



**CAUTION**

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OF PRESENTATION***



# Ked' sa z koristi stáva lovec...

alebo ako sa pripraviť na lov

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**SOITRON\***

# Dôvernosc' informácií:

*Táto prezentácia je určená výhradne pre návštevníkov semináru*

***SOITRON DEFENSE 2018 (15. novembra 2018, Zochova chata)***

*Ako taká nesmie byť poskytovaná tretím stranám a to ani ako celok, ani žiadna jej časť. Mimo účel, na ktorý je určená nesmie byť rozmnožovaná a/alebo zasielaná mechanickou, fotochemickou alebo elektronickou cestou.*



**ISO 9001**  
LL-C (Certification)



**ISO 20000**  
LL-C (Certification)



**ISO 27001**  
LL-C (Certification)



**OHSAS 18001:2007**  
LL-C (Certification)



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Dokument	Keď sa z koristi stáva lovec...
Podnázov	alebo ako sa pripraviť na lov
Verzia	1. X5BF27DFA
Klasifikácia	SELECTED AUDIENCE
OID	1.3.158.35955678.299039. X5BF27DFA

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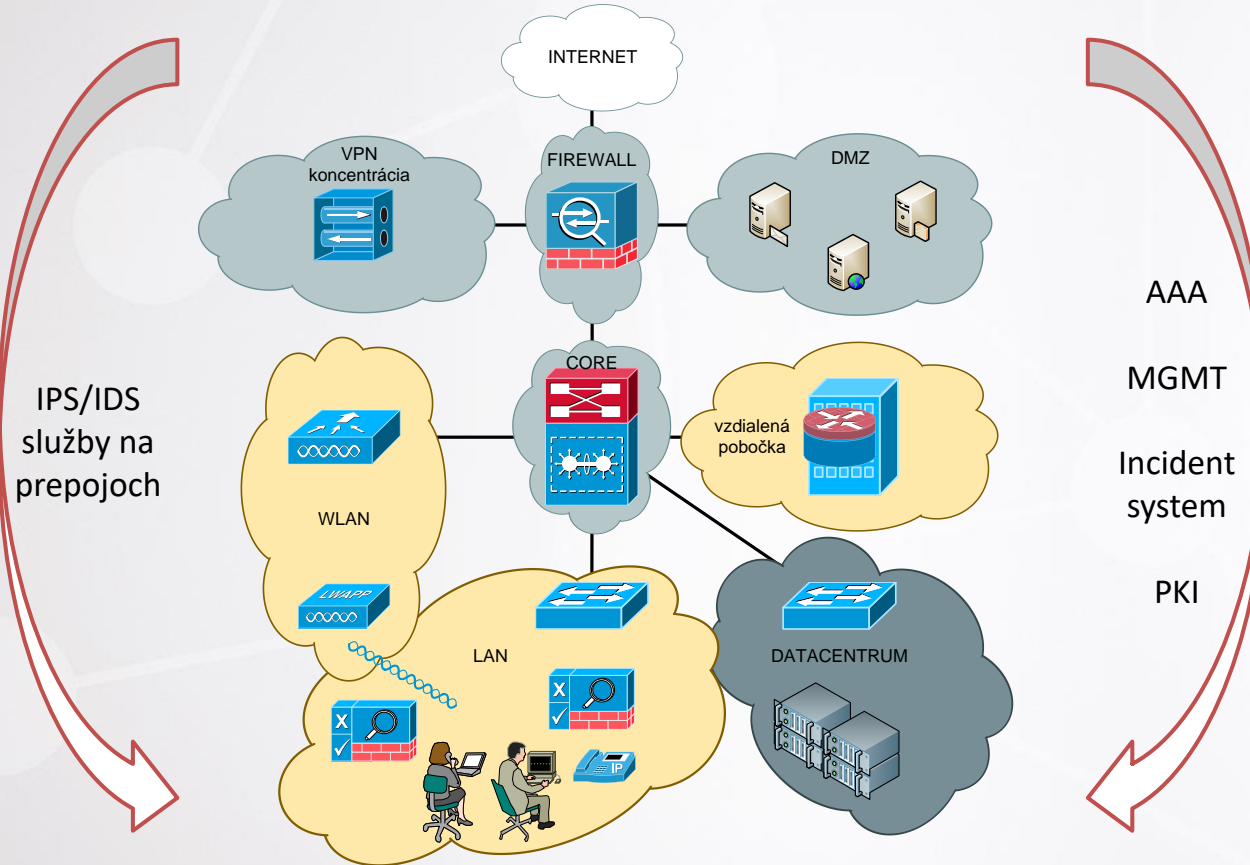
Vypracoval	Maroš Rajnoch
Konzultant	N/A
Preveril	N/A
Schválil	Stanislav Smolár

