



**Check Point**  
SOFTWARE TECHNOLOGIES LTD

# SECURITY CHECKUP

THREAT ANALYSIS REPORT

**SAMPLE REPORT**

# SECURITY CHECKUP

## THREAT ANALYSIS REPORT

January 15, 2017

Prepared by Solution Center, Check Point Software Technologies

Prepared for ABC Corp

Industry Finance

Company size 500 - 1000 Employees

Country USA

Analysis duration 7 days

Analysis network Internal network

Security gateway version R80

Security device Check Point Appliance 4800

Traffic inspected by the following

Check Point Software Blades:

Application Control, URL Filtering,  
IPS, Anti-Bot, Anti-Virus,  
Threat Emulation, DLP

# Table of Contents



## EXECUTIVE SUMMARY



## KEY FINDINGS

-  MALWARE & ATTACKS
-  HIGH RISK WEB ACCESS
-  DATA LOSS
-  MOBILE THREATS
-  ENDPOINTS
-  BANDWIDTH ANALYSIS



## SOFTWARE-DEFINED PROTECTION

- ▶ CHECK POINT SOFTWARE-DEFINED PROTECTION
- ▶ ABOUT CHECK POINT

The following Security Checkup report presents the findings of a security assessment conducted in your network.

The report uncovers where your organization is exposed to security threats, and offers recommendations to address these risks.

To assess risk, network traffic was inspected by Check Point to detect a variety of security threats, including: malware infections, usage of high risk web applications, intrusion attempts, loss of sensitive data, and more.

**Malware and Attacks**

**287**  
computers infected with bots

 **4.6K**  
communications with C&C\* sites

\* C&C - Command and Control.  
If proxy is deployed, there might be additional infected computers.

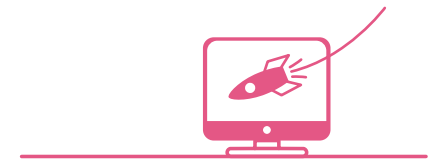
**8** known malware downloaded by

 **10** users

**21** new malware downloaded

New malware variant is a zero-day attack or malicious code with no known anti-virus signature.


**14**  
unique software vulnerabilities were attempted to be exploited



Indicates potential attacks on computers on your network.

**Data Loss**

 **114**  
potential data loss incidents

 **6**  
sensitive data categories

Indicated information sent outside the company or to unauthorized internal users. Information that might be sensitive.

**High Risk Web Access**

 **18**  
high risk web applications

 **96.2GB**

Potential risks: opens a backdoor to your network, hides user activity, causes data leakage or malware infections.

 **22**  
high risk web sites

 **409** hits

Potential risks: Exposure to web-based threats and network infection. Examples: Spam, malicious, phishing web sites.

 **15**  
cloud applications

 **12.5GB**

Risk of data loss and compliance violations. Examples: Dropbox, Google Drive, OneDrive.




























# Key Findings

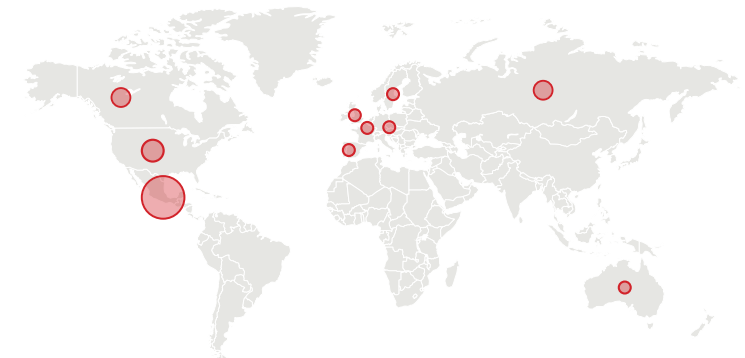
### MACHINES INFECTED WITH BOTS

A bot is malicious software that invades your computer. Bots allow criminals to remotely control your computer to execute illegal activities such as stealing data, spreading spam, distributing malware and participating in Denial of Service (DOS) attacks without your knowledge. Bots play a key role in targeted attacks known as Advanced Persistent Threats (APTs). The following table summarizes the bot families and number of infected computers detected in your network.

#### Top Bot Families (Top 10 Malware)

Malware Family *	Infected Computers **	Communications with Command and Control Center	Destination Country
Salicy	61 Computers	1,453	 Mexico  United States  Canada
Zeroaccess	57 Computers	684	 China  United States  United Kingdom  Canada  Mexico
Zeus	54 Computers	546	 Israel  Germany
Pushdo	41 Computers	307	 Russian Federation
Scar	32 Computers	115	 Mexico  United States  Canada
Virut	23 Computers	97	 Italy  Russian Federation
Rustock	18 Computers	66	 Italy  France  United States  Canada
Conficker	15 Computers	50	 Germany  Sweden  Spain
Koobface	4 Computers	13	 Spain  Italy
<b>Total: 10 Malware Families</b>	<b>287 Infected Computers</b>	<b>4,596</b>	<b>13 Countries</b>

#### Command & Control Locations



















\* Check Point's malware naming convention: <malware type>.<operating system>.<malware family>.<variant> For more details on specific malware, search the malware name on [www.threat-cloud.com](http://www.threat-cloud.com)

\*\* The total number of infected computers (sources) presents distinct computers.

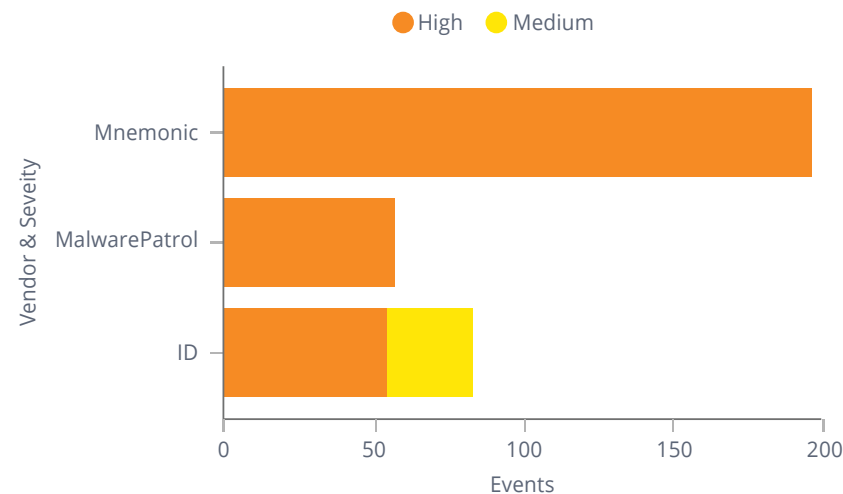
### EXTENDED MALWARE INCIDENTS (CHECK POINT THREATCLOUD INTELLISTORE)

Malware threats were detected by extended security intelligence feeds (via Check Point ThreatCloud IntelliStore\*).

