

# INFORMATION SECURITY DURING MERGERS & ACQUISITIONS

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*Issues, Safety Measures and Need-to-  
Know Solutions*

*Marco Ermini, 2017*

# WHY?

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- Why does it 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...

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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...

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It is all about...

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

# KEY BUSINESS DRIVERS

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

# WHY M&A FAIL?

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- 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...”*

# THE FOUR “C”s

# THE FOUR Cs

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- Capture
- Connect
- Combine
- Consolidate



# THREATS AND RESPONSE

# SCOPING THE THREATS

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- 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

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- 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

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- 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

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- 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

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

# THE SECURITY MANAGER IN ACTION

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- 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?

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- 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

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

# HOW THAT DOES LOOK FOR REAL...

1.2 D-Berichte über die Erstellung der Jahresabschlüsse Page 1 of 109

Bericht  
über die Erstellung der  
**Jahresabschlüsse**  
zum 30. Juni

für die Firma

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

**m**  
MÜNCH & MÜNCH  
Steuerberatungsgesellschaft mbH

[strictly confidential]

1.2 D-Berichte über die Erstellung der Jahresabschlüsse Page 102 of 109

Blatt 101

Entwicklung des Anlagevermögens nach Steuerrecht vom 01.07.2014 bis 30.06.2015

Konto- Inventar	Bezeichnung inventarbezogen	Datum ATA-Art R.N.D. R.S.	Entw. der	Stand zum 01.07.2014 Euro	Zugang Abgang Euro	Umbuchung Euro	Abschreibung Zuschreibung Euro	Stand zum 30.06.2015 Euro
<b>470</b>	<b>Geringwertige Wirtschaftsgüter</b>							
Übertrag	Ansch./Invent.E			347.642,54				0,00
	Abschreibung			-347.642,54				0,00
	<b>Buchwerte</b>			<b>0,00</b>	<b>347.642,54</b>		<b>347.642,54</b>	<b>0,00</b>
470257	Zugänge GVG 01/15	31.01.2015	ANR	40,55				0,00
	GVG/voll	Abschr.		-40,55				0,00
	<b>01/00 / 100,00</b>	<b>BW</b>		<b>0,00</b>	<b>40,55</b>		<b>40,55</b>	<b>0,00</b>
470259	Eon Megra. Untersuchungs- lage	29.01.2015	ANR	193,32				0,00
	GVG/voll	Abschr.		-193,32				0,00
	<b>01/00 / 100,00</b>	<b>BW</b>		<b>0,00</b>	<b>193,32</b>		<b>193,32</b>	<b>0,00</b>
470260	Notebookbilliger.de, Notebook Lenovo S530-40	30.02.2015	ANR	361,44				0,00
	GVG/voll	Abschr.		-361,44				0,00
	<b>01/00 / 100,00</b>	<b>BW</b>		<b>0,00</b>	<b>361,44</b>		<b>361,44</b>	<b>0,00</b>
470261	Mux, 30x MS Office Home and Business 2013	30.02.2015	ANR	5.550,00				0,00
	GVG/voll	Abschr.		-5.550,00				0,00
	<b>01/00 / 100,00</b>	<b>BW</b>		<b>0,00</b>	<b>5.550,00</b>		<b>5.550,00</b>	<b>0,00</b>
470262	Mux, 10x Microsoft Office Standard 2013	30.02.2015	ANR	3.780,00				0,00
	GVG/voll	Abschr.		-3.780,00				0,00
	<b>01/00 / 100,00</b>	<b>BW</b>		<b>0,00</b>	<b>3.780,00</b>		<b>3.780,00</b>	<b>0,00</b>
470263	Lober ident. Zetabo 3400 Bastlerdr	04.03.2015	ANR	369,50				0,00
	GVG/voll	Abschr.		-369,50				0,00
	<b>01/00 / 100,00</b>	<b>BW</b>		<b>0,00</b>	<b>369,50</b>		<b>369,50</b>	<b>0,00</b>
470264	Wühl, Werkzeugkoffer	05.03.2015	ANR	188,60				0,00
	GVG/voll	Abschr.		-188,60				0,00
	<b>01/00 / 100,00</b>	<b>BW</b>		<b>0,00</b>	<b>188,60</b>		<b>188,60</b>	<b>0,00</b>
Übertrag	Ansch./Invent.E			398.640,40				0,00
	Abschreibung			-398.640,40				0,00
	<b>Buchwerte</b>			<b>0,00</b>	<b>398.640,40</b>		<b>398.640,40</b>	<b>0,00</b>

[strictly confidential]

# DUE DILIGENCE

*Toolkit:* <https://github.com/markoer73/M-A>

# “CAPTURE” OF SECURITY CONTROLS

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► 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	<p>Verify status of identities in main identity store (use of unique IDs, generic accounts, password policy, Groups' usage, GPOs, Federations, etc.).</p> <p>Verify if anything is outside of the main identity store (e.g. VPN accounts, Cloud accounts, supplier accounts, etc.).</p>	<ul style="list-style-type: none"> <li>Interview with IT admins from Target.</li> <li>Snapshot of information from AD/LDAP.</li> <li>Interview with business units which manage other tools (Cloud etc.), to understand how this is managed</li> </ul>	<ul style="list-style-type: none"> <li>Ensure appropriate controls are in place to protect Target environment and data</li> <li>Get an idea of the complexity of the DI structure of the Target.</li> <li>Understand usage of Cloud applications and identities.</li> <li>Understand how restriction of access to information happens in Target.</li> </ul>	<ul style="list-style-type: none"> <li>There is a Directory Service</li> <li>Unique IDs are used</li> <li>Permissions are assigned via Groups in the Directory Service</li> <li>Service and Cloud accounts are gathered, minimized, and under control</li> <li>Sensitive files are shared in a secure way</li> </ul>
Admin Accounts	<p>Verify status of admin account management in main identity store, if managed there.</p> <p>Verify if anything is outside of the main identity store (e.g. VPN accounts, Cloud accounts, supplier accounts, etc.)</p>	<ul style="list-style-type: none"> <li>Interview with IT admins from Target.</li> <li>Snapshot of information from AD/LDAP and other tools.</li> </ul>	<ul style="list-style-type: none"> <li>Ensure admin account controls are defined, implemented and reviewed to protect systems and data</li> <li>Understand how IT administrative actions are performed, what the</li> </ul>	<ul style="list-style-type: none"> <li>Admin accounts are managed under a Directory Service</li> <li>Admin accounts are unique for each admin</li> <li>Central ownership of who gets appropriate rights</li> <li>Process for removing rights as appropriate</li> </ul>

# EXAMPLE OF INTERVIEW QUESTIONS

Domain	Minimum Acceptable Level	Key Topics for Discussion
Digital Identities	<ul style="list-style-type: none"> <li>• Directory Services of any kind are used</li> <li>• Unique IDs are used</li> <li>• Permissions are assigned via Groups in the Directory Service</li> <li>• There is an adequate password policy in place</li> <li>• Service and Cloud accounts are gathered, minimized, and under control</li> <li>• Sensitive files are shared in a secure way</li> </ul>	<ul style="list-style-type: none"> <li>• How many people are present in the company? Get overview of employees' org chart/roles, and how many people are in IT and Security.</li> <li>• How old is the company? Get brief history, acquisitions, etc.</li> <li>• Which DS is used? (AD, which version?)</li> <li>• Get overview of Groups, GPOs, shared accounts, shared mailboxes, federated services, password policy (for AD, request screenshots).</li> <li>• 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.)?</li> <li>• What is the process by which Group ownership, permissions and accesses to systems and applications are granted?</li> <li>• 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.</li> <li>• Is Cloud Sharing such as Box, Dropbox etc. being used?</li> </ul>
Admin Accounts	<ul style="list-style-type: none"> <li>• Admin accounts are managed under a Directory Service</li> <li>• Admin accounts are unique for each admin</li> <li>• Central ownership of who gets appropriate rights</li> <li>• Process for removing rights as appropriate</li> </ul>	<ul style="list-style-type: none"> <li>• 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</li> <li>• Understand how permissions are granted and removed from users as their work and function changes in the company</li> </ul>



## 1. Control Required Practice Validation

Company:		Area: General IT Controls		Reference No.:	
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Assigned To:	Marco Ermini	Targeted Completion Date:	
Phone:		Closed Date:	
Date of Validation:			
Validation Completed By:			
Period Tested	From:	To:	
Reviewed By:		Date:	

