SECURE SUMMITS / 2017

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Security in M&A: The Forgotten Son of Information Security

Marco Ermini, 2017

Agenda

- Why M&A need Cyber Security support?
- Aren’t they just ordinary business transactions?
- They seem to occur nearly every day, so what is so special about them that they require special security support, or any security support at all?
- What value does a security professional bring to the team?

The Academic Minute…

- Black's Law Dictionary defines mergers and acquisitions as the following:
  - Merger: The union of two or more corporations by the transfer of property of all, to one of them, which continues in existence, the others being swallowed up or merged therein…
  - Acquisition: The act of becoming the owner of a certain property…
  - Divestiture: to deprive; to take away; to withdraw

The Academic Minute…

- Acquisition of Total Assets
  - Liquidate
  - Break up and sell
  - Integrate
- Acquisition
- Merger
- Divestiture

The Academic Minute…

» It is all about…

1. Costs Control,
2. Market Share,
3. Regulatory Landscape
4. Others…

Business Drivers

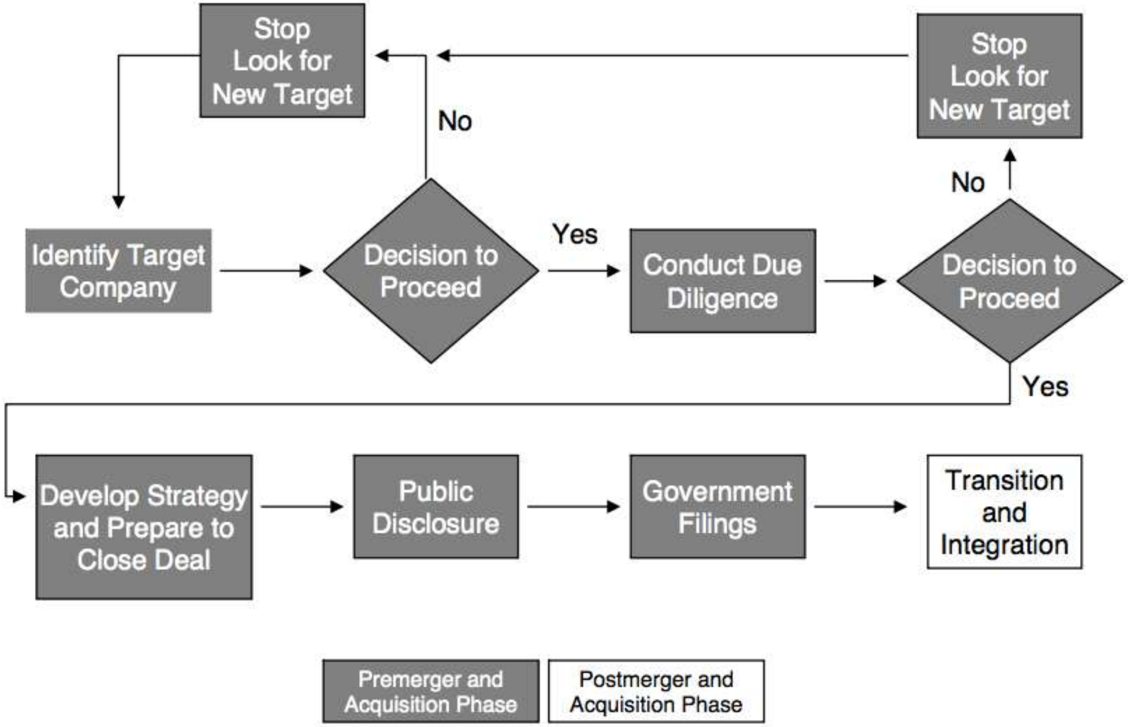
- Confidentiality
- Speed
- Business as usual
  - Zero Impact
- Informed Business Decision on Risk

Why M&A Fail?

- The acquiring company does not properly assess the value of the target company
- Inability of the acquiring company to successfully integrate the target company that leads to a failed acquisition

"It is well known in the M&A community that most acquisitions fail to create shareholder value, that is, they end up as a negative sum after paying acquisition premium and banker fees, impossible to get synergies to make up loss. The acquisitions that do create value are either a version of corporate venture capital (large company scooping tiny team), or mid-cap industrials buying a supplier. Few and far between…"

Typical M&A Diagram Flow



The Four “C”s

The Four Cs

- Capture
- Connect
- Combine
- Consolidate

Threats and Response

Scoping the Threats

- Special Interest Groups – gain from the Operation
  - Financial Criminals
  - Competitors
  - Acquisition / Merger Company
  - Disgruntled Employees
- General Interest Groups – gain from Impact
  - Script Kiddies / Hackers
  - Hacktivists / Terrorists
  - Spies

Scoping the Risks

- Publicity, raising profile — your interest gets attacker’s interest!
- Impact on:
  - Resources
  - Technologies
  - Infrastructure
- Disgruntled Employees
- Change in threat and risk model
- Absorbing unknown / Confusion
- Creating new attack vectors and window of opportunity
- Business drivers can force this the Security Manager very quickly
- **Are we all really equipped for change?**

The Security Manager

The Role of a Security Manager

- Protecting the effort itself
  - Confidentiality of the total effort
  - Confidentiality of the team's work
- Evaluating the security condition of the target company
  - Impact on the deal's value
  - Asking the right questions
- Providing subject matter expertise
  - Identify Security Requirements for the New Company
  - Controlling Rumors
  - Managing Global/International Aspects
  - "Team Consultant"
  - Low Hanging Fruits

Importance of Confidentiality

- » Premature Disclosure of Intent
  - Loss of key employees
  - Bidding wars
  - SEC Liability
  - Loss of Initiative
  - Loss of Goodwill
    - Target Company
    - 3rd Parties relationships
    - Customer relationships

Protecting the operation

- Unintended Release
- Unauthorized Release
- Protection from competitive intelligence efforts
- Documents Control

The Security Manager in action

- Preliminary background investigations
  - Collection of Open-Source information
- Due diligence
  - More in-depth look
  - Estimation of Costs of Cyber Security
- Operations security
  - Protect operational activities
  - Develop and implement protective measures
  - Appropriate for each phase of the acquisition

Preliminary Work

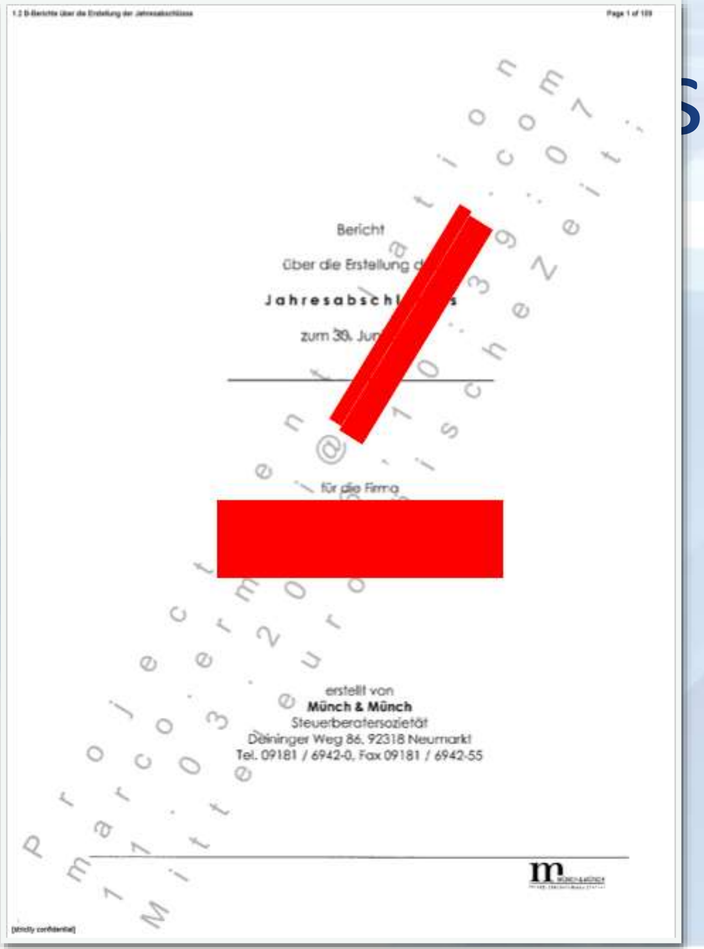
How can I verify an M&A Target candidate?

- You cannot *explicitly* test your acquisition’s candidate
- You cannot simply ask them for their vulnerability assessments’ results
- Not all companies have a structured and mature security program
- You cannot silently test them either

External Sources

- Professional Associations
- Service Providers
- Public (Open) Sources
- Job Applications/Job Postings

s look



Bericht

über die Erstellung d

Jahresabschl s

zum 30. Jun

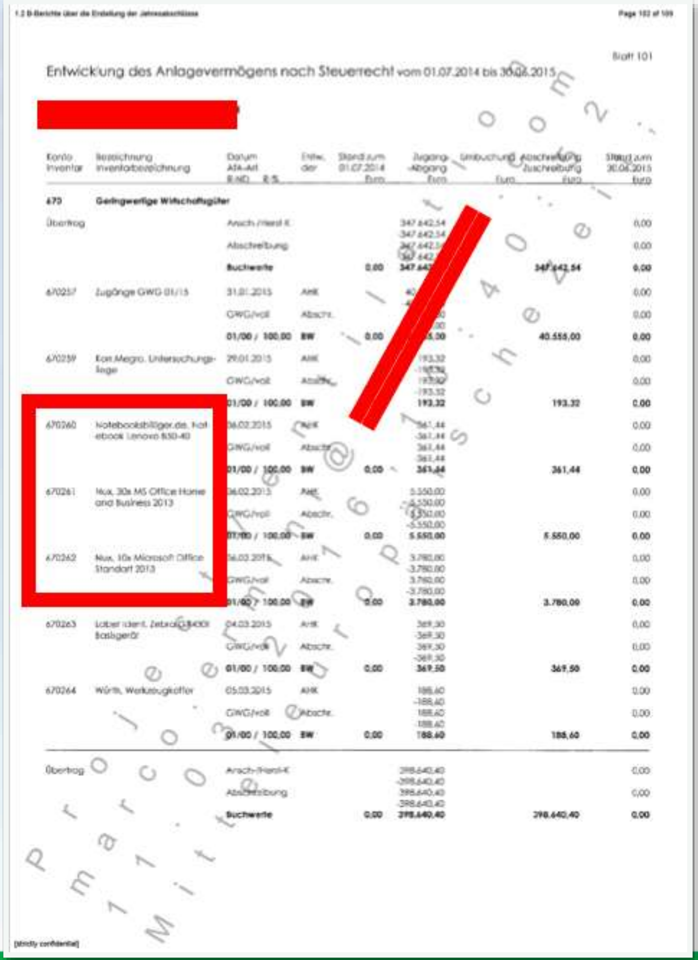
[redacted]

für die Firma

[redacted]

erstellt von
Münch & Münch
Steuerberatersozietät
Deininger Weg 86, 92318 Neumarkt
Tel. 09181 / 6942-0, Fax 09181 / 6942-55

[strictly confidential]



Blatt 101

Entwicklung des Anlagevermögens nach Steuerrecht vom 01.07.2014 bis 30.06.2015

[redacted]

Konto Inventar	Bezeichnung Inventarbezeichnung	Datum AfA-Art R.ND R.%	Entw. der	Stand zum 01.07.2014 Euro	Zugang -Abgang Euro	Umbuchung Euro	Abschreibung Zuschreibung Euro	Stand zum 30.06.2015 Euro
670	**Geringwertige Wirtschaftsgüter**							
Übertrag		Ansch./Herst.K.			347.642,54 -347.642,54			0,00
		Abschreibung			[redacted]			0,00
		Buchwerte		**0,00**	[redacted]		**347.642,54**	**0,00**
670257	Zugänge GWG 01/15	31.01.2015	AHK		[redacted]			0,00
		GWG/voll	Abschr.		[redacted]			0,00
		01/00 / 100,00	**BW**	**0,00**	[redacted]		**40.555,00**	**0,00**
670259	Kon.Megro. Untersuchungs-liege	29.01.2015	AHK		193,32 -193,32			0,00
		GWG/voll	Abschr.		193,32 -193,32			0,00
		01/00 / 100,00	**BW**	[redacted]	**193,32**		**193,32**	**0,00**
670260	Notebooksbilliger.de, Notebook Lenovo B50-40	06.02.2015	AHK		361,44 -361,44			0,00
		GWG/voll	Abschr.		361,44 -361,44			0,00
		01/00 / 100,00	**BW**	**0,00**	**361,44**		**361,44**	**0,00**
670261	Nux, 30x MS Office Home and Business 2013	06.02.2015	AHK		5.550,00 -5.550,00			0,00
		GWG/voll	Abschr.		5.550,00 -5.550,00			0,00
		01/00 / 100,00	**BW**	**0,00**	**5.550,00**		**5.550,00**	**0,00**
670262	Nux, 10x Microsoft Office Standart 2013	06.02.2015	AHK		3.780,00 -3.780,00			0,00
		GWG/voll	Abschr.		3.780,00 -3.780,00			0,00
		01/00 / 100,00	**BW**	**0,00**	**3.780,00**		**3.780,00**	**0,00**
670263	Label ident. Zebra [illegible] Basisgerät	04.03.2015	AHK		369,30 -369,30			0,00
		GWG/voll	Abschr.		369,30 -369,30			0,00
		01/00 / 100,00	**BW**	**0,00**	**369,50**		**369,50**	**0,00**
670264	Würth, Werkzeugkoffer	05.03.2015	AHK		188,60 -188,60			0,00
		GWG/voll	Abschr.		188,60 -188,60			0,00
		01/00 / 100,00	**BW**	**0,00**	**188,60**		**188,60**	**0,00**
Übertrag		Ansch./Herst.K.			398.640,40 -398.640,40			0,00
		Abschreibung			398.640,40 -398.640,40			0,00
		Buchwerte		**0,00**	**398.640,40**		**398.640,40**	**0,00**

[strictly confidential]

Due Diligence

Download the Kit

Toolkit: https://github.com/markoer73/M-A

“Capture” of Security Controls

- » 13 Domains to verify

1. Digital Identities
2. Admin Accounts
3. Endpoints/Client Systems
4. Servers
5. Networks
6. Hosting
7. Email
8. Data Recovery
9. Boundary Defenses
10. Assets Inventory
11. Operational Security
12. Physical Security
13. Wireless Networks

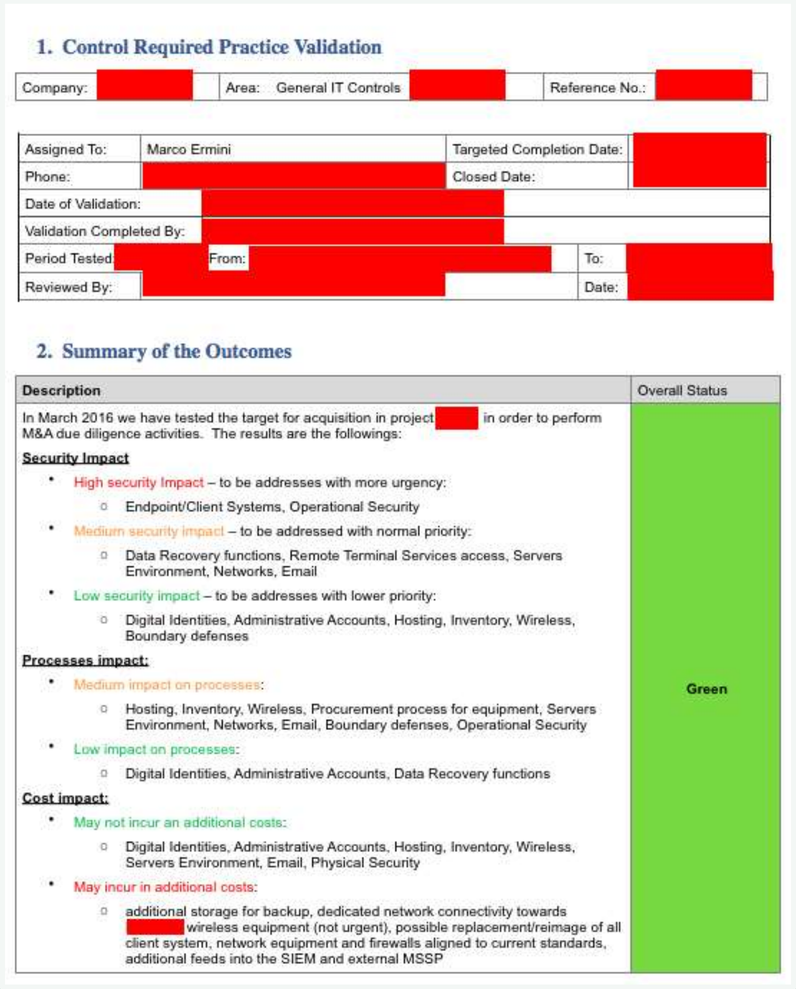
Example of Policy Requirement

Domain	Verification	How-to	Objectives	Minimum Acceptable Level
Digital Identities	Verify status of identities in main identity store (use of unique IDs, generic accounts, password policy, Groups' usage, GPOs, Federations, etc.). Verify if anything is outside of the main identity store (e.g. VPN accounts, Cloud accounts, supplier accounts, etc.).	• Interview with IT admins from Target. • Snapshot of information from AD/LDAP. • Interview with business units which manage other tools (Cloud etc.), to understand how this is managed	• Ensure appropriate controls are in place to protect Target environment and data • Get an idea of the complexity of the DI structure of the Target. • Understand usage of Cloud applications and identities. • Understand how restriction of access to information happens in Target.	• There is a Directory Service • Unique IDs are used • Permissions are assigned via Groups in the Directory Service • Service and Cloud accounts are gathered, minimized, and under control • Sensitive files are shared in a secure way
Admin Accounts	Verify status of admin account management in main identity store, if managed there. Verify if anything is outside of the main identity store (e.g. VPN accounts, Cloud accounts, supplier accounts, etc.)	• Interview with IT admins from Target. • Snapshot of information from AD/LDAP and other tools.	• Ensure admin account controls are defined, implemented and reviewed to protect systems and data • Understand how IT administrative actions are performed, what the procedures and practices are, and who has the ownership and responsibility.	• Admin accounts are managed under a Directory Service • Admin accounts are unique for each admin • Central ownership of who gets appropriate rights • Process for removing rights as appropriate

Example of Interview Questions

Domain	Minimum Acceptable Level	Key Topics for Discussion
Digital Identities	• Directory Services of any kind are used • Unique IDs are used • Permissions are assigned via Groups in the Directory Service • There is an adequate password policy in place • Service and Cloud accounts are gathered, minimized, and under control • Sensitive files are shared in a secure way	• How many people are present in the company? Get overview of employees' org chart/roles, and how many people are in IT and Security. • How old is the company? Get brief history, acquisitions, etc. • Which DS is used? (AD, which version?) • Get overview of Groups, GPOs, shared accounts, shared mailboxes, federated services, password policy (for AD, request screenshots). • Is every system and device connected to DS and follow password policy, or there are systems which have their own passwords (e.g. Wi-Fi, network devices, etc.)? • What is the process by which Group ownership, permissions and accesses to systems and applications are granted? • Get overview of Cloud services used and how accounts are managed, if SSO is used and how, especially concerning files and documents sharing with third parties. • Is Cloud Sharing such as Box, Dropbox etc. being used?
Admin Accounts	• Admin accounts are managed under a Directory Service • Admin accounts are unique for each admin • Central ownership of who gets appropriate rights • Process for removing rights as appropriate	• Get overview of how administration is performed, if AD Groups and GPOs are used, if shared accounts and/or shared mailboxes are used for admin accounts • Understand how permissions are granted and removed from users as their work and function changes in the company

Risk Assessment



1. Control Required Practice Validation

Company:	[redacted]	Area: General IT Controls	[redacted]	Reference No.:	[redacted]

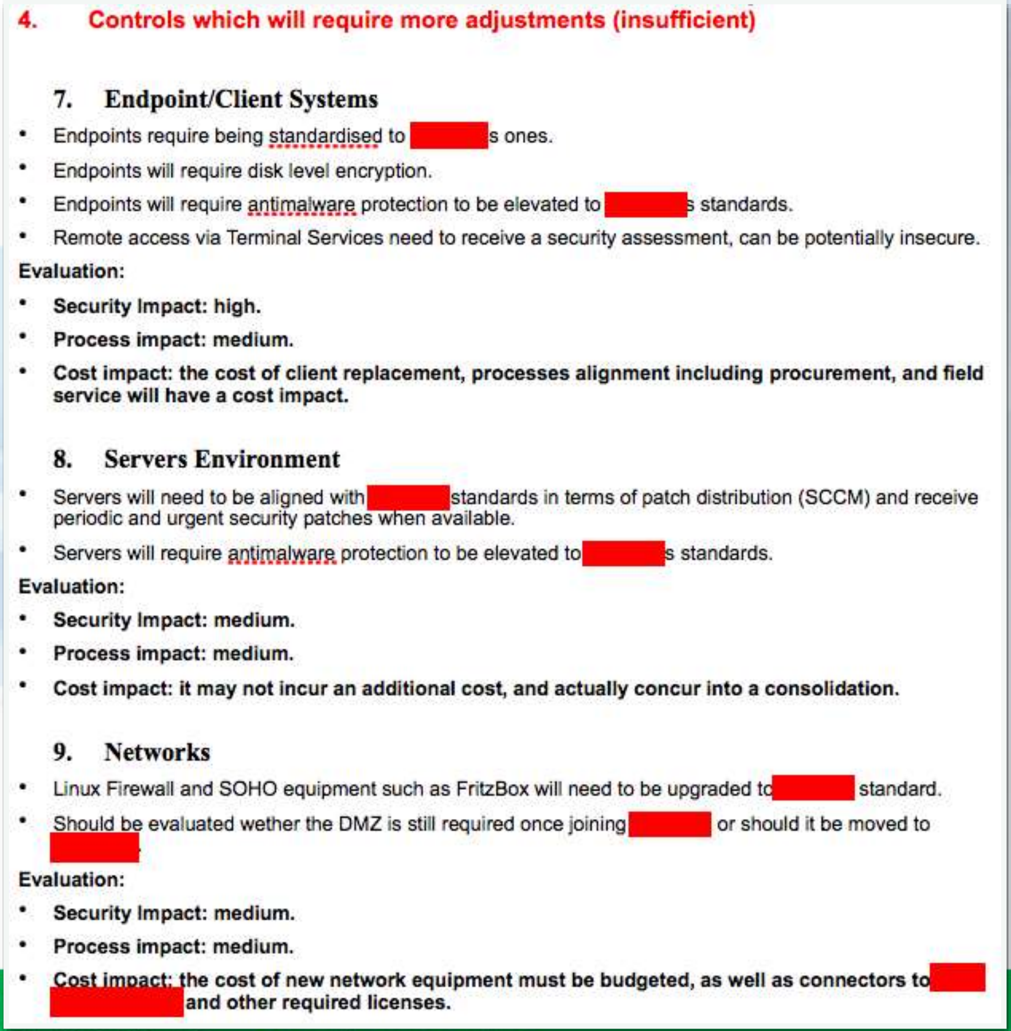
Assigned To:	Marco Ermini	Targeted Completion Date:	[redacted]
Phone:	[redacted]	Closed Date:	
Date of Validation:	[redacted]		
Validation Completed By:	[redacted]		
Period Tested [redacted]	From: [redacted]	To:	[redacted]
Reviewed By:	[redacted]	Date:	

2. Summary of the Outcomes

Description	Overall Status
In March 2016 we have tested the target for acquisition in project [redacted] in order to perform M&A due diligence activities. The results are the followings: **Security Impact** • High security Impact – to be addresses with more urgency: ○ Endpoint/Client Systems, Operational Security • Medium security impact – to be addressed with normal priority: ○ Data Recovery functions, Remote Terminal Services access, Servers Environment, Networks, Email • Low security impact – to be addresses with lower priority: ○ Digital Identities, Administrative Accounts, Hosting, Inventory, Wireless, Boundary defenses **Processes impact:** • Medium impact on processes: ○ Hosting, Inventory, Wireless, Procurement process for equipment, Servers Environment, Networks, Email, Boundary defenses, Operational Security • Low impact on processes: ○ Digital Identities, Administrative Accounts, Data Recovery functions **Cost impact:** • May not incur an additional costs: ○ Digital Identities, Administrative Accounts, Hosting, Inventory, Wireless, Servers Environment, Email, Physical Security • May incur in additional costs: ○ additional storage for backup, dedicated network connectivity towards [redacted] wireless equipment (not urgent), possible replacement/reimage of all client system, network equipment and firewalls aligned to current standards, additional feeds into the SIEM and external MSSP	Green

- Management Summary with a clear status
- Clearly indicate the area that will need additional attention
- Especially indicate where the additional costs will incur (e.g. new wireless equipment, re-imaging of the endpoints, reimplementation of firewall, etc.)

Impact Assessment



4. Controls which will require more adjustments (insufficient)

7. Endpoint/Client Systems

- Endpoints require being standardised to [redacted]s ones.
- Endpoints will require disk level encryption.
- Endpoints will require antimalware protection to be elevated to [redacted]s standards.
- Remote access via Terminal Services need to receive a security assessment, can be potentially insecure.

Evaluation:

- **Security Impact: high.**
- **Process impact: medium.**
- **Cost impact: the cost of client replacement, processes alignment including procurement, and field service will have a cost impact.**

8. Servers Environment

- Servers will need to be aligned with [redacted] standards in terms of patch distribution (SCCM) and receive periodic and urgent security patches when available.
- Servers will require antimalware protection to be elevated to [redacted]s standards.

