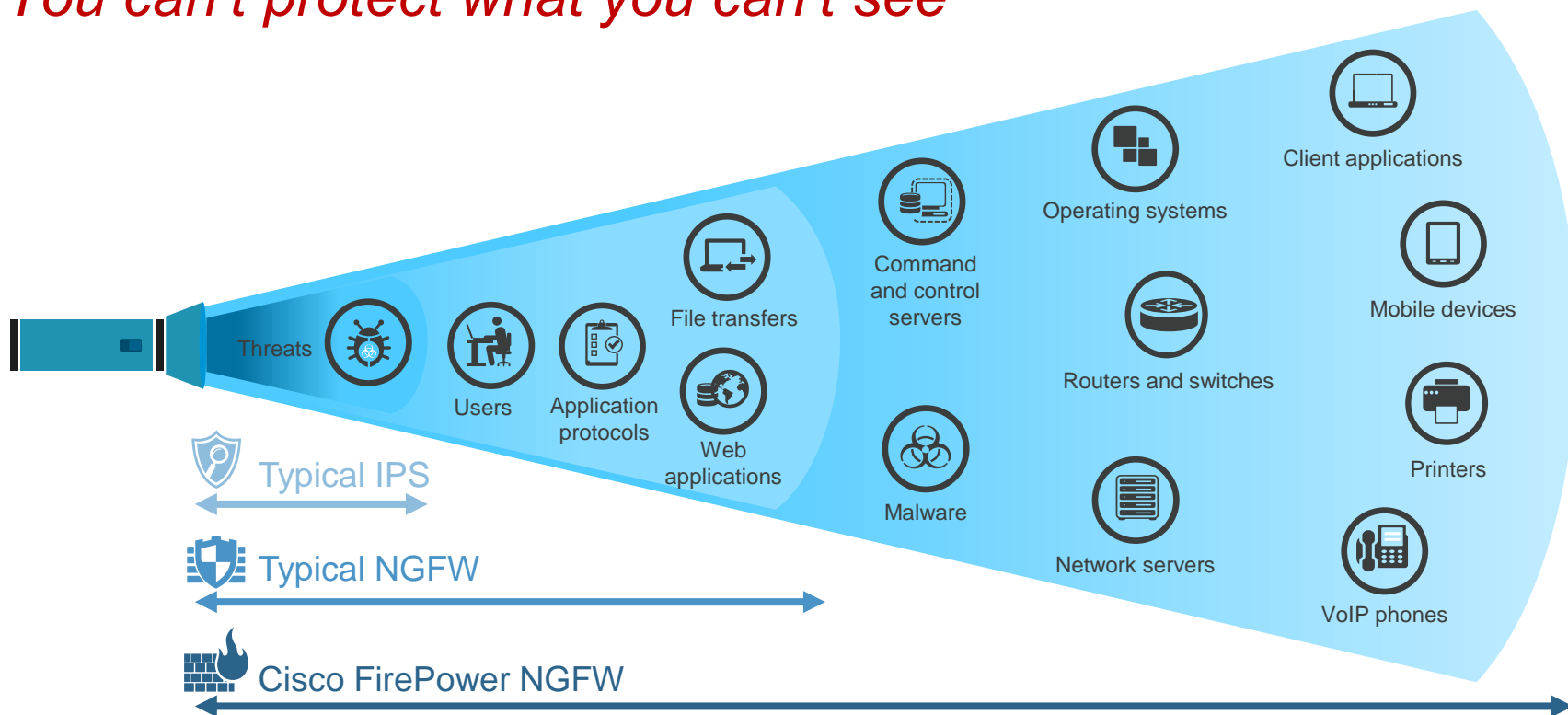
Cisco FirePower NGFW
Overview

World's most widely deployed enterprise-class ASA stateful firewall

Industry-leading SourceFire FirePOWER Next-Generation Security *New!*

HA	VPN	Identity	App Control	URL Filterting	Security Intel	IPS	Malware

TYPICAL NGFW

Cisco TALOS

Network Firewall	Identity	App Control	URL Filtering	Security Intel	NGIPS	NGMalware	Management, Analytics and correlation

Clustering/HA	Advanced VPN	Built-in Network Profiling	

Cisco FirePower NGFW

Cisco FirePower MC

www.cisco.com/go/asafps

Cisco FirePower NGFW
Overview – NextGen Intrusion Prevention (NGIPS)

www.cisco.com/go/asafps

Cisco FirePower NGFW
NGIPS – Summary

World's most Powerfull Intrusion Prevention Engine

Automated Tuning
Adjust IPS policies automatically based on network change

Impact Assessment
Threat correlation reduces actionable events by up to 90%

www.cisco.com/go/ngips

Cisco FirePower NGFW
NGIPS – Impact Assessment

- ● **Intrusion event**

- ■ **Does not exists**
  No Host / IP

- ■ **Service does not exists**

- ■ **Not Vulnerable**

- ■ **Vulnerable**
  Needs action

www.cisco.com/go/ngips

Cisco FirePower NGFW
Overview – Advanced Malware Protection (AMP)

