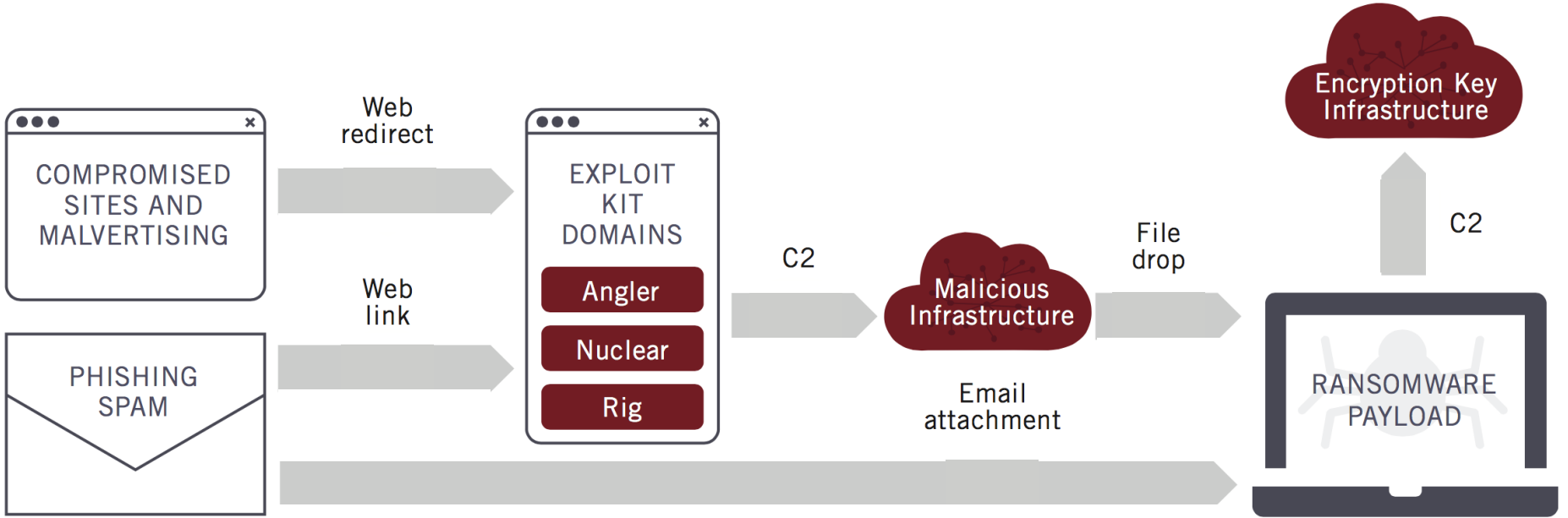




Defending Against Ransomware

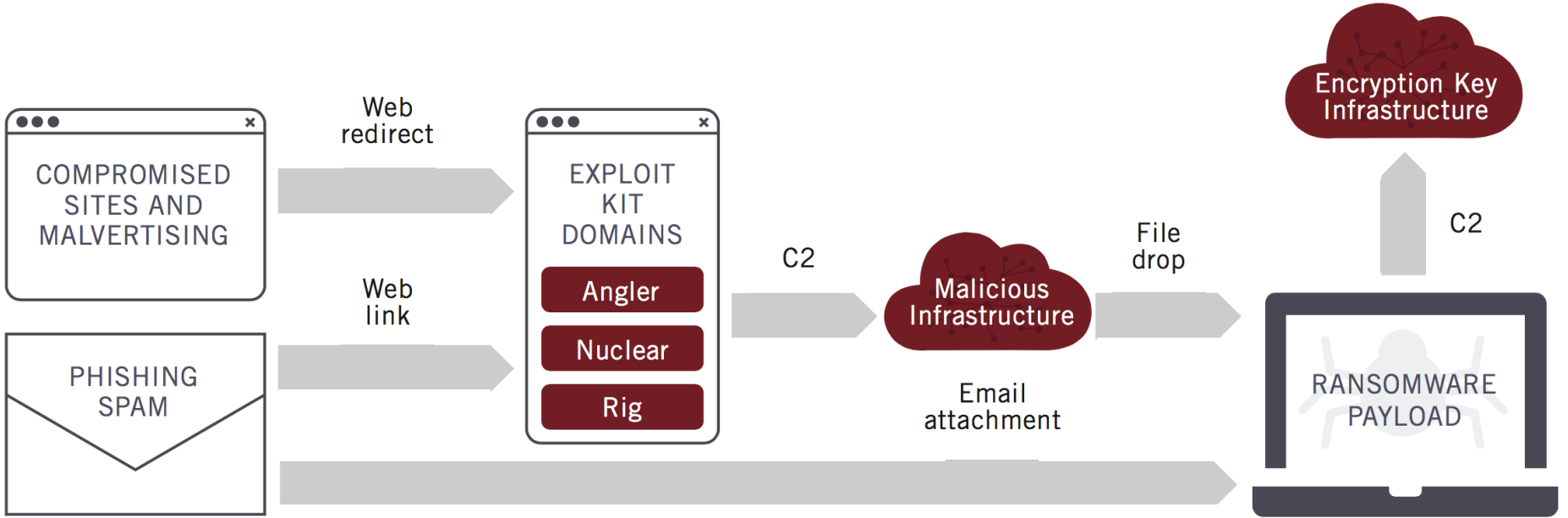
Meg Diaz
OpenDNS Products
July 21, 2016




Encryption C&C

Payment MSG

NAME	DNS	IP	NO C&C	TOR	PAYMENT
Locky	●	●			DNS
SamSam			●		DNS (TOR)
TeslaCrypt	●				DNS
CryptoWall	●				DNS
TorrentLocker	●				DNS
PadCrypt	●				DNS (TOR)
CTB-Locker	●			●	DNS
FAKBEN	●				DNS (TOR)
PayCrypt	●				DNS
KeyRanger	●			●	DNS



 Blocked by OpenDNS Umbrella

 Blocked by Cisco AMP for Endpoints



Blocking Ransomware: Real World Example with a Locky Domain

glsindia[.]com (detection Date: 15/03/2016)

