



Fireproofing your network Do your own security check !

Cisco Connect – 2016, October 19th



Cristian Ionescu, CTO, CCIE #20005

Cosmin Voicu, Senior Solution Engineer, CCIE #37076



1.

About us

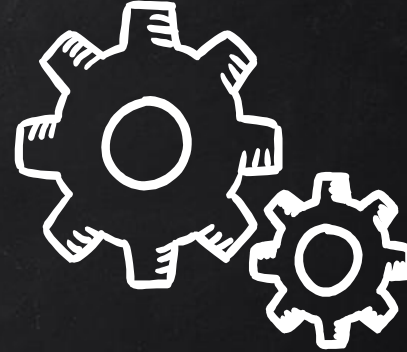


About us



IT Trainings

*Market leader
Over 14.000 students taught*



Top Integrator

*Over 1000 IT Integration projects
implemented in 9 years*



Historical Highlights



2007 Best
NetAcad EMEA

2007
BITTNET

2007
Cisco Premier

2011
LP of the Year

2014
Cisco Silver

2014 Decade of
Training Excellence

2015
1st IT / BVB

2016
Cisco Gold

Future is Bright



Besides Cisco

www.bittnet.ro/certifications



bittnet





Range of services

IT Training

Cisco

Microsoft

AWS, ITIL

Linux, Oracle, Citrix,
IBM

VMWare / 1500 other
topics

IT Solutions

Network Infrastructure
& Security

Servers, Datacenter &
Virtualization

Mobility & Unified
Communications

Hosted & Cloud
Software

IT Services

Consultancy & Design

Implementation &
Optimization

Maintenance & Support

Troubleshooting



2.

Today's story



The Story for today

Is your network protected?

Is all your traffic legit?

Challenges comes from every
direction





Your Assets



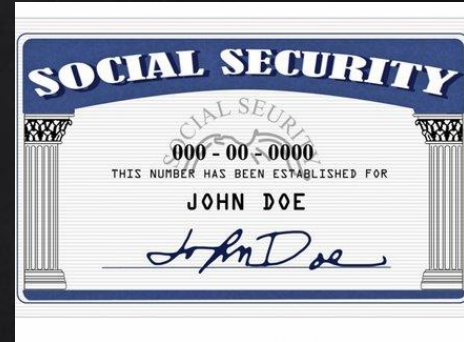
\$1 / acc
w 15 friends



\$2500
development



aaS
\$7/hour



\$1 / SSN



1,000,000,000,00

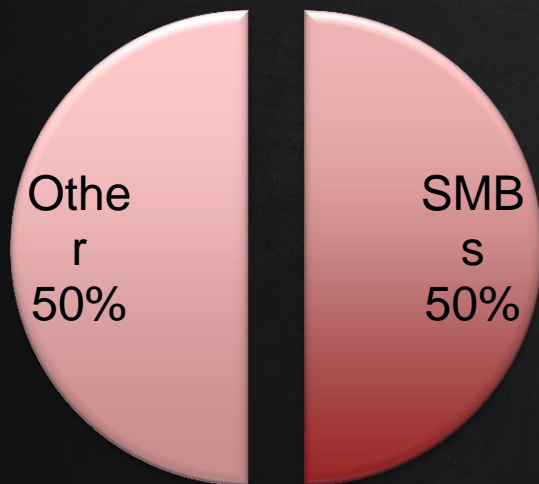
Market for cyber criminals

0

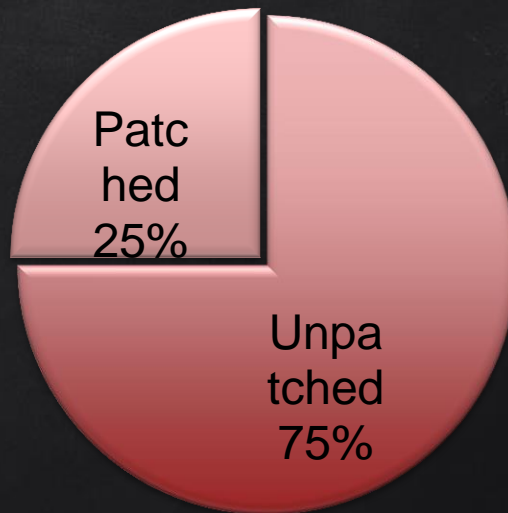


The threat: record of mega breaches in 2015

Targeted Attacks



Website Vulnerabilities



125% increase in attacks





The threat: record of mega breaches in 2015



67% OF Victims were notified by an external entity



So, how do organizations address this?