## 2. Summary of the Outcomes

Description	Overall Status
<p>In March 2016 we have tested the target for acquisition in project in order to perform M&amp;A due diligence activities. The results are the followings:</p> <p><b>Security Impact</b></p> <ul style="list-style-type: none"> <li>• <b>High security Impact</b> – to be addresses with more urgency: <ul style="list-style-type: none"> <li>◦ Endpoint/Client Systems, Operational Security</li> </ul> </li> <li>• <b>Medium security impact</b> – to be addressed with normal priority: <ul style="list-style-type: none"> <li>◦ Data Recovery functions, Remote Terminal Services access, Servers Environment, Networks, Email</li> </ul> </li> <li>• <b>Low security impact</b> – to be addresses with lower priority: <ul style="list-style-type: none"> <li>◦ Digital Identities, Administrative Accounts, Hosting, Inventory, Wireless, Boundary defenses</li> </ul> </li> </ul> <p><b>Processes impact:</b></p> <ul style="list-style-type: none"> <li>• <b>Medium impact on processes:</b> <ul style="list-style-type: none"> <li>◦ Hosting, Inventory, Wireless, Procurement process for equipment, Servers Environment, Networks, Email, Boundary defenses, Operational Security</li> </ul> </li> <li>• <b>Low impact on processes:</b> <ul style="list-style-type: none"> <li>◦ Digital Identities, Administrative Accounts, Data Recovery functions</li> </ul> </li> </ul> <p><b>Cost impact:</b></p> <ul style="list-style-type: none"> <li>• <b>May not incur an additional costs:</b> <ul style="list-style-type: none"> <li>◦ Digital Identities, Administrative Accounts, Hosting, Inventory, Wireless, Servers Environment, Email, Physical Security</li> </ul> </li> <li>• <b>May incur in additional costs:</b> <ul style="list-style-type: none"> <li>◦ additional storage for backup, dedicated network connectivity towards 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</li> </ul> </li> </ul>	Green

# RISK ASSESSMENT

- 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.)

#### 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 whether 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.**

# IMPACT ASSESSMENT

- 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

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## > Due Diligence / Integration – IT

- No significant IT issues to acquisition or challenges to integration found
  - Microsoft server software license transfer not completed yet
  - Maintenance contracts expired for major infrastructure components
- Desktop Environment
  - Small (24) workforce with company owned laptops/desktops (3 yrs average) 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 [ ] DataCenter
  - Old CRM: Superoffice - to be retired in 12/2015
  - Webshop: www[ ].dk hosted at [ ] [ ]

# COSTS ALIGNED WITH IT FOR THE 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 <input type="text"/> 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 <input type="text"/> s Managed Data Cener ( <input type="text"/> )		
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

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- 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
<b>SMALL</b> <ul style="list-style-type: none"> <li>➤ Small employee base (&lt; 200 employees)</li> <li>➤ Low complexity</li> <li>➤ Private ownership</li> <li>➤ Little to no geographical diversity</li> <li>➤ No separate legal entities</li> <li>➤ No/limited need to keep the same facilities</li> <li>➤ No/limited to keep the existing technologies</li> <li>➤ Purchased for limited product portfolio, technology, talent, or local presence</li> </ul>	<ul style="list-style-type: none"> <li>➤ Baseline security controls Target is fully absorbed into IT infrastructure</li> <li>➤ All IT labor is absorbed into IT global business units</li> </ul>	<ul style="list-style-type: none"> <li>➤ Security controls established or confirmed in less than 100 days</li> </ul>
<b>MEDIUM</b> <ul style="list-style-type: none"> <li>➤ Similar to previous kind, but Target has certain identifiable complexities that require specific sensitivity during integration</li> <li>➤ Fewer than 500 employees</li> <li>➤ Needs to be stand-alone for a certain period of time</li> <li>➤ During stand-alone time, Target maintains defined non-compliances</li> <li>➤ Supports its own IT infrastructure during the stand-alone phase</li> </ul>	<ul style="list-style-type: none"> <li>➤ Integration of Target may be full, hybrid, or standalone</li> <li>➤ All IT labor is absorbed into IT global business units</li> </ul>	<ul style="list-style-type: none"> <li>➤ Operation integration of some IT infrastructure may take +180 days</li> <li>➤ Processes may take 3 to 9 months</li> </ul>
<b>LARGE</b> <ul style="list-style-type: none"> <li>➤ More than 500 employees</li> <li>➤ Relatively large operations</li> <li>➤ Significant multinational presence and subsidiaries</li> <li>➤ Target contains certain identifiable complexities that require specific sensitivity during integration</li> </ul>	<ul style="list-style-type: none"> <li>➤ Integration of Target may be full, hybrid, or standalone</li> <li>➤ IT labor can stay funded by Target company</li> </ul>	<ul style="list-style-type: none"> <li>➤ Operation integration of some IT infrastructure may take +180 days</li> <li>➤ Customized integration plan</li> <li>➤ IT Support is shared</li> <li>➤ Processes take more than 12 months</li> </ul>



# COMBINING THE TWO COMPANIES

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- 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

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- 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

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- 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

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- 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

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

# WHAT IF I AM ON THE WEAK SIDE?

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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

# CLOUD EMAIL GATEWAYS

The screenshot shows a web browser window with the title "Inbound Routes". The address bar shows a secure connection to a client's domain. The user is logged in as Marco Ermini, with a last login time of 10 Mar 2017 07:57:04 AM [GMT]. The interface includes a navigation menu with options like Dashboard, Users and Groups, Services, Reports, Tools, and Support. The main content area is titled "Inbound Routes" and provides instructions on how to register IP addresses for email delivery. It includes a status indicator showing that at least one inbound route is registered. Below this, there is a section for "Registered Default Inbound Routes" with a table listing four routes. Each route has a priority, IP address, date registered, and options to delete, check, or change priority. At the bottom, there are buttons for "Check New" and "Add and Check New", and a section for "Domain List" which states that the following domains are registered with the following routes.

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

Introducing 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.

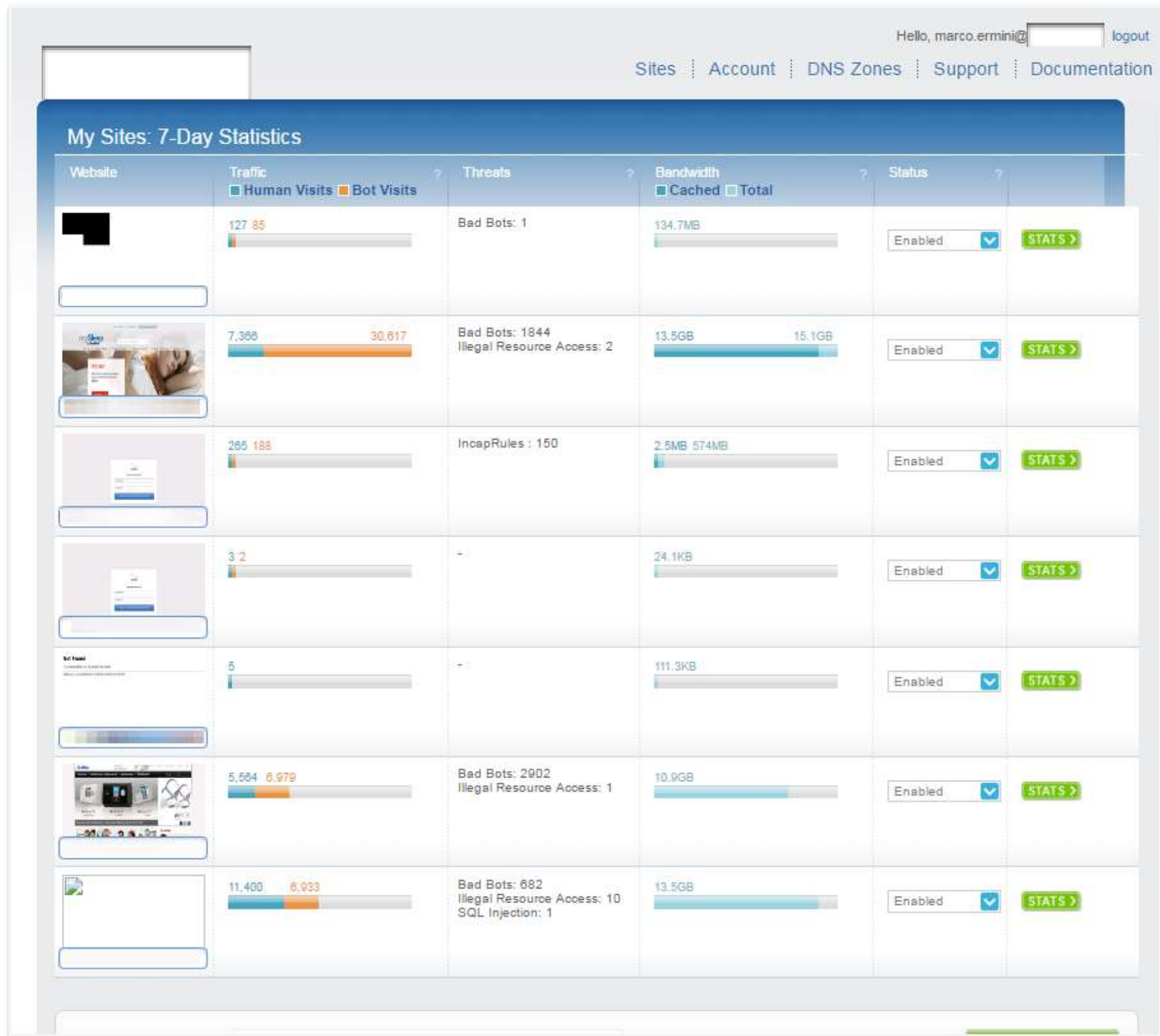
Priority	IP Address	Date Registered	Delete Route	Technical Check	Change Priority	Can Promote to Primary
1	mx.[redacted].de	14 Feb 2005		<b>Check</b>		No
2	mx.[redacted].com	14 Feb 2005	<b>Delete</b>	<b>Check</b>	▲ ▼	No
3	inbound-mx.[redacted].com	19 Jul 2012	<b>Delete</b>	<b>Check</b>	▲ ▼	No
4	mx.[redacted].com.au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

