

US government agencies see 20 percent rise in data breaches



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US Federal agencies reported more breaches last year (57 percent) than any other industry sector by a wide margin, well ahead of the global average of 36 percent according to a new report.

Yet the findings from [Thales eSecurity](#) show that only 42 percent of government respondents claim to be 'very' or 'extremely' vulnerable, compared to 68 percent of US respondents across the board.

In the past year 57 percent of federal respondents have experienced a data breach. This marks a big jump from the 2017 report where 34 percent were breached and the 2016 report (18 percent). In contrast only 26 percent of non-US government agencies worldwide experienced a breach in the past year.

The report also highlights the growing government use of cloud services. 45 percent of US federal respondents now use more than five Infrastructure-as-a-Service vendors and nearly half (48 percent) use more than 100 Software-as-a-Service applications. Over two-thirds (72 percent) of respondents express concerns about increased vulnerabilities from shared infrastructures, other worries include custodianship of encryption keys (62 percent) and security breaches in the cloud (68 percent).

Almost all (93 percent) of respondents are increasing spending this year. On the surface this may appear encouraging, but a deeper probe reveals 56 percent still plan to spend the most

on endpoint security and 48 percent on network security. Only 19 percent will spend the most on data-centric security solutions, such as encryption and tokenization.

"Encryption can be viewed as complex, and the management of encryption keys challenging for organizations dealing with budget and staffing limitations," says Nick Jovanovic, vice president of Thales eSecurity Federal. "But federal government agencies can start by selecting encryption and key management technologies that offer a smart, centralized approach and work across clouds, on-premises and in data centers. A good example of this is the 47 percent of respondents who plan to implement 'bring your own key' solutions to remotely manage their cloud deployments, which will assist them in better protecting and controlling their data."

You can read more in the [2018 Thales Data Threat Report](#) available from the company's website.

Image credit: [AndreyKr/depositphotos.com](#)

Exhibit 2

11,923 views | Jul 13, 2018, 07:30am

The Average Cost Of A Data Breach Is Highest In The U.S. [Infographic]



Niall McCarthy Contributor ⓘ

Data journalist covering technological, societal and media topics

Globally, the impact of a data breach on an organization averages \$3.86 million, though more serious "mega breaches" can cost hundreds of millions of dollars. IBM's [2018 Cost of a Data Breach](#) study was formulated through interviews with more than 2,200 IT, data protection and compliance professionals from 477 companies and it provides an interesting insight into one of the most serious problems facing companies today.

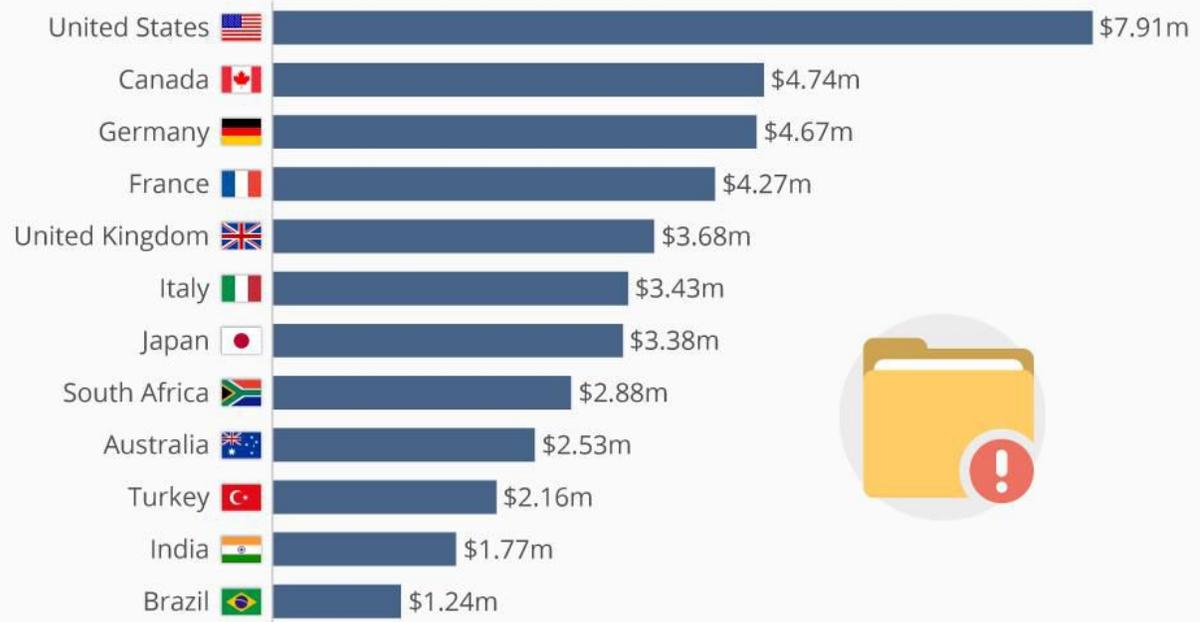
The potential cost of an incident depends on several factors with the financial impact rising in line with the number of records stolen. On average, each record costs \$148 and a breach of 1 million records costs \$40 million while a breach of 50 million costs \$350 million. The research also found that the efficiency in identifying an incident and the speed of the response has a huge impact on its overall cost. On average, it took companies 197 days to identify a data beach and 69 days to contain it.