We are all saying it will not happen to me, until **IT DOES**



3.

Case study



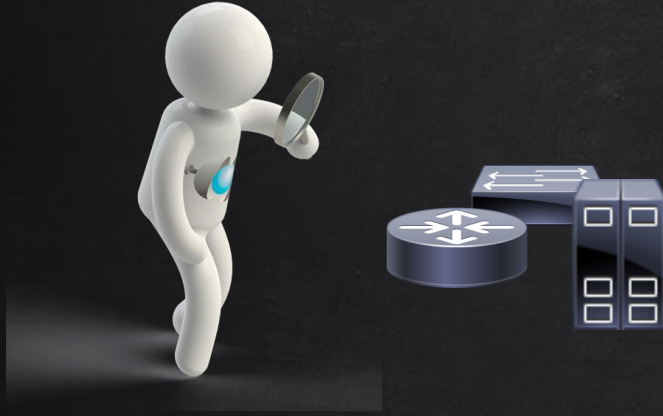
Customer call



- ✓ Got oversize bill from voice provider
- ✓ Worried that somebody is stealing
information



Bittnet Approach



- Assess the existing infrastructure
- Analyze the traffic flows

- Select the appropriate tool, best suited to customer's network
- Prepare the network for the integration of FMC





The Tools

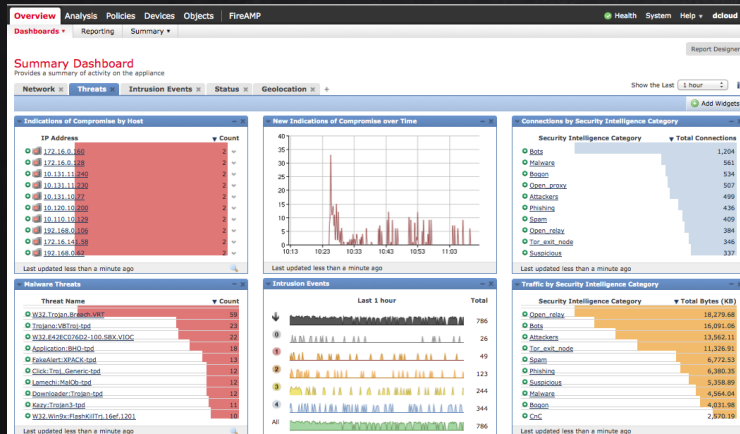
Cisco ASA5512-X with FirePOWER

- ✓ SFR version 6.0.1
- ✓ Control, Protect, URL Filtering & AMP licenses



Firepower Management Center

- ✓ FMC version 6.0.1





Plugging In

- Non-invasive integration without any change to the logical or physical topology
- Mirror port carrying Internet traffic before NAT in both directions
- ASA must be in Transparent mode

```
interface GigabitEthernet0/0
  description *** To Switch SPAN Port ***
  no nameif
  traffic-forward sfr monitor-only
  no shutdown
```



Configuring the FMC

Identify users with AD integration
and user agent

Rule referring URL category/reputation in
order to get URL statistics

File policy to scan for malware

Security Audit
Enter a description

Identity Policy: [EnterpriseAD](#) SSL Policy: [None](#)

Rules Security Intelligence HTTP Responses Advanced

Filter by Device Add Category Add Rule Search Rules

#	Name	Source Zones	Dest Zones	Source Networks	Dest Networks	VLAN Tags	Users	Applications	Src Ports	Dest Ports	URLs	ISE Attrib...	Action							
▼ Mandatory - Security Audit (1-2)																				
1	Allow music	any	any	any	any	any	any	any	any	any	any	Malware Site: any	✓ Allow	🛡️	📁	📄	0			
2	Internet traffic	any	any	any	any	any	any	any	any	any	any	any	✓ Allow	🛡️	📁	📄	0			
▼ Default - Security Audit (-)																				
There are no rules in this section. Add Rule or Add Category																				
Default Action												Intrusion Prevention: Security Over Connectivity						▼	\$	📄