Cisco TALOS

| Network Firewall | Identity | App Control | WWW URL Filtering | Security Intel | NGIPS | PDF NGMalware | Management, Analytics and correlation |

| Clustering/HA | Advanced VPN | Built-in Network Profiling |

Cisco FirePower NGFW

Cisco FirePower MC

www.cisco.com/go/asafps

Cisco FirePower NGFW
AMP – Overview

Cisco NGIPS Security Effectiveness: 2009–2015

APT

Model (Year of NSS Labs Test)	NSS Test Average	Cisco Security Effectiveness
4500 (2009)	64.16%%	89.
4500 (2010)	82.83%	97.5%
8120 (2012)	94.14%	98.9%
8250 (2012)	94.14%	98.9%
8260 (2012)	94.14%	98.9%
7120 (2013)	91.19%	97.9%
8350 (2015)	96.28%	99.5%
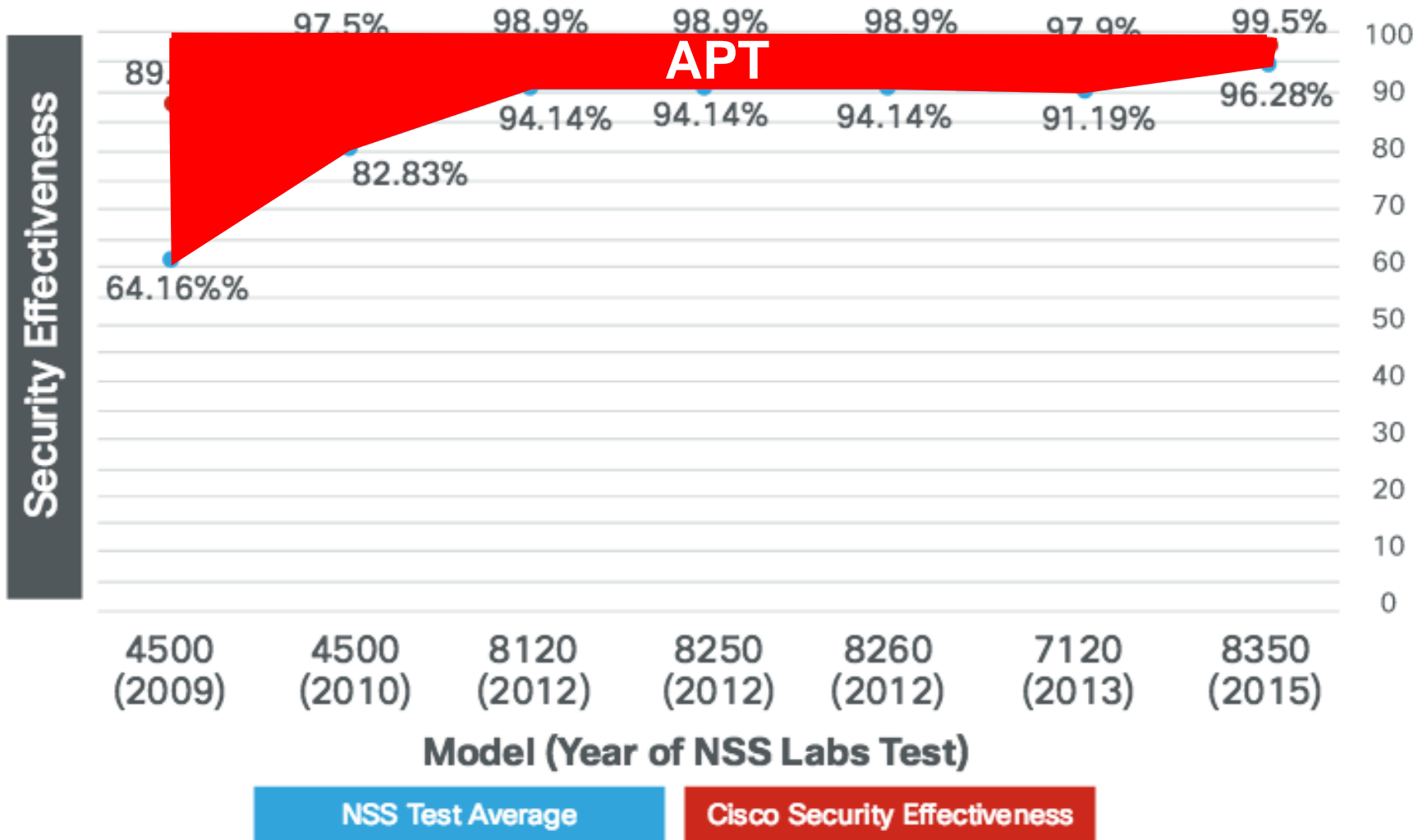
Cisco FirePower NGFW
AMP – Market Overview

Network Based
- Cisco
- McAfee
- FireEye
- paloalto NETWORKS
- HP TippingPoint

Host Based
- Cisco
- McAfee
- MANDIANT
- CYVERA CYBER DEFENSE SOLUTIONS
- Bit9
- TREND MICRO