**Check New** **Add and Check New**

### Domain List

The following domains are registered with the following routes.

# SAAS WAF/CDN



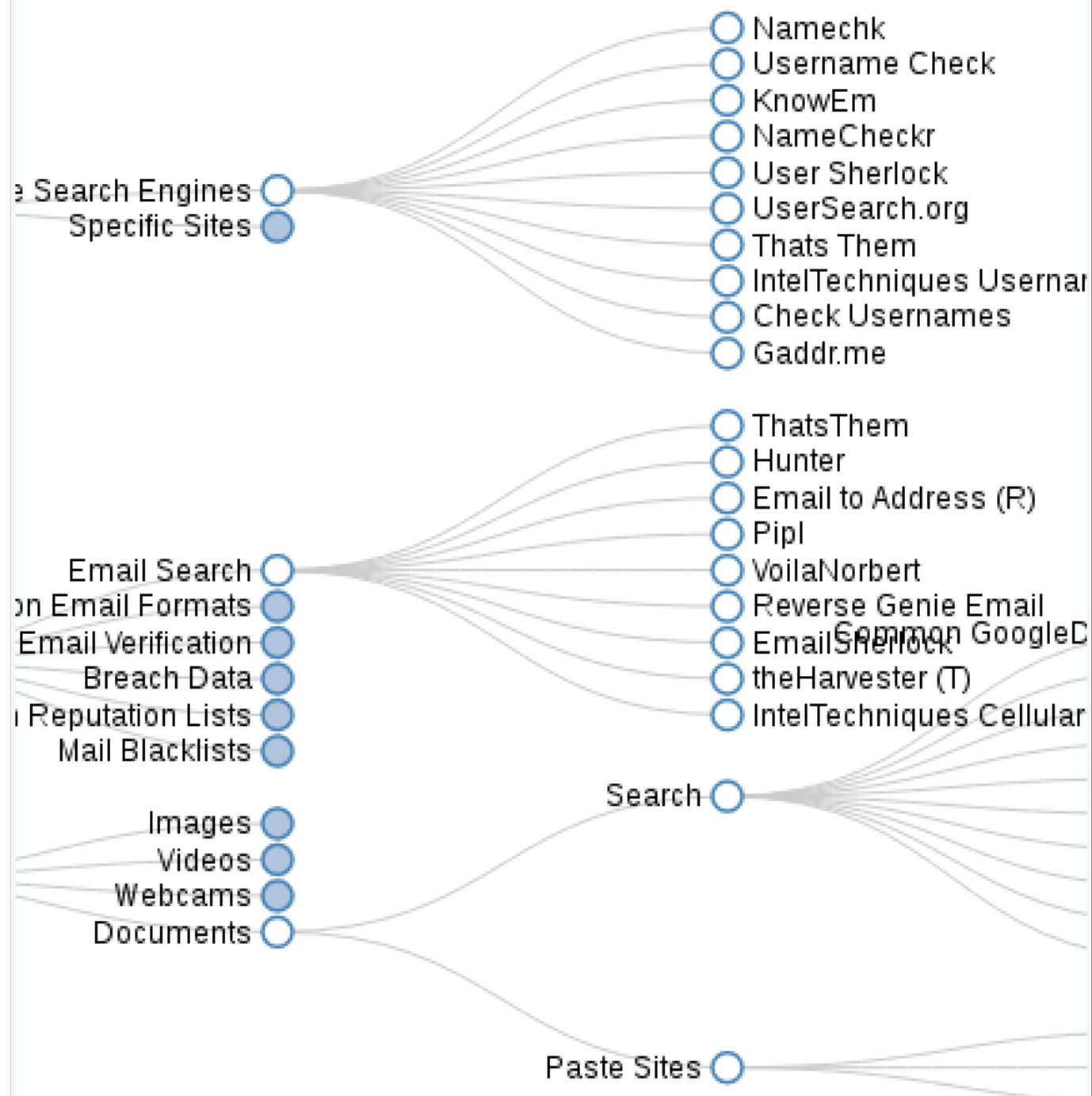
## MOVING TO A CLOUD-BASED ERP OR EMAIL SOLUTION

---

- 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 estimate: 30% for both)
- Ultimate flexibility during a post-deal transition