Evaluation:

- **Security Impact: medium.**
- **Process impact: medium.**
- **Cost impact: it may not incur an additional cost, and actually concur into a consolidation.**

9. Networks

- Linux Firewall and SOHO equipment such as FritzBox will need to be upgraded to [redacted] standard.
- Should be evaluated wether the DMZ is still required once joining [redacted] or should it be moved to [redacted]

Evaluation:

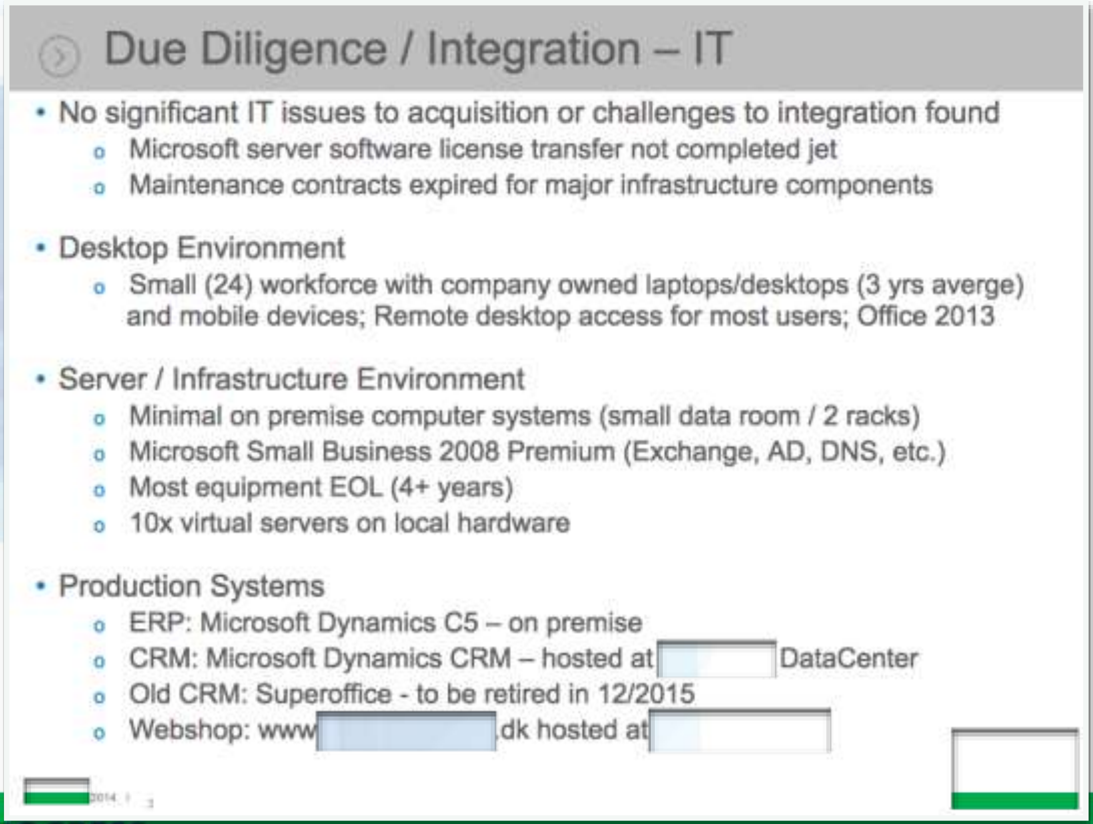
- **Security Impact: medium.**
- **Process impact: medium.**
- **Cost impact: the cost of new network equipment must be budgeted, as well as connectors to [redacted] and other required licenses.**

» Indicate the kind of impact:
  - Security
  - Processes
  - Costs

» Indicate expected remediation, aligned with IT

» If not possible to estimate costs immediately, indicate how they should be calculated (e.g. need to provision new firewall cluster)

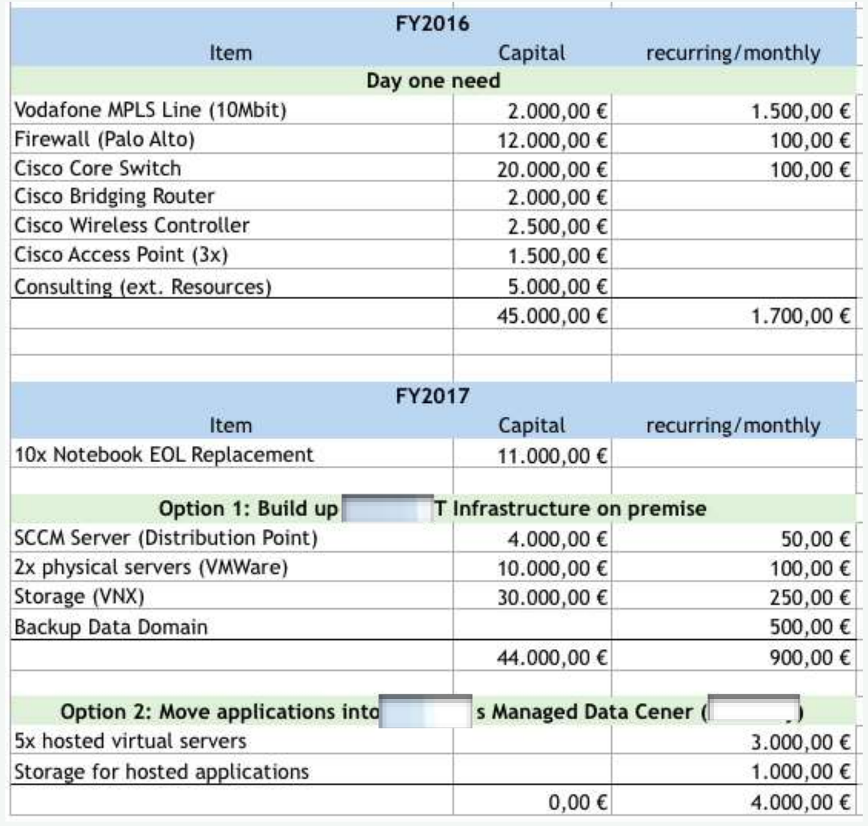
Summarize Findings aligned with IT – in one Slide



Due Diligence / Integration – IT

- No significant IT issues to acquisition or challenges to integration found
  - Microsoft server software license transfer not completed jet
  - Maintenance contracts expired for major infrastructure components
- Desktop Environment
  - Small (24) workforce with company owned laptops/desktops (3 yrs averge) and mobile devices; Remote desktop access for most users; Office 2013
- Server / Infrastructure Environment
  - Minimal on premise computer systems (small data room / 2 racks)
  - Microsoft Small Business 2008 Premium (Exchange, AD, DNS, etc.)
  - Most equipment EOL (4+ years)
  - 10x virtual servers on local hardware
- Production Systems
  - ERP: Microsoft Dynamics C5 – on premise
  - CRM: Microsoft Dynamics CRM – hosted at [redacted] DataCenter
  - Old CRM: Superoffice - to be retired in 12/2015
  - Webshop: www[redacted].dk hosted at [redacted]

Costs aligned with IT for integration



FY2016		
Item	Capital	recurring/monthly
Day one need		
Vodafone MPLS Line (10Mbit)	2.000,00 €	1.500,00 €
Firewall (Palo Alto)	12.000,00 €	100,00 €
Cisco Core Switch	20.000,00 €	100,00 €
Cisco Bridging Router	2.000,00 €	
Cisco Wireless Controller	2.500,00 €	
Cisco Access Point (3x)	1.500,00 €	
Consulting (ext. Resources)	5.000,00 €	
	45.000,00 €	1.700,00 €
FY2017		
Item	Capital	recurring/monthly
10x Notebook EOL Replacement	11.000,00 €	
Option 1: Build up [redacted] T Infrastructure on premise		
SCCM Server (Distribution Point)	4.000,00 €	50,00 €
2x physical servers (VMWare)	10.000,00 €	100,00 €
Storage (VNX)	30.000,00 €	250,00 €
Backup Data Domain		500,00 €
	44.000,00 €	900,00 €
Option 2: Move applications into [redacted] s Managed Data Cener ([redacted])		
5x hosted virtual servers		3.000,00 €
Storage for hosted applications		1.000,00 €
	0,00 €	4.000,00 €

Connect

Starting to work in Clear Sight

- The news is out
- Information Completeness is paramount
- An Integration Plan is proposed
  - Technical Integration
    - Networks, PCs, applications, data centers, hosting…
  - Business Processes and Systems
  - Timing
- The Integration Plan must also negotiate from an “as-is” to a “to-be” state for the Target

Combine

Target Characteristics	Security Guidelines	SLAs
SMALL ➤ Small employee base (< 200 employees) ➤ Low complexity ➤ Private ownership ➤ Little to no geographical diversity ➤ No separate legal entities ➤ No/limited need to keep the same facilities ➤ No/limited to keep the existing technologies ➤ Purchased for limited product portfolio, technology, talent, or local presence	➤ Baseline security controls Target is fully absorbed into IT infrastructure ➤ All IT labor is absorbed into IT global business units	➤ Security controls established or confirmed in less than 100 days
MEDIUM ➤ Similar to previous kind, but Target has certain identifiable complexities that require specific sensitivity during integration ➤ Fewer than 500 employees ➤ Needs to be stand-alone for a certain period of time ➤ During stand-alone time, Target maintains defined non-compliances ➤ Supports its own IT infrastructure during the stand-alone phase	➤ Integration of Target may be full, hybrid, or standalone ➤ All IT labor is absorbed into IT global business units	➤ Operation integration of some IT infrastructure may take +180 days ➤ Processes may take 3 to 9 months
LARGE ➤ More than 500 employees ➤ Relatively large operations ➤ Significant multinational presence and subsidiaries ➤ Target contains certain identifiable complexities that require specific sensitivity during integration	➤ Integration of Target may be full, hybrid, or standalone ➤ IT labor can stay funded by Target company	➤ Operation integration of some IT infrastructure may take +180 days ➤ Customized integration plan ➤ IT Support is shared ➤ Processes take more than 12 months

Combining the two companies

- Resources, staffing, processes, and systems are combined
- Business processes are as much as possible leveled
- IT tools are unified
- ***Active Directory merging strategy is key!***
- The Target company has comparable / same security
- Exceptions are documented and signed off by leadership (executives, CISO)
- Agreed-upon designs are implemented
- Operations — including InfoSec – are turned to standard support
- Weekly or recurring meetings can be setup to assess progresses

Planning the Active Directory Integration

- Training for the technicians performing the migration
- Scheduled outages
- Companies’ cultural differences such as who's allowed access to AD and Exchange, or how file system security is set
- Network differences between the two sites
- Network, AD, or Exchange anomalies
- Customer and employee communication

Pain Points in Active Directory Integration

- Deciding the strategy
  - Integrate the Target into the Acquiring
  - Build a new, combined AD
  - Migrate legacy objects into a new AD
- ***One Company, One Email!***
  - Free/Busy Information
  - Exchange/Lync/Office/AD versions
  - Office 365?
- External Federations/Partners/ADFS?
- DNS configuration/forwarding
- SID history/filtering
- Evaluate purchase of a dedicated AD migration/upgrade tool

Adjusting Policies

Merging Policies

- Safeguards against disgruntled employees
- New employee contracts
  - Are existing Policies still relevant?
  - Are we “dumbing down” their security?
- Existing employee contracts
  - Do they protect you?
  - Do they meet new relationship?
- Identify key policies — yours vs theirs
  - Work with Legal Departments

Merging InfoSec

The New Security Department

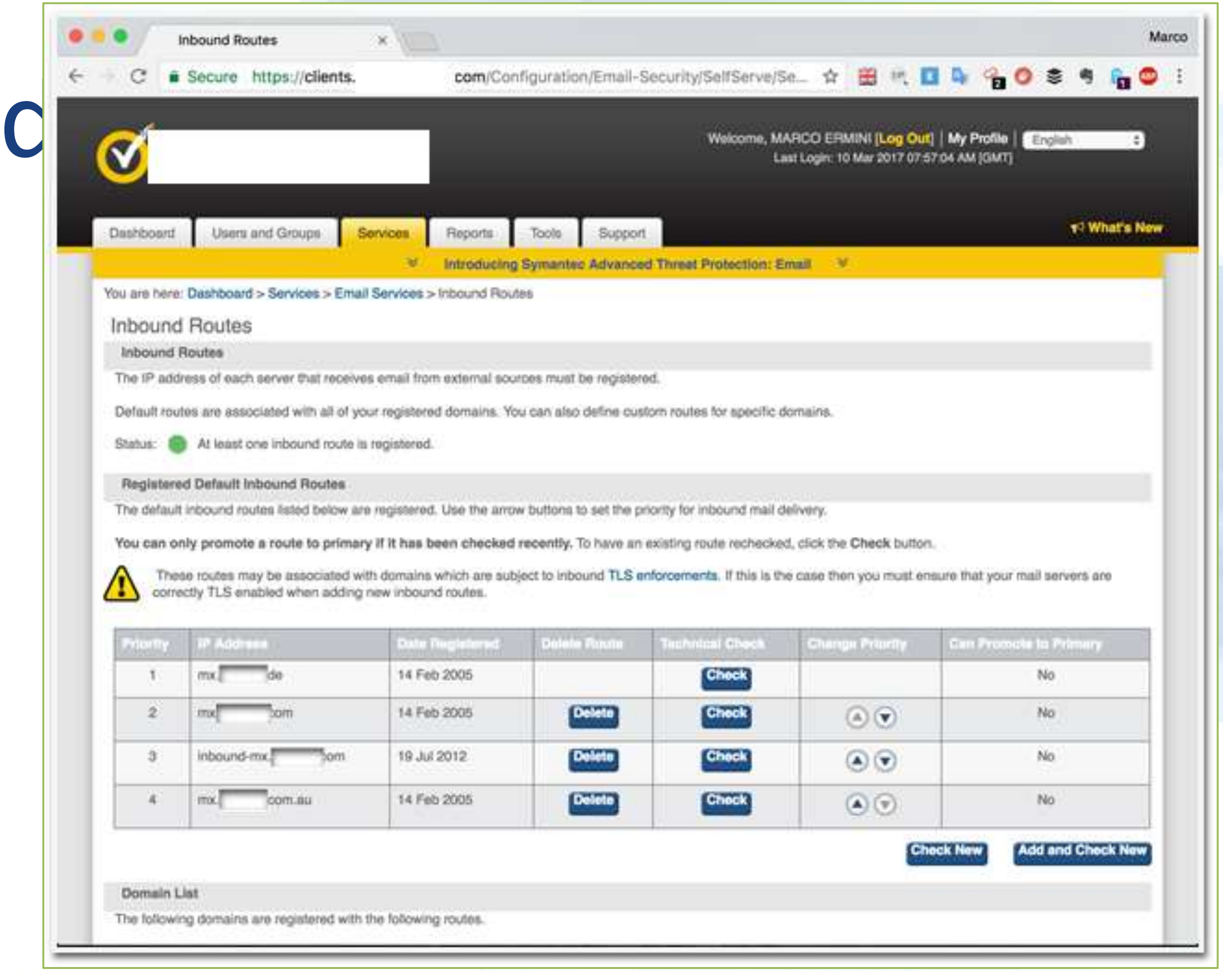
- Cost/Budgeting
  - Pre-merger: OpEx
  - Merger: CapEx, Processes
  - Post-merger: Optimization
- Communications

What if I am on the weak side?

1. Identify specific strengths that can be useful in the merging
   - Experience from security incidents
   - Technological implementations
   - Local knowledge and compliance
2. Be prepared to learn
   - What is the current Cyber Security philosophy?
   - Who is taking security-related decisions?
3. Don’t rush your career decisions
   - Can bring new opportunities
   - Meet the new management

Leveraging the Cloud

Clouc



Inbound Routes
Marco
Secure https://clients.[redacted]com/Configuration/Email-Security/SelfServe/Se...

[redacted]

Welcome, MARCO ERMINI [Log Out] | My Profile | English
Last Login: 10 Mar 2017 07:57:04 AM [GMT]

Dashboard
Users and Groups
Services
Reports
Tools
Support
What's New
Introducing Symantec Advanced Threat Protection: Email

You are here: Dashboard > Services > Email Services > Inbound Routes

Inbound Routes

Inbound Routes

The IP address of each server that receives email from external sources must be registered.

Default routes are associated with all of your registered domains. You can also define custom routes for specific domains.

Status: ● At least one inbound route is registered.

Registered Default Inbound Routes

The default inbound routes listed below are registered. Use the arrow buttons to set the priority for inbound mail delivery.

You can only promote a route to primary if it has been checked recently. To have an existing route rechecked, click the **Check** button.

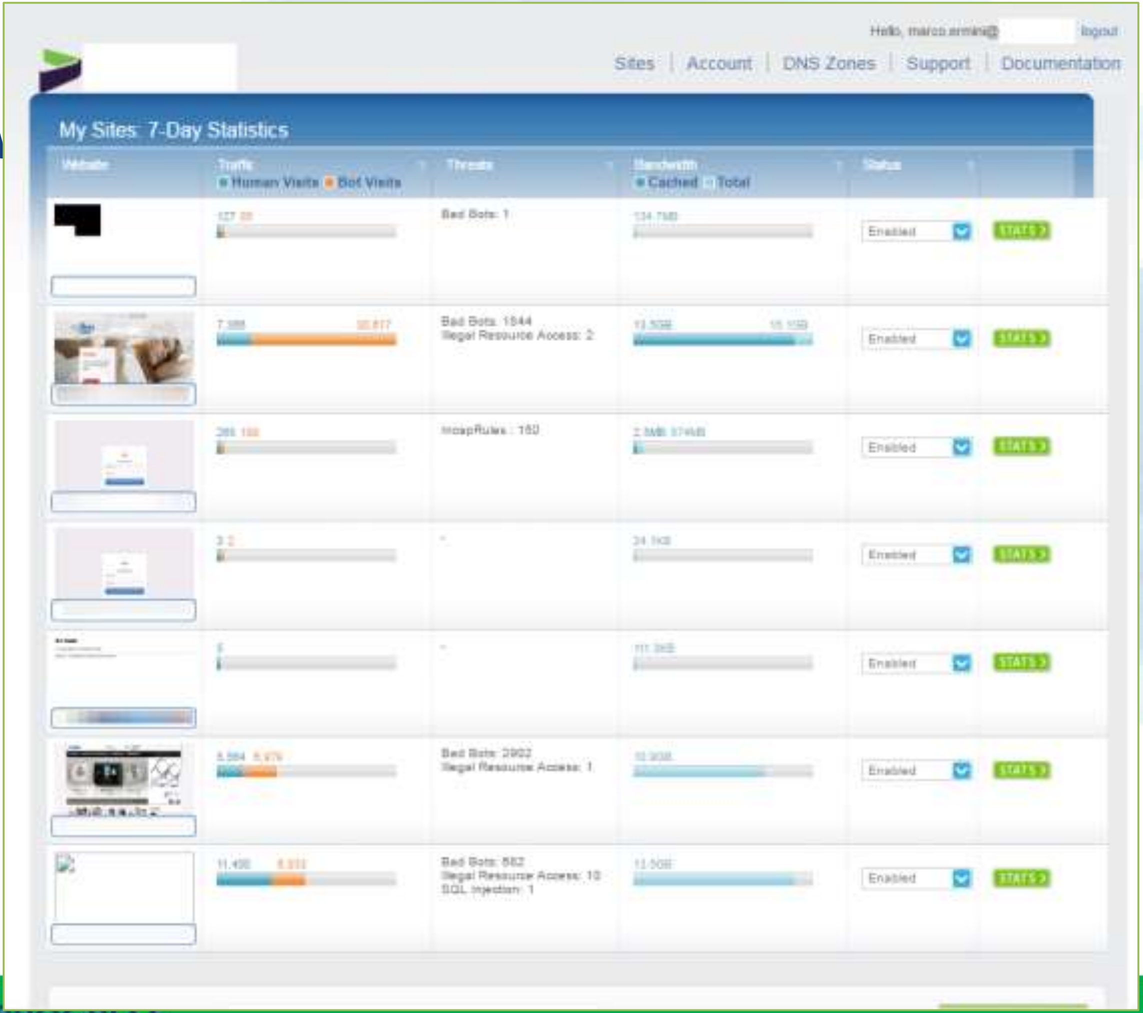
⚠ These routes may be associated with domains which are subject to inbound TLS enforcements. If this is the case then you must ensure that your mail servers are correctly TLS enabled when adding new inbound routes.

Priority	IP Address	Date Registered	Delete Route	Technical Check	Change Priority	Can Promote to Primary
1	mx.[redacted]de	14 Feb 2005		Check		No
2	mx[redacted]om	14 Feb 2005	Delete	Check	▲ ▼	No
3	inbound-mx.[redacted]om	19 Jul 2012	Delete	Check	▲ ▼	No
4	mx.[redacted]com.au	14 Feb 2005	Delete	Check	▲ ▼	No

Domain List

The following domains are registered with the following routes.

SaaS V



Hello, marco.ermini@ logout

Sites | Account | DNS Zones | Support | Documentation

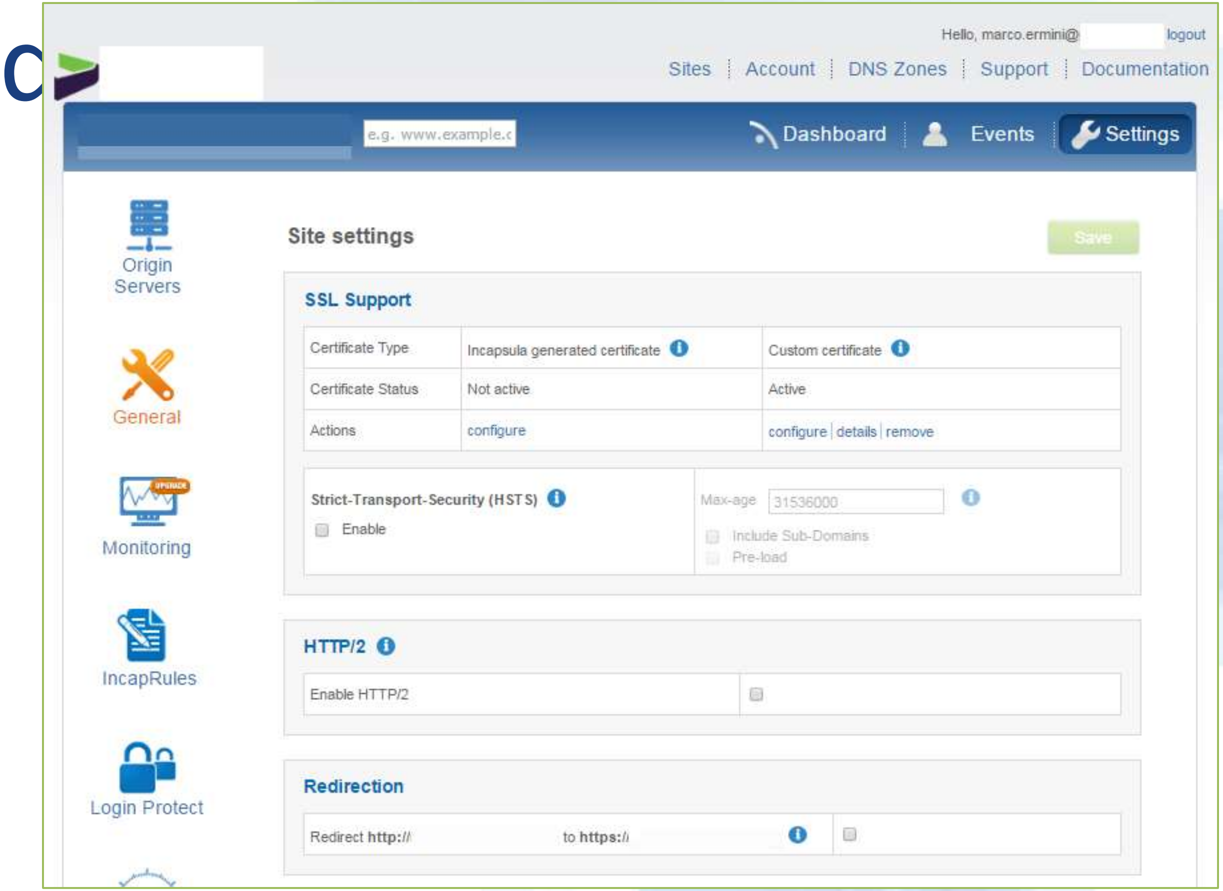
My Sites: 7-Day Statistics

Website	Traffic ● Human Visits ● Bot Visits	Threats	Bandwidth ● Cached □ Total	Status	
[redacted]	127 28	Bad Bots: 1	134.7MB	Enabled	STATS ›
	7,388 20,817	Bad Bots: 1844 Illegal Resource Access: 2	13.5GB 15.1GB	Enabled	STATS ›
	265 188	IncapRules : 160	2.5MB 374KB	Enabled	STATS ›
	3 2	-	24.1KB	Enabled	STATS ›
	5	-	111.3KB	Enabled	STATS ›
	3,584 3,478	Bad Bots: 2902 Illegal Resource Access: 1	10.9GB	Enabled	STATS ›
	11,450 6,333	Bad Bots: 582 Illegal Resource Access: 10 SQL Injection: 1	11.5GB	Enabled	STATS ›

Moving to a Cloud-Based ERP or Email Solution

- Traditional M&A dogma is "transition, then transform"
- Companies however are leveraging migration to key technologies to the Cloud during the M&A process as an enabler
- Can simultaneously replace aging, capital-intensive technology with a subscription-based operating model
- Ideal also for divestitures
- Boarding is considerably faster and cheaper than traditional on premise solutions (Accenture estimates 30% for both)
- Ultimate flexibility during a post-deal transition

Clouc



Hello, marco.ermini@ logout

Sites | Account | DNS Zones | Support | Documentation

e.g. www.example.c

Dashboard | Events | Settings

Site settings

Save

SSL Support

Certificate Type	Incapsula generated certificate	Custom certificate
Certificate Status	Not active	Active
Actions	configure	configure | details | remove

Strict-Transport-Security (HSTS)