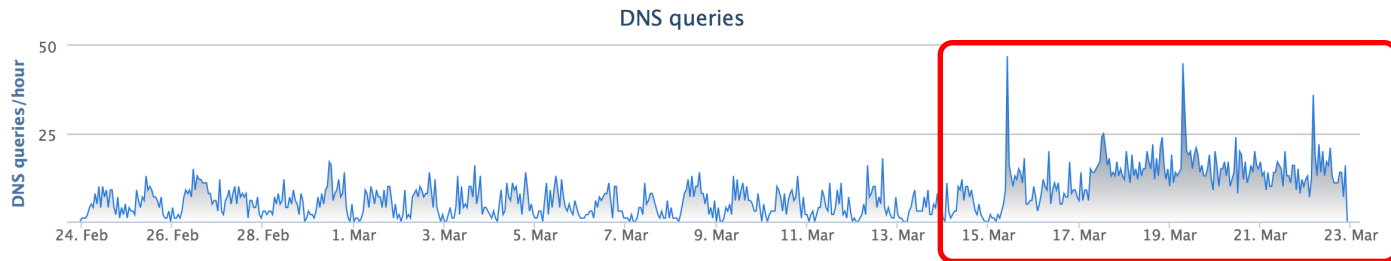
DETAILS FOR GLSLINDIA.COM

This domain is currently in the OpenDNS Security Labs block list

Search in Google

Search in VirusTotal

This domain is associated with the following type of threat: Dropper

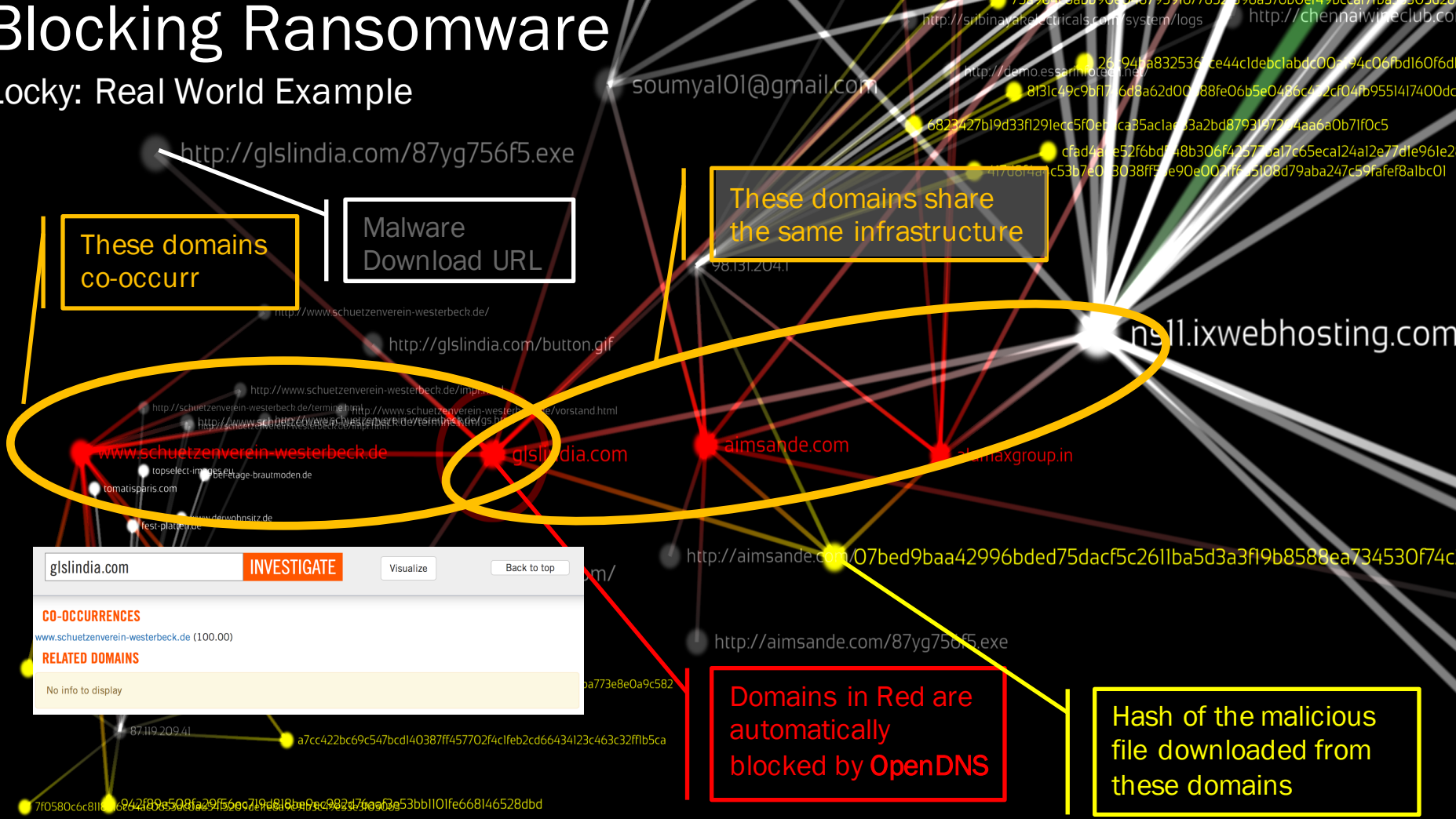


DOMAIN TAGGING

Period	Category	URL
Mar 18, 2016 - Current	Malware	http://glsindia.com/87yg756f5.exe
Mar 15, 2016 - Current	Malware	