BACKUP SLIDES:  
OPEN SOURCE  
INFORMATION  
GATHERING

# OSINT Framework



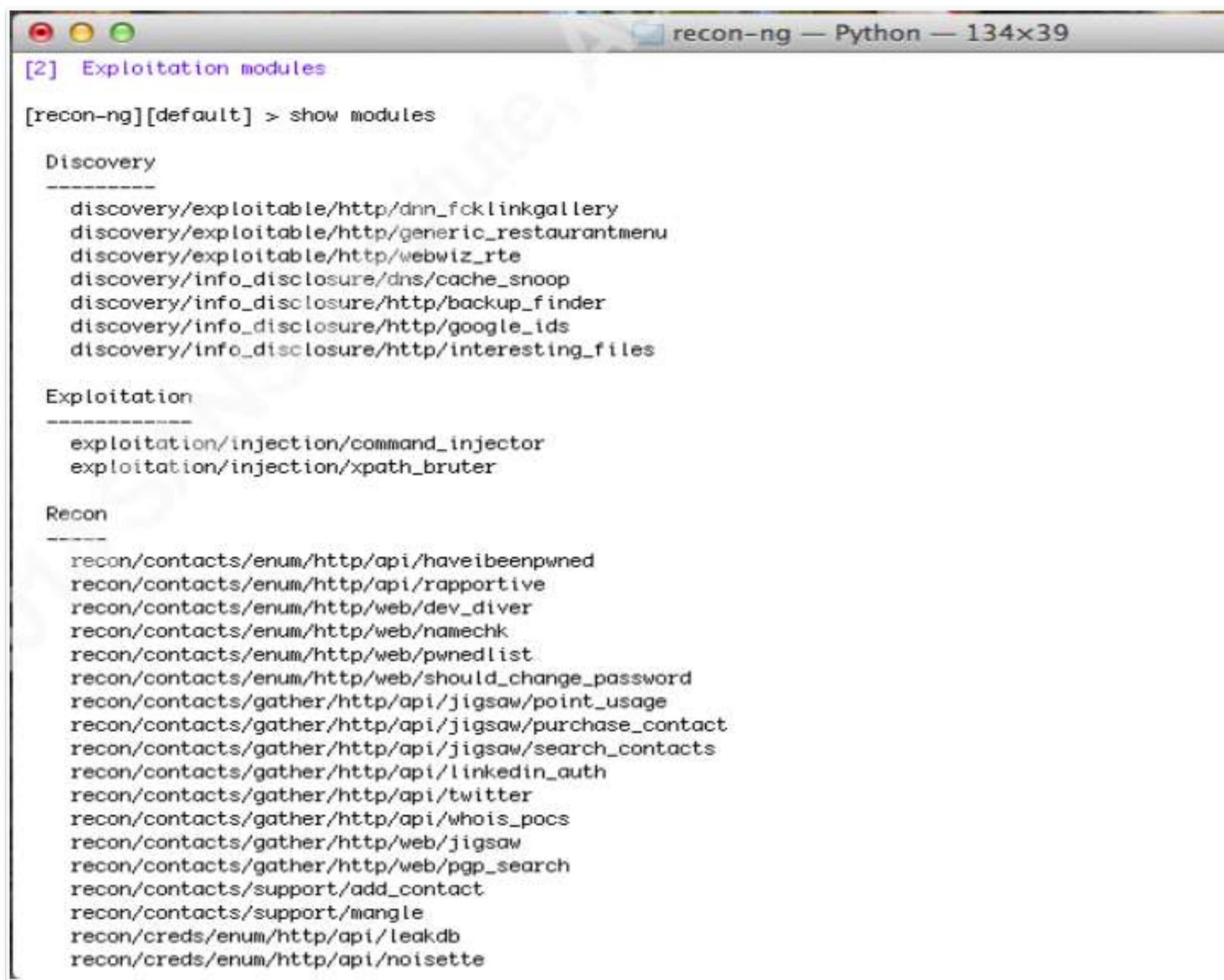
## OPEN SOURCE INTELLIGENCE

- 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

.....



```
recon-ng — Python — 134x39
[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

Whitehouse.gov - FOCA Free 3.2

Project Tools Options TaskList About Donate

Whitehouse.gov  
Network  
Clients (0)  
Servers (3)  
Domains  
whitehouse.gov  
Related Domains  
akamatechnologies.com  
apple.com  
Roles  
Vulnerabilities  
Metadata  
Documents (0/1097)  
Metadata Summary

**FOCA** Clean your OpenOffice documents with OOMetaExtractor

Search engines  
☒ Google  
☒ Bing  
☐ Exalead  
All None

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

Custom search Search All

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

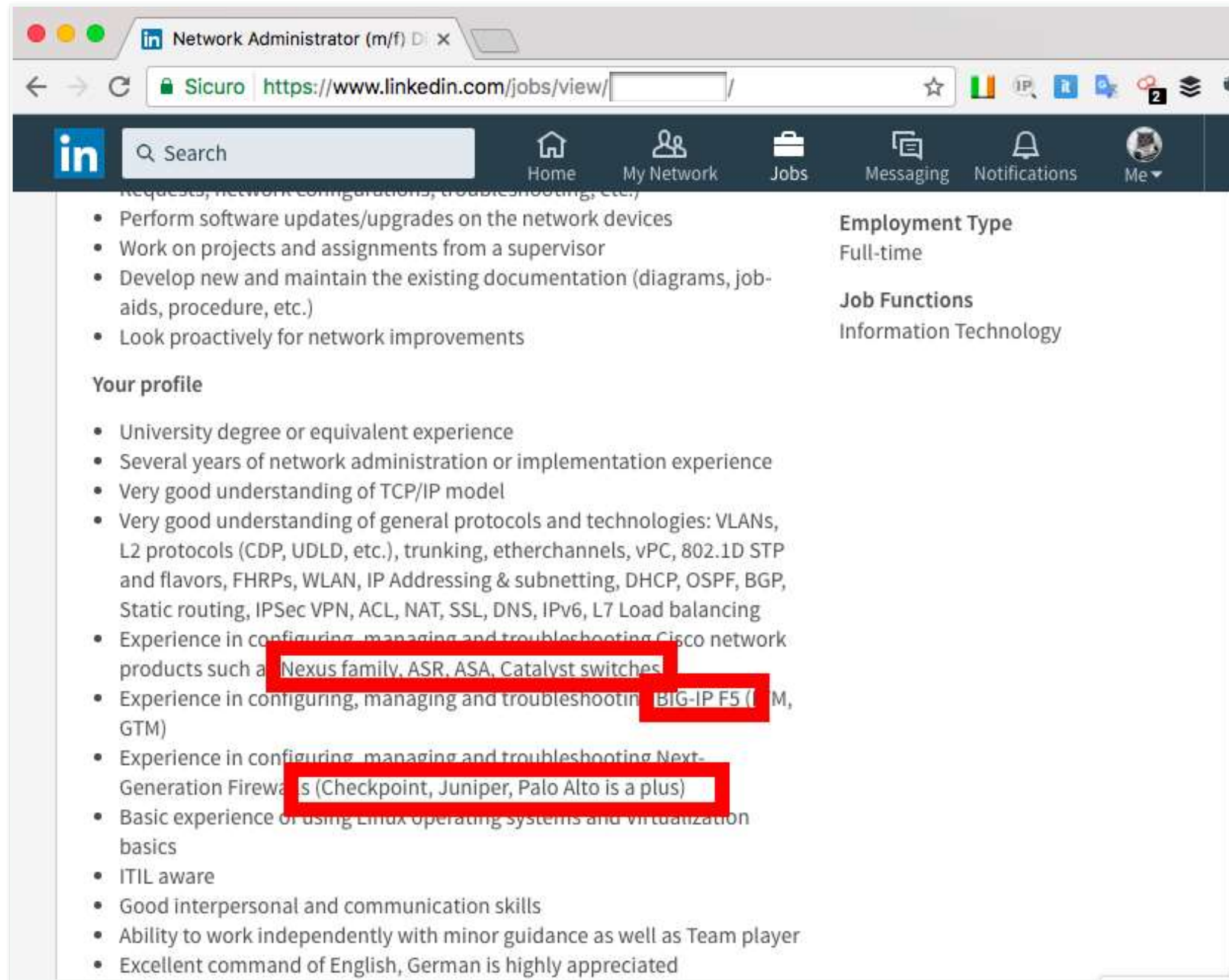
Time	Source	Severity	Message
3:39:42	Fuzzer	medium	File found on http://m.whitehouse.gov:80/robots.txt: http://m.whitehouse.gov/?q=logout/
3:39:42	Fuzzer	medium	File found on http://m.whitehouse.gov:80/robots.txt: http://m.whitehouse.gov/?q=node/add/
3:39:42	Fuzzer	medium	File found on http://m.whitehouse.gov:80/robots.txt: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

Conf Deactivate AutoScroll Clear Save to File

Search done



# JOB POSTING'S HARVESTING



The screenshot shows a web browser window with the LinkedIn logo and a search bar. The URL bar displays "https://www.linkedin.com/jobs/view/". The job title is "Network Administrator (m/f)". The job description includes a list of responsibilities and a list of requirements. The requirements list is highlighted with red boxes.

**Responsibilities:**

- 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

**Employment Type:** Full-time

**Job Functions:** Information Technology

**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 (FIM, 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

# JOB POSTING'S HARVESTING

Jobs bei Palo Alto in München, Bayern 16 Jobs

Job-Mails anfordern

Filter Suchradius

**(Senior-) IT-Consultant (m/w) Arbeitsort: München**  
3.0 ★ [Redacted] GmbH – München Schnellbewerbung vor 1 Tagen

**Systemadministrator Netzwerk (m/w)**  
3.4 ★ [Redacted] – München vor 5 Tagen

**Solution Expert for Internet of Things (IoT) Co-Innovation within the [Redacted]**  
4.4 ★ [Redacted] – München vor 26 Tagen

**System Engineer IT Security (m/w) im Raum Augsburg**  
3.4 ★ [Redacted] – Garching b.München vor 10 Tagen

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

**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

→ C Sicuro https://www.glassdoor.de/Vorstellungsgespräch/ .. ☆ IP, R G 8

Übersicht 3,8 Tsd Bewertungen 3,1 Tsd Jobs 9,5 Tsd Gehälter 1,1 Tsd Vorstellungsgespräche 1,1 Tsd Zusatzleistungen Mehr ▼ ✓ Beobachtet +

■ 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 several Dynamics CRM developers as 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

Search
Summary
Whois
Blacklists
Forward
Reverse
Similar
Scorecard
Shared
Graph
Route
AS

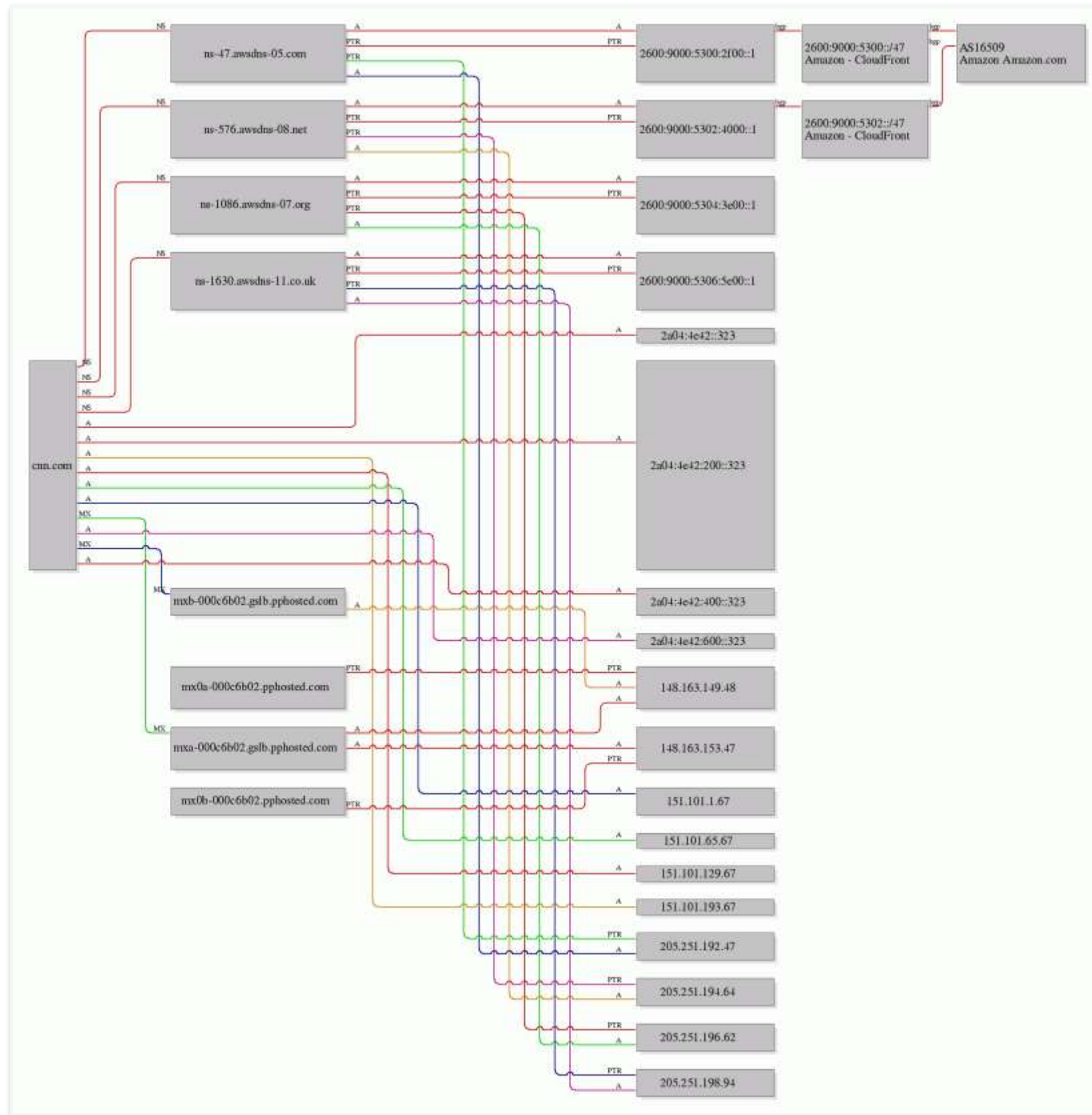
---

**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 <hr/> Fastly Fastly, Inc. <hr/> 2a04:4e42::/36 AS54113

# ROBTEX.COM







# GATHERING OF DOMAIN NAMES

.....