□ Enable

Max-age 31536000

□ Include Sub-Domains

□ Pre-load

HTTP/2

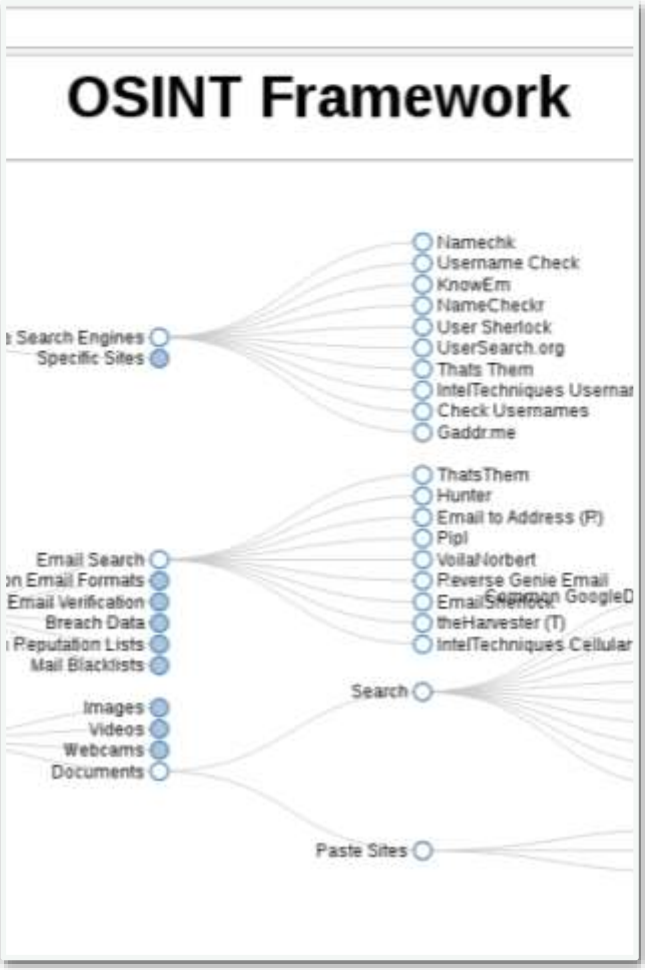
Enable HTTP/2	□

Redirection

Redirect **http://** to **https://**	□

Open Source information gathering

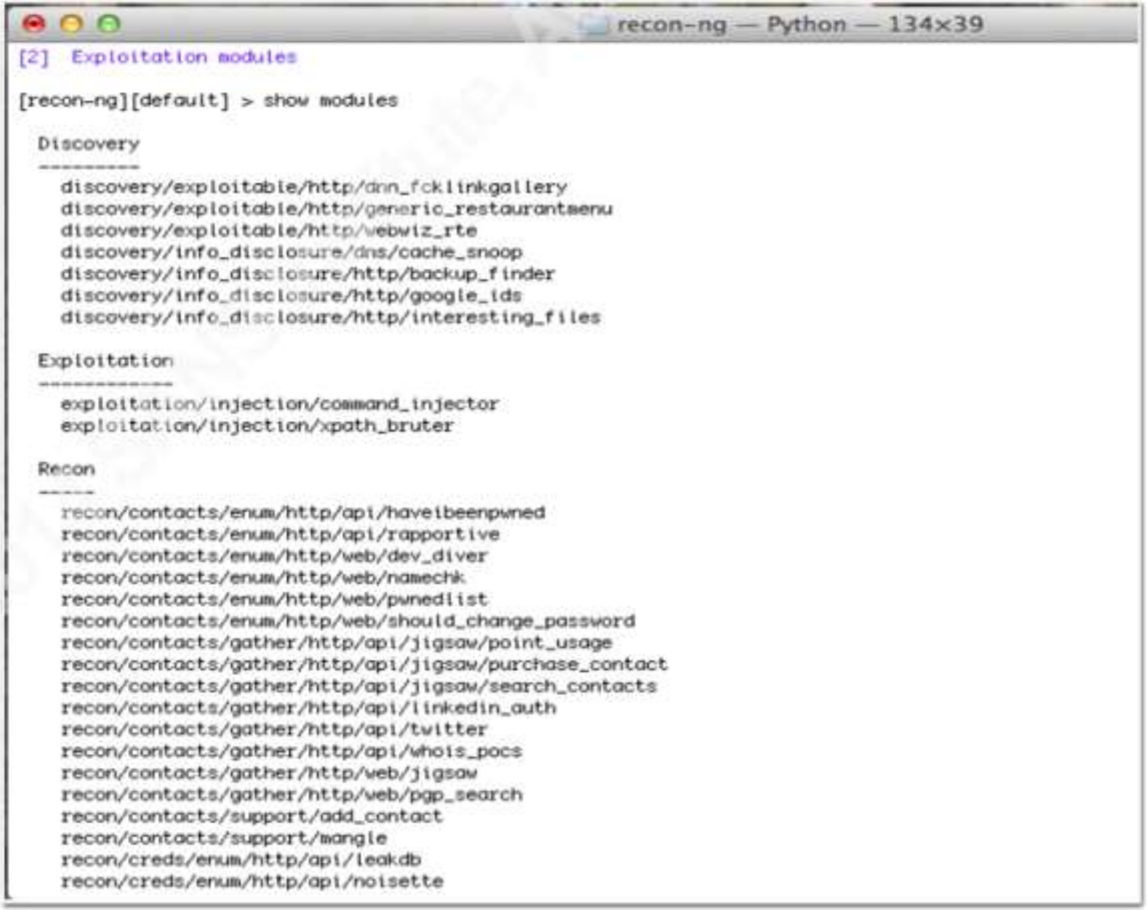
Backup Slides



Open Source Intelligence

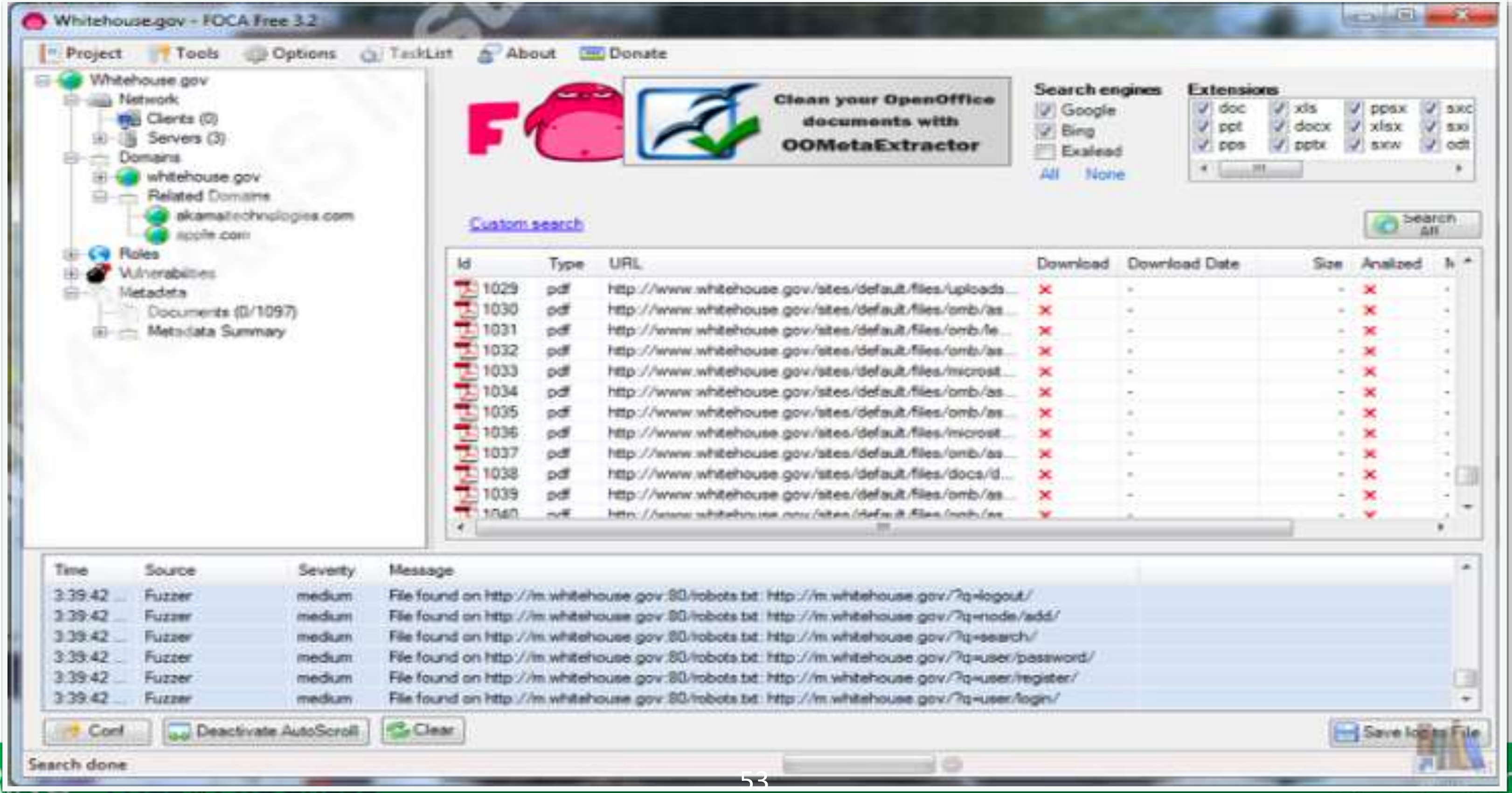
- Collection of free tools and source of information
- They divide into
  - Tools which can run locally
  - Search Engine “dorking” (e.g. Google hacking)
  - Semi-closed sources
  - Exploitation of sites which have originally other purposes (e.g. social networks, dating sites…)

METASPLOIT
recon-ng



```
[2]  Exploitation modules

[recon-ng][default] > show modules

  Discovery
  ---------
    discovery/exploitable/http/dnn_fcklinkgallery
    discovery/exploitable/http/generic_restaurantmenu
    discovery/exploitable/http/webwiz_rte
    discovery/info_disclosure/dns/cache_snoop
    discovery/info_disclosure/http/backup_finder
    discovery/info_disclosure/http/google_ids
    discovery/info_disclosure/http/interesting_files

  Exploitation
  ------------
    exploitation/injection/command_injector
    exploitation/injection/xpath_bruter

  Recon
  -----
    recon/contacts/enum/http/api/haveibeenpwned
    recon/contacts/enum/http/api/rapportive
    recon/contacts/enum/http/web/dev_diver
    recon/contacts/enum/http/web/namechk
    recon/contacts/enum/http/web/pwnedlist
    recon/contacts/enum/http/web/should_change_password
    recon/contacts/gather/http/api/jigsaw/point_usage
    recon/contacts/gather/http/api/jigsaw/purchase_contact
    recon/contacts/gather/http/api/jigsaw/search_contacts
    recon/contacts/gather/http/api/linkedin_auth
    recon/contacts/gather/http/api/twitter
    recon/contacts/gather/http/api/whois_pocs
    recon/contacts/gather/http/web/jigsaw
    recon/contacts/gather/http/web/pgp_search
    recon/contacts/support/add_contact
    recon/contacts/support/mangle
    recon/creds/enum/http/api/leakdb
    recon/creds/enum/http/api/noisette
```

FOCA Search



Search engines: ☑ Google ☑ Bing □ Exalead

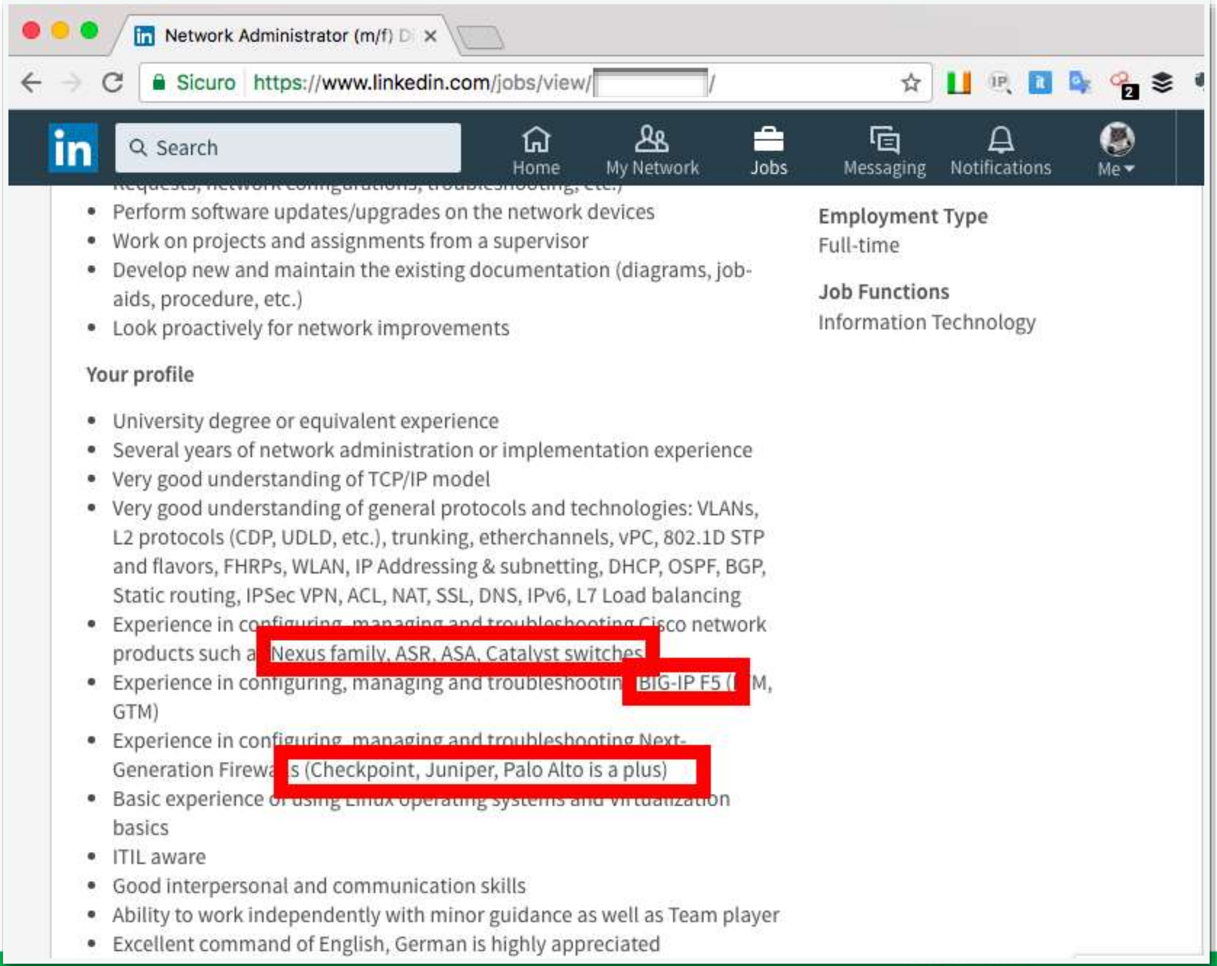
Extensions: ☑ doc ☑ ppt ☑ pps ☑ xls ☑ docx ☑ pptx ☑ ppsx ☑ xlsx ☑ sxw ☑ sxc ☑ sxi ☑ odt

Id	Type	URL	Download	Download Date	Size	Analized	M
1029	pdf	http://www.whitehouse.gov/sites/default/files/uploads...	✗	-	-	✗	-
1030	pdf	http://www.whitehouse.gov/sites/default/files/omb/as...	✗	-	-	✗	-
1031	pdf	http://www.whitehouse.gov/sites/default/files/omb/le...	✗	-	-	✗	-
1032	pdf	http://www.whitehouse.gov/sites/default/files/omb/as...	✗	-	-	✗	-
1033	pdf	http://www.whitehouse.gov/sites/default/files/microsit...	✗	-	-	✗	-
1034	pdf	http://www.whitehouse.gov/sites/default/files/omb/as...	✗	-	-	✗	-
1035	pdf	http://www.whitehouse.gov/sites/default/files/omb/as...	✗	-	-	✗	-
1036	pdf	http://www.whitehouse.gov/sites/default/files/microsit...	✗	-	-	✗	-
1037	pdf	http://www.whitehouse.gov/sites/default/files/omb/as...	✗	-	-	✗	-
1038	pdf	http://www.whitehouse.gov/sites/default/files/docs/d...	✗	-	-	✗	-
1039	pdf	http://www.whitehouse.gov/sites/default/files/omb/as...	✗	-	-	✗	-
1040	pdf	http://www.whitehouse.gov/sites/default/files/omb/as	✗	-	-	✗	-

```
Time        Source    Severity   Message
3:39:42 ... Fuzzer    medium     File found on http://m.whitehouse.gov:80/robots.txt: http://m.whitehouse.gov/?q=logout/
3:39:42 ... Fuzzer    medium     File found on http://m.whitehouse.gov:80/robots.txt: http://m.whitehouse.gov/?q=node/add/
3:39:42 ... Fuzzer    medium     File found on http://m.whitehouse.gov:80/robots.txt: http://m.whitehouse.gov/?q=search/
3:39:42 ... Fuzzer    medium     File found on http://m.whitehouse.gov:80/robots.txt: http://m.whitehouse.gov/?q=user/password/
3:39:42 ... Fuzzer    medium     File found on http://m.whitehouse.gov:80/robots.txt: http://m.whitehouse.gov/?q=user/register/
3:39:42 ... Fuzzer    medium     File found on http://m.whitehouse.gov:80/robots.txt: http://m.whitehouse.gov/?q=user/login/
```

Search done

Job Posting's Harvesting



Network Administrator (m/f) D
Sicuro
https://www.linkedin.com/jobs/view/[redacted]/
in
Search
Home
My Network
Jobs
Messaging
Notifications
Me

Requests, network configurations, troubleshooting, etc.)

- Perform software updates/upgrades on the network devices
- Work on projects and assignments from a supervisor
- Develop new and maintain the existing documentation (diagrams, job-aids, procedure, etc.)
- Look proactively for network improvements

Your profile

- University degree or equivalent experience
- Several years of network administration or implementation experience
- Very good understanding of TCP/IP model
- Very good understanding of general protocols and technologies: VLANs, L2 protocols (CDP, UDLD, etc.), trunking, etherchannels, vPC, 802.1D STP and flavors, FHRPs, WLAN, IP Addressing & subnetting, DHCP, OSPF, BGP, Static routing, IPSec VPN, ACL, NAT, SSL, DNS, IPv6, L7 Load balancing
- Experience in configuring, managing and troubleshooting Cisco network products such as Nexus family, ASR, ASA, Catalyst switches
- Experience in configuring, managing and troubleshooting BIG-IP F5 (LTM, GTM)
- Experience in configuring, managing and troubleshooting Next-Generation Firewalls (Checkpoint, Juniper, Palo Alto is a plus)
- Basic experience of using Linux operating systems and virtualization basics
- ITIL aware
- Good interpersonal and communication skills
- Ability to work independently with minor guidance as well as Team player
- Excellent command of English, German is highly appreciated

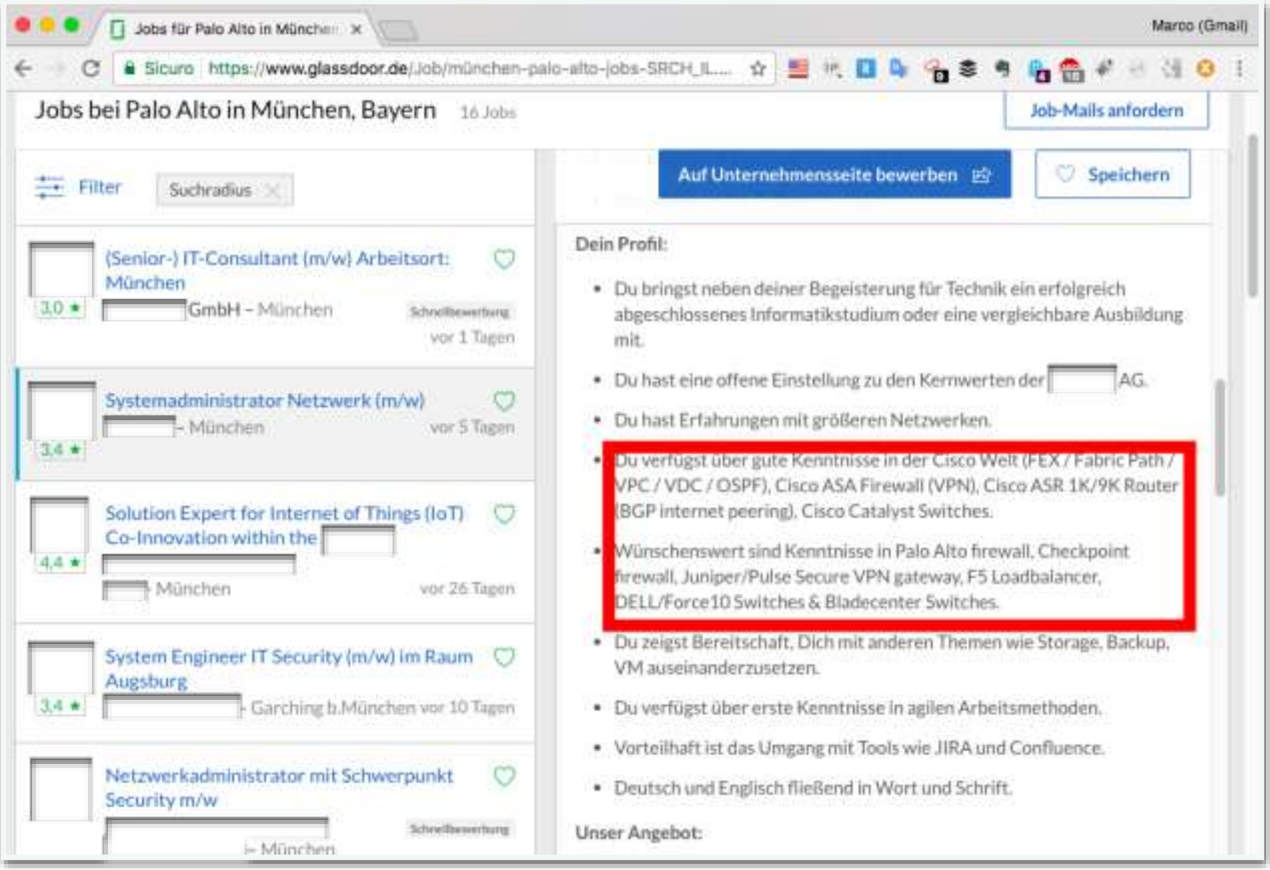
Employment Type

Full-time

Job Functions

Information Technology

Job Posting's Harvesting



Jobs für Palo Alto in München
Marco (Gmail)
Sicuro
https://www.glassdoor.de/Job/münchen-palo-alto-jobs-SRCH_IL....

Jobs bei Palo Alto in München, Bayern 16 Jobs

Job-Mails anfordern
Filter
Suchradius
Auf Unternehmensseite bewerben
Speichern

[redacted] (Senior-) IT-Consultant (m/w) Arbeitsort: München
3,0 ★ [redacted] GmbH – München Schnellbewerbung
vor 1 Tagen

[redacted] Systemadministrator Netzwerk (m/w)
3,4 ★ [redacted] – München vor 5 Tagen

[redacted] Solution Expert for Internet of Things (IoT) Co-Innovation within the [redacted]
4,4 ★ [redacted]
[redacted] - München vor 26 Tagen

[redacted] System Engineer IT Security (m/w) im Raum Augsburg
3,4 ★ [redacted] - Garching b.München vor 10 Tagen

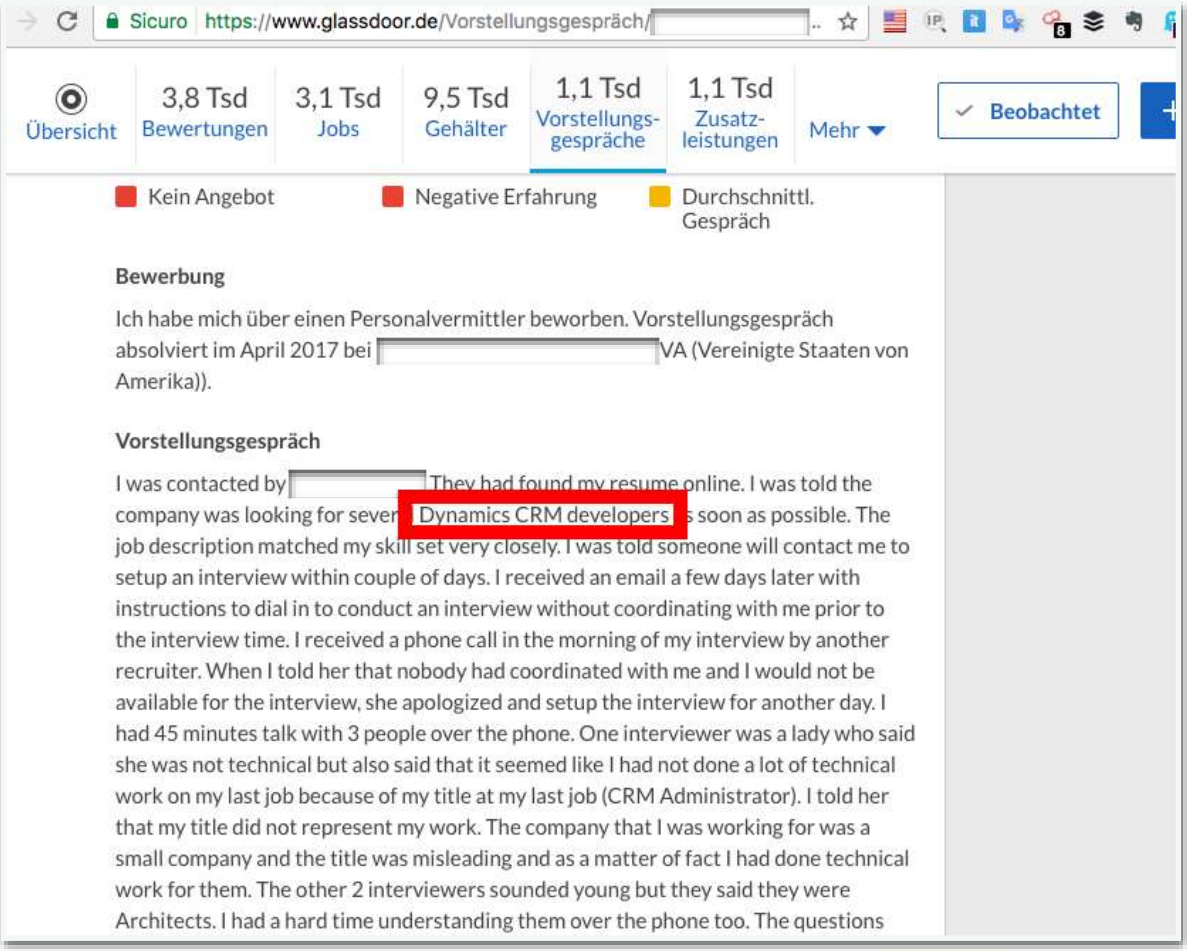
[redacted] Netzwerkadministrator mit Schwerpunkt Security m/w
[redacted] Schnellbewerbung
– München

Dein Profil:

- Du bringst neben deiner Begeisterung für Technik ein erfolgreich abgeschlossenes Informatikstudium oder eine vergleichbare Ausbildung mit.
- Du hast eine offene Einstellung zu den Kernwerten der [redacted] AG.
- Du hast Erfahrungen mit größeren Netzwerken.
- Du verfügst über gute Kenntnisse in der Cisco Welt (FEX / Fabric Path / VPC / VDC / OSPF), Cisco ASA Firewall (VPN), Cisco ASR 1K/9K Router (BGP internet peering), Cisco Catalyst Switches.
- Wünschenswert sind Kenntnisse in Palo Alto firewall, Checkpoint firewall, Juniper/Pulse Secure VPN gateway, F5 Loadbalancer, DELL/Force10 Switches & Bladecenter Switches.
- Du zeigst Bereitschaft, Dich mit anderen Themen wie Storage, Backup, VM auseinanderzusetzen.
- Du verfügst über erste Kenntnisse in agilen Arbeitsmethoden.
- Vorteilhaft ist das Umgang mit Tools wie JIRA und Confluence.
- Deutsch und Englisch fließend in Wort und Schrift.

Unser Angebot:

Job Interviews' Harvesting



🟥 Kein Angebot 🟥 Negative Erfahrung 🟨 Durchschnittl. Gespräch

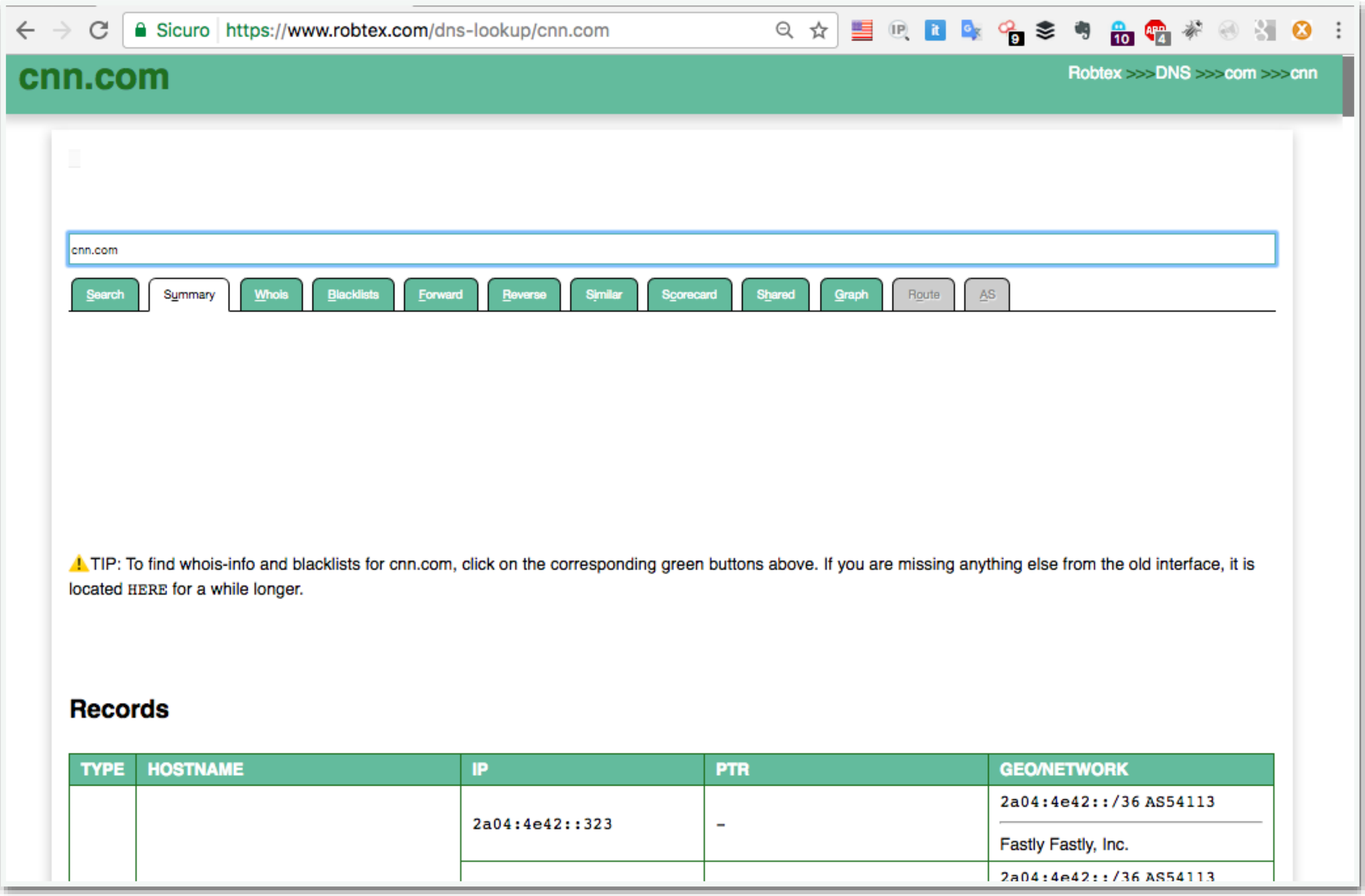
Bewerbung

Ich habe mich über einen Personalvermittler beworben. Vorstellungsgespräch absolviert im April 2017 bei [redacted] VA (Vereinigte Staaten von Amerika)).