Blocking Ransomware

Locky: Real World Example



These domains co-occur

Malware Download URL

These domains share the same infrastructure

Domains in Red are automatically blocked by OpenDNS

Hash of the malicious file downloaded from these domains

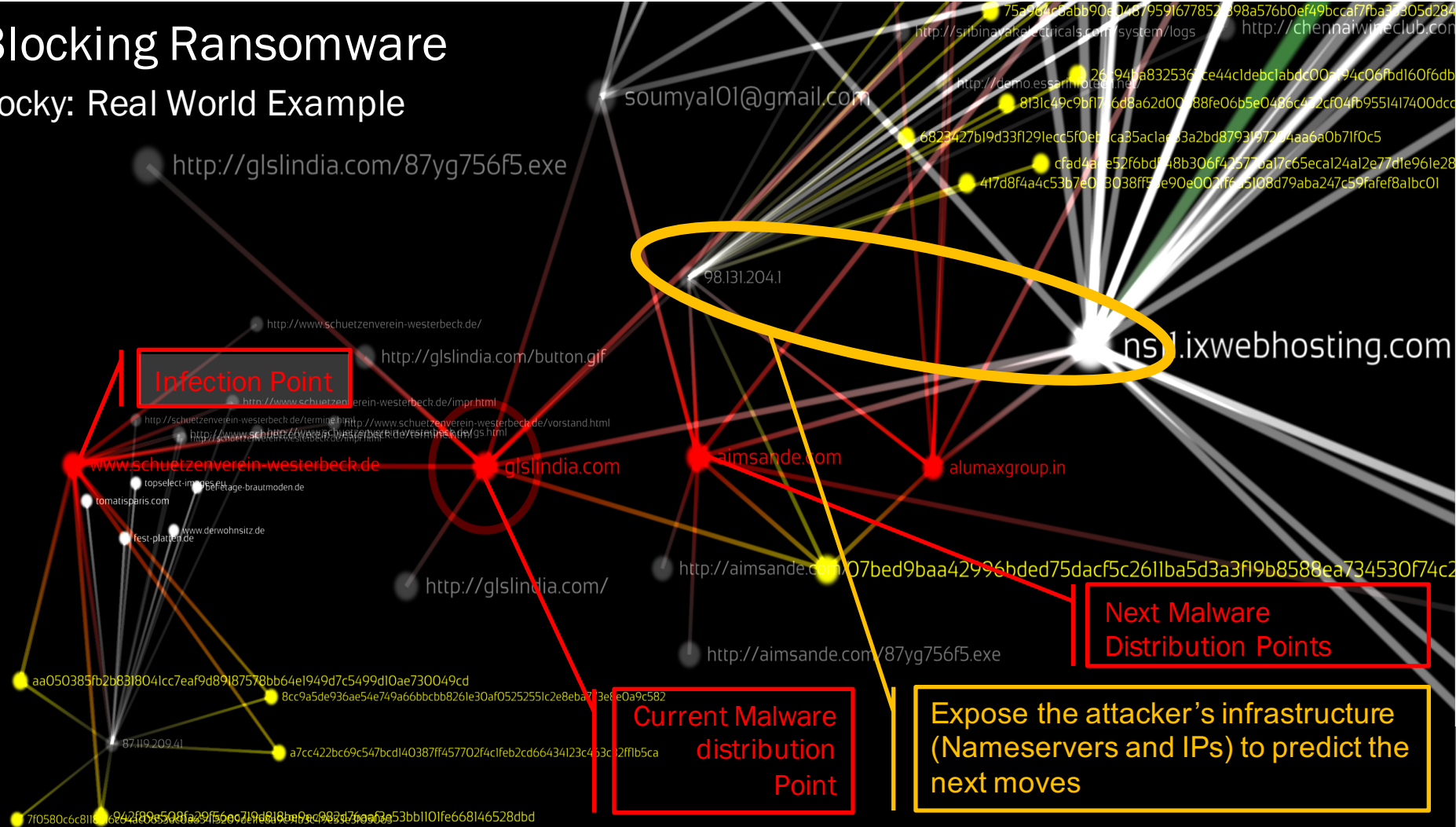
glslindia.com **INVESTIGATE** Visualize Back to top

CO-OCCURRENCES
www.schuetzenverein-westerbeck.de (100.00)

RELATED DOMAINS
No info to display

Blocking Ransomware

Locky: Real World Example



Infection Point

Current Malware distribution Point

Next Malware Distribution Points

Expose the attacker's infrastructure (Nameservers and IPs) to predict the next moves

Discover the Threats Before They Happen (1)

VT Link:

<https://virustotal.com/en/file/07bed9baa42996bded75dacf5c2611ba5d3a3f19b8588ea734530f74c2586087/analysis/>

(first VT submission: **2016-03-18** 16:51:45 three days OpenDNS)

File information



Identification Details Content Analyses Submissions ITW Behaviour Comments



Date	File name	Source	Country
2016-04-06 14:09:36	69b933a694710f8ceb314dc897a94cbe.exe	00625b5b (email)	FR
2016-03-29 23:07:06	69b933a694710f8ceb314dc897a94cbe.exe	00625b5b (email)	FR
2016-03-24 15:42:12	Malware_MSEXE_07bed9baa42996bded75dac...	92c8a5a8 (web)	BR
2016-03-22 21:54:19	69b933a694710f8ceb314dc897a94cbe.exe	00625b5b (email)	FR
2016-03-19 05:07:44	vti-rescan	77377302 (community)	PH
2016-03-19 01:50:42	69b933a694710f8ceb314dc897a94cbe	880cc5f3 (api)	KR
2016-03-18 22:51:12	69b933a694710f8ceb314dc897a94cbe	40787d1a (api)	KR
2016-03-18 21:18:56	69b933a694710f8ceb314dc897a94cbe	8ecc9426 (web)	EC
2016-03-18 19:51:40	69b933a694710f8ceb314dc897a94cbe	892a7459 (api)	KR
2016-03-18 16:51:45	69b933a694710f8ceb314dc897a94cbe	a1ac7217 (api)	KR