#### Top Threats by Feed

Feed	Threat	Severity	Source	Feed Detection Engine
Mnemonic	Malicious domain.bqzei	 High	52 Sources	 Anti-Bot
	C&C domain.utqzy	 High	43 Sources	 Anti-Bot
	Adware domain.qzf	 High	20 Sources	 Anti-Bot
	Adware domain.qaf	 High	17 Sources	 Anti-Bot
	C&C domain.uteuu	 High	25 Sources	 Anti-Bot
	C&C domain.vaोक	 High	19 Sources	 Anti-Bot
	Malicious domain.bqtmg	 High	7 Sources	 Anti-Bot
	C&C domain.uxqcw	 High	10 Sources	 Anti-Bot
	C&C domain.umzgw	 High	3 Sources	 Anti-Bot
	Adware domain.qbm	 High	2 Sources	 Anti-Bot
	<b>Total: 10 Threats</b>	 High	<b>198 Sources</b>	<b>1 Engine</b>
MalwarePatrol	URL hosting a malware executable file.dkgoh	 High	57 Sources	 Anti-Bot  Anti-Virus
	<b>Total: 1 Threat</b>	 High	<b>57 Sources</b>	<b>2 Engines</b>
ID	ExploitKit Nuclear.lkfo	 High	24 Sources	 Anti-Virus
	ExploitKit Nuclear.rqdx	 High	32 Sources	 Anti-Virus
	MalwareDownload Generic.bpkp	 Medium	15 Sources	 Anti-Virus
	ExploitKit Angler.bcncr	 Medium	7 Sources	 Anti-Virus
	<b>Total: 4 Threats</b>	 High	<b>78 Sources</b>	<b>1 Engine</b>
<b>Total: 3 Feeds</b>	<b>15 Threats</b>	 High	<b>333 Sources</b>	<b>2 Engine</b>

#### Feeds by Severity



\* For more information on Check Point ThreatCloud IntelliStore please refer to <http://www.checkpoint.com/products/threatcloud-intellistore/>

## MACHINES INFECTED WITH ADWARE AND TOOLBARS

Adware and toolbars are potentially unwanted programs designed to display advertisements, redirect search requests to advertising websites, and collect marketing-type data about the user in order to display customized advertising on the computer. Computers infected with these programs should be diagnosed as they may be exposed to follow-up infections of higher-risk malware. The following table summarizes the adware and toolbar malware families and the number of infected computers detected in your network.

### Top Malware Families

Adware Name*	Infected Computers**
Adware domain.pzf	3 Computers
Adware domain.qaf	2 Computers
Adware domain.qbm	1 Computer
Adware.Win32.MyWay.A	1 Computer
Adware.Win32.Staser.A	1 Computer
Adware domain.iqp	1 Computer
<b>Total: 6 Adware</b>	<b>570 Computers</b>

\* Check Point's malware naming convention: <malware type>.<operating system>.<malware family>.<variant> For more details on specific malware, search on [www.threat-cloud.com](http://www.threat-cloud.com)

\*\* The total number of infected computers (sources) presents distinct computers



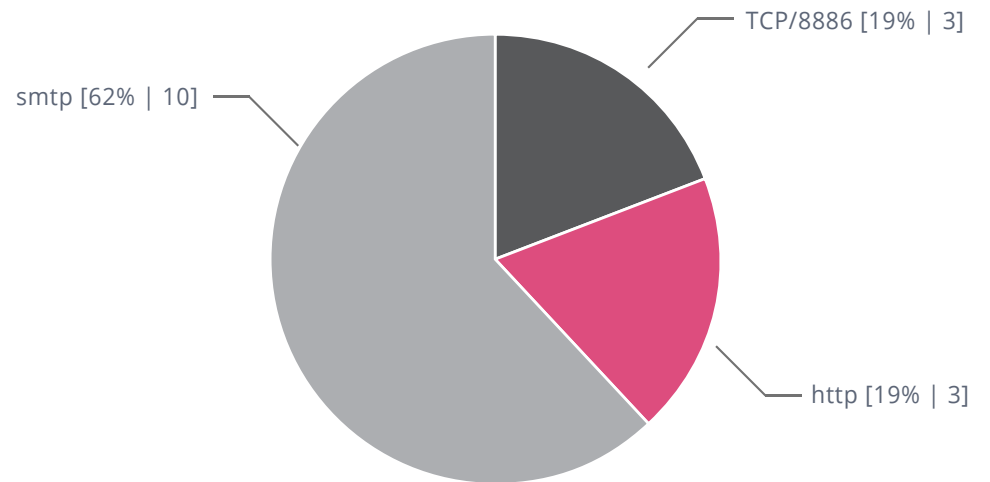
### MALWARE DOWNLOADS (KNOWN MALWARE)

With the increase in sophistication of cyber threats, many targeted attacks begin by exploiting software vulnerabilities in downloaded files and email attachments. During the security analysis, a number of malware-related events which indicate malicious file downloads were detected. The following table summarizes downloads of known malware files detected in your network and the number of the downloading computers. Known malware refers to malware for which signatures exists and therefore should be blocked by an anti-virus system.

#### Top Malware Downloads (Top 10 Malware)

Infected File's Name	Downloaded Computers	Protocol
wire.zip	3 Computers	smtp
Tranfer.xlsx	3 Computers	smtp
tasknow.exe	3 Computers	TCP/8886
Proforma Invoice.Doc	2 Computers	smtp
DF4325.Skm	2 Computers	http
Invitation.pdf	1 Computer	smtp
Your_order.pdf	1 Computer	smtp
RH2221.cgi	1 Computer	http
<b>Total: 8 Infected Files</b>	<b>10 Computers</b>	<b>3 Protocols</b>

#### Downloads by Protocol



### DOWNLOADS OF NEW MALWARE VARIANTS (UNKNOWN MALWARE)

With cyberthreats becoming increasingly sophisticated, advanced threats often include new malware variants with no existing protections, referred to as "unknown malware." These threats include new (zero-day) exploits, or even variants of known exploits with no existing signatures and therefore are not detectable by standard solutions. Detecting these types of malware requires running them in a virtual sandbox to discover malicious behavior. During the security analysis, a number of malware-related events were detected in your network. The table below summarizes downloads of new malware variants detected in your network.

**18.5K**

total files scanned

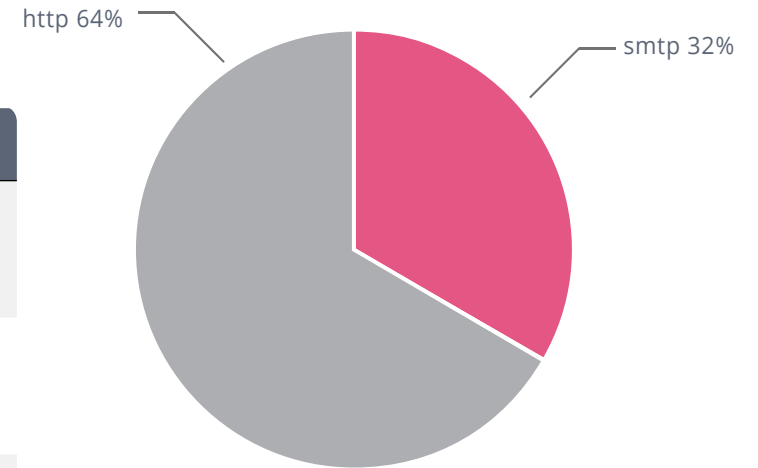
**21**

total malware found

#### Downloads of New Malware Variants (Top 5 Malware)

Infected File Name	Malicious Activity	Downloads	MD5*	Protocols
wire.zip	Behaves like a known malware (Generic.MALWARE.3d0e ) Malware signature matched (Trojan.Win32.Generic.T.kbvX ) Unexpected Process Crash	2	09831c2420848703 26865966037ea68f	smtp
0802_41.xls	Behaves like a known malware (Generic.MALWARE.6c6c ) Malicious Filesystem Activity Malicious Registry Activity Unexpected Process Creation	2	289221d50d705238 6379f79358fc547a	http
image0_.png.zip	A new process was created during the emulation The module creates a suspended process The module executes files or commands The module loads API functions from a DLL dynamically 5 more malicious activities	1	6b5dbd65c284c950 fb3fa98c0ac8e924	smtp
Invoice--0245.zip	Behaves like a known malware (Generic.MALWARE.84ef )	1	1efeb7e73eaa0f4dd b8be34e70c36bf6	http
o.swf	Malicious Registry Activity Unexpected Process Termination	1	388151bde0f98d7fc 1efb0c3925b6740	http
<b>Total: 21 Infected Files</b>	<b>16 Activities</b>	<b>9 Downloads</b>	<b>8 MD5</b>	<b>2 Protocols</b>

Download by Protocol



\* You can analyze suspicious files by copying and pasting files' MD5 to VirusTotal online service at [www.virustotal.com](http://www.virustotal.com)

## ACCESS TO SITES KNOWN TO CONTAIN MALWARE

Organizations can get infected with malware by accessing malicious websites while browsing the Internet, or by clicking on malicious links embedded in received email. The following summarizes events related to sites known to contain malware.