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## CISCO Self-Defending Networks (SDN)

is a CISCO concept of Security from 2004



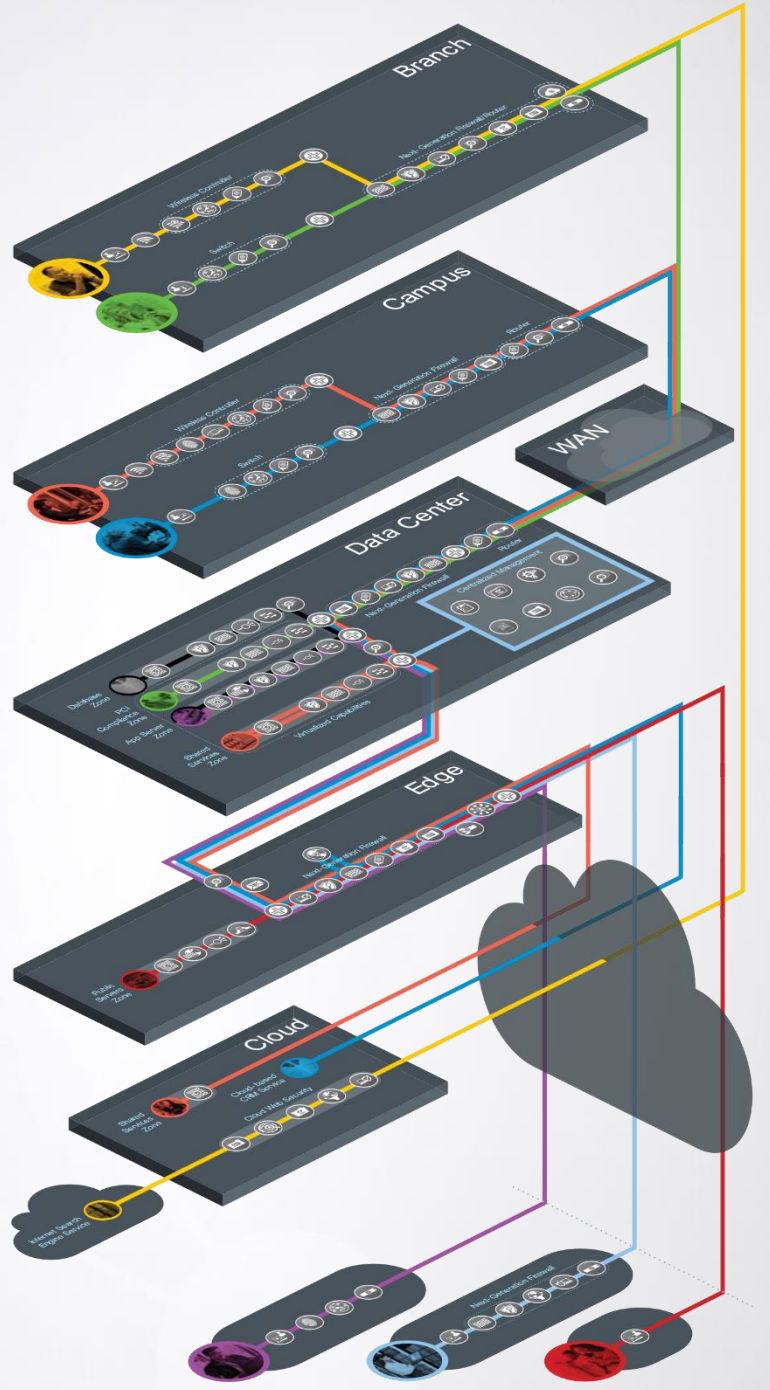
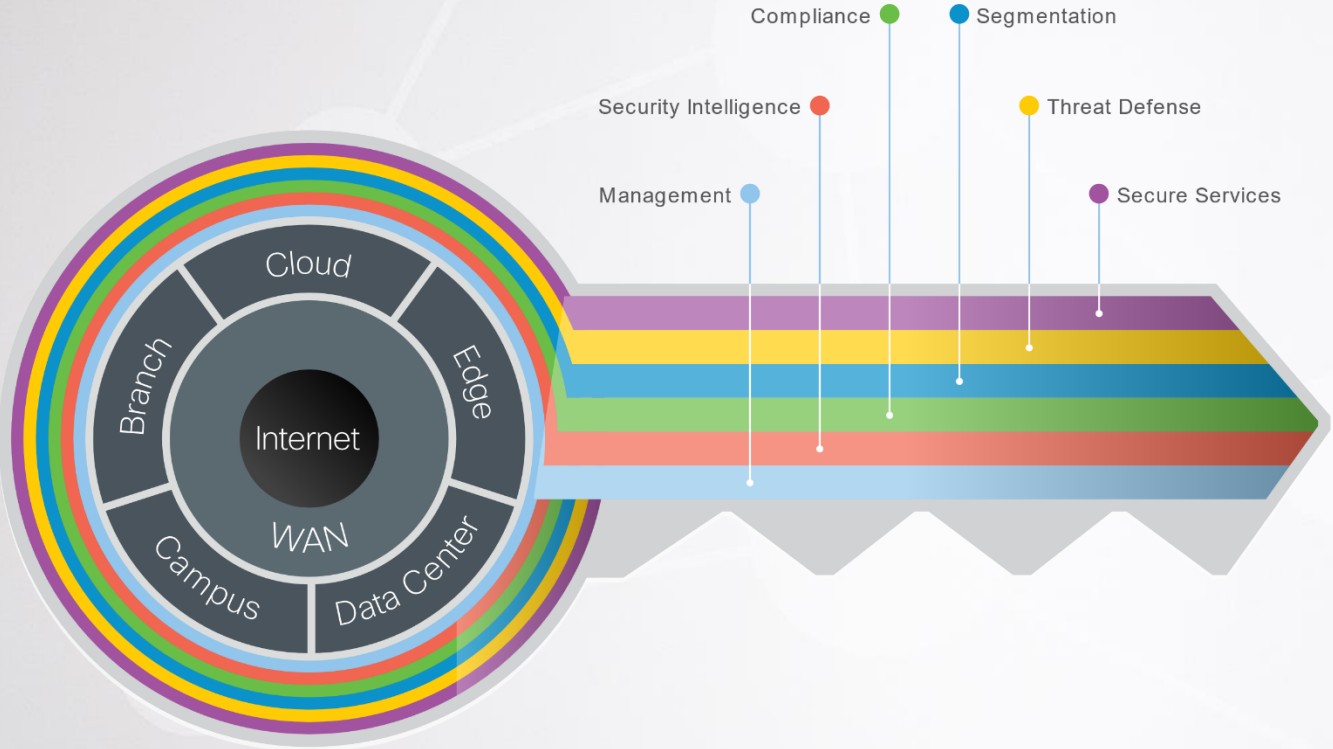
SDN uses 3 principles:

- **integration**  
every network element is a point of security

- **collaboration**  
different points of network cooperate to identify and mitigate threats

- **adaptation**  
adaptations for new threats

SAFE is a secure architectural framework example for business networks. Critical challenges have been deployed, tested, and validated at Cisco. These solutions provide guidance, complete with configuration steps, to ensure effective and secure deployments for our customers.



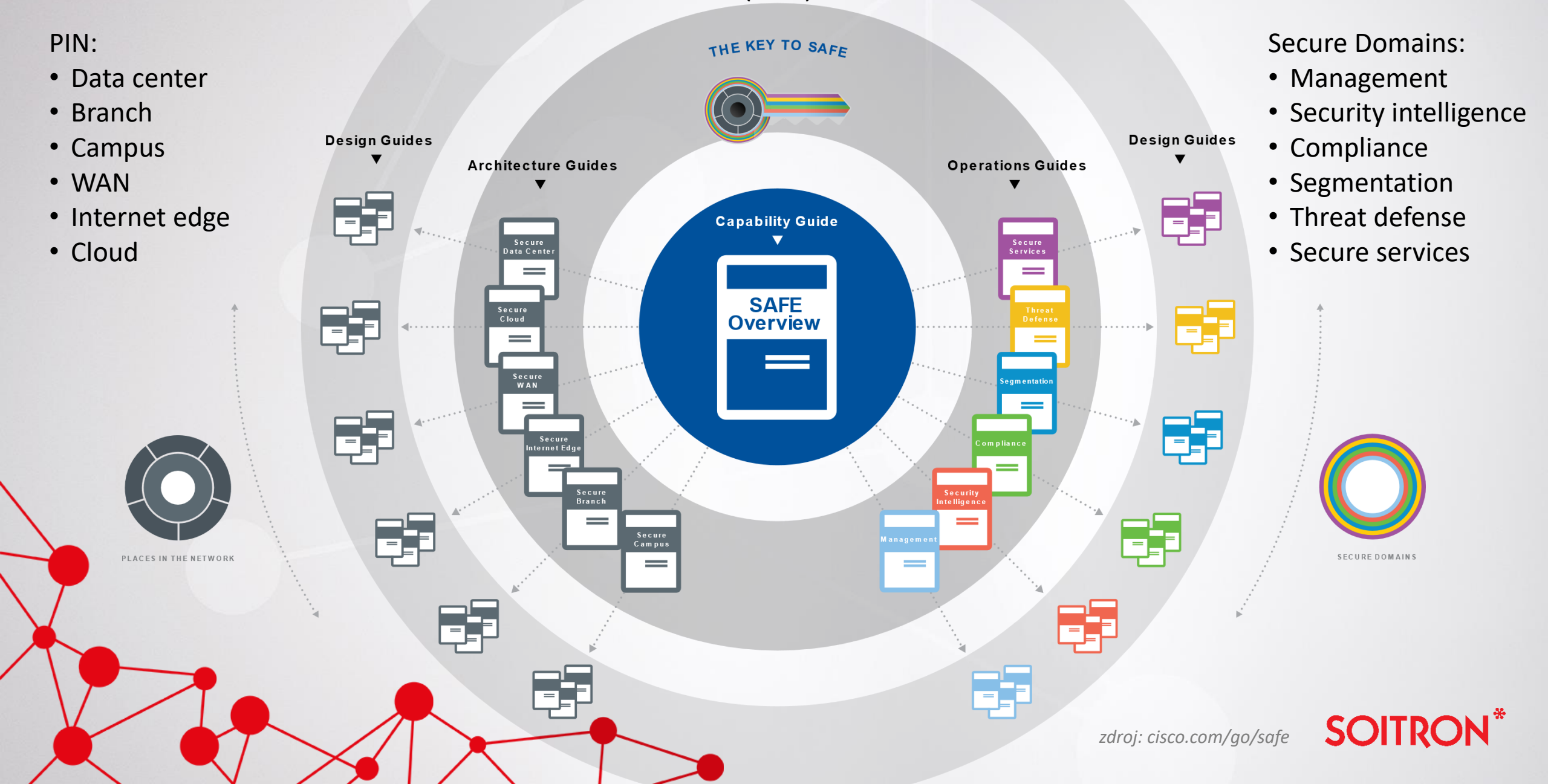
# The SAFE Key organizes security by using two core concepts: Places in the Network (PINs) and Secure Domains.

## PIN:

- Data center
- Branch
- Campus
- WAN
- Internet edge
- Cloud

## Secure Domains:

- Management
- Security intelligence
- Compliance
- Segmentation
- Threat defense
- Secure services





WHITE PAPER

# SAFE: A Security Blueprint for Enterprise Networks



### Authors

Sean Convery (CCIE #4232) and Bernie Trudd (CCIE #1884) are the authors of this White Paper. Sean and Bernie are both members of the VPN and Security Architecture Technical Staff at Cisco's Enterprise Line of Business.

### Abstract

The principle goal of Cisco's secure blueprint for enterprise networks (SAFE) is to provide information to interested parties on designing and implementing secure networks. SAFE network designers considering the security requirements of their network. SAFE takes an approach to network security design. This type of design focuses on the expected threats of mitigation, rather than on "Put the firewall here, put the intrusion detection system there". This results in a layered approach to security where the failure of one security system is not a compromise of network resources. SAFE is based on Cisco products and those of its partners.