```
root@kali2: ~  
File Edit View Search Terminal Help  
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]::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: ~
File Edit View Search Terminal Help
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].20.104
[-] 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].74.204.0/22 ip4:[REDACTED].168.0/23 include:[REDACTED].com include:spf.protection.outlook.com include:[REDACTED].com -all
[*] Enumerating SRV Records
[*] SRV _sip._tls.[REDACTED].com sipdir.online.lync.com 52.112.192.139 443 1
[*] SRV _sip._tls.[REDACTED].com sipdir.online.lync.com 2603:1027:0:4::b 443 1
[*] SRV _sip._tls.[REDACTED].com sipdir.online.lync.com 2603:1027:0:8::b 443 1
[*] SRV _sip._tls.[REDACTED].com sipdir.online.lync.com 2603:1027:0:3::b 443 1
[*] SRV _sip._tls.[REDACTED].com sipdir.online.lync.com 2603:1027::b 443 1
[*] SRV _sip._tls.[REDACTED].com sipdir.online.lync.com 2603:1027:0:7::b 443 1
[*] SRV _sip._tls.[REDACTED].com sipdir.online.lync.com 2603:1027:0:6::b 443 1
[*] SRV _sip._tls.[REDACTED].com sipdir.online.lync.com 2603:1027:0:1::b 443 1
[*] SRV _sip._tls.[REDACTED].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.[REDACTED].com sipfed.online.lync.com 2603:1027::b 5061 1
[*] SRV _sipfederationtls._tcp.[REDACTED].com sipfed.online.lync.com 2603:1027:0:9::b 5061 1
[*] SRV _sipfederationtls._tcp.[REDACTED].com sipfed.online.lync.com 2603:1027:0:1::b 5061 1
[*] SRV _sipfederationtls._tcp.[REDACTED].com sipfed.online.lync.com 2603:1027:0:4::b 5061 1
[*] SRV _sipfederationtls._tcp.[REDACTED].com sipfed.online.lync.com 2603:1027:0:8::b 5061 1
[*] SRV _sipfederationtls._tcp.[REDACTED].com sipfed.online.lync.com 2603:1027:0:6::b 5061 1
[*] SRV _sipfederationtls._tcp.[REDACTED].com sipfed.online.lync.com 2603:1027:0:7::b 5061 1
[*] SRV _sipfederationtls._tcp.[REDACTED].com sipfed.online.lync.com 2603:1027:0:3::b 5061 1
[*] 18 Records Found
root@kali2:~#
```



# OLD (AND NEW) FASHION SCANNING

```
root@kali2: ~
File Edit View Search Terminal Help
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/blacklist.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 default 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

< Back

Next >

Finish

Cancel

58

# 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 Wildcard Edits**

[Domain]

☒ Show on startup

☒ Show on empty graph click

< Back

Next >

Finish

Cancel

# 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...

SSRF with http...

[Domain]

☒ Show on startup

☐ Show on empty graph click

< Back

Next >

Finish

Cancel

60



# MALTEGO

Maltego Kali Linux Edition 4.0.11

Investigate View Entities Collections Transforms Machines Collaboration Import | Export Windows

Copy Paste Clear Graph Cut Delete Number of Results 12 50 255 10k Quick Find Find in Files Entity Selection Select All Select None Invert Selection Add Parents Add Children Add Similar Siblings Add Neighbors Add Path Select Children Select Neighbors Select Parents Select Bookmarked Select by Type Select Links Reverse Links

Entity Palette

- Devices
  - Device: A device such as a phone
- Infrastructure
  - AS: An internet Autonomous
  - Banner: Banner
  - DNS Name: Domain Name System s
  - Domain: An internet domain

Run View

Home New Graph (5) X

Layout Freeze View

72.255 212.0 212.255

ans1.jcy1.q

Select netblock

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

Netblocks	Type	In
<input checked="" type="checkbox"/>	Netblock	6
<input checked="" type="checkbox"/>	Netblock	6
<input checked="" type="checkbox"/>	Netblock	4
<input checked="" type="checkbox"/>	Netblock	6
<input checked="" type="checkbox"/>	Netblock	2
<input checked="" type="checkbox"/>	Netblock	1
<input checked="" type="checkbox"/>	Netblock	1
<input checked="" type="checkbox"/>	Netblock	6
<input checked="" type="checkbox"/>	Netblock	6

☐ Remove unselected entities from graph Next>

Output - Transform Output

```
Transform To Netblock [Blocks delegated to this NS] returned with 12 entities (from entity "ans1.jcy1")
Transform To Netblock [Blocks delegated to this NS] returned with 12 entities (from entity "ans1.suw1")
Transform To Netblock [Blocks delegated to this NS] returned with 12 entities (from entity "ans1.nycl")
Transform To Netblock [Blocks delegated to this NS] returned with 12 entities (from entity "ans1.sjcl")
Transform To Netblock [Blocks delegated to this NS] returned with 12 entities (from entity "ans1.dfw1")
Transform To Netblock [Blocks delegated to this NS] done (from 6 entities)
```

Footprint XXL [com]

Running machine...