Average total costs of a data breach also varied heavily between countries with the United States the hardest hit. In 2018, an average incident costs U.S. firms \$7.91 million while in Canada and Germany, the impact is lower at less than \$5 million. Indian and Brazilian companies have the lowest average cost of a data breach at \$1.77 million and \$1.24 million respectively.

**Click below to enlarge (charted by [Statista](#))*

Average Cost Of A Data Breach Highest In The U.S.

Average total cost of a data breach by country in 2018



@StatistaCharts Source: IBM

Forbes **statista**

Average total cost of a data breach by country in 2018 STATISTA

Exhibit 3

DEFINING IT

IT Definition (5/16/2018)

Information technology (IT) refers to software, hardware, networking, Internet of Things, and telecommunication products and services that the state uses to store, manage, access, communicate, send and receive information. IT also refers to data, voice and video technologies. The determination of whether something falls under IT is not dependent on cost (i.e., could be a free service) or whether the product or service is hosted on state systems.

Examples of IT products or services include, but are not limited to, the following:

- On-premise, commercial-off-the-shelf (COTS) software applications installed on state systems (e.g., Adobe Acrobat).
- Externally hosted, COTS software applications installed on a vendor's system (e.g., DocuSign, Salesforce, etc.).
- Custom developed software applications (e.g., DHHS' CHAMPS system).
- Software-as-a-Service (SAAS) applications hosted by a vendor (e.g., LexisNexis, Survey Monkey, etc.).
- Subscription-based information services (e.g., Gongwer, Gartner, etc.).
- Social media accounts (e.g., Twitter, Facebook, etc.).
- Mobile Applications (e.g., iTunes).
- Server hardware and software used to support applications such as database, application/web servers, storage systems, and other hosting services (e.g., Dell EMC PowerEdge Blade server).
- Hardware devices (e.g., laptops, tablets, smartphones, etc.).
- Data, voice, and video networks and associated communications equipment and software (e.g., Cisco routers and switches).
- Peripherals directly connected to computer information systems (e.g., Ricoh scan printers, printers).
- Internet of Things (IOT) are objects with electronic components that include processing and networking capabilities designed to enhance the functionality of the object by leveraging communications over the internet (e.g., ADT Security, smart thermostat, software-enabled lab equipment, refrigerator with an LCD screen, etc.).
- Vendor services for software application, installation, configuration, development and maintenance, including staff augmentation arrangements (e.g., CNSI resources assisting with maintenance and support of the DHHS CHAMPS system).

To utilize or source a product or service that includes components that meet the definition of Information Technology, the agency shall engage with the designated General Manager, or Business Relationship Manager for consultation on the need for DTMB IT services, (e.g., Cyber Security, Agency Services, Enterprise Architecture, Telecom, etc.).