### Top Accessed Sites Known to Contain Malware

Malicious URL *	Number of Sources	Number of Hits
10ensalud.com	3	3
0i7.ru	2	2
00xff.net	1	1
002dh.com	1	1
17ta.com	1	1
<b>Total: 5 Infected Files</b>	<b>8 Sources</b>	<b>8 Hits</b>

# 42 emails





received with link to malicious site

\* You can analyze suspicious URLs by copying and pasting them into VirusTotal online service at [www.virustotal.com](http://www.virustotal.com)

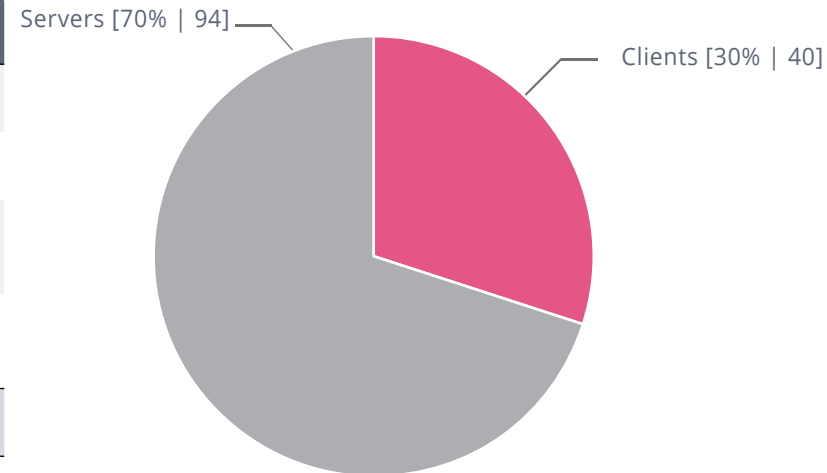
### ATTACKS AND EXPLOITED SOFTWARE VULNERABILITIES

During the security analysis, attacks and exploited software vulnerabilities on servers/clients were detected. Such incidents might indicate intrusion attempts, malware attacks, DoS attacks or attempts to bridge security by exploiting software vulnerabilities. The following summarizes these events.







#### Attacks on Clients (Top 10 Attacks)

Attack Name	CVE	Attacked Computer	Attackers	Severity	Number of Attacks
Adobe Flash Player SWF File Buffer Overflow (APSB13-04)	CVE-2009-0520	32	43	 High	3,342
Adobe Reader TTF CVT Buffer Overflow (APSB10-09)	CVE-2010-2883	31	12	 High	1,232
Internet Explorer ActiveX Navigate Handling Code Execution (MS08-073)	CVE-2008-0078	14	523	 High	32
Microsoft Access Snapshot Viewer ActiveX Control Arbitrary File Download	CVE-2008-2463	13	12	 Medium	265
<b>Total: 5 Attacks</b>		<b>94 Attacked Computers</b>	<b>594 Attackers</b>		<b>4,884 Attacks</b>

#### Attacked Targets



#### Attacks on Servers (Top 10 Attacks)

Attack Name	CVE *	Attacked Computer	Attackers	Severity	Number of Attacks
Microsoft SCCM Reflected Cross-site Scripting (MS12-062)	CVE-2012-2536	13	56	 Medium	4,765
Joomla Unauthorized File Upload Remote Code Execution	CVE-2012-2902	12	33	 Medium	2,543
Web Servers Malicious HTTP Header Directory Traversal	CVE-2002-0440	7	123	 High	126
ImageMagick GIF Comment Processing Off-by-One Buffer Overflow	CVE-2005-0191	3	4	 Medium	24
PHP Php-Cgi Query String Parameter Code Execution	CVE-2012-1823	2	2	 High	10
Oracle Database Server CREATE_TABLES SQL Injection	CVE-2009-1991	2	2	 Low	5
<b>Total: 9 Attacks</b>		<b>40 Attacked Servers</b>	<b>265 Attackers</b>		<b>7,182 Attacks</b>

\* For more information on specific CVE, search on MITRE's CVE search page ([www.cve.mitre.org/cve/](http://www.cve.mitre.org/cve/))

### DDOS ATTACKS

Denial-of-service (DoS) attacks target networks, systems and individual services flooding them with so much traffic that they either crash or are unable to operate. This effectively denies the service to legitimate users. A DoS attack is launched from a single source to overwhelm and disable the target service. A Distributed Denial-of-service (DDoS) attack is coordinated and simultaneously launched from multiple sources to overwhelm and disable a target service. During the security analysis, DDoS attacks were detected. The following summarizes the events.

Summary		
<b>14</b> attack types	<b>70.4K</b> total attacks	<b>13.3MB</b> bandwidth utilization

#### Top 5 DDoS Attacks

Attack Name	Severity	Source	Destination	Events
Network flood IPv4 UDP	Critical	59 Sources	7 attacked 4 attacked	6.4K
Network flood IPv4 TCP-SYN	Critical	2 Sources	13 attacked 21 attacked 4 attacked	5.0K
TCP Scan (horizontal)	High	3 Sources	2 attacked	15.55K
TCP Scan (vertical)	High	3 Sources	13 attacked 15 attacked 5 attacked	1.6K
TCP Scan	High	12 Sources	21 attacked 18 attacked 17 attacked 7 attacked 2 attacked	1.0K
<b>Total: 14 Protections</b>	Critical	<b>118 Sources</b>	<b>64 Destinations</b>	<b>70.4 K</b>















#### Top Source Countries

Source Country	Attacks
Mexico	41.4K
United Kingdom	5.9K
United States	5.7K
Poland	2.1K
France	1.3K
Sweden	156
China	24
Serbia	19
India	18
Canada	18
Netherlands	14
Singapore	5
Vietnam	3
Trinidad and Tobago	2
Kuwait	2
<b>Total: 16 Countries</b>	<b>56.6K</b>

### USAGE OF HIGH RISK WEB APPLICATIONS

Web applications are essential to the productivity of every organization, but they also create degrees of vulnerability in its security posture. Remote Administration applications might be legitimate when used by admins and the helpdesk, but please note that some remote access tools can be used for cyber-attacks as well. The following risky web applications were detected in your network, sorted by category, risk level and number of users.

#### Top High Risk Web Applications (Top 5 Categories)

Application Category	Application Name	Source	Risk Level *	Traffic
Proxy Anonymizer	 Tor	7 Sources	<span style="color: red;">5</span> Critical	23 GB
	 Hola	4 Sources	<span style="color: red;">5</span> Critical	354 MB
	 Ultrasurf	4 Sources	<span style="color: red;">5</span> Critical	239 MB
	 Hide My Ass	3 Sources	<span style="color: red;">5</span> Critical	120 MB
	 OpenVPN	1 Source	<span style="color: red;">5</span> Critical	32 MB
	<b>Total: 7 Applications</b>		<b>16 Sources</b>	
P2P File Sharing	 BitTorrent Protocol	24 Sources	<span style="color: red;">4</span> High	23 GB
	 SoulSeek	22 Sources	<span style="color: red;">4</span> High	22 GB
	 Xunlei	19 Sources	<span style="color: red;">4</span> High	12 GB
	 iMesh	13 Sources	<span style="color: red;">4</span> High	456 MB
	 Gnutella Protocol	8 Sources	<span style="color: red;">4</span> High	56 MB
	<b>Total: 6 Applications</b>		<b>73 Sources</b>	
File Storage & Sharing Applications	 Dropbox	132 Sources	<span style="color: red;">4</span> High	6 GB
	 Hightail	54 Sources	<span style="color: red;">4</span> High	3 GB
	 Mendeley	9 Sources	<span style="color: red;">4</span> High	123 MB
	 Zippyshare	5 Sources	<span style="color: red;">4</span> High	55 MB
	 Sendspace	1 Source	<span style="color: red;">4</span> High	3 MB
	<b>Total: 5 Applications</b>		<b>201 Sources</b>	
<b>Total: 3 Categories</b>	<b>18 Applications</b>	<b>290 Sources</b>		<b>96.2 GB</b>

# 96.2 GB

total high risk web applications traffic

#### Top Categories

Application Category	Traffic
Proxy Anonymizer	26 GB
P2P File Sharing	61 GB
File Storage & Sharing Applications	9.2 GB
<b>Total: 3 Categories</b>	<b>96.2 GB</b>

\* Risk level 5 indicates an application that can bypass security or hide identities. Risk level 4 indicates an application that can cause data leakage or malware infection without user knowledge.