This document begins with an overview of the architecture, then details the specific modules of the actual network design. The first three sections of each module describe the traffic flow, expected threats with basic mitigation diagrams. Detailed technical analysis of the design more detailed threat mitigation techniques and migration strategies. Appendix A details SAFE and includes configuration snapshots. Appendix B is a primer on network security for those unfamiliar with basic network security concepts are encouraged to read this section before using the document. Appendix C contains glossary definitions of the technical terms used in this document for the included figures.

This document focuses heavily on threats encountered in enterprise environments. Network designers who understand these threats can better decide where and how to deploy mitigation technology. Understanding of the threats involved in network security, deployments tend to be incorrect, too focused on security devices, or lack threat response options. By taking the threat-mitigation approach, this document should provide network designers with information for making sound network security choices.



## Cisco TrustSec™ 2.0: Design and Implementation Guide

CISCO VALIDATED DESIGN

## Network as a Sensor with Stealthwatch and Stealthwatch Learning Networks for Threat Visibility and Defense Deployment Guide

February 2017







## Cisco Cyber Threat Defense v2.0

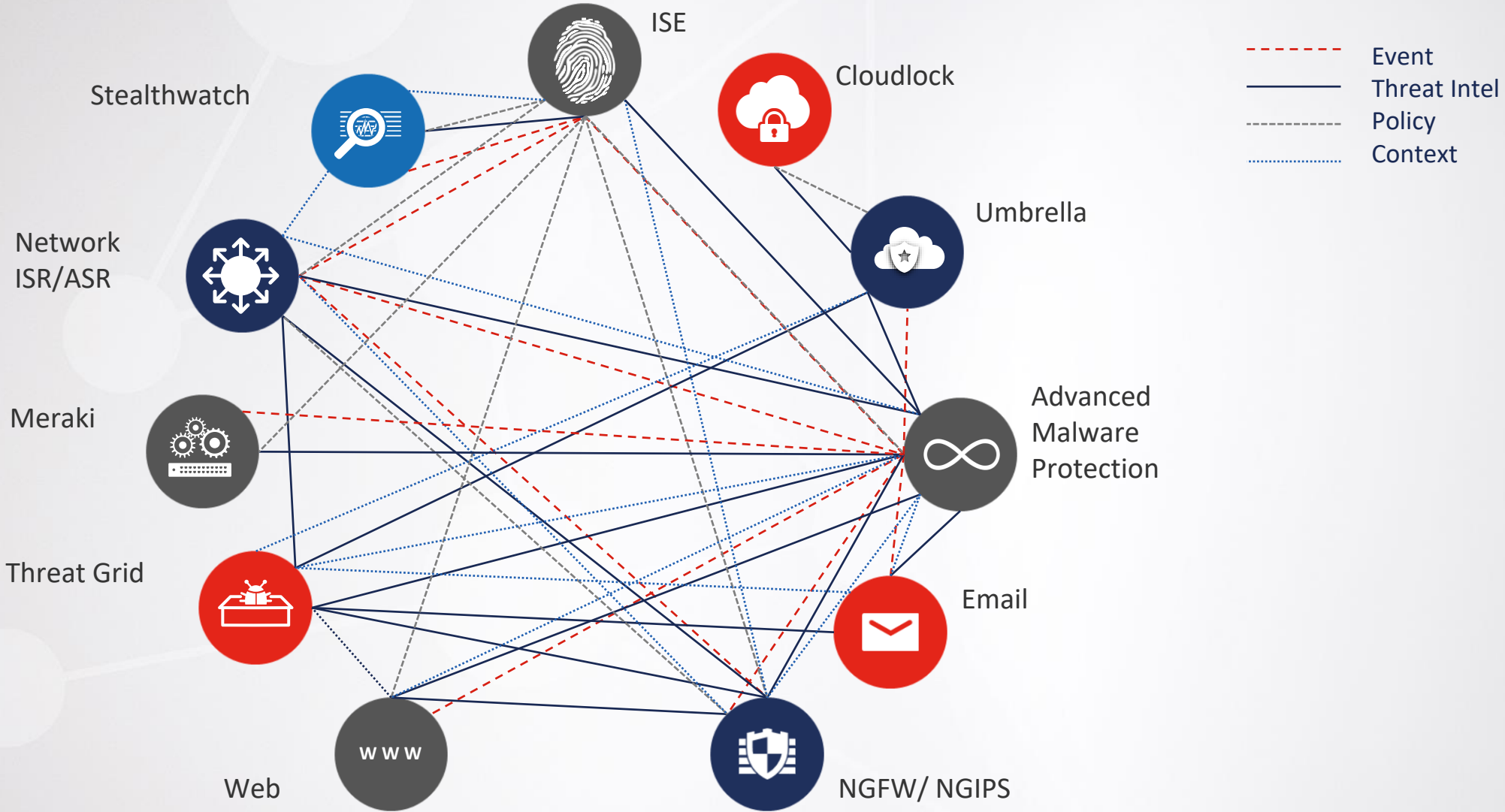
Design Guide  
Last Updated: July 23, 2015