Vorstellungsgespräch

I was contacted by [redacted] They had found my resume online. I was told the company was looking for sever Dynamics CRM developers s soon as possible. The job description matched my skill set very closely. I was told someone will contact me to setup an interview within couple of days. I received an email a few days later with instructions to dial in to conduct an interview without coordinating with me prior to the interview time. I received a phone call in the morning of my interview by another recruiter. When I told her that nobody had coordinated with me and I would not be available for the interview, she apologized and setup the interview for another day. I had 45 minutes talk with 3 people over the phone. One interviewer was a lady who said she was not technical but also said that it seemed like I had not done a lot of technical work on my last job because of my title at my last job (CRM Administrator). I told her that my title did not represent my work. The company that I was working for was a small company and the title was misleading and as a matter of fact I had done technical work for them. The other 2 interviewers sounded young but they said they were Architects. I had a hard time understanding them over the phone too. The questions

robtex.com



cnn.com

Robtex >>> DNS >>> com >>> cnn

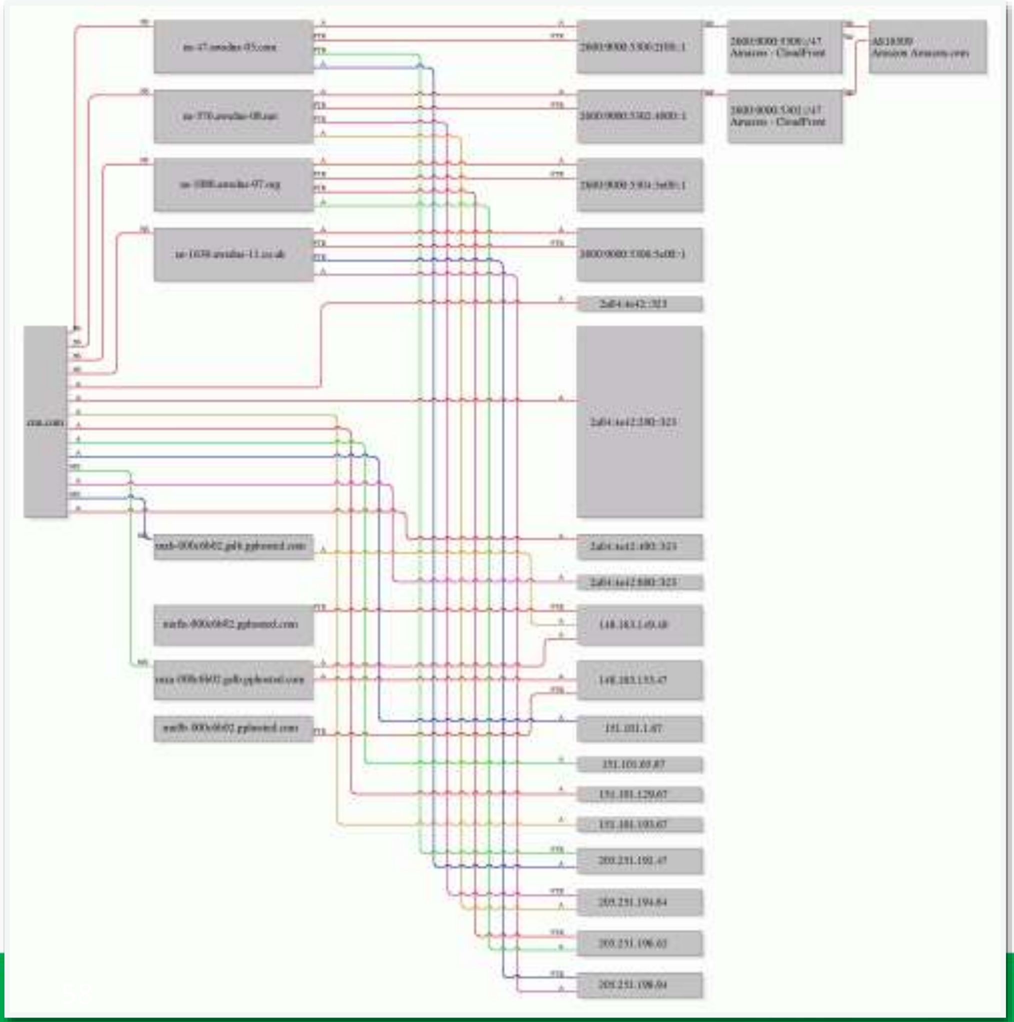
cnn.com

⚠ TIP: To find whois-info and blacklists for cnn.com, click on the corresponding green buttons above. If you are missing anything else from the old interface, it is located HERE for a while longer.

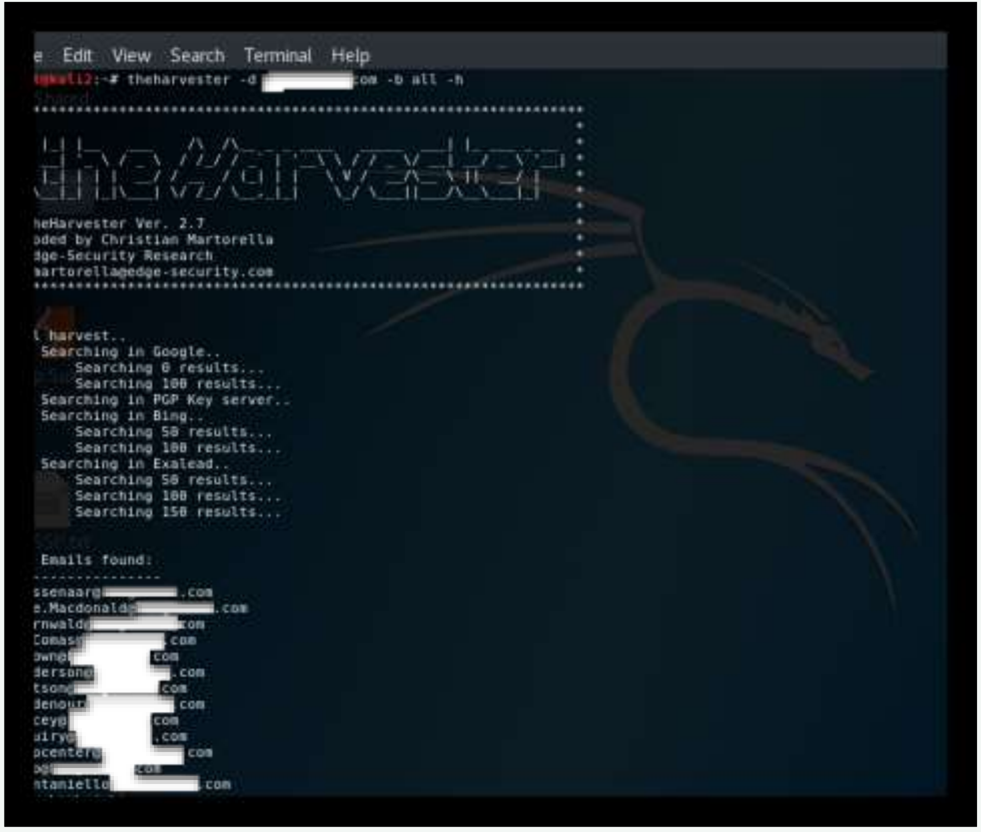
Records

TYPE	HOSTNAME	IP	PTR	GEO/NETWORK
		2a04:4e42::323	–	2a04:4e42::/36 AS54113 Fastly Fastly, Inc.
				2a04:4e42::/36 AS54113

robtex.com

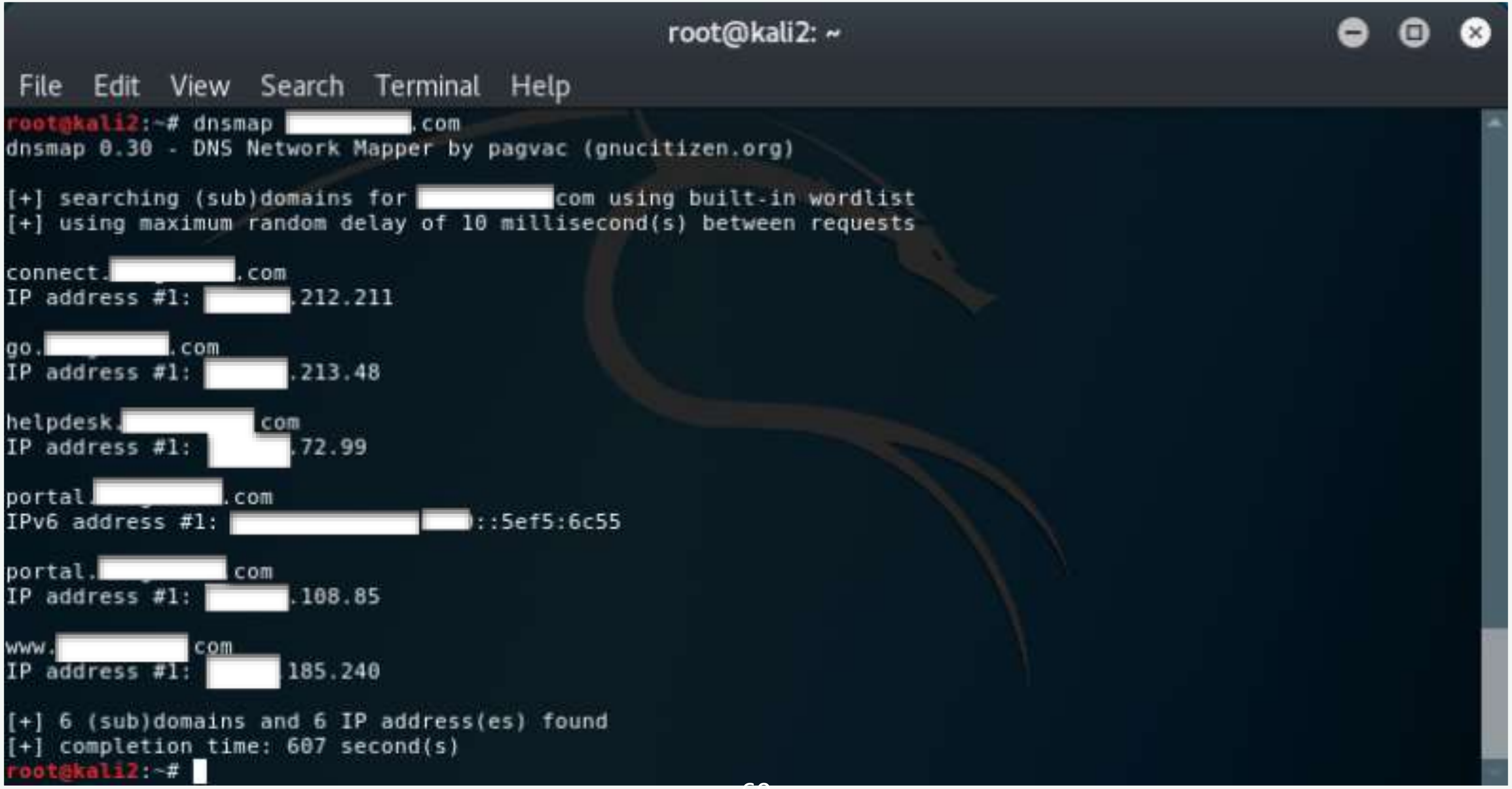

cnn.com
ns-47.awsdns-05.com
ns-570.awsdns-08.net
ns-1086.awsdns-07.org
ns-1630.awsdns-11.co.uk
mxb-000c6b02.gslb.pphosted.com
mxfb-000c6b02.pphosted.com
mxa-000c6b02.gslb.pphosted.com
mxfb-000c6b02.pphosted.com
2600:9000:5300:2100::1
2600:9000:5302:4800::1
2600:9000:5304:5e00::1
2600:9000:5306:5a00::1
2600:9000:5300::/47
Amazon - CloudFront
2600:9000:5302::/47
Amazon - CloudFront
AS16509
Amazon Amazon.com
2a04:4e42::323
2a04:4e42:200::323
2a04:4e42:400::323
2a04:4e42:600::323
148.163.149.48
148.163.153.47
151.101.1.67
151.101.65.67
151.101.129.67
151.101.193.67
205.251.192.47
205.251.194.84
205.251.196.63
205.251.198.94
ns
A
AAAA
PTR
mx

Harvesting of Corporate Emails



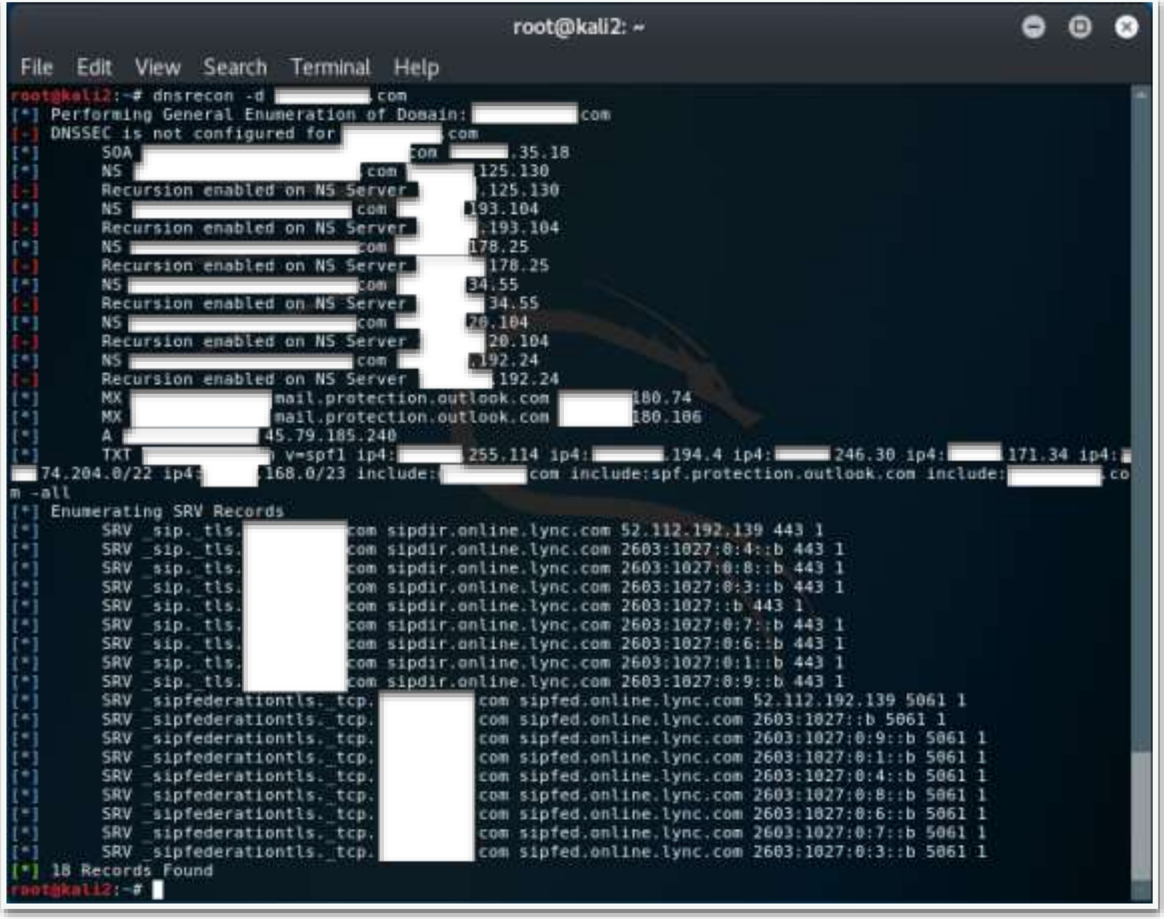
```
kali2:~# theharvester -d [redacted]com -b all -h

*******************************************************************
                                                                  *
heHarvester Ver. 2.7                                              *
oded by Christian Martorella                                      *
dge-Security Research                                             *
martorella@edge-security.com                                      *
*******************************************************************


l harvest..
 Searching in Google..
     Searching 0 results...
     Searching 100 results...
 Searching in PGP Key server..
 Searching in Bing..
     Searching 50 results...
     Searching 100 results...
 Searching in Exalead..
     Searching 50 results...
     Searching 100 results...
     Searching 150 results...


 Emails found:
---------------
ssenaar@[redacted].com
e.Macdonald@[redacted].com
rnwald[redacted]com
Comas[redacted].com
own@[redacted]com
derson[redacted].com
tson[redacted]com
denou[redacted]com
cey@[redacted]com
uiry[redacted].com
pcenter[redacted]com
p[redacted]com
ntaniello[redacted].com
```

Gathering of domain names



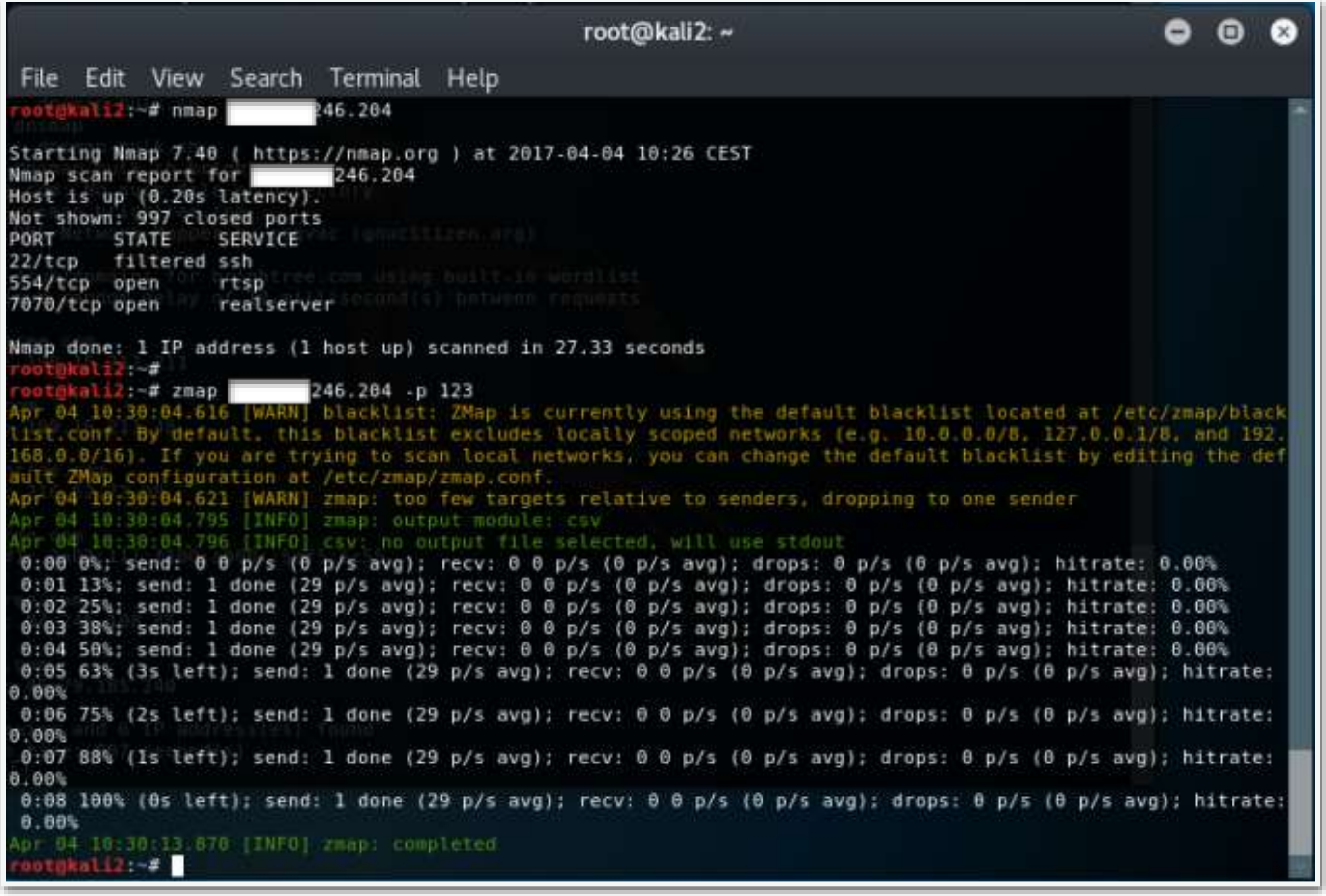
```
root@kali2:~# dnsmap [redacted].com
dnsmap 0.30 - DNS Network Mapper by pagvac (gnucitizen.org)

[+] searching (sub)domains for [redacted]com using built-in wordlist
[+] using maximum random delay of 10 millisecond(s) between requests

connect.[redacted].com
IP address #1: [redacted].212.211

go.[redacted].com
IP address #1: [redacted].213.48

helpdesk.[redacted]com
IP address #1: [redacted].72.99

portal.[redacted].com
IPv6 address #1: [redacted][redacted]::5ef5:6c55

portal.[redacted]com
IP address #1: [redacted].108.85

www.[redacted]com
IP address #1: [redacted] 185.240

[+] 6 (sub)domains and 6 IP address(es) found
[+] completion time: 607 second(s)
root@kali2:~# 
```

Gathering of domain names



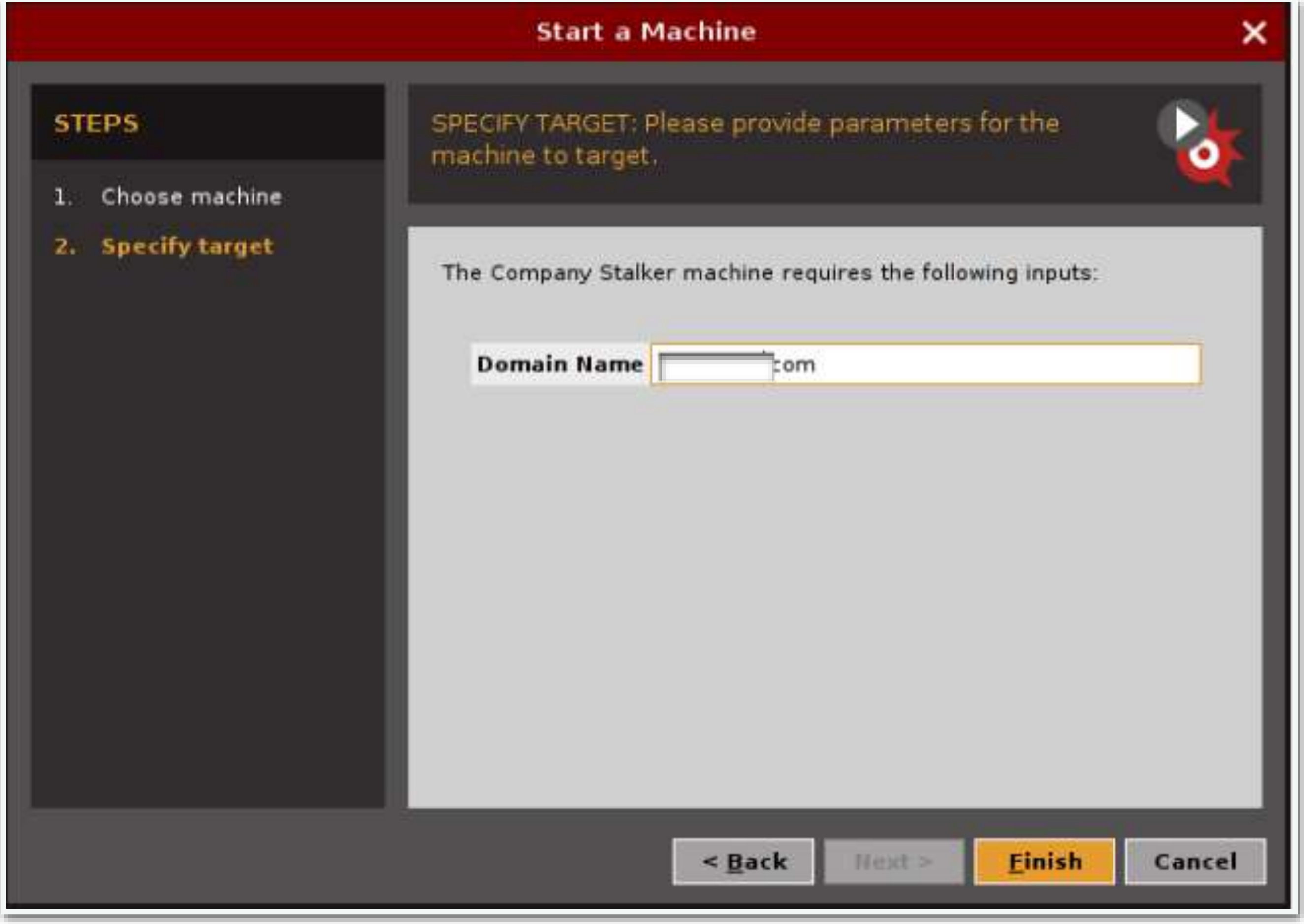
```
root@kali2:~# dnsrecon -d [redacted].com
[*] Performing General Enumeration of Domain: [redacted]com
[-] DNSSEC is not configured for [redacted].com
[*]      SOA [redacted]com [redacted].35.18
[*]      NS [redacted].com [redacted]125.130
[-]      Recursion enabled on NS Server [redacted].125.130
[*]      NS [redacted] com [redacted]193.104
[-]      Recursion enabled on NS Server [redacted].193.104
[*]      NS [redacted]com [redacted]178.25
[-]      Recursion enabled on NS Server [redacted]178.25
[*]      NS [redacted]com [redacted]34.55
[-]      Recursion enabled on NS Server [redacted]34.55
[*]      NS [redacted]com [redacted].104
[-]      Recursion enabled on NS Server [redacted]20.104
[*]      NS [redacted] com [redacted].192.24
[-]      Recursion enabled on NS Server [redacted].192.24
[*]      MX [redacted]mail.protection.outlook.com [redacted]180.74
[*]      MX [redacted]mail.protection.outlook.com [redacted]180.106
[*]      A [redacted]45.79.185.240
[*]      TXT [redacted] v=spf1 ip4:[redacted].255.114 ip4:[redacted].194.4 ip4:[redacted]246.30 ip4:[redacted].171.34 ip4:[redacted]
[redacted]74.204.0/22 ip4:[redacted].168.0/23 include:[redacted]com include:spf.protection.outlook.com include:[redacted].co
m -all
[*] Enumerating SRV Records
[*]      SRV _sip._tls.[redacted]com sipdir.online.lync.com 52.112.192.139 443 1
[*]      SRV _sip._tls.          com sipdir.online.lync.com 2603:1027:0:4::b 443 1
[*]      SRV _sip._tls.          com sipdir.online.lync.com 2603:1027:0:8::b 443 1
[*]      SRV _sip._tls.          com sipdir.online.lync.com 2603:1027:0:3::b 443 1
[*]      SRV _sip._tls.          com sipdir.online.lync.com 2603:1027::b 443 1
[*]      SRV _sip._tls.          com sipdir.online.lync.com 2603:1027:0:7::b 443 1
[*]      SRV _sip._tls.          com sipdir.online.lync.com 2603:1027:0:6::b 443 1
[*]      SRV _sip._tls.          com sipdir.online.lync.com 2603:1027:0:1::b 443 1
[*]      SRV _sip._tls.          com sipdir.online.lync.com 2603:1027:0:9::b 443 1
[*]      SRV _sipfederationtls._tcp.[redacted]com sipfed.online.lync.com 52.112.192.139 5061 1
[*]      SRV _sipfederationtls._tcp.          com sipfed.online.lync.com 2603:1027::b 5061 1
[*]      SRV _sipfederationtls._tcp.          com sipfed.online.lync.com 2603:1027:0:9::b 5061 1
[*]      SRV _sipfederationtls._tcp.          com sipfed.online.lync.com 2603:1027:0:1::b 5061 1
[*]      SRV _sipfederationtls._tcp.          com sipfed.online.lync.com 2603:1027:0:4::b 5061 1
[*]      SRV _sipfederationtls._tcp.          com sipfed.online.lync.com 2603:1027:0:8::b 5061 1
[*]      SRV _sipfederationtls._tcp.          com sipfed.online.lync.com 2603:1027:0:6::b 5061 1
[*]      SRV _sipfederationtls._tcp.          com sipfed.online.lync.com 2603:1027:0:7::b 5061 1
[*]      SRV _sipfederationtls._tcp.          com sipfed.online.lync.com 2603:1027:0:3::b 5061 1
[*] 18 Records Found
root@kali2:~#
```