### ACCESS TO HIGH RISK WEB SITES

Web use is ubiquitous in business today. But the constantly evolving nature of the web makes it extremely difficult to protect and enforce standards for web usage in a corporate environment. To make matters more complicated, web traffic has evolved to include not only URL traffic, but embedded URLs and applications as well. Identification of risky sites is more critical than ever. Access to the following risky sites was detected in your network, organized by category, number of users, and number of hits.

#### Top Risky Websites (Top 5 Categories)

Site Category	Site	Number of Users	Number of Hits
Phishing	wsq.altervista.org	7 Users	59
	applynow.mwexoticspetsforsale.com	4 Users	45
	login.marlktpplaats.com	4 Users	21
	masternard.com	3 Users	5
	pro-update.com	1 User	3
	<b>Total: 7 Sites</b>	<b>16 Users</b>	<b>135</b>
Spam	bgeqwre.com	24 Users	65
	bgvlidf.com	22 Users	55
	buogbvd.com	19 Users	19
	br46cy78son.net	13 Users	7
	dq4cmdrzqp.biz	8 Users	1
	<b>Total: 6 Sites</b>	<b>73 Users</b>	<b>153</b>
Spyware / Malicious Sites	100footdiet.org	132 Users	66
	0scan.com	54 Users	33
	050h.com	9 Users	5
	123carnival.com	5 Users	5
	0hm.net	1 User	3
	<b>Total: 9 Sites</b>	<b>254 Users</b>	<b>121</b>
<b>Total: 3 Categories</b>	<b>22 Sites</b>	<b>343 Users</b>	<b>409</b>

#### Access to sites containing questionable content

Site Category	Browse Time (hh:mm:ss)	Traffic Total Bytes
Illegal / Questionable	1:16:00	15.1MB
Sex	2:42:00	8.9MB
Gambling	13:11:00	7.4MB
Hacking	00:01:00	56.0KB
<b>Total: 4 Categories</b>	<b>17:10:00</b>	<b>31.5MB</b>

Access to non-business websites or to sites containing questionable content can expose an organization to possible productivity loss, compliance and business continuity risks.

### DATA LOSS INCIDENTS

Your company's internal data is one of its most valuable assets. Any intentional or unintentional loss can cause damage to your organization. The information below was sent outside the company, or to potentially unauthorized internal users. This information may potentially be sensitive information that should be protected from loss. The following represents the characteristics of the data loss events that were identified during the course of the analysis.

#### Summary

**74.3K** total emails scanned

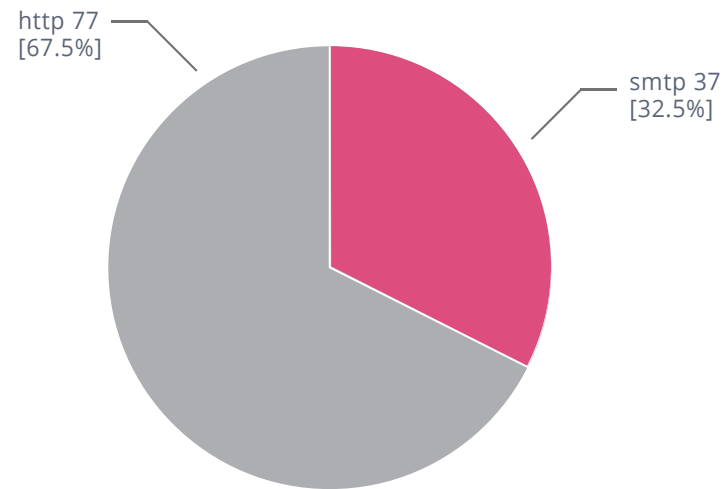
**2** emails with data loss incidents

**114** web data loss incidents

#### Top Data Types (Top 10 Categories)

Data Type	Users	Events	Services
Credit Card Numbers	7	54	http
Business Plan	5	32	smtp
Financial Reports	2	12	http
Source Code	1	9	http
Pay Slip File	3	5	smtp
U.S. Social Security Numbers	1	2	http
<b>Total: 6 Data Types</b>	<b>19 Users</b>	<b>114 Events</b>	<b>2 Services</b>

#### Incidents by Protocol





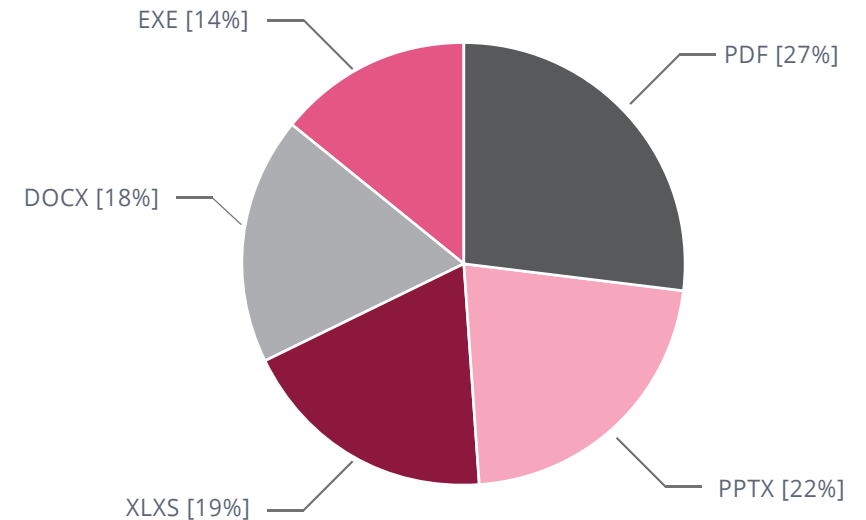
### FILES UPLOADED TO CLOUD BASED WEB APPLICATIONS

One of the greatest characteristics of Web 2.0 is the ability to generate content and share it with others. This capability comes with significant risk. Sensitive information can get into the wrong hands by storing confidential financial files on cloud-based file storage and sharing services. The following table provides an overview of the types of files uploaded from your organization and the respective file storage and sharing applications used.

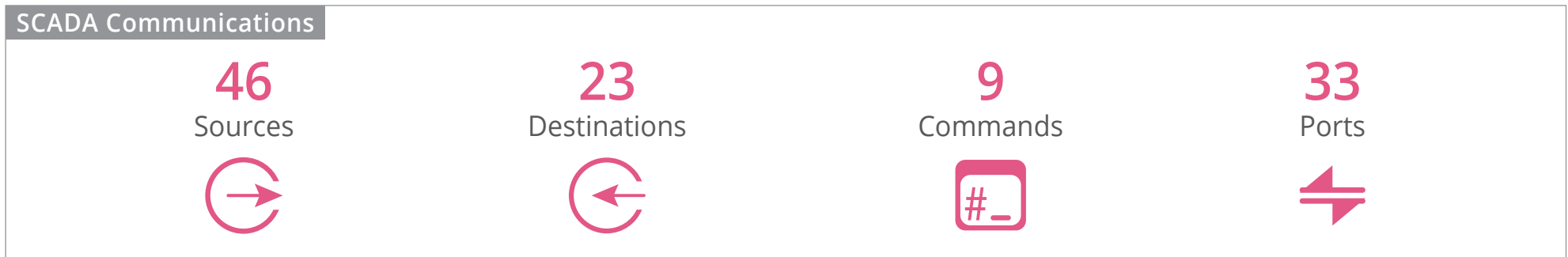
#### Cloud-Based Web Applications (Top 5 Categories)