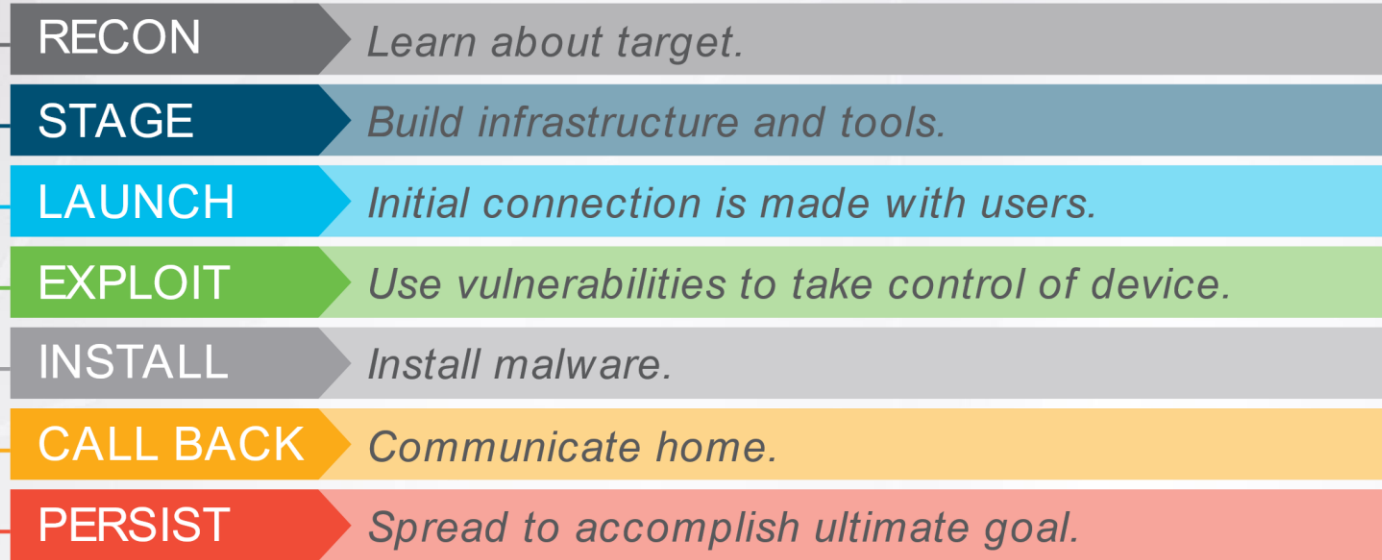
## SAFE Design Guide

Security Domain: Threat Defense  
Use Case: Cisco Ransomware Defense  
Added Advanced - Updated August 2017