Cisco FirePower NGFW
AMP – Overview

Sandboxing

Sleep Techniques
Unknown Protocols
Encryption
Polimorfism

Point-in-Time

Antivirus…

www.cisco.com/go/amp
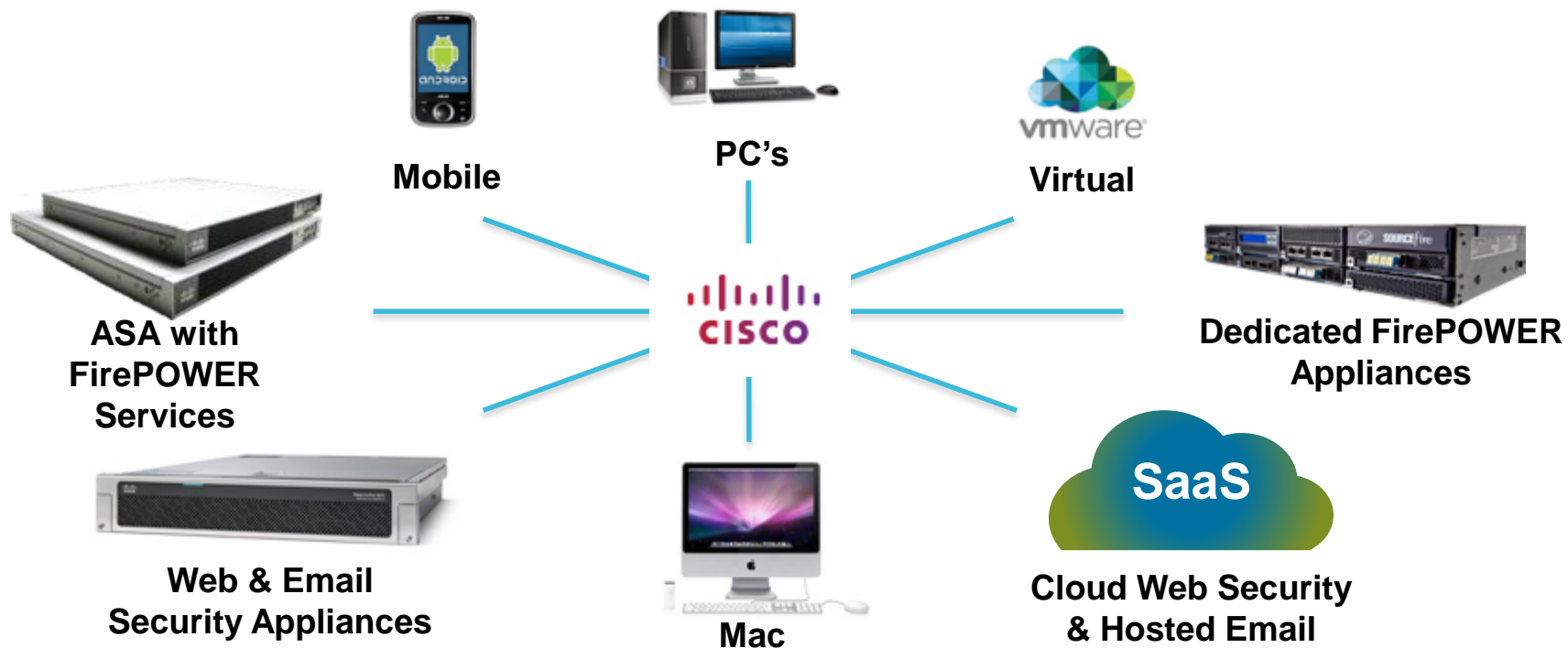
Cisco FirePower NGFW
AMP – Summary