Site / Application Category	Site / Application	Uploaded Files	Number of Users	File Type
File Storage & Sharing Applications	Dropbox	7 Files	59 Users	.EXE, .PPTX, .PDF
	Hightail	4 Files	45 Users	.DOCX, .PPTX
	Mendeley	4 Files	21 Users	.PDF, .XLSX
	Google Drive-web	3 Files	13 Users	.EXE, .PDF
	Mega	3 Files	6 Users	.EXE
	<b>Total: 7 Sites</b>		<b>24 Files</b>	<b>163 Users</b>
P2P File Sharing	BitTorrent Protocol	24 Files	65 Users	.DOCX, .PPTX
	SoulSeek	22 Files	55 Users	.PDF, .XLSX
	FileMp3.org	16 Files	43 Users	.PDF, PPTX
	P2P-Radio	9 Files	22 Users	.XLSX
	Sharebox	3 Files	10 Users	.PDF, .XLSX
	<b>Total: 6 Sites</b>		<b>76 Files</b>	<b>201 Users</b>
Share Files	Facebook	132 Files	66 Users	.DOCX, .PPTX
	FreeWire	42 Files	23 Users	DOCX.
	<b>Total: 2 Sites</b>		<b>174 Files</b>	<b>89 Users</b>
<b>Total: 3 Categories</b>	<b>15 Sites</b>	<b>274 Files</b>	<b>453 Users</b>	

#### File Types



SCADA (Supervisory Control and Data Acquisition) is a type of industrial control system (ICS) that monitors and controls industrial processes. It operates with coded signals over communication channels to provide control of remote equipment. SCADA networks are usually separated from the organizational IT network for security purposes. SCADA protocols detected on the IT network might indicate a security risk with a potential for a security breach. The following SCADA protocols were detected on your network.

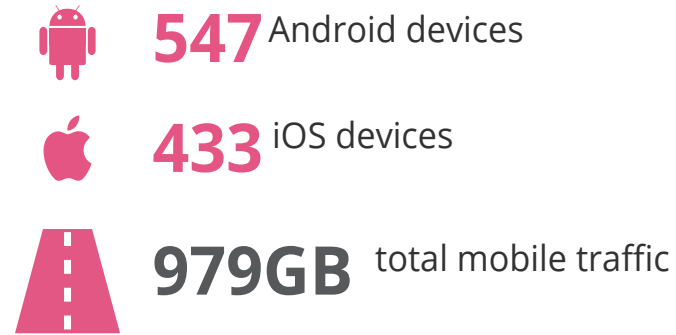


**Top SCADA Protocols & Commands (Top 20)**

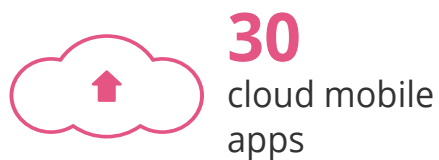
Protocol & Command	Transactions	Traffic
BACNet Protocol (Building Automation and Control Networks)	38	4.3GB
DNP3 Protocol - freeze and clear	21	123MB
EtherNet/IP	16	2.2GB
OPC UA - secure conversation message	2	71.0MB
DNP3 Protocol - immediate freeze	2	513MB
DNP3 Protocol	2	1.6GB
DNP3 Protocol - write	1	1.7GB
DNP3 Protocol - ware restart	1	57MB
DNP3 Protocol - select	1	321MB
Total: 9 Protocols & Commands	84 Transactions	10.885GB

The following Security Checkup report presents the findings of a security assessment conducted in your network. The report focuses on mobile threats and uncovers where your organization is exposed to them, and offers recommendations to address these risks.

To assess risk, network traffic was inspected by Check Point to detect a variety of security threats, including: mobile malware infections, usage and downloads of high risk mobile apps, download of malicious mobile applications, outdated mobile operating systems, and more.



Mobile devices detected on corporate network (number of devices is based on source IP addresses).



Examples: Dropbox, Google Drive, OneDrive. Risk of data loss and compliance violations.

High risk mobile apps are apps that might be used by attackers to monitor and control mobile devices or cause data loss.

Examples: Spam, malicious, botnets and phishing web sites. Potential risks: Exposure to web-based threats and network infection.

Download of malicious content such as malicious apps, malware and adware and infected devices communicating with Command and Control servers.

### MOBILE DEVICES INFECTED WITH MALWARE

Mobile malware are malicious software which invade your mobile device. Mobile malware allow criminals to steal sensitive information from a device, take control of its sensors to execute keylogging, steal messages, turn on the video camera, and all this without your knowledge. Mobile malware play a key role in targeted attacks known as Advanced Persistent Threats (APTs). The following table summarizes the mobile malware detected in your network.

#### Bot infections (top 20 bots)

Malware*	Infected Devices	Communications with Command and Control Center
Plankton	5 devices	1,453
Xinyin	5 devices	1,265
AndroRAT	4 devices	684
BatteryBot	2 devices	587
Bosua	3 devices	45
HummingBad	2 devices	33
SMS-Agent.A	2 devices	26
SmsThief	1 device	7
SMS-Agent.B	1 device	3
<b>Total: 9 malware families</b>	<b>13 infected devices</b>	<b>4,103</b>

#### Command & Control locations



\* For more information on specific malware, search on [www.threat-cloud.com](http://www.threat-cloud.com)

## DOWNLOADS OF MALICIOUS APPS AND MALWARE

With the increased in sophistication in mobile cyber threats, many targeted attacks begin by embedding malware in downloaded apps and files. During the security analysis, a number of malware-related events which indicate malicious file downloads were detected. The following table summarizes downloads of malware by mobile devices.

### Malware downloads (top 20)









Malware*	Downloaded by	Downloads	MD5
MobileConf.apk	21 devices	3	582e74467fd100622871fd9cc4dc005c
com.android.senscx.apk	13 devices	3	048b145948a07ab93e24a76dafda8bb7
org.blhelper.vrtwidget.apk	8 devices	3	76745ce873b151cfd7260e182cbfd404
SystemThread.apk	7 devices	3	b9484ae3403c974db0f721b01bd6c302
com.android.systemUI.apk	3 devices	3	f8645efd5ea2b802d68406207000d59b
Pornclub.apk	2 devices	2	6fa0ffc80d7796748238ad5f1ef3fd71
Settings Tools.apk	2 devices	1	29dc63afd068dad7a589c680896e5e86
MainActivity.apk	1 device	1	f3867f6159ee25ebf90c8cc0220184ed
clean.apk	1 device	1	eeb6777ce814c6c78e7b9bce9f8176e6
<b>Total: 9 malware files</b>	<b>58 devices</b>	<b>20 downloads</b>	

\* For more information on specific malware, search on [www.threat-cloud.com](http://www.threat-cloud.com)

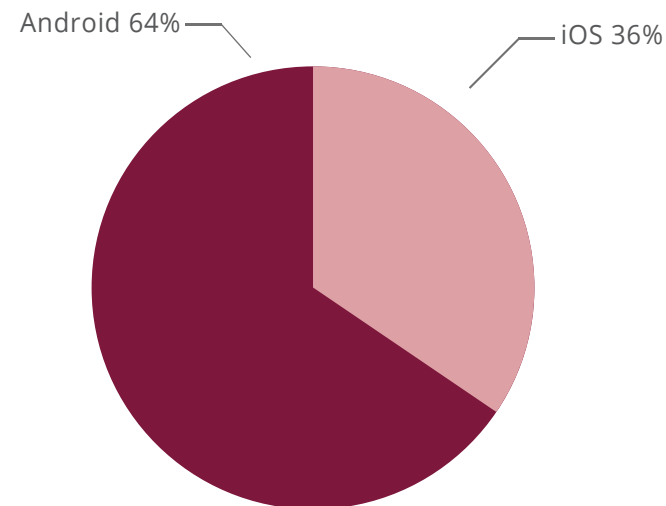
### USAGE OF HIGH RISK MOBILE APPS

Mobile apps are essential to the productivity of every organization, but they also create degrees of vulnerability in its security posture. Remote Administration apps might be legitimate when used by admins and the helpdesk, but when used maliciously, they can allow potential attackers to steal sensitive information from a device, take control of the sensors to execute keylogging, steal messages, turn on video camera, and more. The following risky apps were detected in your network.