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

Property ... Hub Tran... Ove... >> X

25 entities, 80 links

# MALTEGO

Maltego Kali Linux Edition 4.0.11

Investigate View Entities Collections Transforms Machines Collaboration Import | Export Windows

Home New Graph (5) New Graph (7) X

Run View Layout Freeze View Hub Transform Inputs Property View Entity Palette Output

**Machines**

**Domain Explorer**  
[brighttree.com]

Running machine...

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

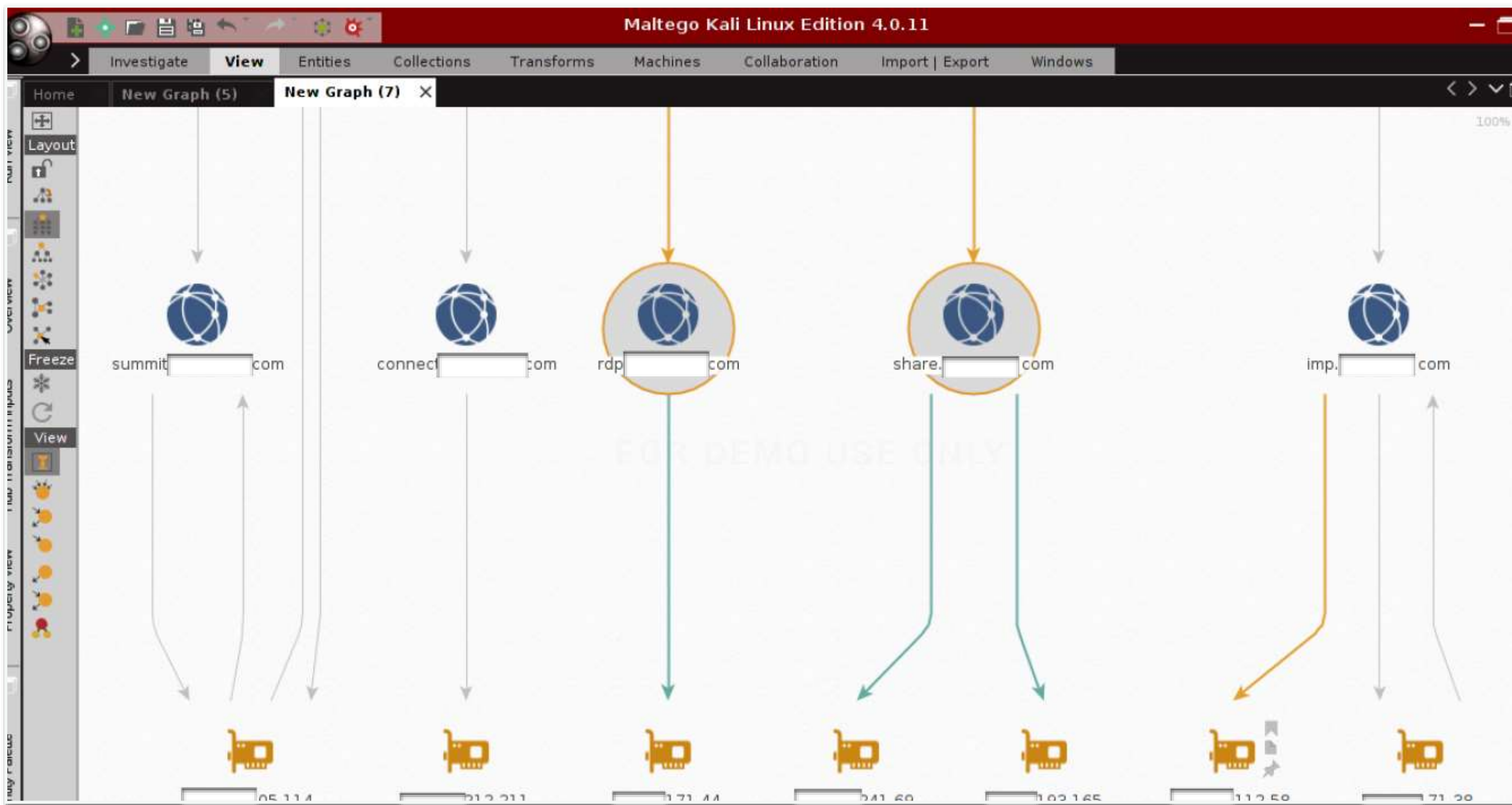
**User Filter**  
Please select the entities to continue with from the list below

The following results were returned		Type
<input checked="" type="checkbox"/>	ans1.suw1. [redacted].com	WHOIS Nameserver
<input checked="" type="checkbox"/>	ans1.dfw1. [redacted].com	WHOIS Nameserver
<input checked="" type="checkbox"/>	lawrnceville	WHOIS City
<input checked="" type="checkbox"/>	Mike [redacted]	WHOIS Name
<input checked="" type="checkbox"/>	ans1.jcyl. [redacted].com	WHOIS Nameserver
<input checked="" type="checkbox"/>	ans1.nycl6. [redacted].com	WHOIS Nameserver
<input checked="" type="checkbox"/>	ans1.sjcl. [redacted].com	WHOIS Nameserver
<input checked="" type="checkbox"/>	GODADDY.COM, LLC	WHOIS Registrar
<input checked="" type="checkbox"/>	2002-02-26	WHOIS Registered

☒ Remove unselected entities from graph **Proceed >**



# MALTEGO



# NMAP

**Zenmap**

Scan Tools Profile Help

Target: rdp.[redacted].com Profile: Slow comprehensive scan [Scan] [Cancel]

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

Hosts Services Nmap Output Ports / Hosts Topology Host Details Scans

OS	Host	Port	Protocol	State	Service	Version
	share.[redacted]	143	tcp	closed	imap	
	rdp.[redacted]	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)

Filter Hosts



ecure <https://www.censys.io/certificates?q=>

S

[-2.demo.hybris.com](#)

, O=Let's Encrypt, CN=Let's Encrypt Authority X3

3441100ecea8904ae728d609993a2469604d24a1ed523add81d780f451f2

ed Leaf Certificate

T=New South Wales, L=Sydney, O=[Inc.](#), OU=IT, CN=store.[com](#)

, L=Amsterdam, O=Verizon Enterprise Solutions, OU=Cybertrust, CN=Verizon Akamai SureServer CA G14-SH

f5a179d4bc445c2ec865585b4d16cfded149e7f26ba43ef9b6e154bef431

ed Leaf Certificate

d.subject.organization: [Inc.](#)

T=Bavaria, L=Martinsried, O=[Germany Inc.](#), CN=\*.apuat.ccg.[com](#)

, O=DigiCert Inc, OU=www.digicert.com, CN=DigiCert SHA2 High Assurance Server CA

2cb129e8c2c7437b65e7f0884db8e5f847d8a03f0effa34f0d55c99e682d

ed Leaf Certificate

d.subject.organization: [Germany Inc.](#)

T=California, L=San Diego, O=[Corp](#), CN=rms.[com](#)

, O=Symantec Corporation, OU=Symantec Trust Network, CN=Symantec Class 3 Secure Server CA - G4

046b20c54305795f285527165f888419f8abc273745578cf5b3d861f9b69

ed Leaf Certificate

d.subject.organization: [Corp](#)

T=Bavaria, L=Martinsried, O=[Germany Inc.](#), OU=IT Infrastructure Europe, CN=sslvpn.[com](#)

, O=DigiCert Inc, OU=www.digicert.com, CN=DigiCert SHA2 High Assurance Server CA

5ee487d0d1622e2e6bd08ed1cc777c450a2a907302e2d6610344981c6f5c

ed Leaf Certificate

d.subject.organization: [Germany Inc.](#)

T=Bavaria, L=Martinsried, O=[Germany Inc.](#), OU=IT Infrastructure Europe, CN=sslvpn.[com](#)

, O=DigiCert Inc, OU=www.digicert.com, CN=DigiCert SHA2 High Assurance Server CA

96dc3f712b0354cec2405475a1a240328955324b36b2e11d4dbc61449653

ed Leaf Certificate

d.subject.organization: [Germany Inc.](#)

## 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

# CENSYS.IO - GEOLOCATION

Secure

https://www.censys.io/ipv4/64.1

☆

🇺🇸

IP

it

G

2

censys

About

Search

Reports

API

Raw Data

Login

64.1

Search

64.1 (gw. com.au)

Summary

Details

JSON

WHOIS

Raw WHOIS

Basic Information

Network 64.1 AS-SYD – Dual Internet Gateway, AU (AU)

Routing 64.0/24 via AS

Protocols no publicly accessible services

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

Map

Satellite

NEW SOUTH WALES

castle

Sydney

Canberra

ACT

RIA

Google

Map data ©2017 GBRMPA, Google

Terms of Use

City

Province New South Wales

Country Australia (AU)

Lat/Long


Timezone Australia/Sydney

# SHODAN.IO

.....