Continuous
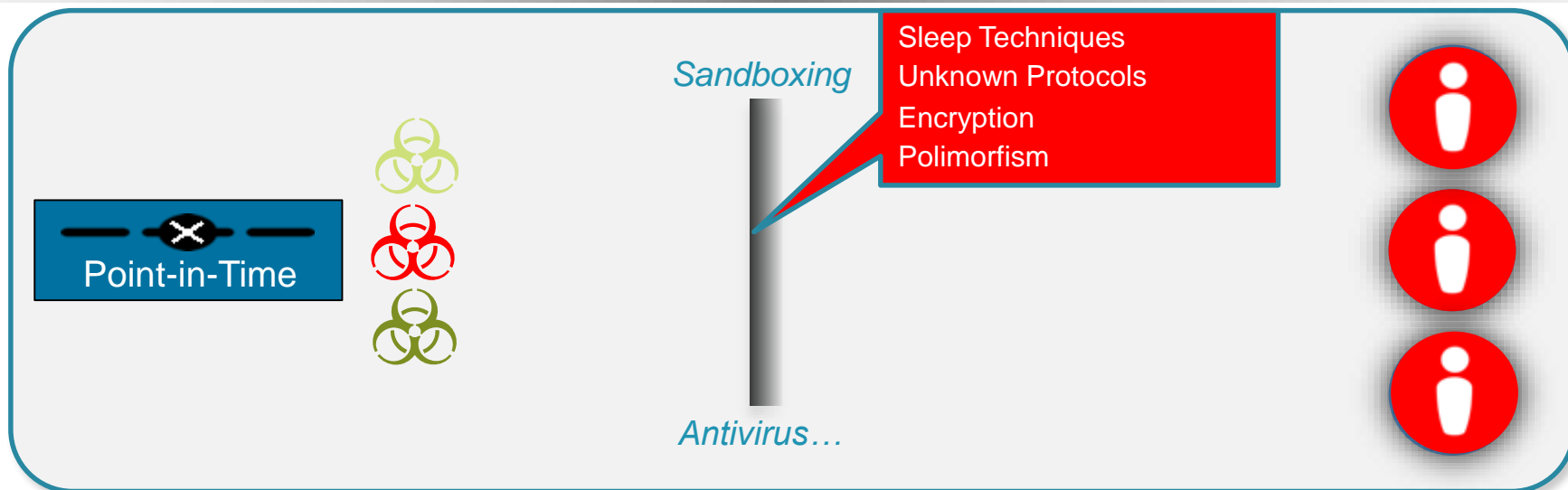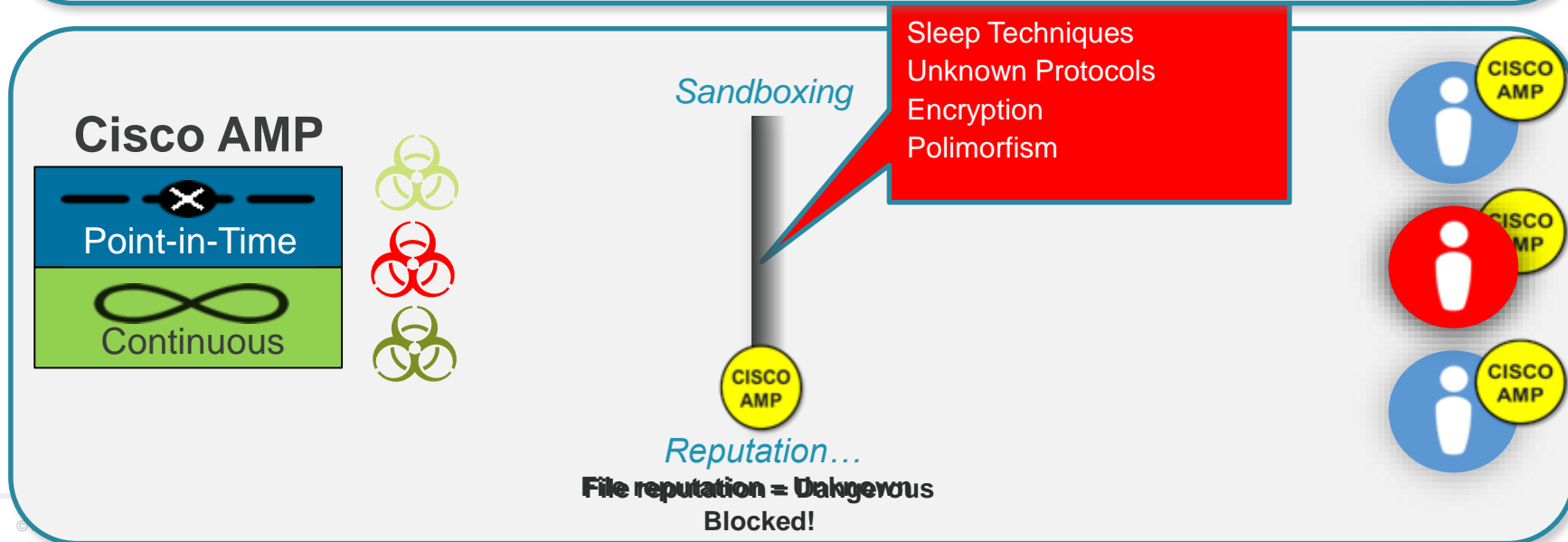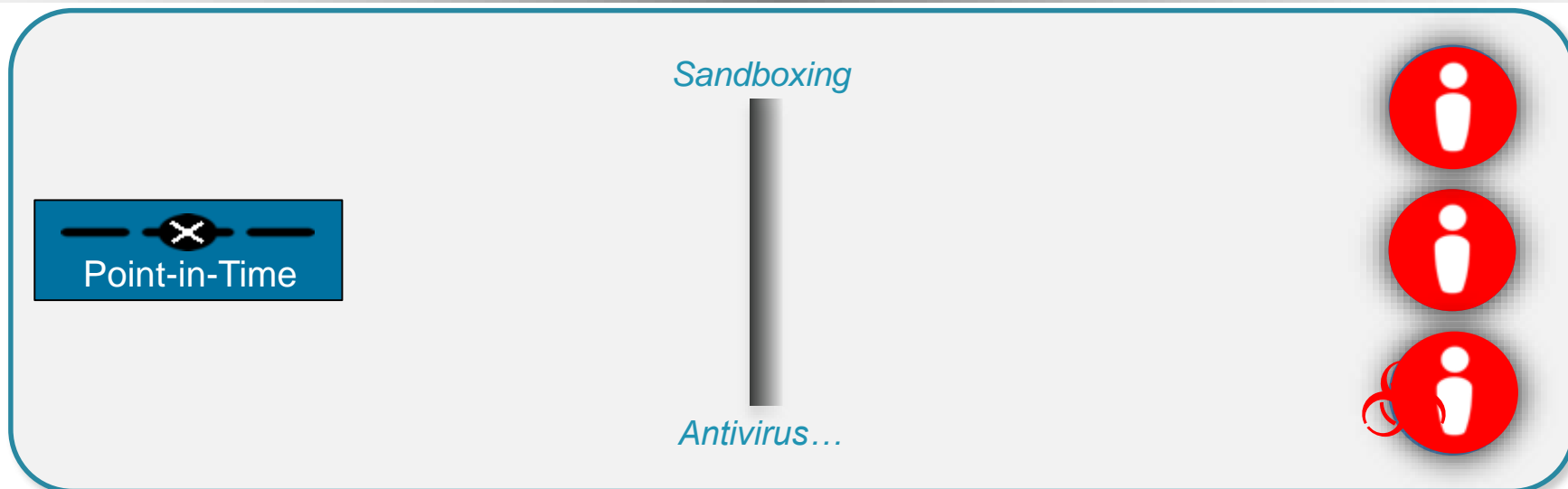
Looks ACROSS the organization and answers:

- When did it happen?
- Where is patient 0?
- What systems were infected?
- What was the entry point?
- What else did it bring in?

www.cisco.com/go/amp

Cisco FirePower NGFW
AMP – AMP Everywhere

Mobile

PC's

Virtual

ASA with FirePOWER Services

Dedicated FirePOWER Appliances

Web & Email Security Appliances

Mac

SaaS

Cloud Web Security & Hosted Email
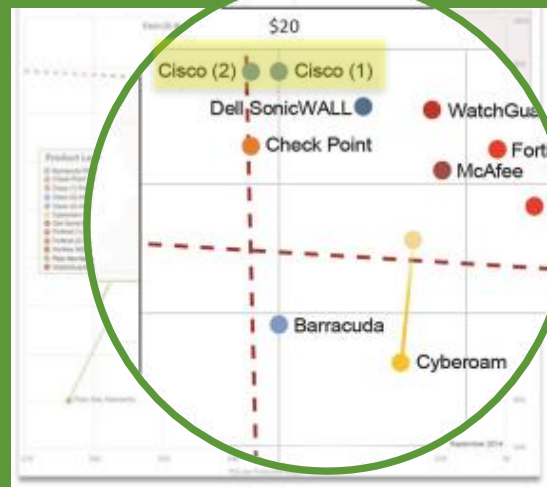
www.cisco.com/go/amp
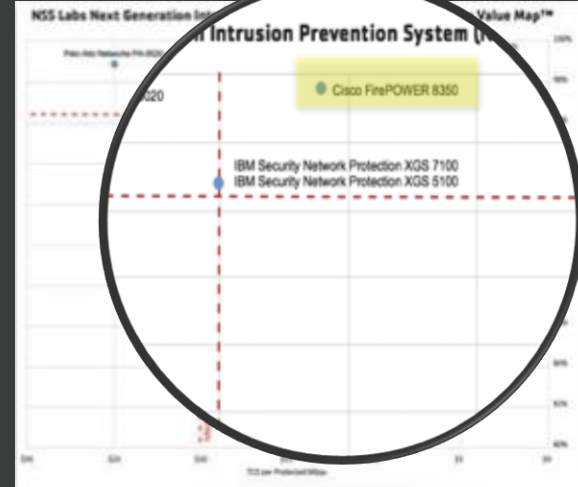
Cisco FirePower NGFW
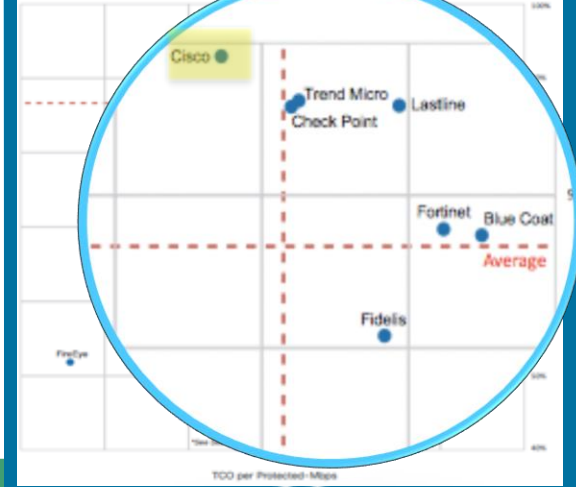## Third Party Validation