#### Top high risk mobile apps

App Category	App Name*	Risk Level	Devices	Traffic
Spyware	Mspy	 High	24	5 GB
	Spy2Mobile	 High	22	2 GB
	Bosspy	 High	19	1 GB
	Mobile Spy	 High	11	456 MB
	Shadow Copy	 High	5	350 MB
	My Mobile Watchdog	 High	3	120 MB
	MobiStealth	 High	2	59 MB
	TalkLogV	 High	1	56 MB
<b>Total: 1 category</b>	<b>18 apps</b>		<b>87</b>	<b>9 GB</b>

#### Mobile devices



\* For more information on specific app, search on <http://appwiki.checkpoint.com/>

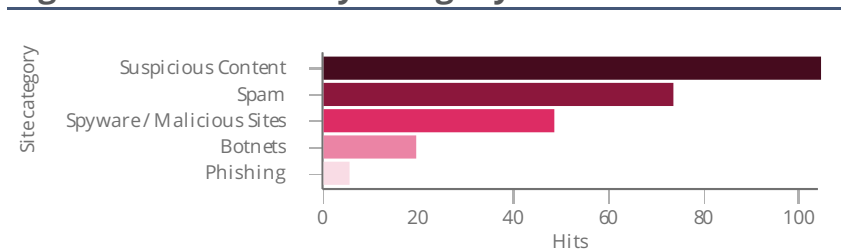
### ACCESS TO HIGH RISK WEB SITES

Web use is ubiquitous in business today. But the dynamic, constantly evolving nature of the web makes it extremely difficult to protect and enforce web usage in a corporate environment. Identification of risky sites is more critical than ever. Access to the following risky sites was detected in your network, organized by category, number of users, then number of hits.

#### Top high risk web sites (top 10 sites per category)

Site Category	Site	Mobile Users	Hits
Suspicious Content	ad.pxlad.io/ad	81 Mobile Users	104
	an.tacoda.net/an/atids.html		
	bam.nr-data.net/1/92a411bc23		
	beacon.securestudies.com/scripts/beaco ...		
	cdn.applight.mobi/applight/2015		
	down.onowcdn.com/testapk		
	dxcdn.cn		
	fbhpadmax.com		
	file1.updrv.com/soft/2012/drivethelife5_s ...		
	19 more Sites		
Spam	a0.awsstatic.net	61 Mobile Users	73
	adx.adform.net/adx		
	aptrk.com/g		
	c.ffctdbtr.com		
	cj-cy.com		
	clk.apxadtracking.net/iclk/redirect.php		
	comerciointernacional.com.mx		
	delightfulmotivation.com		
	dl7wen29y4h7i03edf6pm3s6h7nt5oxgpoe.		
	dreamingofgalleries.me		
16 more Sites			

#### High risk web sites by category

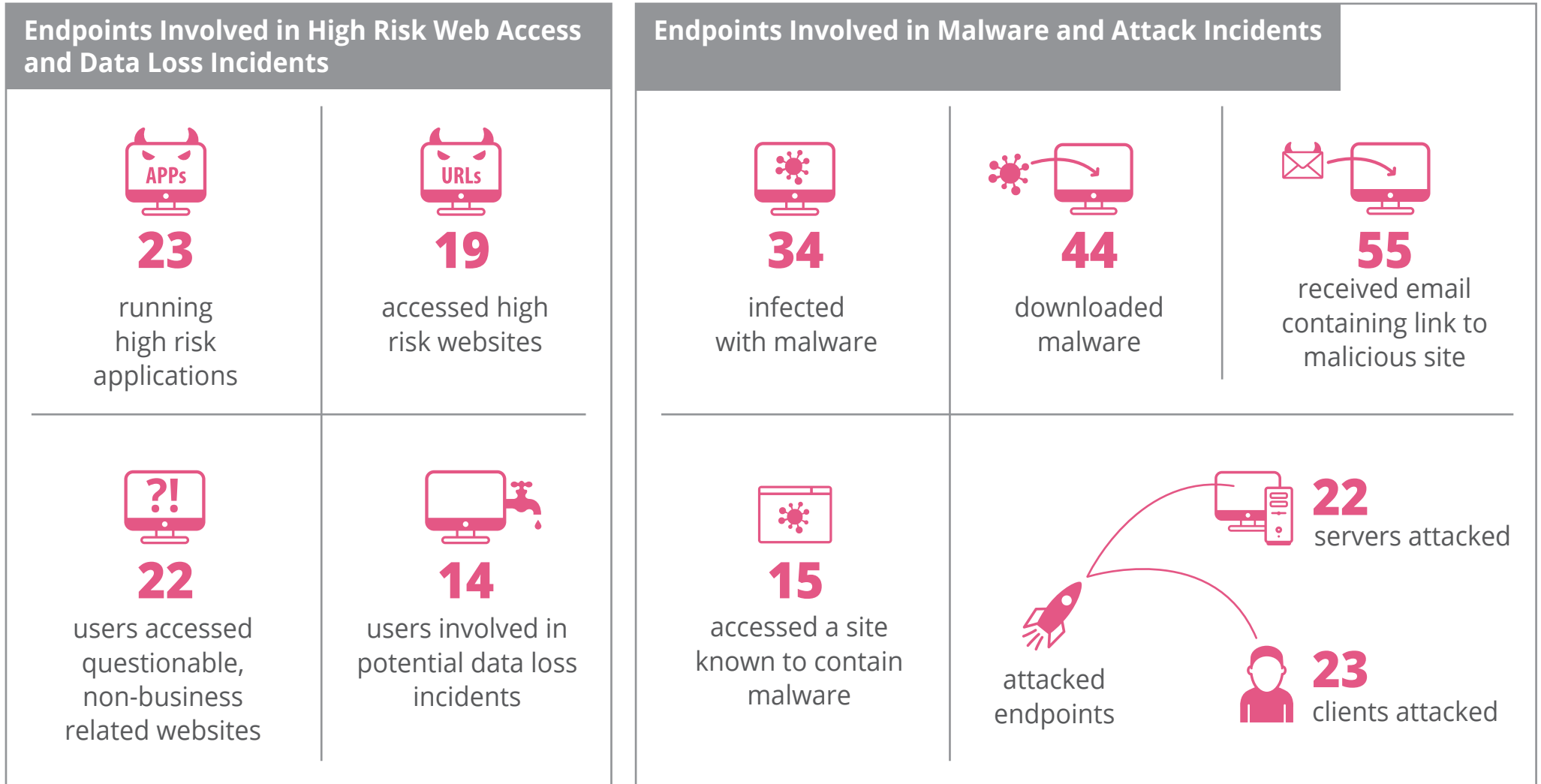


#### Access to sites containing questionable content

Category	Browse Time (hh:mm:ss)	Traffic Total Bytes
Sex	21:24:00	3.9GB
Illegal / Questionable	3:59:00	910.8MB
Gambling	0:10:00	11.4MB
Hacking	0:01:00	64.0KB
<b>Total: 4 Categories</b>	<b>25:34:00</b>	<b>4.8GB</b>

Web Access to non-business websites or to sites containing questionable content can expose an organization to possible productivity loss, compliance and business continuity risks.