Old (and new) fashion scanning



```
root@kali2:~# nmap [redacted]246.204

Starting Nmap 7.40 ( https://nmap.org ) at 2017-04-04 10:26 CEST
Nmap scan report for [redacted]246.204
Host is up (0.20s latency).
Not shown: 997 closed ports
PORT     STATE    SERVICE
22/tcp   filtered ssh
554/tcp  open     rtsp
7070/tcp open     realserver

Nmap done: 1 IP address (1 host up) scanned in 27.33 seconds
root@kali2:~#
root@kali2:~# zmap [redacted]246.204 -p 123
Apr 04 10:30:04.616 [WARN] blacklist: ZMap is currently using the default blacklist located at /etc/zmap/black
list.conf. By default, this blacklist excludes locally scoped networks (e.g. 10.0.0.0/8, 127.0.0.1/8, and 192.
168.0.0/16). If you are trying to scan local networks, you can change the default blacklist by editing the def
ault ZMap configuration at /etc/zmap/zmap.conf.
Apr 04 10:30:04.621 [WARN] zmap: too few targets relative to senders, dropping to one sender
Apr 04 10:30:04.795 [INFO] zmap: output module: csv
Apr 04 10:30:04.796 [INFO] csv: no output file selected, will use stdout
 0:00 0%; send: 0 0 p/s (0 p/s avg); recv: 0 0 p/s (0 p/s avg); drops: 0 p/s (0 p/s avg); hitrate: 0.00%
 0:01 13%; send: 1 done (29 p/s avg); recv: 0 0 p/s (0 p/s avg); drops: 0 p/s (0 p/s avg); hitrate: 0.00%
 0:02 25%; send: 1 done (29 p/s avg); recv: 0 0 p/s (0 p/s avg); drops: 0 p/s (0 p/s avg); hitrate: 0.00%
 0:03 38%; send: 1 done (29 p/s avg); recv: 0 0 p/s (0 p/s avg); drops: 0 p/s (0 p/s avg); hitrate: 0.00%
 0:04 50%; send: 1 done (29 p/s avg); recv: 0 0 p/s (0 p/s avg); drops: 0 p/s (0 p/s avg); hitrate: 0.00%
 0:05 63% (3s left); send: 1 done (29 p/s avg); recv: 0 0 p/s (0 p/s avg); drops: 0 p/s (0 p/s avg); hitrate:
0.00%
 0:06 75% (2s left); send: 1 done (29 p/s avg); recv: 0 0 p/s (0 p/s avg); drops: 0 p/s (0 p/s avg); hitrate:
0.00%
 0:07 88% (1s left); send: 1 done (29 p/s avg); recv: 0 0 p/s (0 p/s avg); drops: 0 p/s (0 p/s avg); hitrate:
0.00%
 0:08 100% (0s left); send: 1 done (29 p/s avg); recv: 0 0 p/s (0 p/s avg); drops: 0 p/s (0 p/s avg); hitrate:
 0.00%
Apr 04 10:30:13.870 [INFO] zmap: completed
root@kali2:~#
```

Maltego



Start a Machine

STEPS

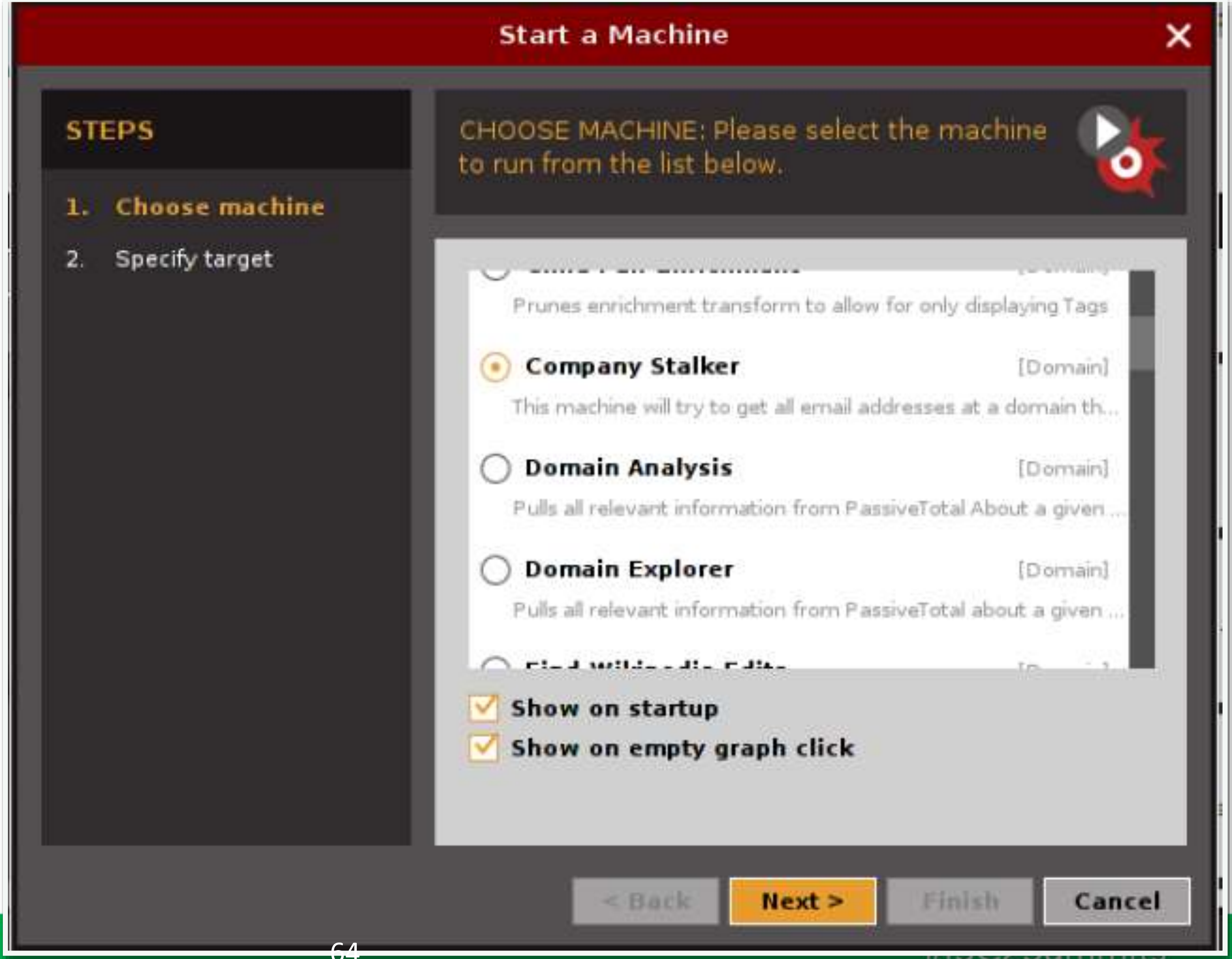
1. Choose machine
2. Specify target

SPECIFY TARGET: Please provide parameters for the machine to target.

The Company Stalker machine requires the following inputs:

Domain Name [redacted]com

Maltego



Start a Machine

STEPS

1. Choose machine
2. Specify target

CHOOSE MACHINE: Please select the machine to run from the list below.

Prunes enrichment transform to allow for only displaying Tags

● Company Stalker [Domain]
This machine will try to get all email addresses at a domain th...

○ Domain Analysis [Domain]
Pulls all relevant information from PassiveTotal About a given ...

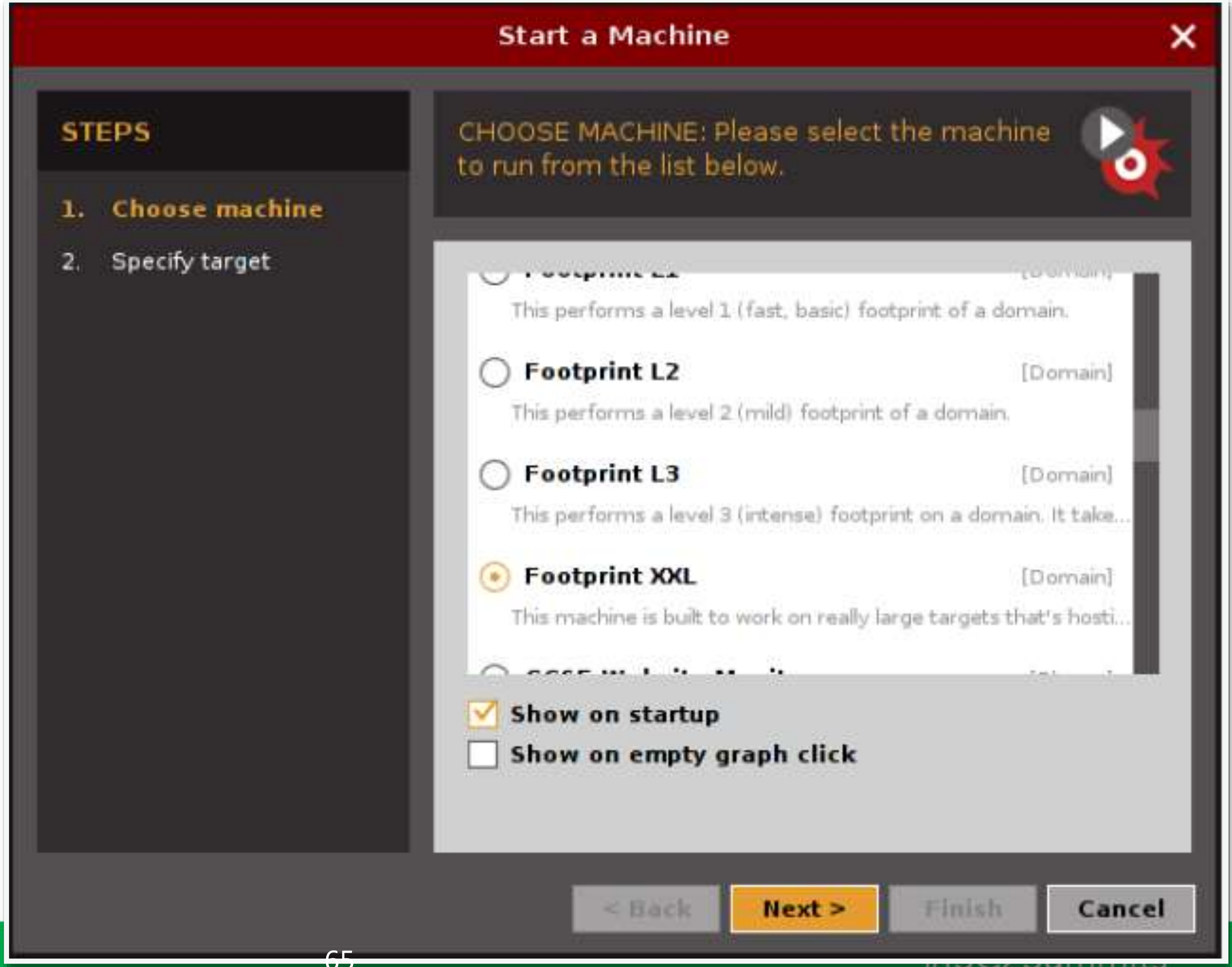
○ Domain Explorer [Domain]
Pulls all relevant information from PassiveTotal about a given ...

○ Find Wikipedia Edits [Domain]

☑ Show on startup

☑ Show on empty graph click

Maltego



Start a Machine

STEPS

1. **Choose machine**
2. Specify target

CHOOSE MACHINE: Please select the machine to run from the list below.

○ **Footprint L1** [Domain]
This performs a level 1 (fast, basic) footprint of a domain.

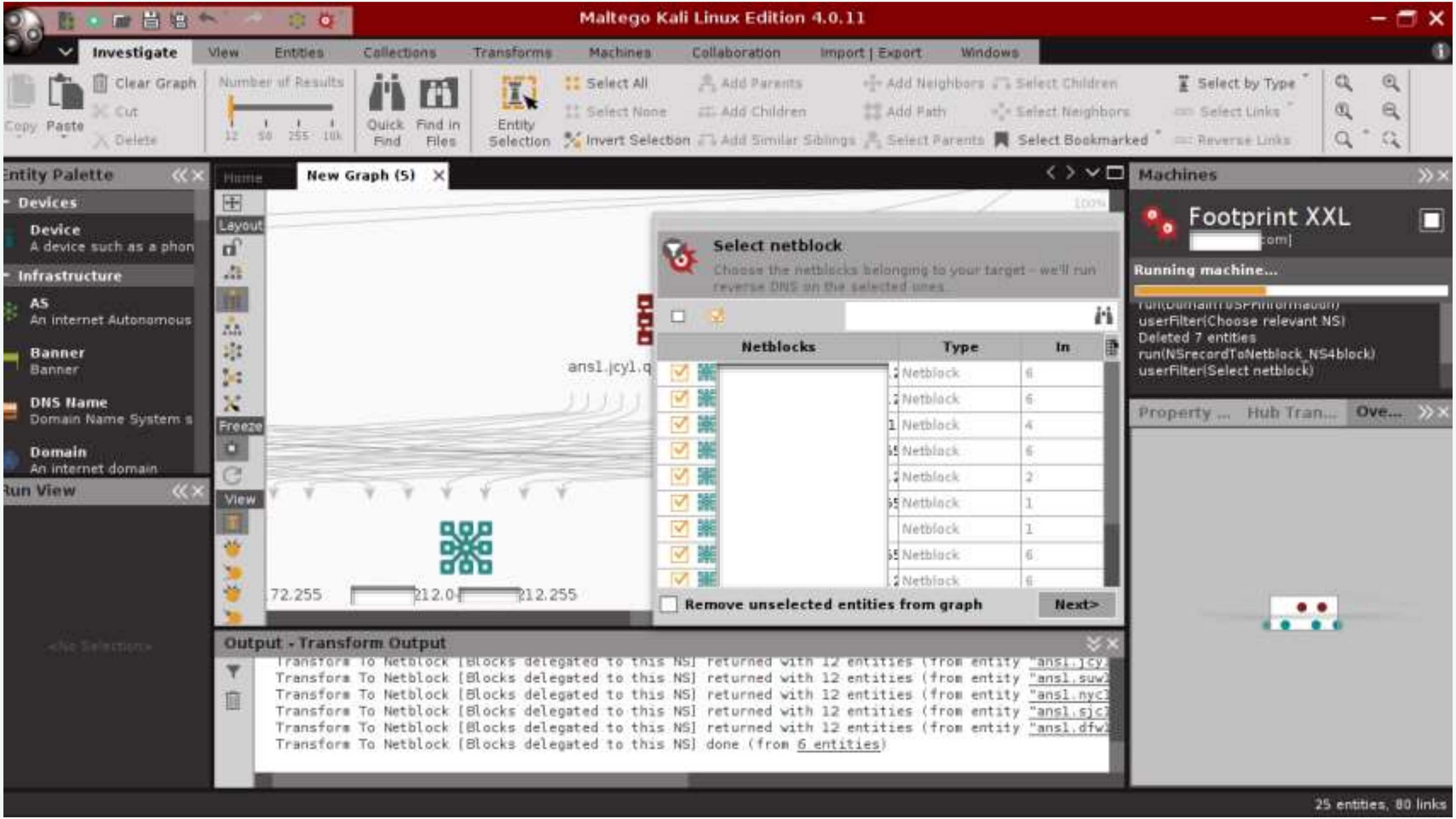
○ **Footprint L2** [Domain]
This performs a level 2 (mild) footprint of a domain.

○ **Footprint L3** [Domain]
This performs a level 3 (intense) footprint on a domain. It take...

● **Footprint XXL** [Domain]
This machine is built to work on really large targets that's hosti...

☑ Show on startup

□ Show on empty graph click



Select netblock

Choose the netblocks belonging to your target - we'll run reverse DNS on the selected ones

	Netblocks	Type	In
☑	[redacted]	Netblock	6
☑	[redacted]	Netblock	6
☑	[redacted]	Netblock	4
☑	[redacted]	Netblock	6
☑	[redacted]	Netblock	2
☑	[redacted]	Netblock	1
☑	[redacted]	Netblock	1
☑	[redacted]	Netblock	6
☑	[redacted]	Netblock	6

☐ Remove unselected entities from graph

Next>

Footprint XXL

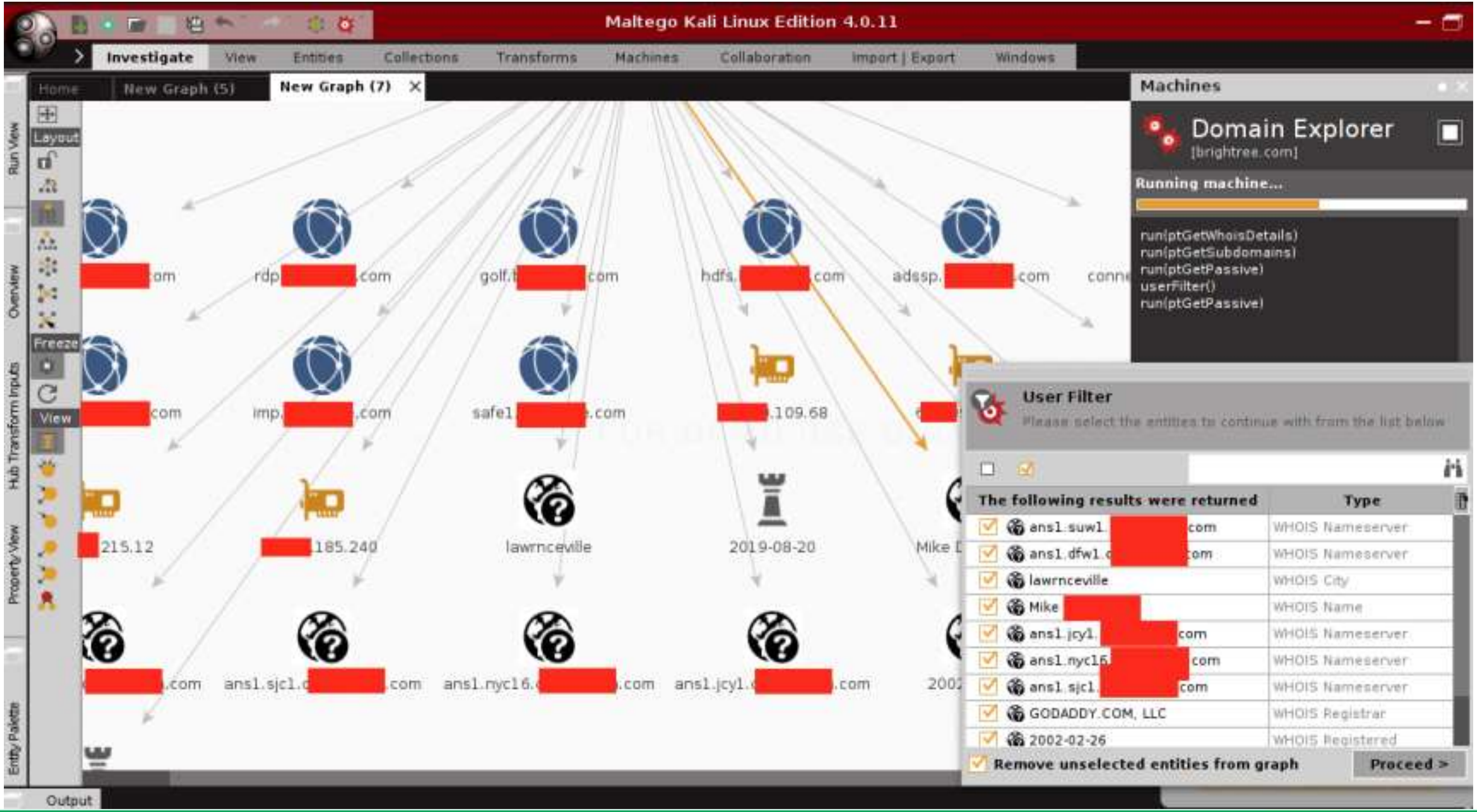
[redacted]com]

Running machine...

```
run(DomainToSPFInformation)
userFilter(Choose relevant NS)
Deleted 7 entities
run(NSrecordToNetblock_NS4block)
userFilter(Select netblock)
```

Output - Transform Output

```
Transform To Netblock [Blocks delegated to this NS] returned with 12 entities (from entity "ansl.jcy
Transform To Netblock [Blocks delegated to this NS] returned with 12 entities (from entity "ansl.suw
Transform To Netblock [Blocks delegated to this NS] returned with 12 entities (from entity "ansl.nyc
Transform To Netblock [Blocks delegated to this NS] returned with 12 entities (from entity "ansl.sjc
Transform To Netblock [Blocks delegated to this NS] returned with 12 entities (from entity "ansl.dfw
Transform To Netblock [Blocks delegated to this NS] done (from 6 entities)
```



Domain Explorer
[brightree.com]

Running machine...

```
run(ptGetWhoisDetails)
run(ptGetSubdomains)
run(ptGetPassive)
userFilter()
run(ptGetPassive)
```

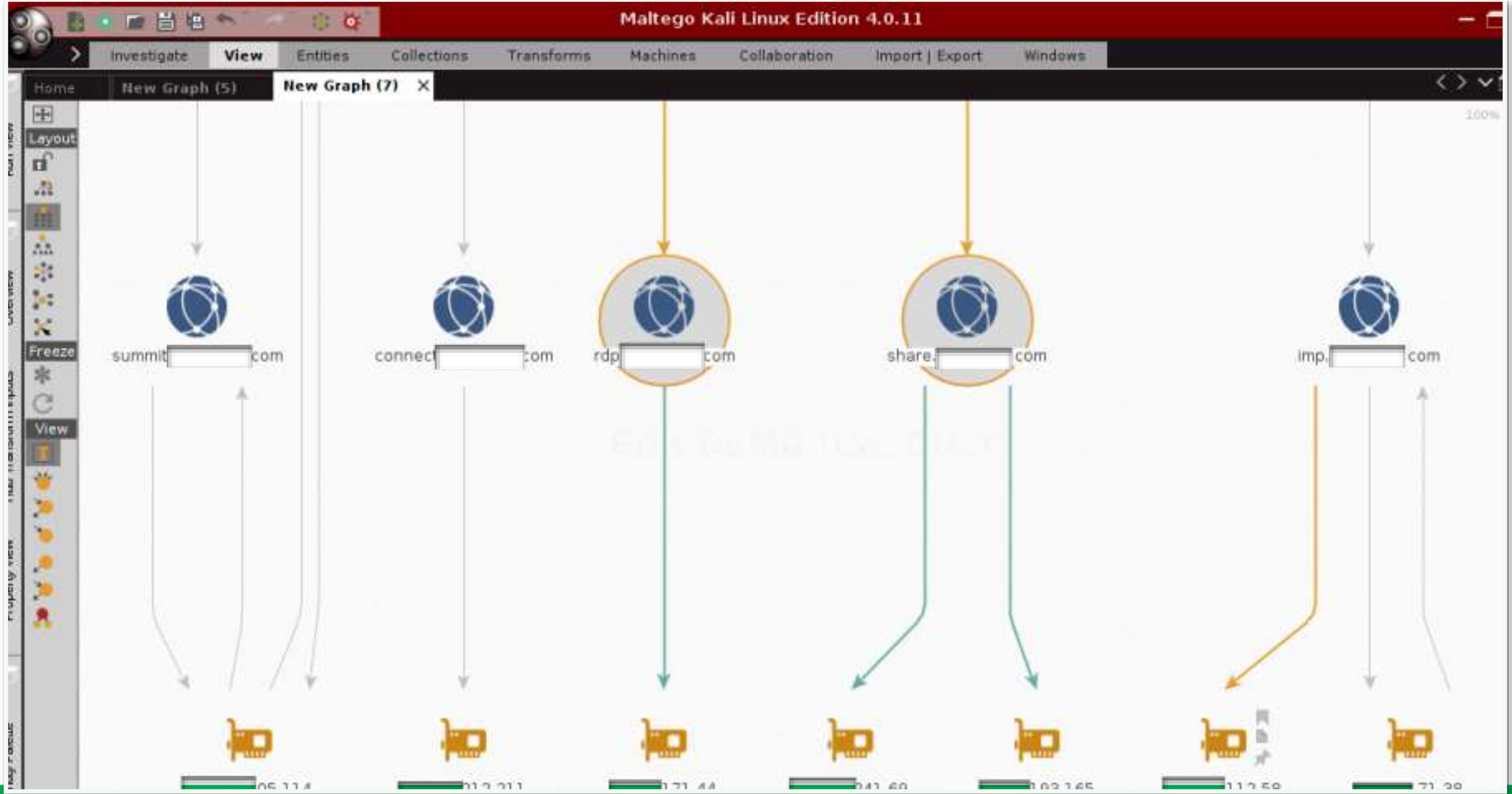
User Filter

Please select the entities to continue with from the list below

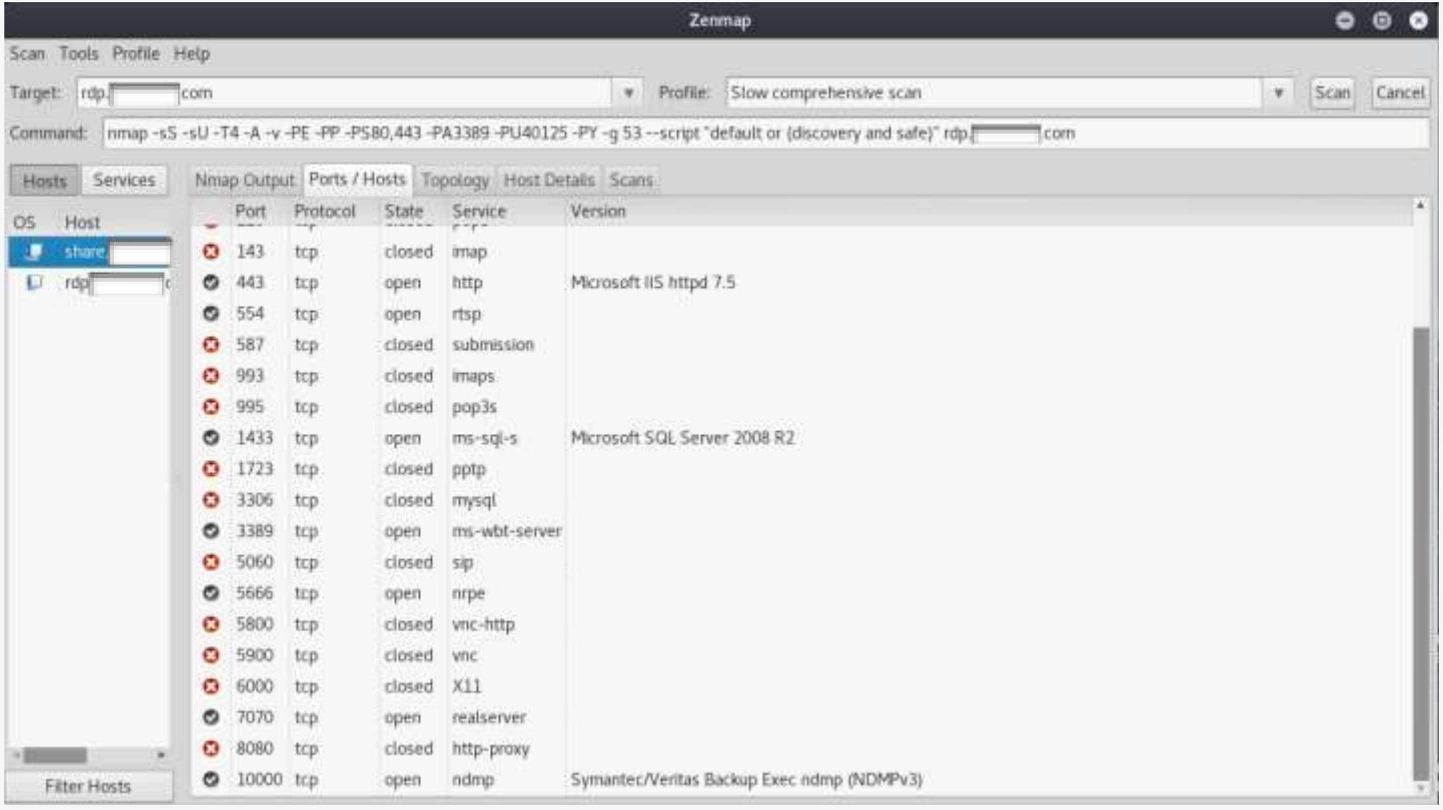
	The following results were returned	Type
☑	ans1.suwl.[redacted]com	WHOIS Nameserver
☑	ans1.dfw1.c[redacted]om	WHOIS Nameserver
☑	lawrnceville	WHOIS City
☑	Mike [redacted]	WHOIS Name
☑	ans1.jcyl.[redacted]com	WHOIS Nameserver
☑	ans1.nyc16[redacted]com	WHOIS Nameserver
☑	ans1.sjcl.[redacted]com	WHOIS Nameserver
☑	GODADDY.COM, LLC	WHOIS Registrar
☑	2002-02-26	WHOIS Registered