Cisco FirePower NGFW

NSS Labs Security Value Map for
Next-Generation Firewall (NGFW)
2014

NSS Labs Security Value Map for
Intrusion Prevention System (IPS)
2015

NSS Labs Security Value Map for
Breach Detection (AMP)
2015

http://www.cisco.com/go/nssngfw2014

Cisco FirePower NGFW
Platform Overview – Low/Mid range sizing ASA/FirePower

	Cisco ASA5506X	Cisco ASA5508X	Cisco ASA5512X	Cisco ASA5515X	Cisco ASA5516X	Cisco ASA5525X	Cisco ASA5545X	Cisco ASA5555X
Performance								
Max Stateful Firewall	**750Mbps**	**1Gbps**	**1Gbps**	**1.2Gbps**	**1.8Gbps**	**2Gbps**	**3Gbps**	**4Gbps**
Max AVC	200Mbps	450Mbps	300Mbps	500Mbps	850Mbps	1,1Gbps	1,5Gbps	1,75Gbps
Max AVC+NGIPS	125Mbps	250Mbps	150Mbps	250Mbps	450Mbps	650Mbps	1Gbps	1,25Gbps
Max IPSec VPN	100Mbps	175Mbps	200Mbps	250Mbps	250Mbps	300Mbps	400Mbps	600Mbps
Max IPSec/SSL VPN Peers	50	50	250	250	150	750	2500	5000
Capabilities								
Max Firewall Conns	50K	100K	100K	250K	250K	500K	750K	1M
Max Conns/Second	**5K**	**10K**	**10K**	**15K**	**20K**	**20K**	**30K**	**50K**
VLANs Supported	30	50	**10**0	100	100	200	300	500
Virtual Firewalls	-	-	**2-5**	**2-20**	**2-20**	**2-50**	**2-100**	**2-250**
HA Supported	A/S	A/A & A/S	A/A & A/S	A/A & A/S	A/A & A/S	A/A & A/S	A/A & A/S	A/A & A/S

www.cisco.com/go/asafps

Cisco FirePower NGFW
Platform Overview – High range sizing ASA/FirePower

	Cisco ASA SM For Cat6500	Cisco ASA 5585X	Cisco FirePower 4100 NEW!	Cisco FirePower 9300 NEW!
Performance				
Max Stateful Firewall	**20Gbps**	**4-40Gbps**	**20-60Gbps[1]**	**75-225Gbps[1]**
Max AVC	-	4,5-15Gbps	12-25Gbps[2]	25-100Gbps[2]
Max AVC+NGIPS	-	2-10Gbps	10-20Gbps[2]	20-90Gbps[2]
Max IPSec VPN	-	1-5Gbps	8-14Gbps[1]	15-54Gbps[1]
Max IPSec/SSL VPN Peers	-	5K-10K	10K-20K[1]	15K-60K[1]
Capabilities				
Max Firewall Conns	10M	0,5M-4M	10M-25M[1]	55M-70M[1]
Max Conns/Second	**300K**	**50K-350K**	**150K-350K[1]**	**600K-2.5M[1]**
VLANs Supported	1000	1024	1024	1024
Virtual Firewalls	**2-250**	**2-250**	**2-250[1]**	**2-250[1]**
HA Supported	A/A & A/S	A/A & A/S	A/A & A/S	A/A & A/S

[1] ASA Code
[2] FirePower Threat Defense Code

Cisco FirePower NGFW
Platform Overview - Licensing

Cisco TALOS

| Network Firewall | Identity | App Control | WWW URL Filtering* | Security Intel* | NGIPS* | PDF NGMalware* | Management, Analytics and correlation* |

| Clustering/HA | Advanced VPN* | Built-in Network Profiling |
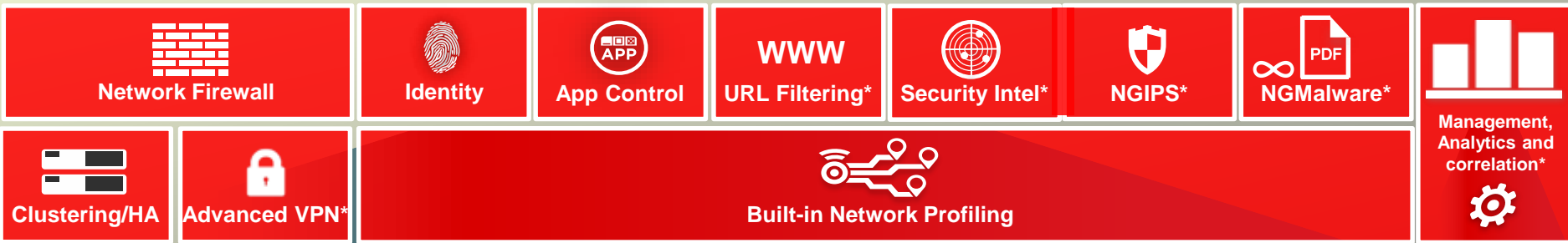
Cisco FirePower NGFW — Cisco FirePower MC

