THE BIG DISCONNECT

“OUR 2017 REPORT FINDS A GLOBAL SITUATION WHERE SPENDING ON SECURITY IS UP - SHARPLY IN SOME SECTORS - YET SUCCESSFUL DATA BREACHES ARE ALSO UP SIGNIFICANTLY.”

“CLEARLY, THERE’S STILL A BIG DISCONNECT BETWEEN WHAT WE ARE SPENDING THE MOST OF OUR SECURITY BUDGET ON AND WHAT’S NEEDED TO ENSURE THAT OUR SENSITIVE DATA REMAINS SECURE.”
Breach rates are accelerating despite increased IT security spending to protect data.

No wonder enterprises feel vulnerable to data threats.

- 2015: 54% previously had a data breach
- 2016: 61% previously had a data breach
- 2017: 68% previously had a data breach

- 2015: 21% had a data breach in the last year
- 2016: 26% had a data breach in the last year
- 2017: 26% had a data breach in the last year
GLOBAL VULNERABILITY TO DATA THREATS

GLOBAL

GLOBAL VULNERABILITY

88% VULNERABLE
30% VERY/EXTREMELY VULNERABLE

REGIONAL

SOMewhat or more vulnerable

90% UNITED STATES
84% UNITED KINGDOM
95% GERMANY
83% JAPAN
90% MEXICO
77% BRAZIL
91% AUSTRALIA

Very or extremely vulnerable

29% UNITED STATES
20% UNITED KINGDOM
45% GERMANY
23% JAPAN
31% MEXICO
19% BRAZIL
49% AUSTRALIA
COMPLIANCE THE TOP DRIVER FOR IT SECURITY SPENDING
AND RATED AS HIGHLY EFFECTIVE AT PROTECTING DATA

IN SPITE OF PRIORITIZING COMPLIANCE FIRST FOR THE LAST TWO YEARS, AND INVESTING TO MEET COMPLIANCE REQUIREMENTS, THE RATE OF BREACHES KEEPS RISING

59% believe compliance is very or extremely effective at preventing data breaches.

“Compliance is a minimum table stake for regulated enterprises ... But being compliant does not mean you won’t be breached.”

Garrett Bekker
Sr. Analyst Information Security, 451 Research

IT SECURITY SPENDING PRIORITIES

- 44% Compliance
- 38% Best Practices
- 36% Protect Rep & Brand
- 35% Prevent Data Breaches
- 35% Increased Cloud Use
INCREASING SPENDING THE MOST WHERE DEFENSES OFTEN FAIL TO PROTECT DATA

IT SECURITY DEFENSE SPENDING INC REASES

<table>
<thead>
<tr>
<th></th>
<th>Inc Reases</th>
</tr>
</thead>
<tbody>
<tr>
<td>NETWORK SECURITY</td>
<td>62%</td>
</tr>
<tr>
<td>END POINT PROTECTION</td>
<td>56%</td>
</tr>
<tr>
<td>ANALYSIS AND CORRELATION DATA IN MOTION</td>
<td>52%</td>
</tr>
<tr>
<td>DATA AT REST</td>
<td>46%</td>
</tr>
</tbody>
</table>

BELIEVE NETWORK SECURITY VERY/EXTREMELY EFFECTIVE AT PROTECTING DATA

BELIEVE ENDPOINT PROTECTION VERY/EXTREMELY EFFECTIVE AT PROTECTING DATA

“...spending on securing internal networks from external threats is less and less effective - and relevant - as both the data and the people accessing it are increasingly external.”

“...organizations keep spending on the same solutions that worked for them in the past but aren’t necessarily the most effective at stopping modern breaches”

Garrett Bekker, 451 Research
63% of respondents indicated that their organizations deploy new technologies in advance of having appropriate levels of data security in place.

Garrett Bekker, 451 Research

<table>
<thead>
<tr>
<th>Technology</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>SaaS</td>
<td>55%</td>
</tr>
<tr>
<td>IaaS</td>
<td>49%</td>
</tr>
<tr>
<td>Mobile</td>
<td>49%</td>
</tr>
<tr>
<td>Paas</td>
<td>46%</td>
</tr>
<tr>
<td>Big Data</td>
<td>43%</td>
</tr>
<tr>
<td>Iot</td>
<td>32%</td>
</tr>
<tr>
<td>Containers</td>
<td>17%</td>
</tr>
<tr>
<td>Blockchain</td>
<td>10%</td>
</tr>
</tbody>
</table>
The lack of skilled security staff has been a consistent theme in 451’s research efforts the past few years, and in conjunction with complexity, makes a strong case for data security functionality delivered as a service.