Download file

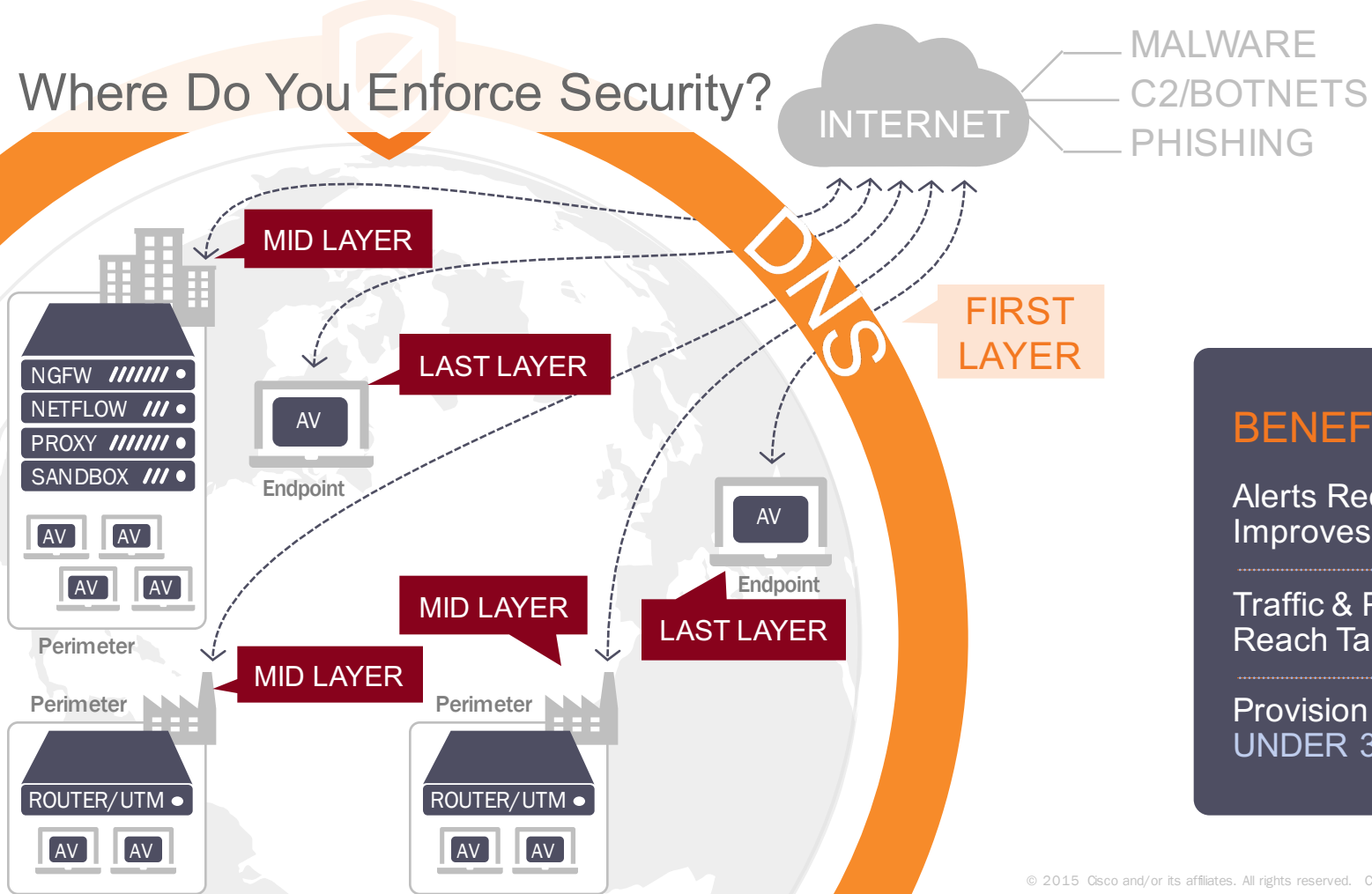
Re-scan file

Close

Best Practice Recommendations

- Solid patch management
- Non-native document rendering PDF + Office
- Users run as non-privileged users (no admin)
- Disable RDP
- Firewall enabled on endpoints
- Segmented and secured backups (tested)
- Encryption of backups and local documents
- Look into adding Endpoint Threat Detection & Response and DNS-layer security

Where Do You Enforce Security?



BENEFITS

Alerts Reduced 2-10x;
Improves Your SIEM

Traffic & Payloads Never
Reach Target

Provision Globally in
UNDER 30 MINUTES



Thank you.