* License required

Cisco FirePower NGFW
Platform Overview - Advantages

SNORT
Auto-Tuning
Auto-False Positive red

Correlation
Reporting
IOC

Retrospection
Endpoint
Advanced Sandboxing

Transparent Mode

ISE Integration

Open AppID

Talos Multivector

Cisco TALOS

| Network Firewall | Identity | App Control | WWW URL Filtering* | Security Intel* | NGIPS* | PDF NGMalware* | Management, Analytics and correlation* |

| Clustering/HA | Advanced VPN* | Built-in Network Profiling |

Cisco FirePower NGFW

Cisco FirePower MC

Clustering

Clientless VPN
Transparent VPN

Context
Real vulnerability
Compliance

Cisco Anyconnect
AMP

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Cisco FirePower NGFW
Cisco Anyconnect

Simple & secure access anywhere on any device

Market Leader over 130M licenses endpoints & 60,000 customers

Cisco Anyconnect

802.1x (ISE) [1]

VPN (ASA) [1]

Network Visibility [2*]

Posture (ASA/ISE) [2*]

Anti-Malware (AMP) [1*]

Cloud Proxy (CWS) [1*]

OpenDNS **

www.cisco.com/go/aanyconnect

Cisco FirePower NGFW
Platform Overview - Upgrade

FirePOWER Services for 5500-X* (Software)

ASA5500X-SSD120=

FirePOWER Services for 5585-X (Blade)

ASA-SSP-SFRxx-K9=

* ASA-5512X, ASA-5515X, ASA-5525X, ASA-5545X, ASA-5555X

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Cisco FirePower NGFW
Unified Hardware

NGFW - Cisco ASA	NGIPS - Cisco FirePower	APT - Cisco AMP

Cisco ASA 5500-X	Cisco ASA 5585-X	Cisco FirePower 4100/9300

Unified Management

Unified Management*

Unified Management
Up to 225Gbps
FW, NGFW, NGIPS, AMP, DDoS..

99.2%

Highest Security Effectiveness
- NSS Labs Breach Detection Test 2015

Cisco <1 DAY
INDUSTRY ~100 DAYS

Breach Detection Time
- 2016 Annual Security Report

FIRST YEAR $184K

Savings from Security Automation
- SANS Institute

*Roadmap

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Cisco FirePower NGFW
Unified Software
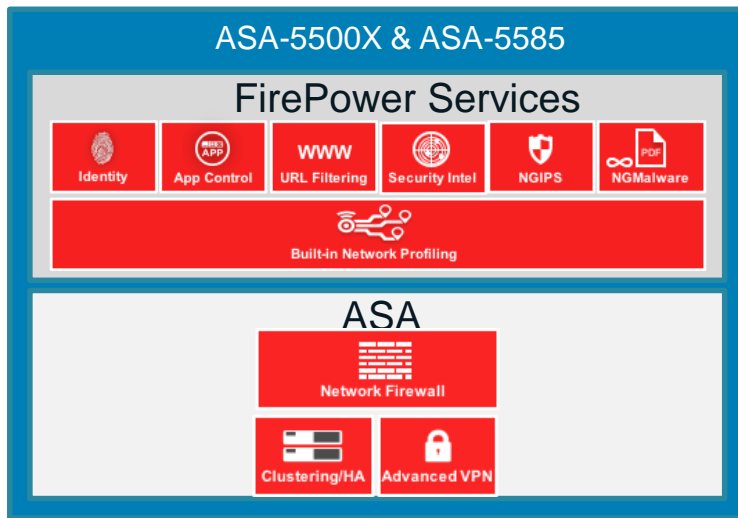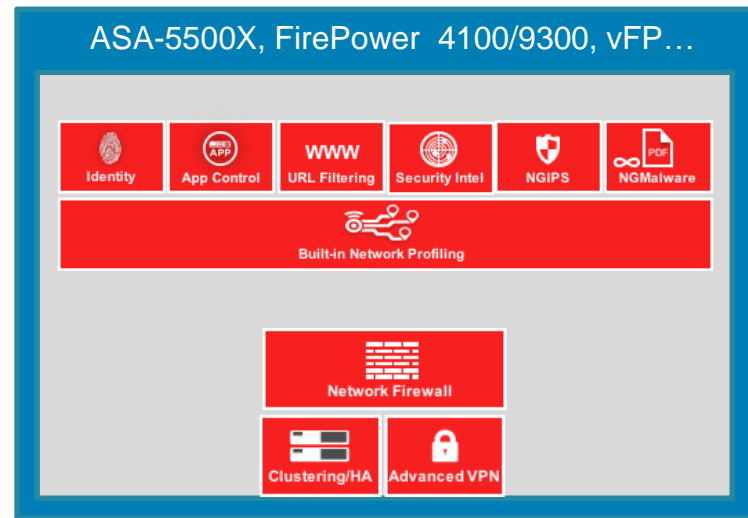
NEW!