Description (rows 3-15 from the IT Definition)	Readiness Documents Needed?	Department of Technology, Management and Budget (DTMB) Procurement				Agency Procurement Office, including FS for DTMB non-IT purchases		
		(Purchases > \$500,000)		(Purchases < \$500,000)		(Purchases < \$500,000)		
		Central Procurement Services		Financial Services (FS)				
		Information Technology Division	Services Division	Commodities Division	Financial Services (FS)			
PURCHASES WITHOUT AN IT COMPONENT								
1 Commodities	No			Process Purchase		Process Purchase		
2 Services				Process Purchase		Process Purchase		
ALL PURCHASES IN LINES 3-15 HAVE AN IT COMPONENT. AGENCY SERVICES MUST BE ENGAGED. <i>If you are unsure where your purchase falls within this matrix, contact Central Procurement Services at 517-284-7000 and ask for assistance with an IT purchase.</i>								
ENGAGE AGENCY SERVICES	3	Commercial-off-the-shelf (COTS) software applications and data stored on state systems. [For example: Adobe Acrobat]	Yes	Process Purchase		Process Purchase		
	4	COTS or Software-as-a-Service (SaaS) software applications and data stored on a vendor's system; or COTS stored on state systems and data on vendor's system. [For example: DocuSign, Salesforce, Survey Monkey, LexisNexis, etc. or any other situation where we are sharing data with the vendor; online ordering systems used for Maintenance, Repair, and Operations (MRO)]	Yes	Process when the primary purchase is (>50%) an IT solution, OR the related IT solution <i>interfaces</i> with other government or vendor applications.	Process when the primary purchase is (>50%) a service and the related IT solution does not interface with other government or vendor applications. [For example: a contractor provides a service to SOM and they compile data on a software platform used to generate reports needed in performing the services]	Process when the primary purchase is (>50%) a commodity and the related IT solution does not interface with other government or vendor applications. [For example: when the contractor providing the commodities uses a web-based ordering system for MRO or office supplies]	Process when primary purchase is (>50%) an IT solution , OR the related IT solution interfaces with other government or vendor applications	Process when the primary purchase is (>50%) a service or commodity and the related IT solution does not interface with other government or vendor applications.
	5	Custom developed software applications. [For example: MDARD Licensing and Inspection system]	Yes	Process purchase for custom software development (Agile or Waterfall)	Process when the primary purchase is (>50%) a service and custom developed software is <50% of the contract.		Process purchase for custom software development (Agile or Waterfall)	
	6	Information Services - State and citizen access to public information provided by a vendor. [For example: Lynda.com, Gongwer, online newspaper services etc.] Go to line 4 if there is: - non-public information - an interface with other state systems	Yes	Process when the primary purchase is (>50%) Information Services	Process when the primary purchase is (>50%) a service and related Information Services is a component of the overall service contract. [For example: a contractor collects and compiles data and generates reports for SOM using their software platform, such as a collect and report data contract]		Process when the primary purchase is (>50%) Information Services	Process when the primary purchase is (>50%) a service and the related Information Services is a component of the overall contract. Agencies can also purchase online newspaper services.
	7	Social media accounts and the downloading an existing mobile app [For example: Twitter, Facebook, etc.]	No. However, contact must be made with eMichigan and Design and Delivery.		Process Purchase			Process Purchase
	8	Development of a mobile app	Yes	Process when the primary purchase is (>50%) to <i>develop</i> a mobile application	Process when the primary purchase is (>50%) a service. The mobile application is a component (<50%) of the services under the contract.	Process when the primary purchase is (>50%) a commodity. The mobile application is a component (<50%) of the contract. [For example: lottery tickets with a digital bar code, cigarette carton stamps with mobile app for law enforcement]	Process when the primary purchase is (>50%) to <i>develop</i> a mobile application	Process when the primary purchase is (>50%) a service or a commodity. The mobile application is a component (<50%) of the contract.

NOTE: When purchases include licensing/security terms or end-user agreements (EULA) - the contract **must** be reviewed by the Attorney General.

Purchasing Matrix
For State of Michigan Purchases When a Statewide Contract is Not Available

	Description (rows 3- 15 from the IT Definition)	Readiness Documents Needed?	Department of Technology, Management and Budget (DTMB) Procurement				Agency Procurement Office, including FS for DTMB non-IT purchases
			(Purchases > \$500,000) Central Procurement Services		(Purchases < \$500,000)		(Purchases < \$500,000)
			Information Technology Division	Services Division	Commodities Division	Financial Services (FS)	
ENGAGE AGENCY SERVICES	9 Server hardware and software used to support applications such as database, application/web servers, storage systems, and other hosting services (including data storage) [For example: Dell EMC PowerEdge Blade server]	Yes	Process Purchase			Process Purchase	
	10 Hardware devices [For example: laptops, tablets, smartphones, equipment that captures information (data, pictures, video) that will be used by an agency etc.]	Yes, unless exception granted by Agency Services	Process purchases for all <i>except</i> cellular services and devices		Process purchases for cellular services and devices	Process purchases for all <i>except</i> cellular services and devices	
	11 Managing land data and voice networks including communications equipment and software [For example: Cisco routers, switches, phones]	No readiness document, but engage Telecom	Process when the primary purchase is (> 50%) for software . The hardware is a component of the purchase		Process purchases when the primary purchase is (> 50%) for hardware . The software is a component of the purchase.	Process Purchase	
	12 Video networks and associated communications equipment and software	Yes, unless exception granted by Agency Services	Process purchases <i>except</i> for security cameras (including data storage) and radios		Process purchases for security cameras (including data storage) and radios	Process purchases <i>except</i> for security cameras (including data storage) and radios	
	13 Peripherals directly connected to computer information systems [For example: Ricoh scan printers, printers]	Yes, unless exception granted by Agency Services			Process Purchase	Process Purchase	
	14 Internet of Things (IOT): Objects with electronic components that include processing and networking capabilities designed to enhance the functionality of the object by leveraging communications over the internet [For example: ADT Security, smart thermostat, software-enabled lab equipment, refrigerator with an LCD screen, drone, etc.]	Yes, unless exception granted by Agency Services			Process Purchase		Processes purchase
	15 Contracted staff (contractors) for software application, installation, configuration, development and maintenance, including staff augmentation arrangements [For example: contractors assisting with maintenance and support of the SIGMA system]	No	Processes purchase if the services are for software installation, configuration, development and system maintenance; when the contractor will be touching the State network; and all IT-staff augmentation resources.		NOTE: Processes purchases for <i>non-IT</i> staff augmentation responsible for consulting, analysis, business process activities.	Processes purchase if the services are for software installation, configuration, development and system maintenance; when the contractor will be touching the State network; and all IT-staff augmentation resources.	

ENGAGE AGENCY SERVICES