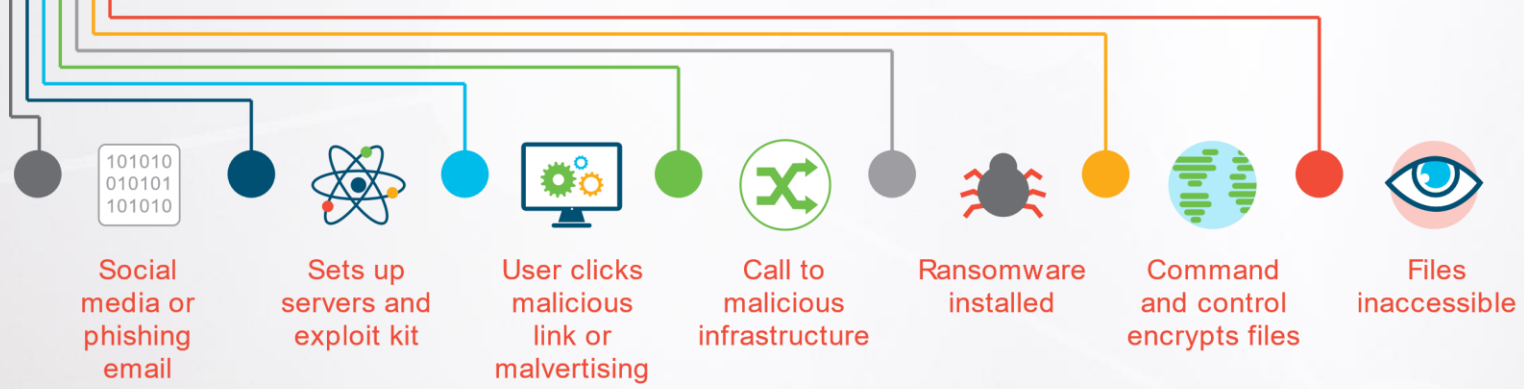
# Summarizing Cisco Security Product Integration – An integrated portfolio creates value for customer!