ASA with FirePower Services

ASA-5500X & ASA-5585

FirePower Services

Identity	App Control	WWW URL Filtering	Security Intel	NGIPS	NGMalware

Built-in Network Profiling

ASA

Network Firewall

Clustering/HA | **Advanced VPN**

2014

FirePower Threat Defense*

ASA-5500X, FirePower 4100/9300, vFP…

Identity	App Control	WWW URL Filtering	Security Intel	NGIPS	NGMalware

Built-in Network Profiling

Network Firewall

Clustering/HA | **Advanced VPN**

2016

99.2%

Highest Security Effectiveness
- NSS Labs Breach Detection Test 2015

Cisco **<1 DAY**
INDUSTRY **~100 DAYS**

Breach Detection Time
- 2016 Annual Security Report

FIRST YEAR **$184K**

Savings from Security Automation
- SANS Institute

www.cisco.com/go/asafps

Cisco FirePower NGFW
Unified Management

NEW!

Cisco Firepower Management Center

Multitenant

www.cisco.com/go/asafps
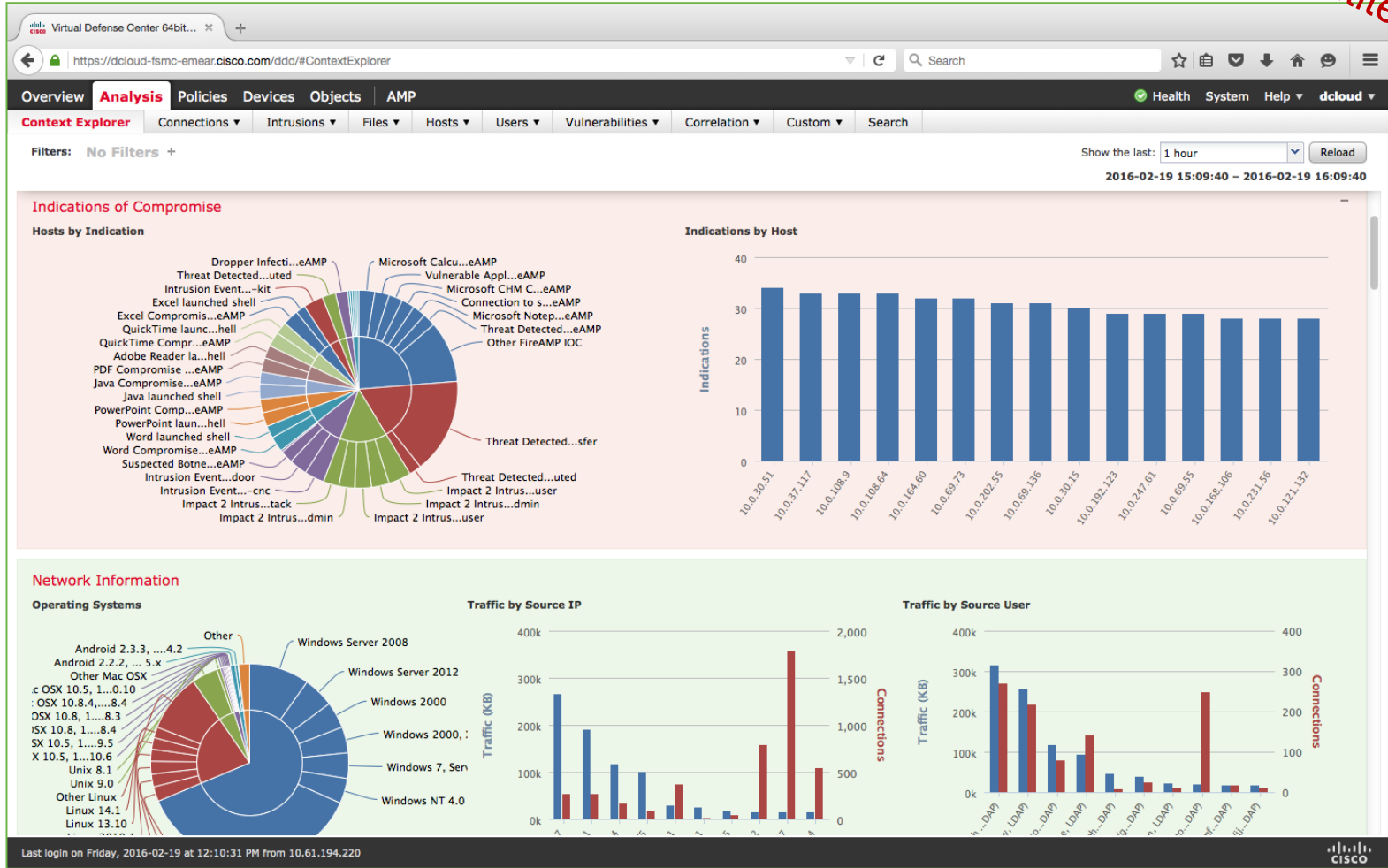
Cisco FirePower NGFW
Unified Threat Response