**208.27.123.1**

Added on 07.01.2014

 Williamston

**Details**

**Host IP Address**

[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”

Secure | <https://namechk.com>

**Namech\_k** marco ermini  

## Domains





































Help keep Namechk free [Donate PayPal](#) [Donate Bitcoins!](#)

.com	.net	.org	.co	.biz	.io	.ly	.us	.me	.co.uk	.eu	.info
.xyz	.ca	.be	.it	.am	.so	.tv	.la	.fr	.li	.ch	.ms
.jp	.at	.nu	.name	.pro	.work	.social	.guru	.help	.ninja	.bar	+

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

## Usernames

[Download Results](#)

 Facebook	 YouTube	 Twitter	 Instagram	 Blogger	 GooglePlus	 Twitch	 Reddit	 Ebay	 Wordpress	 Pinterest	 Yelp
 Slack	 Github	 Basecamp	 Tumblr	 Flickr	 Pandora	 ProductHunt	 Steam	 MySpace	 Foursquare	 OkCupid	 Vimeo
 UStream	 Etsy	 SoundCloud	 BitBucket	 Meetup	 CashMe	 DailyMotion	 About.me	 Disqus	 Medium	 Behance	 Photobucket

# VIPS “DORKING”

Secure | <https://inteltechniques.com/OSINT/username.html>

# INTEL | TECHNIQUES .com



OSINT TRAINING &  
PRIVACY CONSULTING

[Online Training](#)[Live Training](#)[Privacy Training](#)[Tools](#)[Forum](#)[Blog](#)[Podcast](#)[Books](#)[Bio](#)[Contact](#)

## Custom User Name Search

	<input type="text"/>	Populate All
	<input type="text"/>	KnowEm
	<input type="text"/>	NameVine
	<input type="text"/>	CheckUsers
	<input type="text"/>	Pipl
	<input type="text"/>	Pipl API
	<input type="text"/>	PeekYou
	<input type="text"/>	ThatsThem
	<input type="text"/>	UserSearch
	<input type="text"/>	Twitter
	<input type="text"/>	Facebook
	<input type="text"/>	YouTube
	<input type="text"/>	Tumblr
	<input type="text"/>	Instagram
	<input type="text"/>	Google +
	<input type="text"/>	Email
	<input type="text"/>	Submit All (Allow

Pop-ups)

# VIPS “DORKING”

.....

The screenshot shows the NameVine website interface. At the top, there's a navigation bar with the NameVine logo, a search bar, and links for About, Blog, Feedback, and Settings. The main content area features a large input field for a domain name. Below it, a central box prompts users to "Create A Consistent Online Presence" and "Instantly Find A Domain Name With Matching Social Media Profiles". To the right of this box are social media sharing buttons for Twitter, Facebook, Google+, and a general Share button. Below the central box, a section titled "Domains and Social Media Profiles" displays a grid of 10 items, each with a logo, a name, an availability status, and a button to either register or view details. The items are: .COM (available, register), Twitter (available, register), Facebook (unavailable, view), Pinterest (available, register), YouTube (available, register), Instagram (available, register), Tumblr (available, register), Wordpress (available, register), Blogger (available, register), and Github (available, register). At the bottom of the page, there's a section for "Domain Suggestions".

https://namevine.com/#/

namevine

Search About Blog Feedback Settings

Create A Consistent Online Presence  
Instantly Find A Domain Name With Matching Social Media Profiles

Tweet Like 26 G+ 0 Share

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/>

f

Marco Home 1  






Message ...

Timeline About Friends Photos More ▾

DO YOU KNOW ?

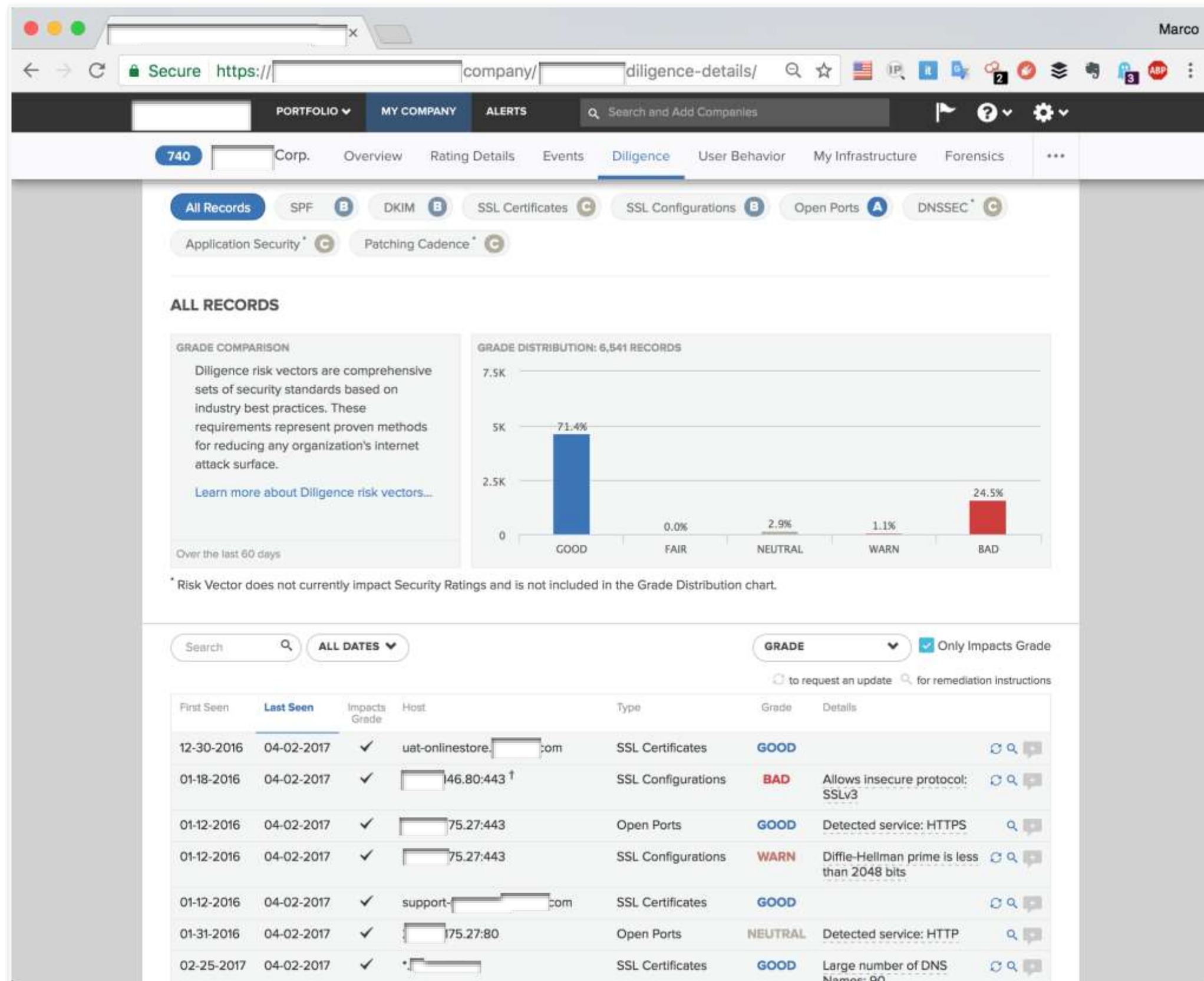
If you know  send him a message.

 Photos · Nothing to show

  September 28, 2016 · YouTube · 

Great sounds. Thx Todd.