# Most cyber attacks follow this general flow:

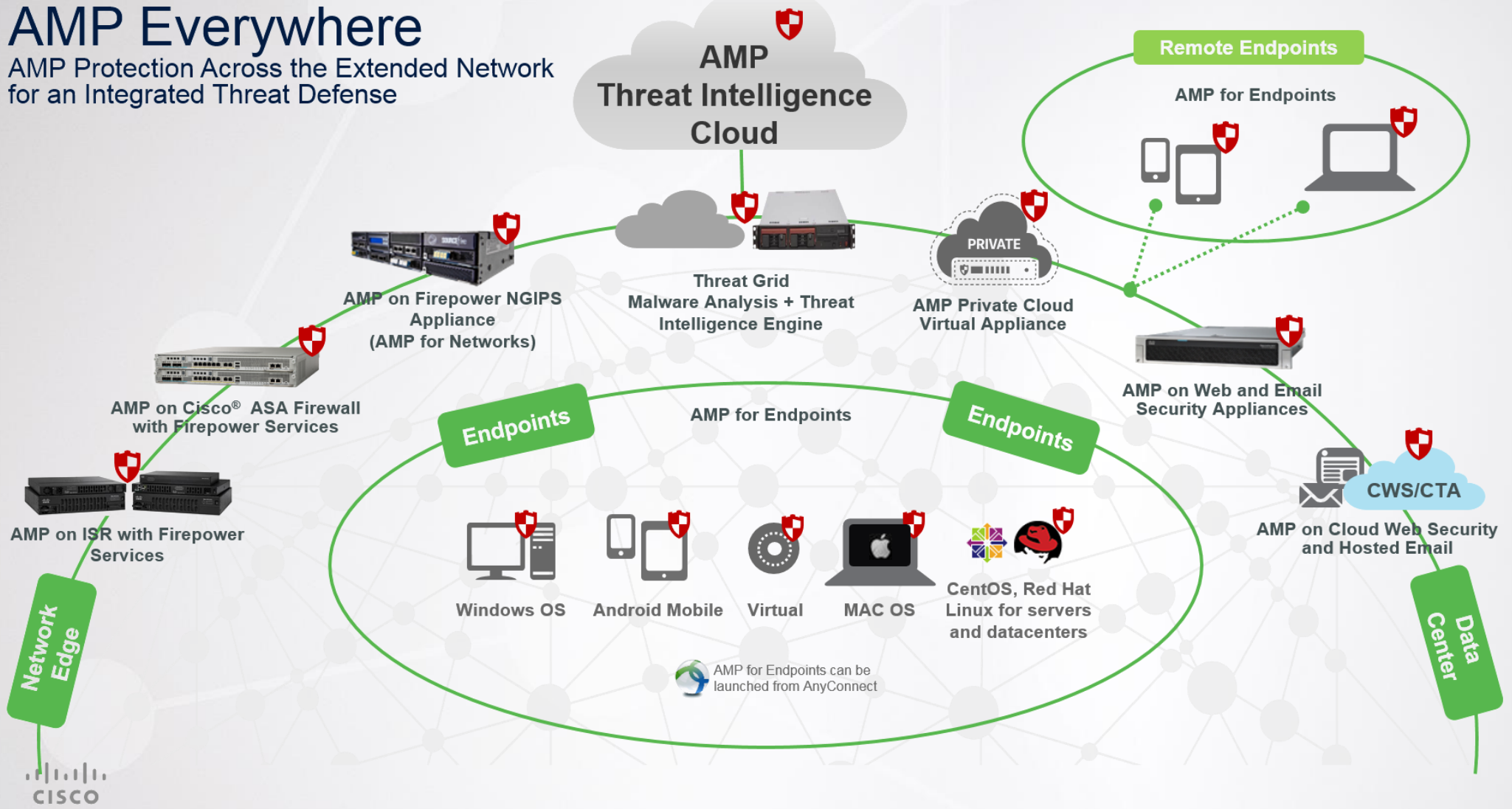


For example, this is the ransomware kill chain:



# AMP Everywhere

AMP Protection Across the Extended Network  
for an Integrated Threat Defense



# Cisco Threat Response – detekcia, investigácia a remediácia bezpečnostných incidentov

Threat Response **Investigate** Snapshots Intelligence Modules
threatlab+6@cisco.com

New Investigation
Edit This Investigation
Take Snapshot
11 of 11 enrichments complete with 0 alerts.

**5** Targets

**11** Observables

**21** Indicators

**0** Domains

**11** File Hashes

**0** IP Addresses

**0** URLs

**4** Modules

Relations Graph Showing 114 nodes

**Clean SHA256**  
d5bc504277172be5c54...

Last targeted Demo\_Qakbot\_1 on Sep 5, 2018

First Seen Aug 6, 2018 →

HOSTNAME: Demo\_AMP\_Intel

Last Seen Sep 5, 2018 →

HOSTNAME: Demo\_Qakbot\_1

Indicators: W32.GenericKD:Malwaregen.21.d0.12

Observables

**edb1ff2521fb4bf748111f92786d260...**  
**Malicious SHA256**

My Environment Global

2 Sightings in My Environment

First: Aug 16, 2018  
Last: Aug 16, 2018

Judgements (58) Verdict (1) Sightings (3) Indicators (5)

Module	Disposition	Reason	Source	Sev.	Conf.	TLP	Expiration
VirusTotal	Malicious	Panda 4.6.4.2 (update...	VirusTotal	High	High	White	Indefinite
VirusTotal	Malicious	GData A:25.18297B:2...	VirusTotal	High	High	White	Indefinite