# 343 total endpoints detected





### BANDWIDTH UTILIZATION BY APPLICATIONS & WEBSITES

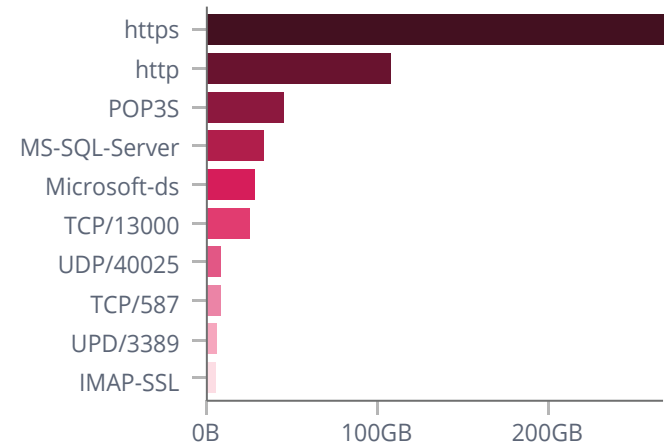
An organization’s network bandwidth is usually utilized by a wide range of web applications and sites used by employees. Some are business related and some might not be business related. Applications that use a lot of bandwidth, for example, streaming media, can limit the bandwidth that is available for important business applications. It is important to understand what is using the network’s bandwidth to limit bandwidth consumption of non-business related traffic. The following summarizes the bandwidth usage of your organization sorted by consumed bandwidth.

#### Top Applications/Sites (Top 30)

Application/Site	Category	Risk Level	Sources	Traffic
YouTube	Media Sharing	2 Low	151 Sources	13.6GB
Office 365-Outlook	Email	1 Very Low	363 Sources	10.9GB
Microsoft SQL Server	Business Application	2 Low	189 Sources	6.4GB
Windows Update	Software Update	1 Very Low	623 Sources	4.7GB
Server Message Block (SMB)	Network Protocols	1 Very Low	491 Sources	3.7GB
Skype	VoIP	3 Medium	475 Sources	2.3GB
bestday.com	Travel	- Unknown	232 Sources	2.3GB
SMTP Protocol	Network Protocols	3 Medium	248 Sources	2.2GB
Google Services	Computers / Internet	2 Low	437 Sources	1.9GB
Microsoft Dynamics CRM	Business Application	1 Very Low	3 Sources	1.7GB
Facebook	Social Network	2 Low	226 Sources	1.6GB
oloadcdn.net	Computers / Internet	- Unknown	3 Sources	1.5GB
Server Message Block (SMB)-write	Network Protocols	1 Very Low	33 Sources	1.2GB
Gmail	Email	3 Medium	55 Sources	1.1GB
Outlook.com	Email	3 Medium	280 Sources	1.0GB
ds.pr.dl.ws.microsoft.com	Computers / Internet	- Unknown	1 Source	958.6MB
Jabber Protocol (XMPP)	Network Protocol	2 Low	391 Sources	872.6MB
<b>Total: 254 Applications/Sites</b>	<b>34 Categories</b>	<b>4 Risks</b>	<b>2,049 Sources</b>	<b>539.8GB</b>

**539.8GB**  
total traffic scanned

#### Traffic by Protocol





# Software-Defined Protection

Enterprise Security Blueprint

In a world with high-demanding IT infrastructures and networks, where perimeters are no longer well defined, and where threats grow more intelligent every day, we need to define the right way to protect enterprises in the ever changing threat landscape.

There is a wide proliferation of point security products; however these products tend to be reactive and tactical in nature rather than architecturally oriented. Today's corporations need a single architecture that combines high performance network security devices with real-time proactive protections. A new paradigm is needed to protect organizations proactively.

Software-defined Protection is a new, pragmatic security architecture and methodology. It offers an infrastructure that is modular, agile and most importantly, *SECURE*.

Such architecture must protect organizations of all sizes at any location: headquarters networks, branch offices, roaming through smartphones or mobile devices, or when using cloud environments.

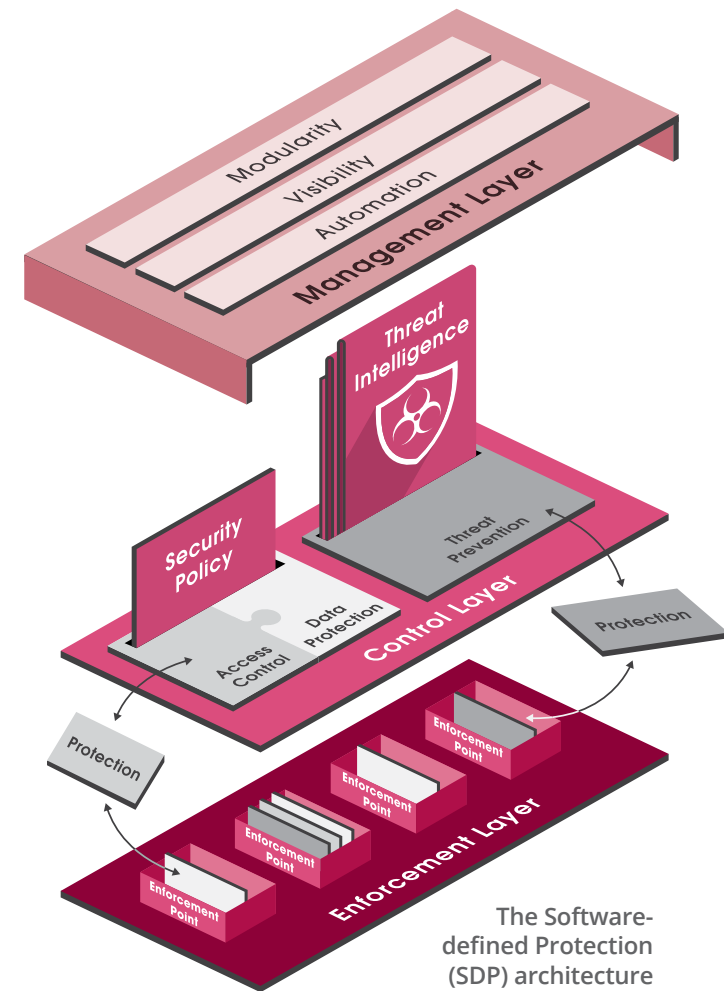
Protections should automatically adapt to the threat landscape without the need for security administrators to follow up manually on thousands of advisories and recommendations. These protections must integrate seamlessly into the larger IT environment, and the architecture must provide a defensive posture that collaboratively leverages both internal and external intelligent sources.

The Software Defined Protection (SDP) architecture partitions the security infrastructure into three interconnected layers:

- ▶ **An Enforcement Layer** that is based on physical, virtual and host-based security enforcement points. It segments the network as well as executes the protection logic in high-demand environments.
- ▶ **A Control Layer** that analyzes different sources of threat information and generates protections and policies to be executed by the Enforcement Layer.
- ▶ **A Management Layer** that orchestrates the infrastructure and brings the highest degree of agility to the entire architecture.

By combining the high performance Enforcement Layer with the fast-evolving and dynamic software-based Control Layer, the SDP architecture provides not only operational resilience, but also proactive incident prevention for an ever-changing threat landscape.

Designed to be forward-looking, the SDP architecture supports traditional network security and access control policy requirements as well as the threat prevention needed by modern enterprises that embrace new technologies such as mobile computing and Software-defined Networks (SDN).



## Check Point Software-Defined Protection

Check Point provides all the right components needed to implement a complete SDP architecture with the best management and the best security.

Check Point software-defined protections provide the flexibility needed to cope with new threats and embrace new technologies. Our solutions generate new and updated protections for known and unknown threats and proactively distribute this knowledge through the cloud. Implementing Check Point security solutions based on sound architectural security design empowers enterprises to embrace leading-edge information system solutions with confidence.



### CHECK POINT SDP ENFORCEMENT LAYER

To secure the boundaries of each segment, Check Point offers a wide range of enforcement points. These include high-performance network security appliances, virtual gateways, endpoint host software and mobile device applications (Check Point Capsule) which enables you to extend security from the corporate network, and apply it to your mobile devices. Check Point provides enterprises with all the building blocks needed to engineer segmented, consolidated and secure systems and networks.