# CYBERSECURITY RATINGS FIRMS





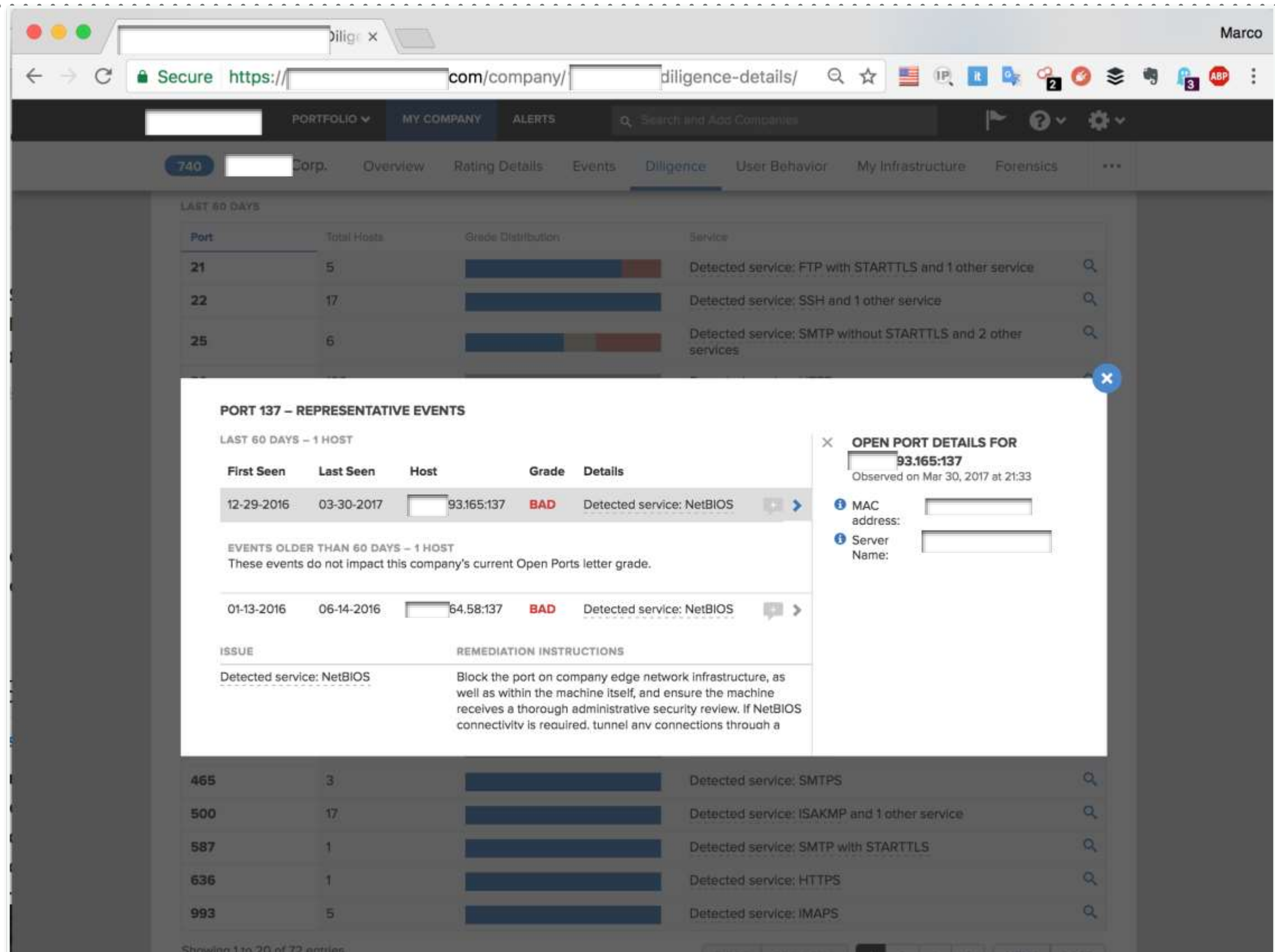
# CYBERSECURITY RATINGS FIRMS

.....

03-30-2017	04-02-2017	✓	spf1. <input type="text"/> .com 2 PAST EVENTS ▲	SPF	<b>WARN</b>	Effective but allows a large number of hosts	↺ 🔍 +
First Seen	Last Seen		Impacts	Grade		Details	
03-24-2017	03-29-2017	×		<b>WARN</b>		Effective but allows a large number of hosts	🔍
06-06-2016	03-23-2017	×		<b>BAD</b>		SPF record is ineffective	🔍

03-30-2017	04-02-2017	✓	spf2. <input type="text"/> .com 3 PAST EVENTS ▲	SPF	<b>WARN</b>	Effective but allows a large number of hosts	↺ 🔍 +
First Seen	Last Seen		Impacts	Grade		Details	
03-24-2017	03-29-2017	×		<b>WARN</b>		Effective but allows a large number of hosts	🔍
08-20-2016	03-23-2017	×		<b>BAD</b>		SPF record is ineffective	🔍
06-06-2016	08-19-2016	×		<b>BAD</b>		SPF record is ineffective	🔍

# CYBERSECURITY RATINGS FIRMS



The screenshot displays a web application for a cybersecurity ratings firm. The interface includes a navigation bar with tabs like 'PORTFOLIO', 'MY COMPANY', and 'ALERTS'. A search bar is present. The main content area shows a table of port scan results for a company. A modal window is open, providing detailed information for port 137, including representative events, remediation instructions, and a sidebar for additional details like MAC address and server name.

**PORT 137 – REPRESENTATIVE EVENTS**

LAST 60 DAYS – 1 HOST

First Seen	Last Seen	Host	Grade	Details
12-29-2016	03-30-2017	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.

01-13-2016	06-14-2016	64.58:137	BAD	Detected service: NetBIOS
------------	------------	-----------	-----	---------------------------

**ISSUE**  
Detected service: NetBIOS

**REMEDIATION INSTRUCTIONS**  
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**  
93.165:137  
Observed on Mar 30, 2017 at 21:33

MAC address:

Server Name:

# 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] 76.3:123	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

i Product: ntpd

i Version: 4

i 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
```

# CYBERSECURITY RATINGS FIRMS

The screenshot displays a web application interface for a cybersecurity ratings firm. The browser address bar shows a URL ending in "/event-evidence/". The navigation bar includes tabs for "PORTFOLIO", "MY COMPANY", and "ALERTS", along with a search bar and a "Download forensics data" button. The main content area is titled "FORENSICS" and shows a list of events. The left sidebar contains filters for "IP ADDRESS SEARCH", "TIME RANGE", "NARROW BY RISK VECTOR", "FILTER BY INFECTIONS", and "NARROW BY TAGS". The main content area displays two botnet infection events, one for Zeus and one for Gamarue, with details such as Source Port, Destination Port, Server Name, C&C IP, Observations, Request Method, First Seen, Last Seen, Representative Event Timestamp, and User Agent.

**FORENSICS** [Download forensics data](#)

**FILTER** Showing events 1–2 of 2. Order results by: **MOST RECENT** [Expand all](#)

**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**

Botnet Infections: Zeus	IP Address: 246.156
Source Port	17776
Destination Port	80
Server Name	xdqzpbcrvkj.ru
Date Seen	05-07-2016
Location	United States
<a href="#">Details</a>	

Botnet Infections: Gamarue	IP Address: 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
<a href="#">Details</a>	



# 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.



Pexels

*Datacenter image courtesy Pexels*

Troy Hunt, the security researcher who I spoke with

# CYBERSECURITY RATINGS FIRMS

740

Corp.

Overview

Rating Details

Events

Diligence

User Behavior

My Infrastructure

Forensics

...

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

34

2,752

GRADE

BREACHES

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	com and 4 more	113
2017-Jan-01	CloudPets	com	1
2016-Dec-05	MrExcel	com and 1 more	6
2016-Oct-08	Modern Business Solutions	com and 1 more	3
2016-Sep-10	Leet	com and 1 more	5
2016-Sep-01	NetProspex	com and 7 more	1,132
2016-Aug-07	Wishbone	.com	1

FIRST

PREVIOUS

1

2

3

...

5

NEXT

LAST

# CYBERSECURITY RATINGS FIRMS

## 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

# CYBERSECURITY RATINGS FIRMS

Your security posture is *good*  
in your industry.



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



Application  
Security



DNS  
Health



IP  
Reputation



Network  
Security



Patching  
Cadence



Social  
Engineering



Endpoint  
Security



Information  
Leak



Hacker  
Chatter



Cubit  
Score



# CYBERSECURITY RATINGS FIRMS

## Web Application Security

YOUR SCORE



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



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



THANK YOU!

.....  
*Marco Ermini, 2017*