☑ Remove unselected entities from graph

Proceed >


Maltego Kali Linux Edition 4.0.11
Investigate
View
Entities
Collections
Transforms
Machines
Collaboration
Import | Export
Windows
Home
New Graph (5)
New Graph (7)
Layout
Freeze
View
summit[redacted]com
connect[redacted]com
rdp[redacted]com
share.[redacted]com
imp.[redacted]com
[redacted]05.114
[redacted]212.211
[redacted]171.44
[redacted]241.60
[redacted]193.165
[redacted]112.58
[redacted]71.38

NMAP



Target: rdp.[redacted]com

Profile: Slow comprehensive scan

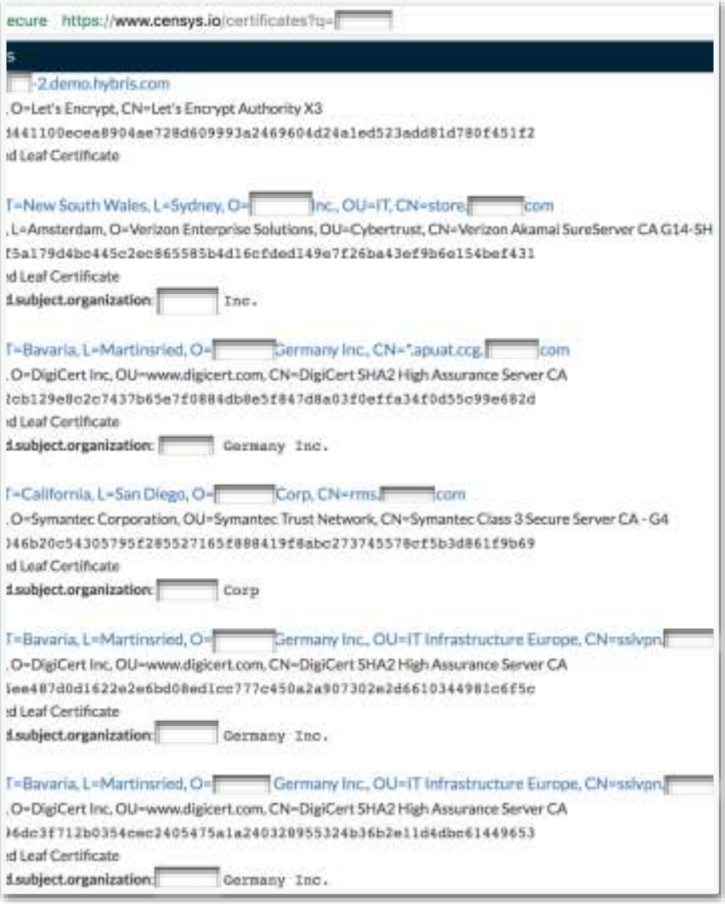
```
Command: nmap -sS -sU -T4 -A -v -PE -PP -PS80,443 -PA3389 -PU40125 -PY -g 53 --script "default or (discovery and safe)" rdp.[redacted]com
```

OS	Host
	share.[redacted]
	rdp[redacted]

	Port	Protocol	State	Service	Version
✗	143	tcp	closed	imap	
✓	443	tcp	open	http	Microsoft IIS httpd 7.5
✓	554	tcp	open	rtsp	
✗	587	tcp	closed	submission	
✗	993	tcp	closed	imaps	
✗	995	tcp	closed	pop3s	
✓	1433	tcp	open	ms-sql-s	Microsoft SQL Server 2008 R2
✗	1723	tcp	closed	pptp	
✗	3306	tcp	closed	mysql	
✓	3389	tcp	open	ms-wbt-server	
✗	5060	tcp	closed	sip	
✓	5666	tcp	open	nrpe	
✗	5800	tcp	closed	vnc-http	
✗	5900	tcp	closed	vnc	
✗	6000	tcp	closed	X11	
✓	7070	tcp	open	realserver	
✗	8080	tcp	closed	http-proxy	
✓	10000	tcp	open	ndmp	Symantec/Veritas Backup Exec ndmp (NDMPv3)

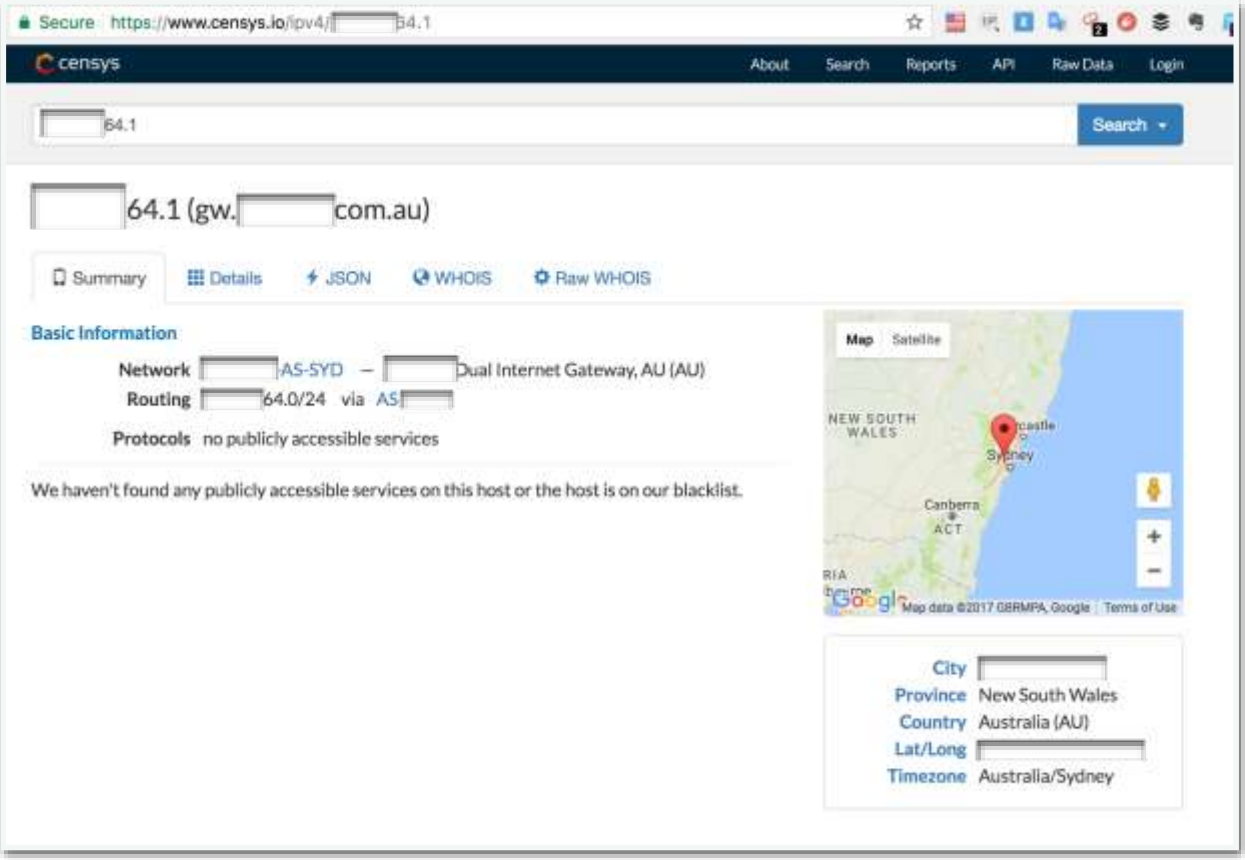
censys.io (semi-free)

- » Parsing and collection of various publically-available information
- » Example: certificates
  - SSLVPN in France and Munich
  - Date Center presence in Munich, San Diego, Sydney
  - Demo-site of Hybrid (e-commerce technology)
  - Using Akamai services in Sydney



```
ecure   https://www.censys.io/certificates?q=[redacted]
s
[redacted]-2.demo.hybris.com
, O=Let's Encrypt, CN=Let's Encrypt Authority X3
d441100ecea8904ae728d609993a2469604d24a1ed523add81d780f451f2
d Leaf Certificate

T=New South Wales, L=Sydney, O=[redacted]Inc., OU=IT, CN=store.[redacted]com
, L=Amsterdam, O=Verizon Enterprise Solutions, OU=Cybertrust, CN=Verizon Akamai SureServer CA G14-SH
f5a179d4bc445c2ec865585b4d16cfded149e7f26ba43ef9b6e154bef431
d Leaf Certificate
d.subject.organization: [redacted] Inc.

T=Bavaria, L=Martinsried, O=[redacted]Germany Inc., CN=*.apuat.ccg.[redacted]com
, O=DigiCert Inc, OU=www.digicert.com, CN=DigiCert SHA2 High Assurance Server CA
2cb129e8c2c7437b65e7f0884db8e5f847d8a03f0effa34f0d55c99e682d
d Leaf Certificate
d.subject.organization: [redacted] Germany Inc.

T=California, L=San Diego, O=[redacted]Corp, CN=rms.[redacted]com
, O=Symantec Corporation, OU=Symantec Trust Network, CN=Symantec Class 3 Secure Server CA - G4
046b20c54305795f285527165f888419f8abc273745578cf5b3d861f9b69
d Leaf Certificate
d.subject.organization: [redacted] Corp

T=Bavaria, L=Martinsried, O=[redacted]Germany Inc., OU=IT Infrastructure Europe, CN=sslvpn.[redacted]
, O=DigiCert Inc, OU=www.digicert.com, CN=DigiCert SHA2 High Assurance Server CA
5ee487d0d1622e2e6bd08ed1cc777c450a2a907302e2d6610344981c6f5c
d Leaf Certificate
d.subject.organization: [redacted] Germany Inc.

T=Bavaria, L=Martinsried, O=[redacted] Germany Inc., OU=IT Infrastructure Europe, CN=sslvpn.[redacted]
, O=DigiCert Inc, OU=www.digicert.com, CN=DigiCert SHA2 High Assurance Server CA
06dc3f712b0354cec2405475a1a240320955324b36b2e11d4dbc61449653
d Leaf Certificate
d.subject.organization: [redacted] Germany Inc.
```

censys.io - Geolocation



https://www.censys.io/ipv4/[redacted]64.1

[redacted]64.1

[redacted]64.1 (gw.[redacted]com.au)

Basic Information

Network [redacted]AS-SYD – [redacted]Dual Internet Gateway, AU (AU)

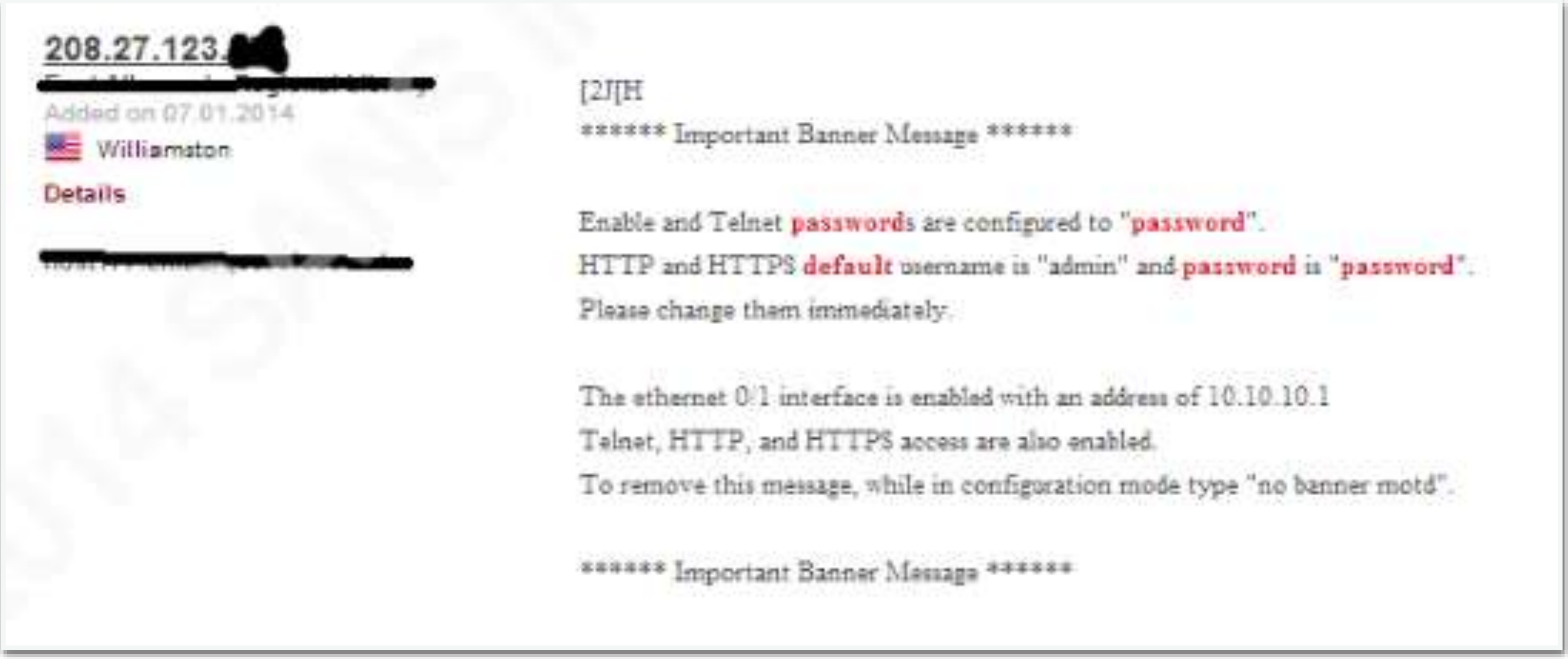
Routing [redacted]64.0/24 via AS[redacted]

Protocols no publicly accessible services

We haven't found any publicly accessible services on this host or the host is on our blacklist.

City	[redacted]
Province	New South Wales
Country	Australia (AU)
Lat/Long	[redacted]
Timezone	Australia/Sydney

shodan.io



208.27.123.[redacted]

[redacted]

Added on 07.01.2014

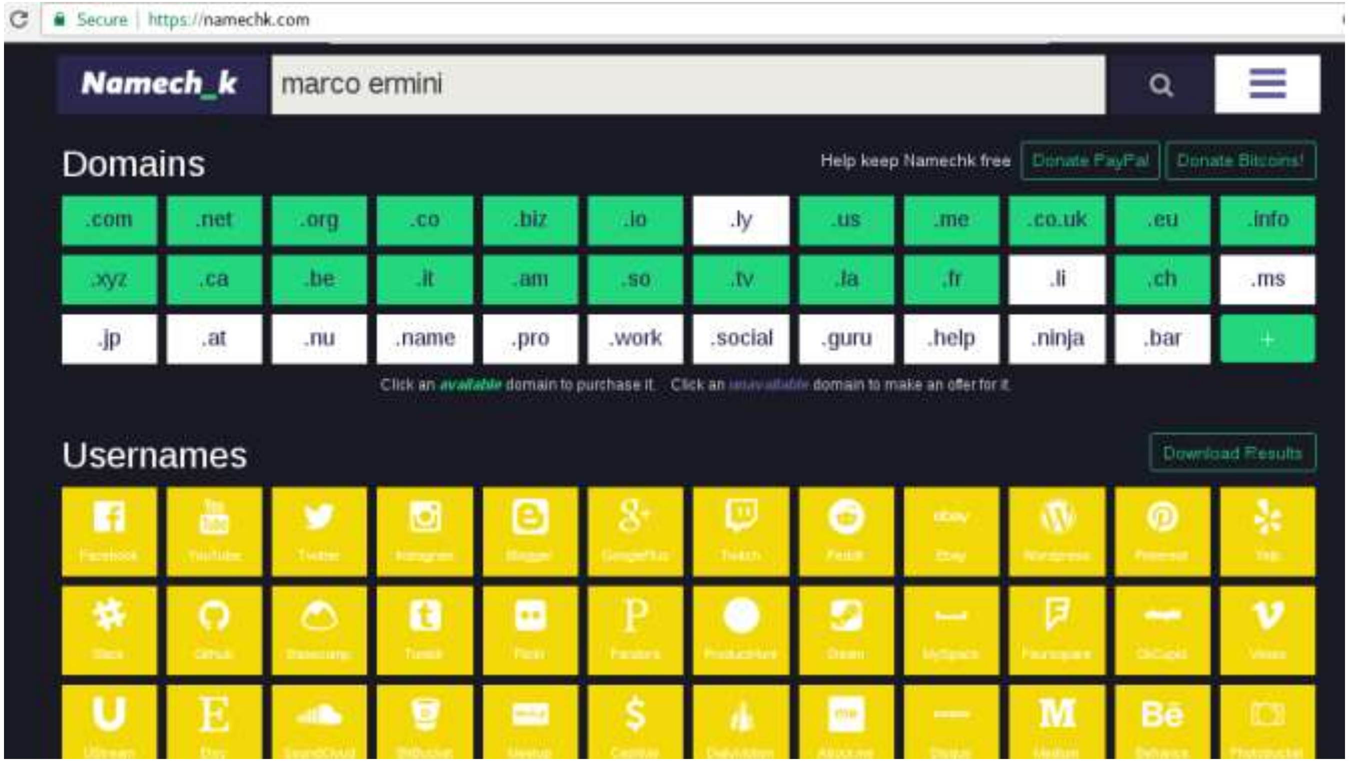
Williamston

Details

[redacted]

```
[2J[H
****** Important Banner Message ******

Enable and Telnet passwords are configured to "password".
HTTP and HTTPS default username is "admin" and password is "password".
Please change them immediately.

The ethernet 0/1 interface is enabled with an address of 10.10.10.1
Telnet, HTTP, and HTTPS access are also enabled.
To remove this message, while in configuration mode type "no banner motd".

****** Important Banner Message ******
```

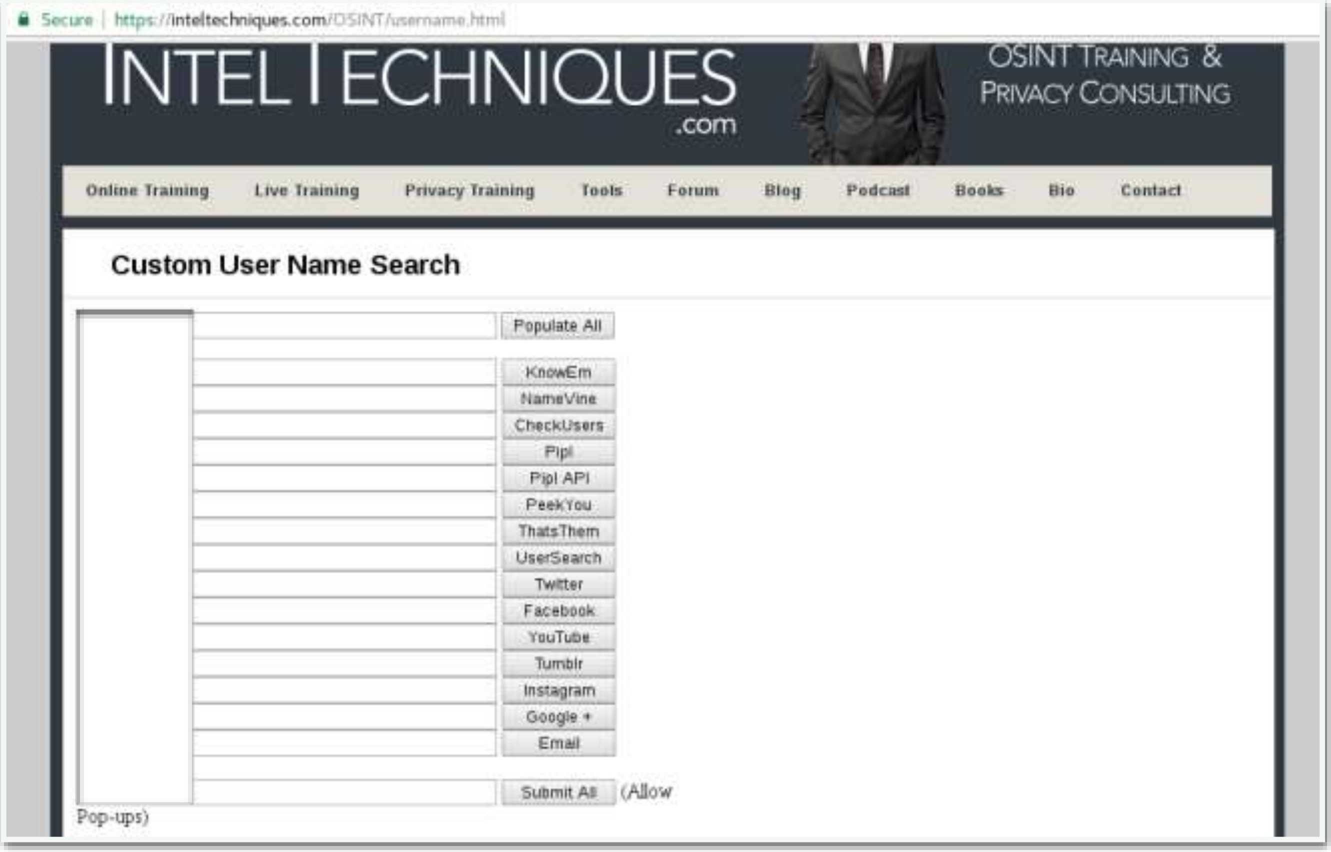
VIPs “Dorking”



Click an *available* domain to purchase it. Click an unavailable domain to make an offer for it.