VirusTotal	Malicious	AhnLab-V3 3.13.1.21...	VirusTotal	High	High	White	Indefinite
VirusTotal	Malicious	NANO-Antivirus 1.0.1...	VirusTotal	High	High	White	Indefinite
VirusTotal	Malicious	MicroWorld-eScan 14...	VirusTotal	High	High	White	Indefinite
VirusTotal	Malicious	ESET-NOD32 17969 (...)	VirusTotal	High	High	White	Indefinite

Show 52 more

Sightings Timeline

My Environment Global

102 Sightings in My Environment

First: Aug 6, 2018  
Last: Sep 5, 2018

**Cisco AMP dnes poskytuje širokú výbavu na boj s malwarom.  
Je tak Vašou voľbou či sa z obete stane lovec – želám úspešný lov!**



**VS.**



...nasleduje ukážka P. Mesjara...



# Cyber Threat Response Lab v3.1

[https://dcloud-cms.cisco.com/demo\\_news/cyber-threat-response-lab-v3-1](https://dcloud-cms.cisco.com/demo_news/cyber-threat-response-lab-v3-1)

- *Scenario 1: HackMDs.com – Connectivity and Setup*
- *Scenario 2: Target Reconnaissance: Gathering Information about Vulnerabilities for a Future Attack*
- *Scenario 3: Smash and Grab: Attacking Your Public Network Services Through the Front Door*
- *Scenario 4: The Ransomware Scenario*
- *Scenario 5: Insider Threats: Moving Within to Obtain and Export Your Data*
- *Scenario 6: Compromised Hosts: Controlling Access and Monitoring for Malicious Threats*
- *Scenario 7: Centralized Defense*
- *Scenario 8: Cyber Threat Response Challenge*



PLÁN  
B