Garrett Bekker
451 Research
“... external attackers frequently masquerade as insiders by using stolen or compromised credentials to access all types of valuable data, including PII, PHI, financial data and intellectual property”

Garrett Bekker
Sr. Analyst Information Security, 451 Research

THE MOST DANGEROUS INSIDERS

<table>
<thead>
<tr>
<th>Percentage</th>
<th>Group</th>
</tr>
</thead>
<tbody>
<tr>
<td>58%</td>
<td>Privileged Users</td>
</tr>
<tr>
<td>44%</td>
<td>Executive Management</td>
</tr>
<tr>
<td>36%</td>
<td>Ordinary Employees</td>
</tr>
<tr>
<td>33%</td>
<td>Contractors</td>
</tr>
</tbody>
</table>
In spite of all the furor around nation state hacking, cyber criminals top the list of concerns by a wide margin.

<table>
<thead>
<tr>
<th>TOP EXTERNAL THREAT ACTOR SELECTIONS</th>
<th>HACKTIVISTS</th>
<th>NATION-STATES</th>
<th>COMPETITORS</th>
</tr>
</thead>
<tbody>
<tr>
<td>CYBER CRIMINALS</td>
<td>44%</td>
<td>15%</td>
<td>11%</td>
</tr>
<tr>
<td>HACKTIVISTS</td>
<td>17%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>NATION-STATES</td>
<td>12%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>COMPETITORS</td>
<td></td>
<td></td>
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</tr>
</tbody>
</table>
4 OF 5 PLANNED DATA SECURITY CONTROLS ARE DRIVEN BY CLOUD AND SAAS

TOP 5 PLANNED DATA SECURITY TOOLS DEPLOYMENTS

2017
- 39% - THIRD PARTY KEY OR BYOK
- 38% - CASB
- 37% - TOKENIZATION
- 36% - ENABLING CLOUD ENCRYPTION
- 34% - HARDWARE SECURITY MODULES

2016
- 40% - APPLICATION ENCRYPTION
- 39% - MULTIFACTOR AUTHENTICATION
- 39% - TOKENIZATION
- 38% - CASB
- 38% - SIEM
CONTAINERS SURPRISE
ONLY 3 YEARS AFTER TECHNOLOGY INTRODUCTION (DOCKER)

“...40% of respondents are already using containers in production environments...

...only 13% have no plans for containers this year”

Garrett Bekker
451 Research

CONTAINER BASED APPLICATION DEPLOYMENTS

54% SELECTED ENCRYPTION

AS THE #1 SECURITY CONTROL REQUIRED TO EXPAND CONTAINER USAGE
NEW REGULATIONS ARE DRIVING ENTERPRISE BEHAVIOR
DATA PRIVACY AND SOVEREIGNTY IMPACTING ENTERPRISES WORLDWIDE

Globally are Impacted by Data Privacy and Data Sovereignty

 ADDRESSING REQUIREMENTS BY:

- 64% Encrypting Data
- 40%Tokenizing Data
- 36% Migrating Customer Data
- 26%Will Use Local Hosting and Cloud

VARIATIONS IN IMPACT OF DATA PRIVACY/Sovereignty

- 75% Impacted
  - U.S. Highest Rate
  - 81% Impacted
  - Germany
  - 56% Impacted
  - Japan Lowest Rate
| **Re-prioritize your IT security tool set** | Cloud and SaaS break legacy IT Security models – Data security with encryption and access controls across environments is required. Service-based solutions and platforms that include automation are preferred for reduced costs and simplicity. |
| **Discover and classify** | Get a better handle on the location of sensitive data, particularly for Cloud, Big Data, Containers and IoT |
| **Don’t just check off the compliance box** | Global and industry regulations can be demanding, but firms should consider moving beyond compliance to greater use of encryption and BYOK, especially for cloud and other advanced technology environments. |
| **Encryption and access control** | Encryption needs to move beyond laptops and desktops. **Data center**: File and application level encryption and access controls. **Cloud**: Encrypt and manage keys locally, BYOK enables safe SaaS, PaaS and IaaS. **Big Data**: Encryption and access control within the environment. **Containers**: Encrypt and control access to data both within containers and underlying data storage locations. **IoT**: Use secure device ID and authentication, as well as encryption of data at rest on devices, back end systems and in transit to limit data threats. |
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2017
THALES
DATA THREAT
REPORT

Trends in Encryption and Data Security
GLOBAL EDITION

2017 Data Threat
ABOUT THALES E-SECURITY

- **Instilling trust across the data landscape**
  Our powerful technology platform provides advanced data security for more servers, applications, and environments than any other security alternative.

- **What we do**
  Thales e-Security provides companies everything they need to protect and manage their data and scale easily to new environments and requirements—encryption, advanced key management, tokenization, authorization, privileged user control, and HSMs.

- **Our customers**
  Our customers include 19 of the world’s 20 largest banks, four of the world’s five largest oil companies, 27 NATO country members and 15 of the Fortune 25.
Our solutions protect data while eliminating complexity, inefficiency and cost.
2017 THALES DATA THREAT REPORT

Trends in Encryption and Data Security

GLOBAL EDITION