VIPs

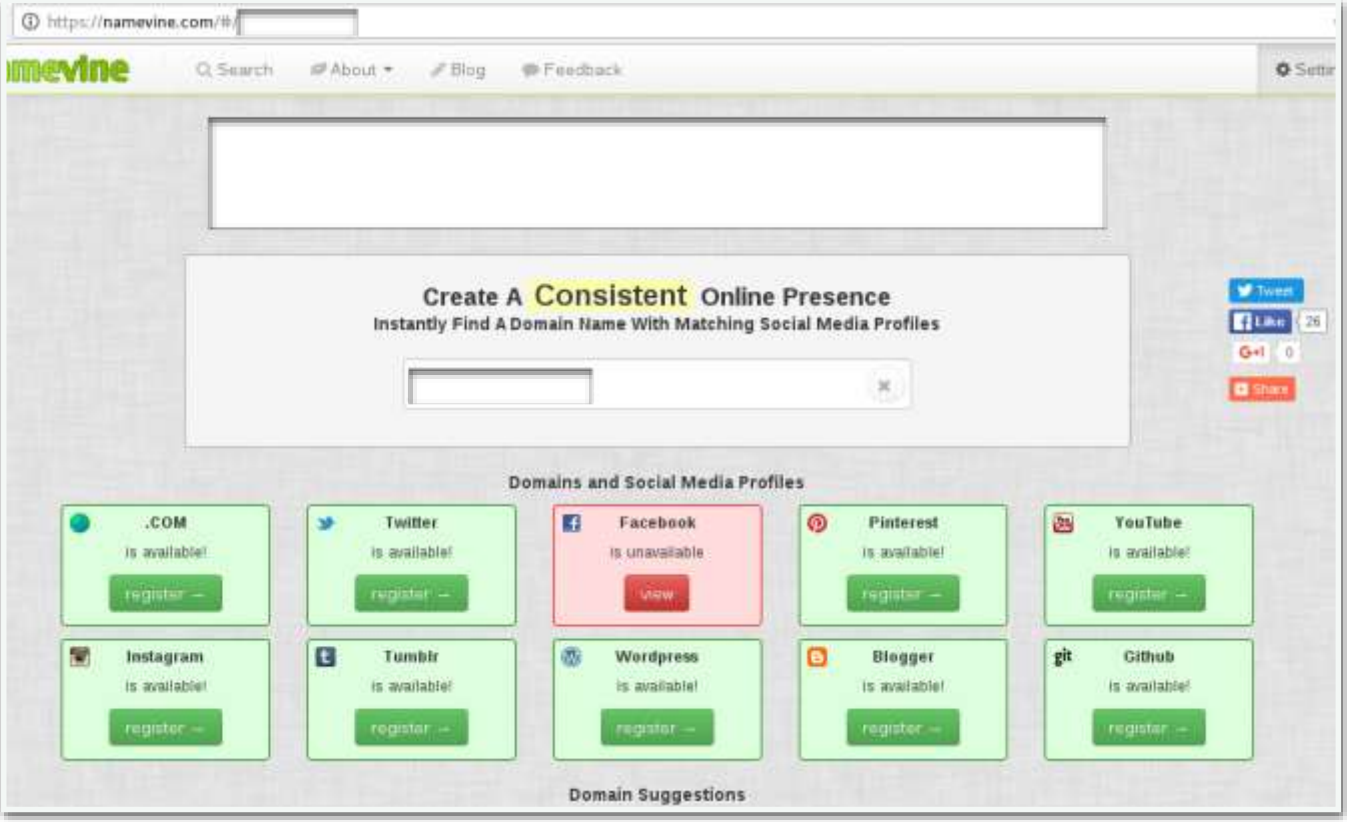
"Dorking"



Custom User Name Search

(Allow Pop-ups)

VIPs “Dorking”



https://namevine.com/#/[redacted]

Create A Consistent Online Presence

Instantly Find A Domain Name With Matching Social Media Profiles

[redacted]

Domains and Social Media Profiles

.COM
is available!
register →

Twitter
is available!
register →

Facebook
is unavailable
view

Pinterest
is available!
register →

YouTube
is available!
register →

Instagram
is available!
register →

Tumblr
is available!
register →

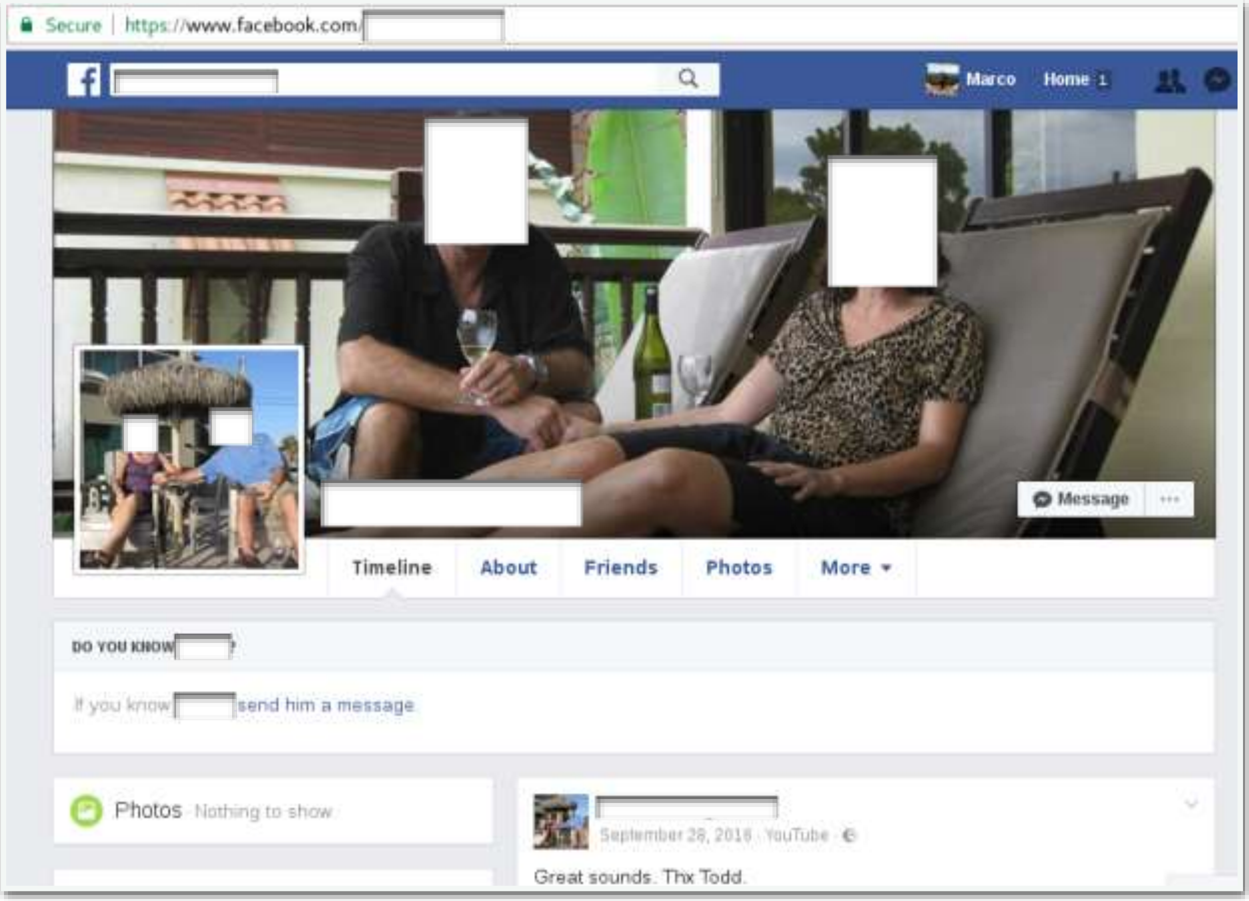
Wordpress
is available!
register →

Blogger
is available!
register →

Github
is available!
register →

Domain Suggestions

VIPs
“Dorking”



Secure | https://www.facebook.com/[redacted]

[redacted]

[redacted]

DO YOU KNOW [redacted]?

If you know [redacted] send him a message

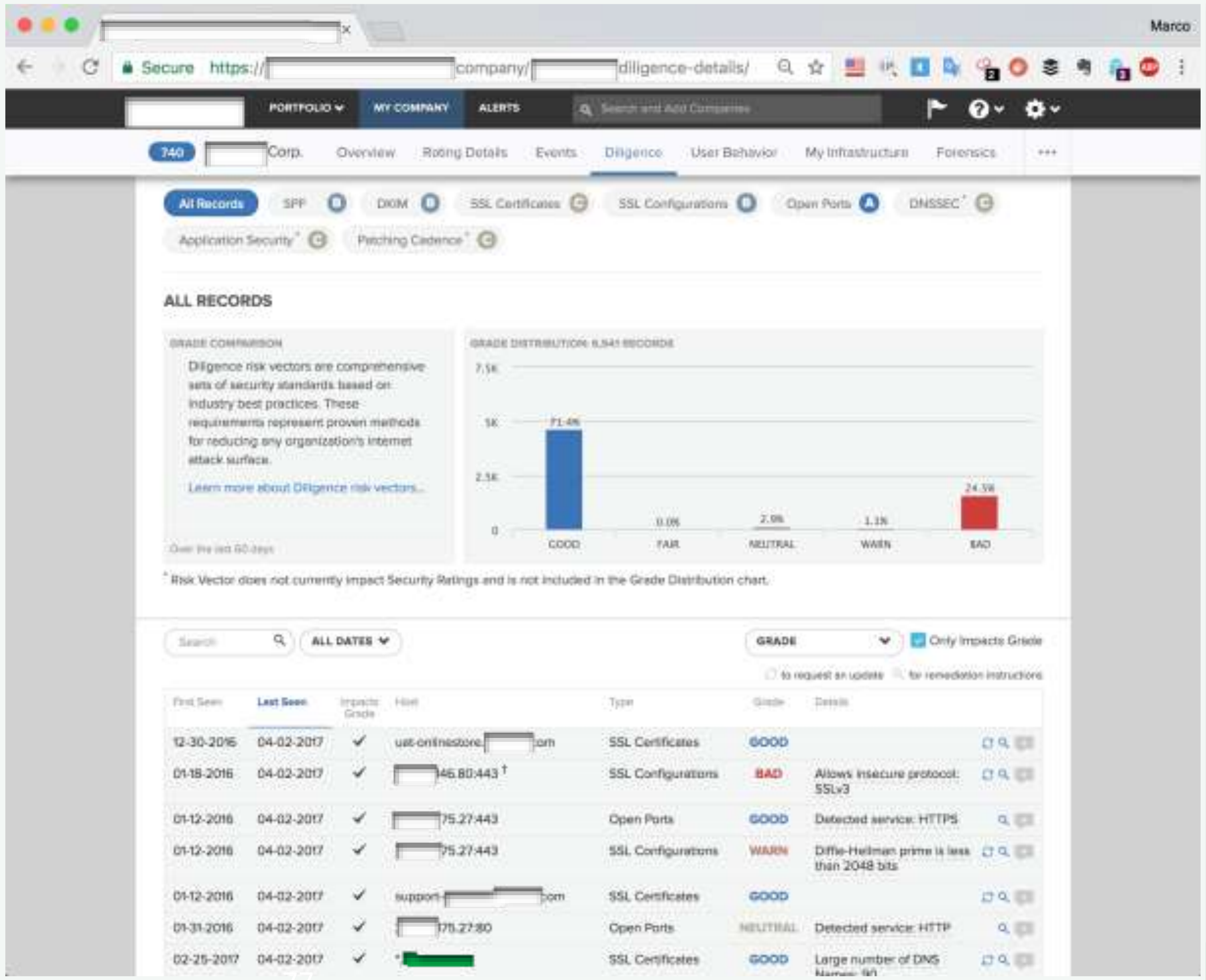
Photos · Nothing to show

[redacted]

September 28, 2016 · YouTube ·

Great sounds. Thx Todd.

Cyber Security Ratings Firms



ALL RECORDS

Diligence risk vectors are comprehensive sets of security standards based on industry best practices. These requirements represent proven methods for reducing any organization's internet attack surface.

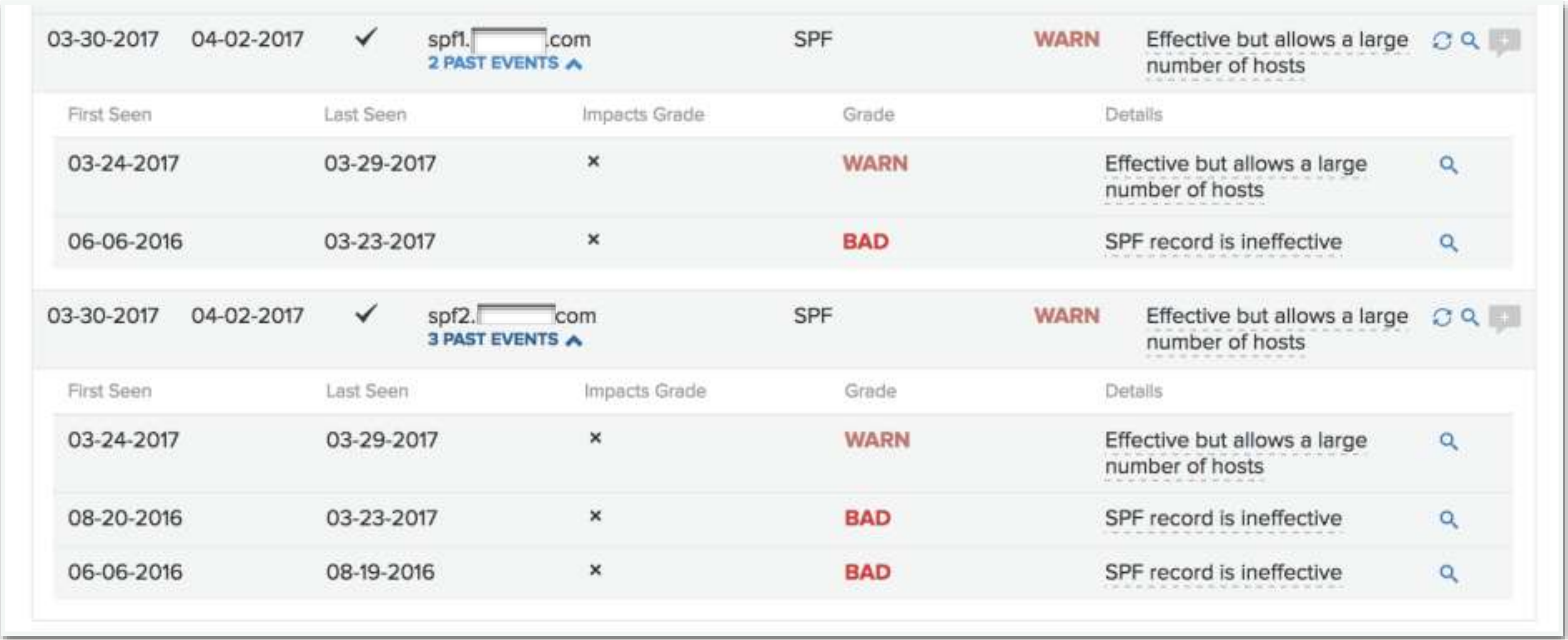
Learn more about Diligence risk vectors...

* Risk Vector does not currently impact Security Ratings and is not included in the Grade Distribution chart.

to request an update · for remediation instructions

First Seen	Last Seen	Impacts Grade	Host	Type	Grade	Details
12-30-2016	04-02-2017	✓	uat-onlinestore.[redacted].com	SSL Certificates	GOOD	
01-18-2016	04-02-2017	✓	[redacted]46.80:443 †	SSL Configurations	BAD	Allows insecure protocol: SSLv3
01-12-2016	04-02-2017	✓	[redacted]75.27:443	Open Ports	GOOD	Detected service: HTTPS
01-12-2016	04-02-2017	✓	[redacted]75.27:443	SSL Configurations	WARN	Diffie-Hellman prime is less than 2048 bits
01-12-2016	04-02-2017	✓	support-[redacted].com	SSL Certificates	GOOD	
01-31-2016	04-02-2017	✓	[redacted]175.27:80	Open Ports	NEUTRAL	Detected service: HTTP
02-25-2017	04-02-2017	✓	*[redacted]	SSL Certificates	GOOD	Large number of DNS Names: 90

CyberSecurity Ratings Firms



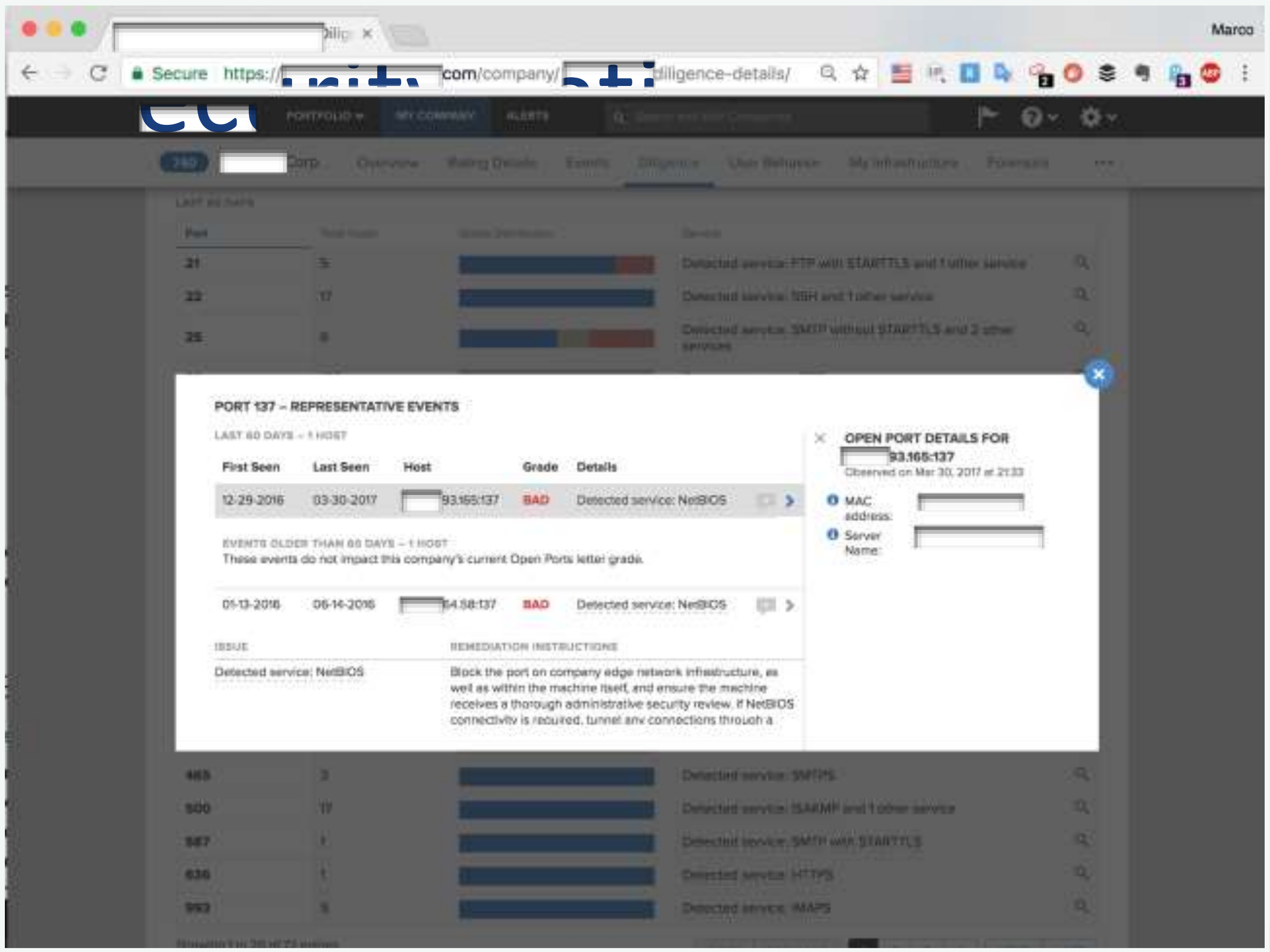
03-30-2017	04-02-2017	✓	spf1.[redacted].com 2 PAST EVENTS ^	SPF	WARN	Effective but allows a large number of hosts

First Seen	Last Seen	Impacts Grade	Grade	Details
03-24-2017	03-29-2017	×	WARN	Effective but allows a large number of hosts
06-06-2016	03-23-2017	×	BAD	SPF record is ineffective

03-30-2017	04-02-2017	✓	spf2.[redacted].com 3 PAST EVENTS ^	SPF	WARN	Effective but allows a large number of hosts

First Seen	Last Seen	Impacts Grade	Grade	Details
03-24-2017	03-29-2017	×	WARN	Effective but allows a large number of hosts
08-20-2016	03-23-2017	×	BAD	SPF record is ineffective
06-06-2016	08-19-2016	×	BAD	SPF record is ineffective

Cyb



Secure https://[redacted]com/company/[redacted]diligence-details/
PORTFOLIO ▾ MY COMPANY ALERTS
740 [redacted]Corp Overview Rating Details Events Diligence User Behavior My Infrastructure Forensics

LAST 60 DAYS

Port	Total Hosts	Grade Distribution	Service
21	5		Detected service: FTP with STARTTLS and 1 other service
22	17		Detected service: SSH and 1 other service
25	8		Detected service: SMTP without STARTTLS and 2 other services
465	3		Detected service: SMTPS
500	17		Detected service: ISAKMP and 1 other service
587	1		Detected service: SMTP with STARTTLS
636	1		Detected service: HTTPS
993	5		Detected service: IMAPS

PORT 137 – REPRESENTATIVE EVENTS

LAST 60 DAYS – 1 HOST

First Seen	Last Seen	Host	Grade	Details
12-29-2016	03-30-2017	[redacted]93.165:137	BAD	Detected service: NetBIOS

EVENTS OLDER THAN 60 DAYS – 1 HOST

These events do not impact this company's current Open Ports letter grade.

First Seen	Last Seen	Host	Grade	Details
01-13-2016	06-14-2016	[redacted]64.58:137	BAD	Detected service: NetBIOS

ISSUE	REMEDIATION INSTRUCTIONS
Detected service: NetBIOS	Block the port on company edge network infrastructure, as well as within the machine itself, and ensure the machine receives a thorough administrative security review. If NetBIOS connectivity is required, tunnel any connections through a

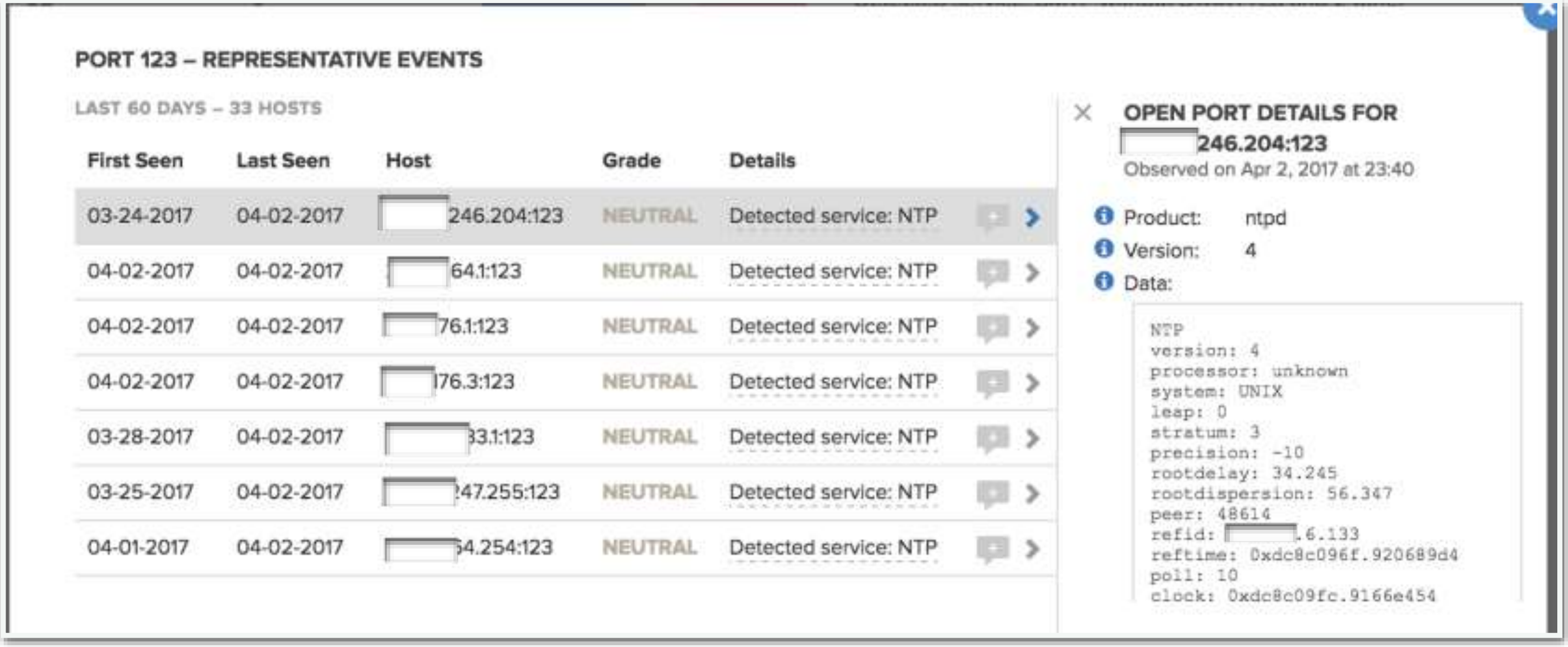
OPEN PORT DETAILS FOR [redacted]93.165:137

Observed on Mar 30, 2017 at 21:33

MAC address: [redacted]

Server Name: [redacted]

CyberSecurity Ratings Firms



PORT 123 – REPRESENTATIVE EVENTS

LAST 60 DAYS – 33 HOSTS

First Seen	Last Seen	Host	Grade	Details
03-24-2017	04-02-2017	[redacted]246.204:123	NEUTRAL	Detected service: NTP
04-02-2017	04-02-2017	[redacted]64.1:123	NEUTRAL	Detected service: NTP
04-02-2017	04-02-2017	[redacted]76.1:123	NEUTRAL	Detected service: NTP
04-02-2017	04-02-2017	[redacted]176.3:123	NEUTRAL	Detected service: NTP
03-28-2017	04-02-2017	[redacted]33.1:123	NEUTRAL	Detected service: NTP
03-25-2017	04-02-2017	[redacted]47.255:123	NEUTRAL	Detected service: NTP
04-01-2017	04-02-2017	[redacted]4.254:123	NEUTRAL	Detected service: NTP

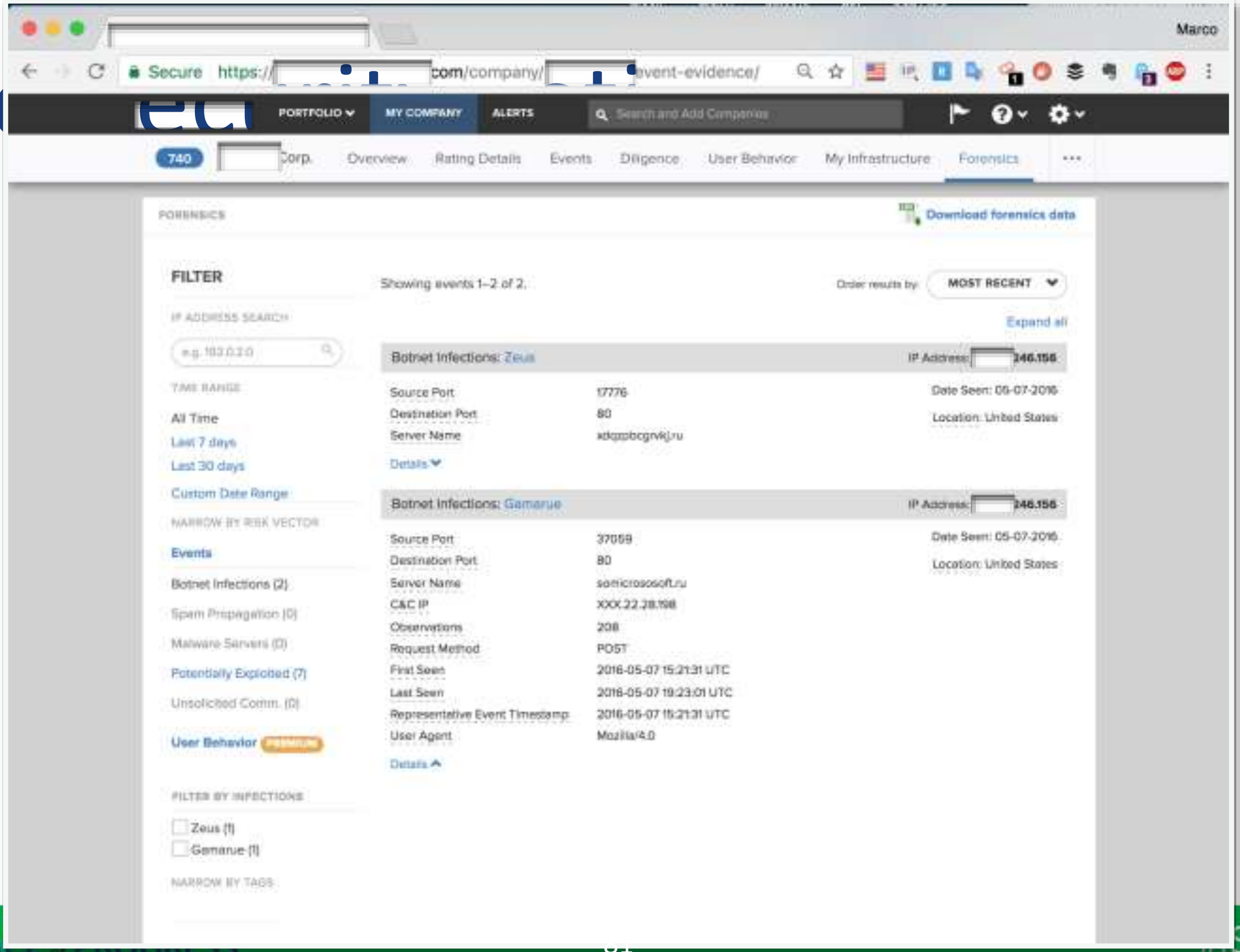
OPEN PORT DETAILS FOR [redacted]246.204:123

Observed on Apr 2, 2017 at 23:40

Product:	ntpd
Version:	4
Data:	

```
NTP
version: 4
processor: unknown
system: UNIX
leap: 0
stratum: 3
precision: -10
rootdelay: 34.245
rootdispersion: 56.347
peer: 48614
refid: [redacted].6.133
reftime: 0xdc8c096f.920689d4
poll: 10
clock: 0xdc8c09fc.9166e454
```

Cyb



FORENSICS

Download forensics data

FILTER

IP ADDRESS SEARCH

e.g. 192.0.2.0

TIME RANGE

All Time
Last 7 days
Last 30 days
Custom Date Range

NARROW BY RISK VECTOR

Events

Botnet Infections (2)
Spam Propagation (0)
Malware Servers (0)
Potentially Exploited (7)
Unsolicited Comm. (0)

User Behavior PREMIUM

FILTER BY INFECTIONS

□ Zeus (1)
□ Gamarue (1)

NARROW BY TAGS

Showing events 1–2 of 2.