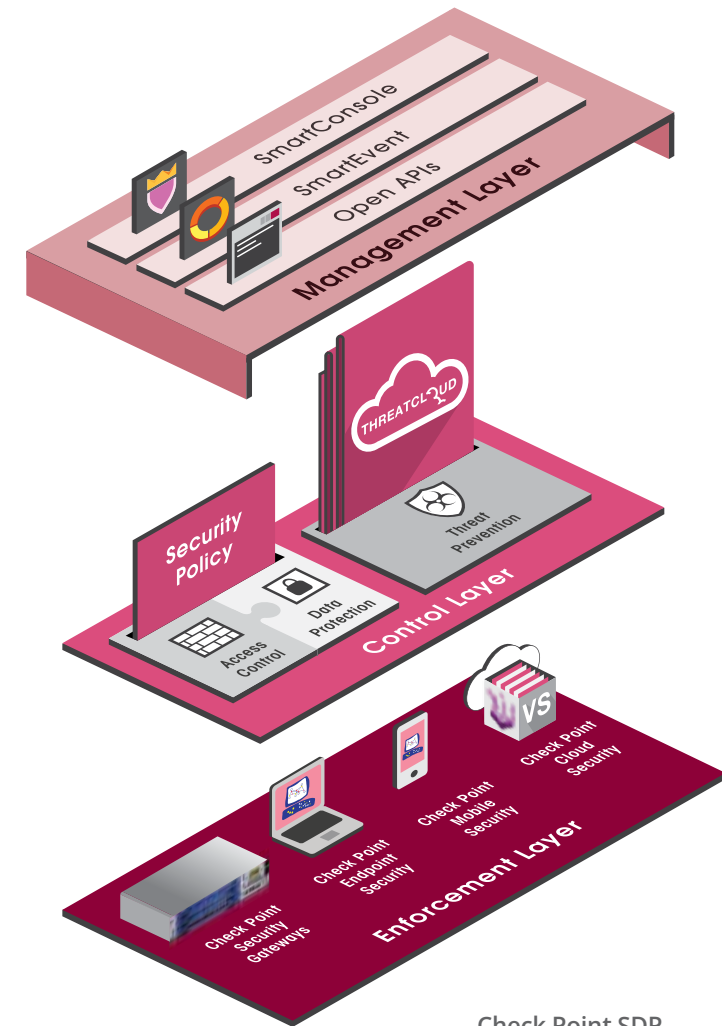


### CHECK POINT SDP CONTROL LAYER

Check Point SDP control layer is based on Check Point Software Blade Architecture that provides customers with flexible and effective security solutions to match their exact needs. With a choice of over 20 Software Blades, the modular nature of the Software Blade Architecture allows customers to build a relevant security solution per enforcement point and to expand their security infrastructure over time.

### NEXT GENERATION THREAT PREVENTION

Check Point efficiently delivers controls to counter many of the known and unknown threats. The Check Point Threat prevention solution includes: Integrated Intrusion Prevention System (IPS) to proactively prevent intrusions, network based Antivirus to identify and block malware, Anti-bot to detect and prevent bot damage, Threat Emulation malware sandboxing to detect and block unknown and zero-day attacks. Check Point built a unique cloud-based threat intelligence, big data and protection generator, Check Point ThreatCloud™. Check Point ThreatCloud enables a collaborative way to fight cybercrime, delivering real-time security threat intelligence converted into security indicators to the control layer.



Check Point SDP

## NEXT GENERATION FIREWALL AND SECURE WEB GATEWAY

Check Point access control is based on multiple software blades which enable a unified context-based security policy: Firewall to securely control access to clients, servers, applications and connection types; Application Control to control usage of Web 2.0 applications and prevent high-risk applications usage; URL Filtering to control access to millions of websites and prevent access to websites hosting malware; and Identity Awareness for granular visibility of users, groups and machines and creation of accurate, identity-based policies.

## NEXT GENERATION DATA PROTECTION

Next Generation Data Protection solutions encompass all facets of protecting content from getting into the wrong hands. Data Loss Prevention (DLP) is an integral part of a data protection solution helping businesses to pre-emptively protect sensitive information from unintentional loss, educating users on proper data handling policies and empowering them to remediate incidents in real-time. DLP controls sensitive information from leaving the company and it also inspects and controls sensitive emails between departments with Microsoft Exchange support. In addition, Check Point provides protection for data at rest and in storage with encryption technologies. These technologies

can be implemented on all enforcement points protecting sensitive documents and confidential data from being accessed or transferred to removable media or by unauthorized users.

## CHECK POINT CAPSULE: EXTENDING CORPORATE SECURITY POLICY TO MOBILE DEVICES

Check Point Capsule enables you to extend Check Point's security from the corporate network, and apply it to your mobile devices. This way both your network and your employees' mobile devices enforce the same protections against internal and external threats. With Check Point Capsule you are able to access corporate email, documents, as well as internal directories and assets from within a secure business environment. Personal data and applications are segregated from business data, enabling secure use of business assets while protecting employees' personal information and applications. Business documents are protected everywhere they go with Check Point Capsule. Security is established at document creation and travels with the document everywhere it goes, ensuring that corporate security guidelines are always enforced.



## CHECK POINT SDP MANAGEMENT LAYER

All Check Point protections and enforcement points are managed from a single unified security management console. Check Point security management is highly scalable, providing the ability to manage tens of millions of objects while maintaining super-fast user interface response times.

## CHECK POINT MODULAR / LAYERED POLICY MANAGEMENT

Check Point Security Management supports enterprise segmentation, allowing administrators to define security policy for each segment while enforcing segregation of duties with a new concept called Layers and Sub Layers.

Policies can be defined for each segment. Access control policies can be defined using separate layers, which can be assigned to different administrators. Multiple administrators can then work on the same policy simultaneously.

## AUTOMATION AND ORCHESTRATION

Check Point Security Management provides CLIs and Web Services APIs that allow organizations to integrate with other systems such as network management, CRM, trouble ticketing, identity management and cloud orchestrators.

### **VISIBILITY WITH CHECK POINT SMARTEVENT**

Check Point SmartEvent performs big data analysis and real-time security event correlation. It provides consolidated and correlated views of incidents based on multiple sources of information. Security event analysis creates actionable intelligence in the form of threat indicators that can be distributed via ThreatCloud to block threats in real-time.

Learn more about Check Point Software-defined Protection and how it can help your security infrastructure keep pace with today's rapidly changing threat landscape.

Visit:

[www.checkpoint.com/sdp](http://www.checkpoint.com/sdp)

## About Check Point

Check Point Software Technologies' mission is to secure the Internet. Check Point was founded in 1993, and has since developed technologies to secure communications and transactions over the Internet by enterprises and consumers.

Check Point was an industry pioneer with our FireWall-1 and our patented Stateful Inspection technology. Check Point has extended its IT security innovation with the development of our Software Blade architecture. The dynamic Software Blade architecture delivers secure, flexible and simple solutions that can be customized to meet the security needs of any organization or environment.

Check Point develops markets and supports a wide range of software, as well as combined hardware and software products and services for IT security. We offer our customers an extensive portfolio of network and gateway security solutions, data and endpoint security solutions and management

solutions. Our solutions operate under a unified security architecture that enables end-to-end security with a single line of unified security gateways, and allow a single agent for all endpoint security that can be managed from a single unified management console. This unified management allows for ease of deployment and centralized control and is supported by, and reinforced with, real-time security updates.

Our products and services are sold to enterprises, service providers, small and medium sized businesses and consumers. Our Open Platform for Security (OPSEC) framework allows customers to extend the capabilities of our products and services with third-party hardware and security software applications. Our products are sold, integrated and serviced by a network of partners worldwide. Check Point customers include tens of thousands of businesses and organizations of all sizes including all Fortune 100 companies. Check Point's award-winning ZoneAlarm solutions protect millions of consumers from hackers, spyware and identity theft.

[www.checkpoint.com](http://www.checkpoint.com)

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