Intrusion policy to inspect traffic. Security over
Connectivity to get more events

Log at the end of connection for
complete session data



First findings



- Four hosts are infected with malware and connected to Command & Control Centers (marked with IoC)



- Two of them have soft phones installed



- Correlate with Call Manager logs



- Identified host making rogue calls



Remediation



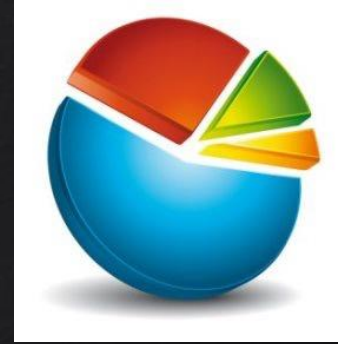
- ✗ Configure the customer's network to use OpenDNS
- ✗ Configure access code for international calls
- ✗ Implement time-based policy for international calls
- ✗ Clean infected hosts with AMP for Endpoints





Other key points

- ✗ YouTube and Torrents taking up a large portion of bandwidth
- ✗ Hosts visiting malicious URLs



- Some employees are using anonymizing services (e.g. Hola, Squid), possibly to evade IT policies
- DoS attacks on Internet exposed web servers



Recommendations

✗ A redesign to better segment the network and protect the valuable resources

✗ Migrate to Cisco ASA with FirePOWER services for the following benefits:

✗ SSL remote access VPN with AnyConnect

✗ Migrate to AMP for Endpoints, a more efficient tool than the traditional



- Real-time protection against ever evolving malware
- Highly effective threat prevention with industry leading IPS
- Take control over the network with unprecedented visibility into applications, hosts and users provided by Firepower Management Center



Run your own check-up

- ASA with FirePOWER and TAMC license bundle (demo licenses available)
- Firepower Management Center VM or appliance



- Go to Reporting tab in FMC
- Choose an existing template
- Customize your own template
- Generate the report

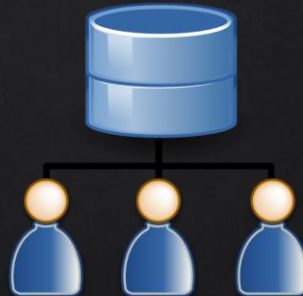


Drawbacks

Proxy servers



No AD, no ID



SSL Encryption





Getting attacked

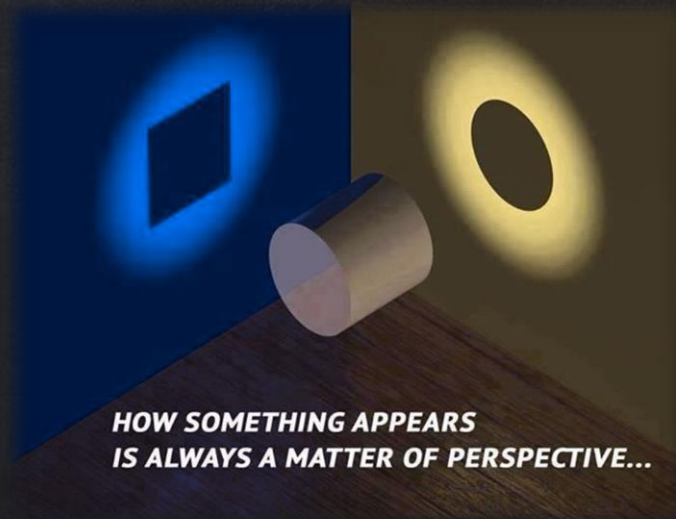
~~If~~

When

Are you ready to make a stand?

Check your network with





Bittnet Systems SA

Bucharest, Romania | 7-11 Iuliu Maniu , 6th District

Cluj-Napoca, Romania | Impact Hub, Building A, 21 Garii Str.,

E-mail: askformore@bittnet.ro | Web: www.bittnet.ro