Order results by: MOST RECENT

Expand all

Botnet Infections: Zeus — IP Address: [redacted]246.156

Source Port	17776
Destination Port	80
Server Name	xdqzpbcgrvkj.ru

Date Seen: 05-07-2016
Location: United States

Details

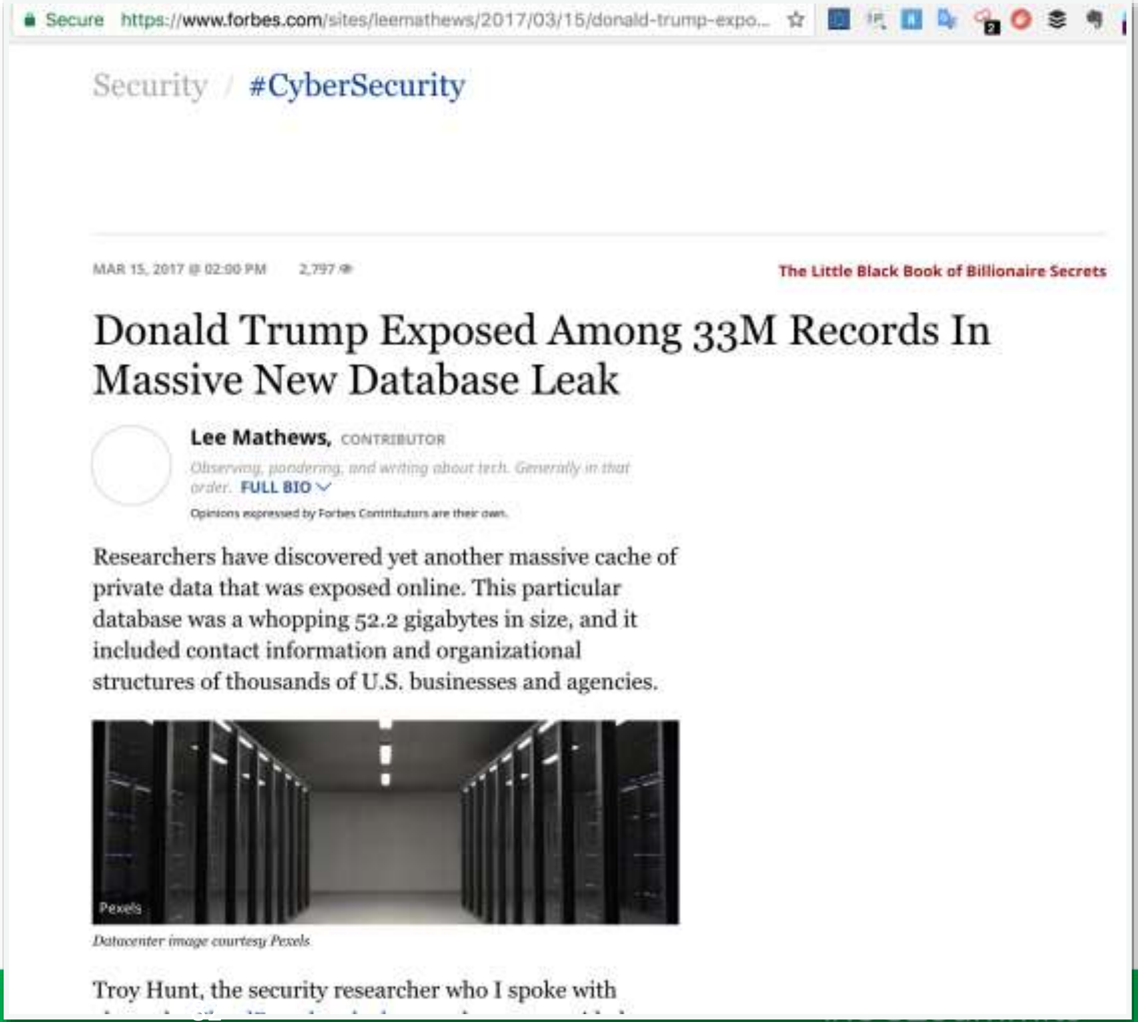
Botnet Infections: Gamarue — IP Address: [redacted]246.156

Source Port	37059
Destination Port	80
Server Name	somicrososoft.ru
C&C IP	XXX.22.28.198
Observations	208
Request Method	POST
First Seen	2016-05-07 15:21:31 UTC
Last Seen	2016-05-07 19:23:01 UTC
Representative Event Timestamp	2016-05-07 15:21:31 UTC
User Agent	Mozilla/4.0

Date Seen: 05-07-2016
Location: United States

Details

Data Breaches



Secure https://www.forbes.com/sites/leemathews/2017/03/15/donald-trump-expo...

Security / #CyberSecurity

MAR 15, 2017 @ 02:00 PM 2,797

The Little Black Book of Billionaire Secrets

Donald Trump Exposed Among 33M Records In Massive New Database Leak

Lee Mathews, CONTRIBUTOR

Observing, pondering, and writing about tech. Generally in that order. FULL BIO

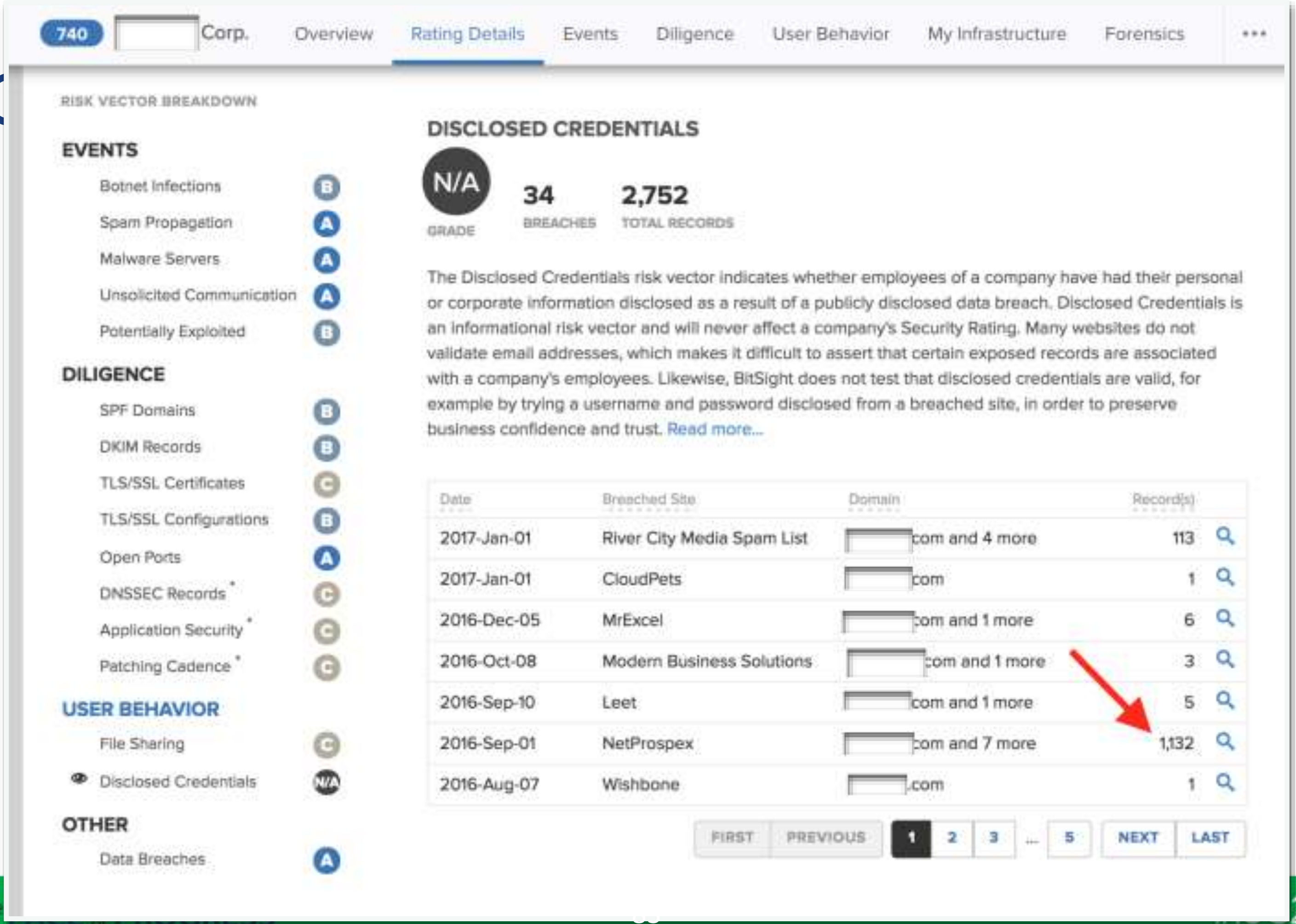
Opinions expressed by Forbes Contributors are their own.

Researchers have discovered yet another massive cache of private data that was exposed online. This particular database was a whopping 52.2 gigabytes in size, and it included contact information and organizational structures of thousands of U.S. businesses and agencies.

Datacenter image courtesy Pexels

Troy Hunt, the security researcher who I spoke with

Cyb



RISK VECTOR BREAKDOWN

EVENTS

Botnet Infections	B
Spam Propagation	A
Malware Servers	A
Unsolicited Communication	A
Potentially Exploited	B

DILIGENCE

SPF Domains	B
DKIM Records	B
TLS/SSL Certificates	C
TLS/SSL Configurations	B
Open Ports	A
DNSSEC Records *	C
Application Security *	C
Patching Cadence *	C

USER BEHAVIOR

File Sharing	C
Disclosed Credentials	N/A

OTHER

Data Breaches	A

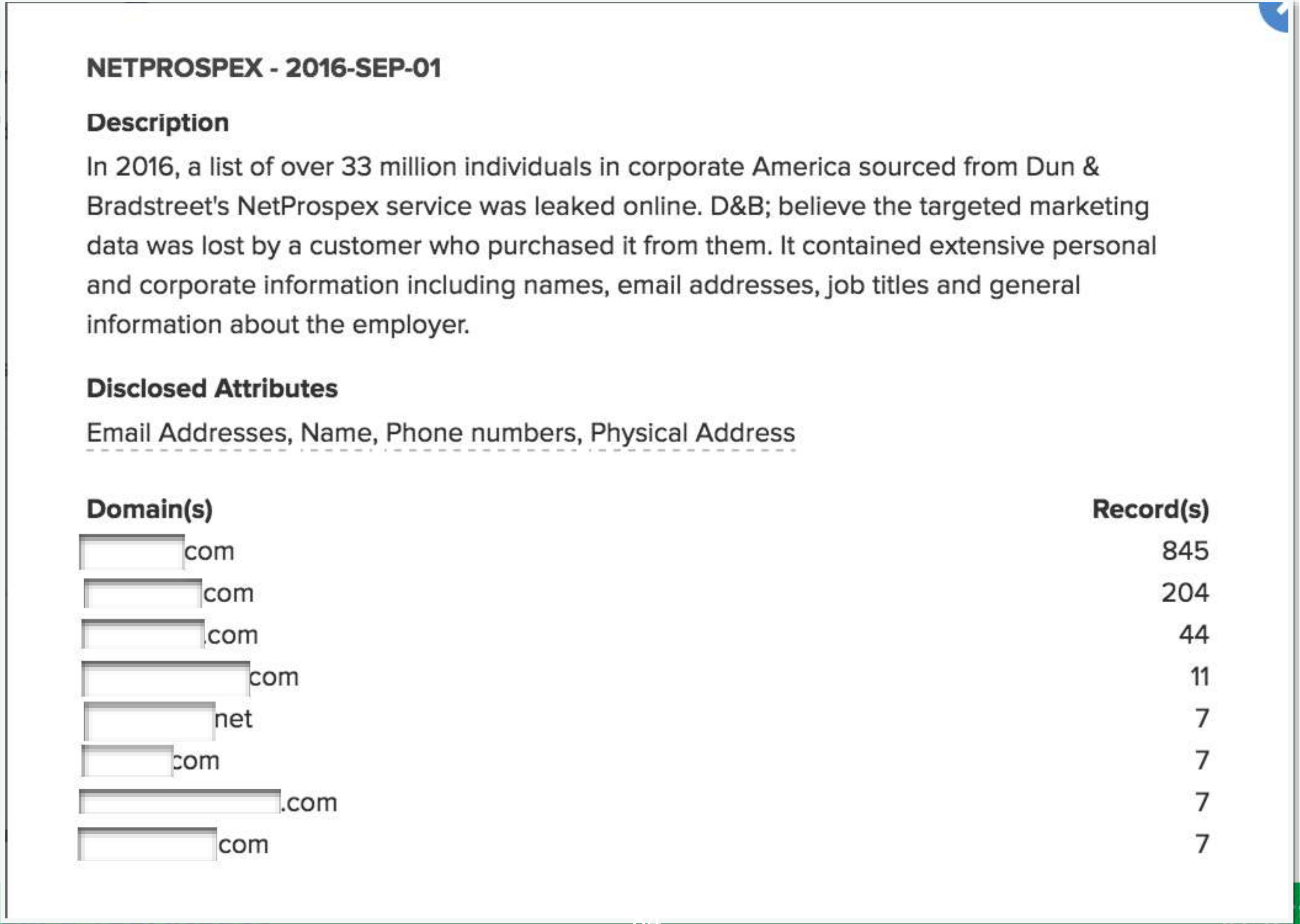
DISCLOSED CREDENTIALS

N/A GRADE — 34 BREACHES — 2,752 TOTAL RECORDS

The Disclosed Credentials risk vector indicates whether employees of a company have had their personal or corporate information disclosed as a result of a publicly disclosed data breach. Disclosed Credentials is an informational risk vector and will never affect a company's Security Rating. Many websites do not validate email addresses, which makes it difficult to assert that certain exposed records are associated with a company's employees. Likewise, BitSight does not test that disclosed credentials are valid, for example by trying a username and password disclosed from a breached site, in order to preserve business confidence and trust. Read more...

Date	Breached Site	Domain	Record(s)
2017-Jan-01	River City Media Spam List	[redacted] com and 4 more	113
2017-Jan-01	CloudPets	[redacted] com	1
2016-Dec-05	MrExcel	[redacted] com and 1 more	6
2016-Oct-08	Modern Business Solutions	[redacted] com and 1 more	3
2016-Sep-10	Leet	[redacted] com and 1 more	5
2016-Sep-01	NetProspex	[redacted] com and 7 more	1,132
2016-Aug-07	Wishbone	[redacted] .com	1

Cyb



NETPROSPEX - 2016-SEP-01

Description

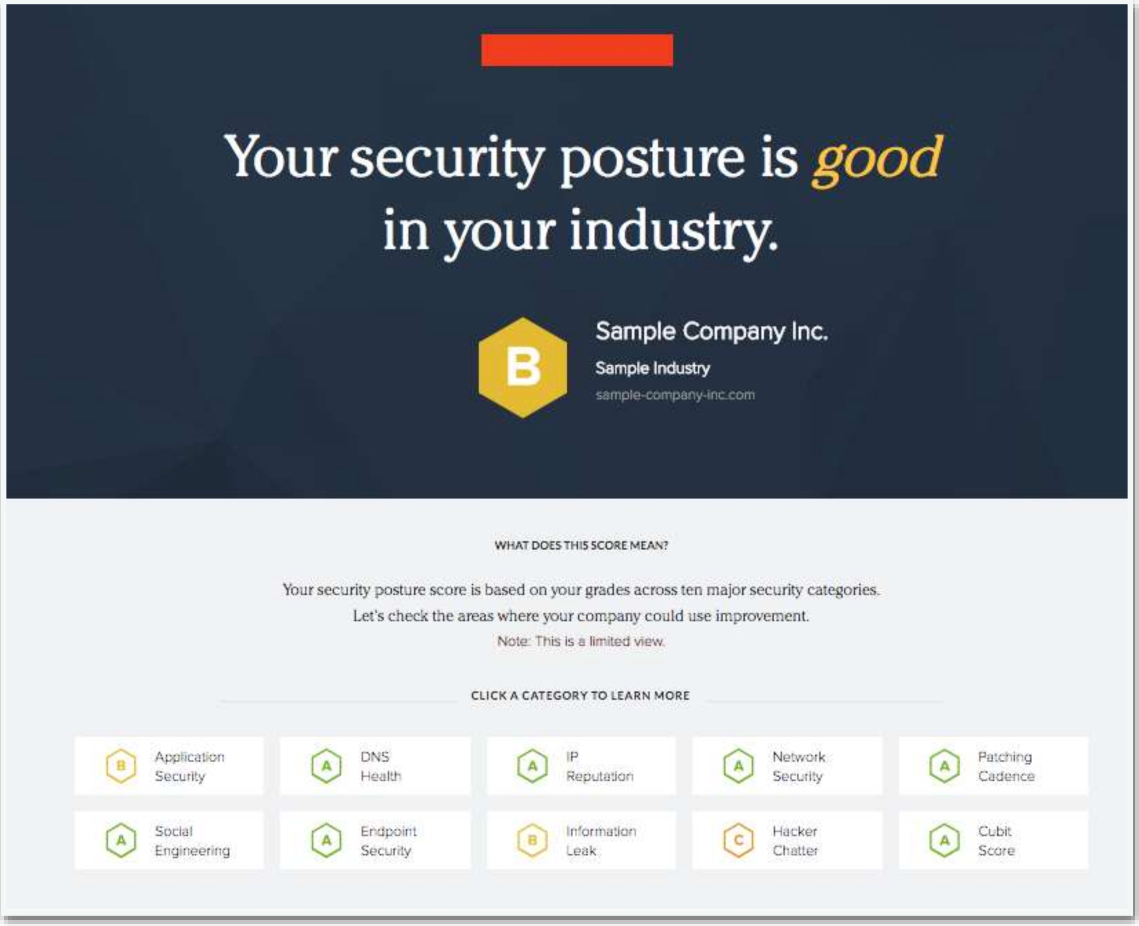
In 2016, a list of over 33 million individuals in corporate America sourced from Dun & Bradstreet's NetProspex service was leaked online. D&B; believe the targeted marketing data was lost by a customer who purchased it from them. It contained extensive personal and corporate information including names, email addresses, job titles and general information about the employer.

Disclosed Attributes

Email Addresses, Name, Phone numbers, Physical Address

Domain(s)	Record(s)
[redacted]com	845
[redacted]com	204
[redacted].com	44
[redacted]com	11
[redacted]net	7
[redacted]com	7
[redacted].com	7
[redacted]com	7

Cyber



Your security posture is *good* in your industry.

B

Sample Company Inc.

Sample Industry

sample-company-inc.com

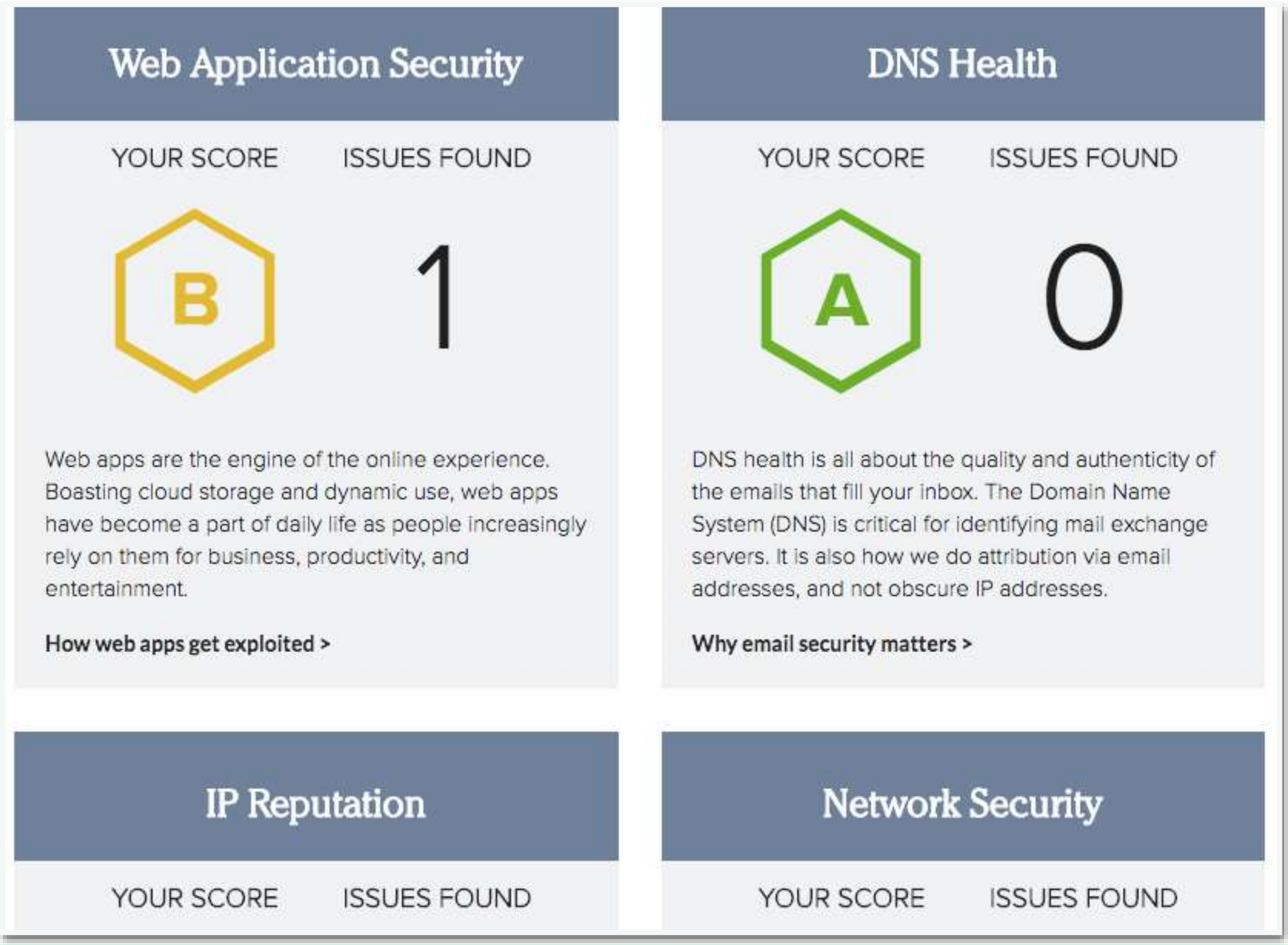
WHAT DOES THIS SCORE MEAN?

Your security posture score is based on your grades across ten major security categories.
Let's check the areas where your company could use improvement.
Note: This is a limited view.

CLICK A CATEGORY TO LEARN MORE

B Application Security	A DNS Health	A IP Reputation	A Network Security	A Patching Cadence
A Social Engineering	A Endpoint Security	B Information Leak	C Hacker Chatter	A Cubit Score

Cyb



Web Application Security

YOUR SCORE B

ISSUES FOUND 1

Web apps are the engine of the online experience. Boasting cloud storage and dynamic use, web apps have become a part of daily life as people increasingly rely on them for business, productivity, and entertainment.

How web apps get exploited >

DNS Health

YOUR SCORE A

ISSUES FOUND 0

DNS health is all about the quality and authenticity of the emails that fill your inbox. The Domain Name System (DNS) is critical for identifying mail exchange servers. It is also how we do attribution via email addresses, and not obscure IP addresses.

Why email security matters >

IP Reputation

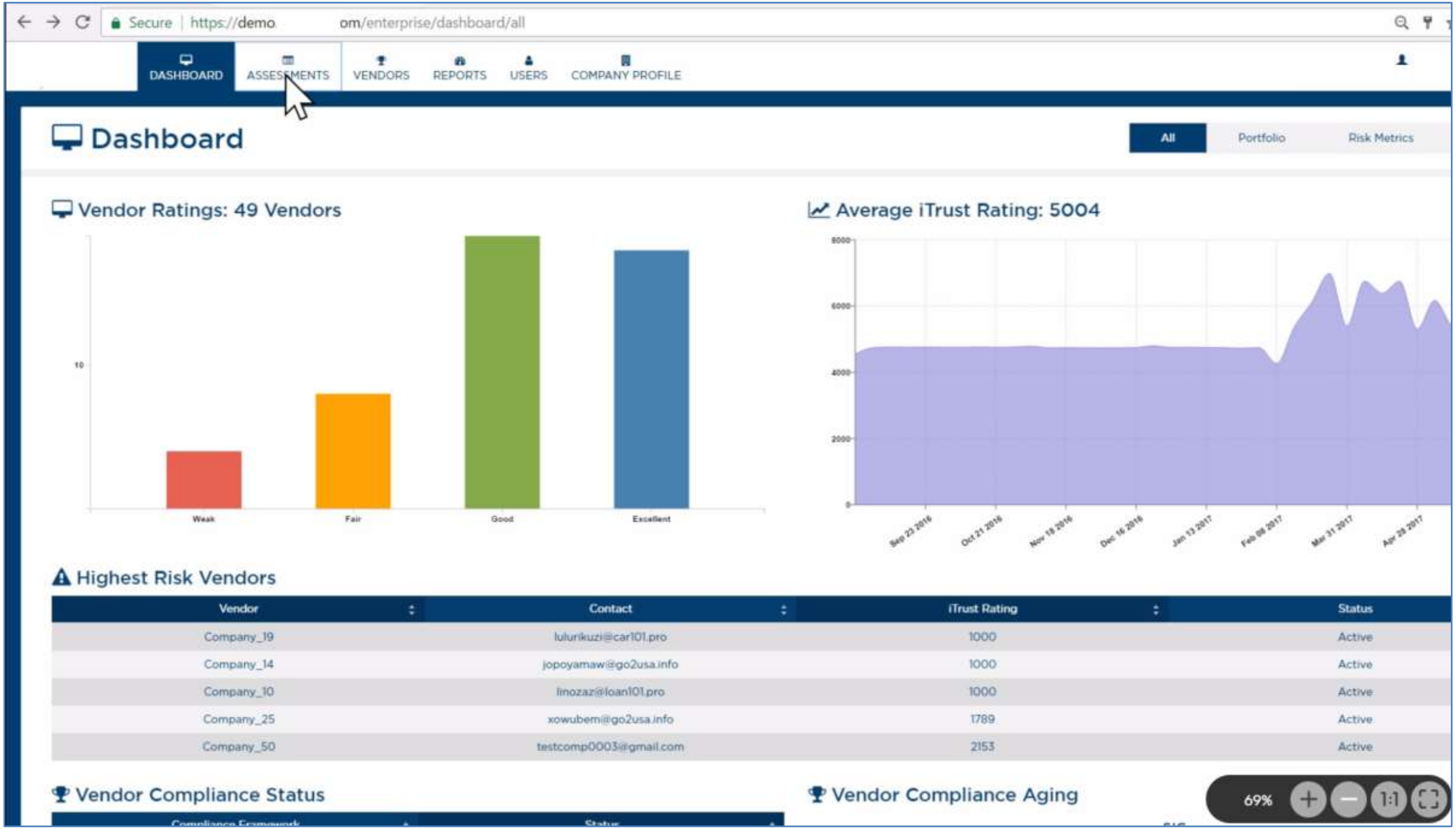
YOUR SCORE

ISSUES FOUND

Network Security

YOUR SCORE

ISSUES FOUND



Dashboard

Vendor Ratings: 49 Vendors

Average iTrust Rating: 5004

Highest Risk Vendors

Vendor	Contact	iTrust Rating	Status
Company_19	lulurikuzi@car101.pro	1000	Active
Company_14	jopoyamaw@go2usa.info	1000	Active
Company_10	linozaz@loan101.pro	1000	Active
Company_25	xowubem@go2usa.info	1789	Active
Company_50	testcomp0003@gmail.com	2153	Active

Vendor Compliance Status

Compliance Framework	Status

Vendor Compliance Aging

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THANK YOU!

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2017