

# 2017 THALES DATA THREAT REPORT

## Trends in Encryption and Data Security

RETAIL EDITION

# 2017 THALES DATA THREAT REPORT

## TRENDS IN ENCRYPTION AND DATA PROTECTION



Copyright 2017 Thales



## U.S. RETAIL DATA BREACH RATES IMPROVE BUT ARE STILL NOT GOOD NEWS

RATES OF DATA BREACHES IN THE LAST YEAR DROPPED FROM 22% TO 19%,  
WHILE ALL THE OTHER VERTICALS THAT WE MEASURED HAD INCREASES.  
BUT 1 IN 5 RETAILERS BEING BREACHED EACH YEAR IS STILL BAD NEWS

– COMPOUNDING THE PROBLEM –

**U.S. RETAILERS INCREASINGLY USE SENSITIVE DATA WITH CLOUD, BIG DATA  
AND OTHER ADVANCED, BUT OVER HALF DO SO WITHOUT DATA SECURITY**

## U.S. RETAIL

# 52%

HAVE  
EXPERIENCED A  
DATA BREACH

- 19% IN THE LAST YEAR  
(DOWN FROM 22% PREVIOUSLY)
- 11% MORE THAN ONCE



## GLOBAL RETAIL

# 60%

HAVE  
EXPERIENCED A  
DATA BREACH

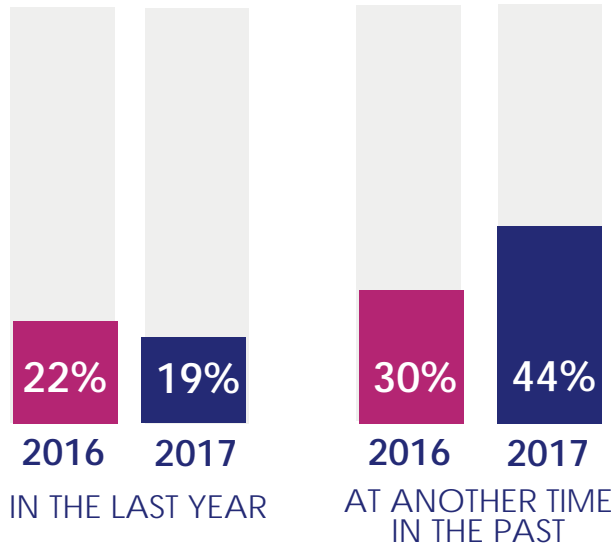
- 43% IN THE LAST YEAR
- 32% MORE THAN ONCE

# U.S. RETAIL – LEAST LIKELY TO BE BREACHED OF U.S. VERTICALS

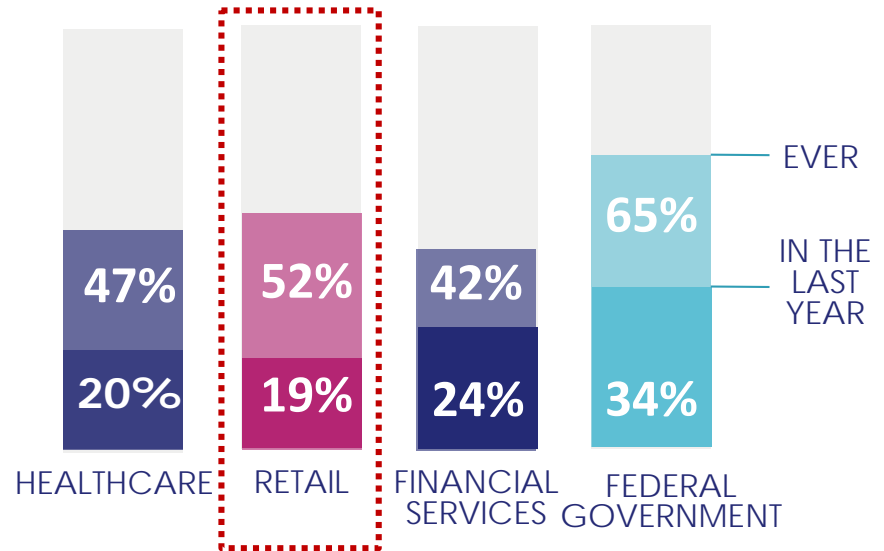
“Breach results were not so rosy for **global** retail, however - a staggering 43% of **global** retail respondents reported a breach in the past year alone, approaching twice the global average.”

Garrett Bekker  
Principal Analyst, Information  
Security, 451 Research

## U.S. RETAIL DATA BREACHES



## 2017 DATA BREACH RESULTS BY U.S. VERTICAL



".. 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  
Principal Analyst Information Security, 451 Research

## THE MOST DANGEROUS INSIDERS

61% U.S. RETAIL

56% GLOBAL RETAIL

59% U.S. RETAIL

51% GLOBAL RETAIL

36% U.S. RETAIL

28% GLOBAL RETAIL

29% U.S. RETAIL

31% GLOBAL RETAIL

EXECUTIVE  
MANAGEMENT

PRIVILEGED  
USERS

CONTRACTORS

ORDINARY  
EMPLOYEES

IN SPITE OF ALL THE FUROR AROUND NATION STATE HACKING,  
CYBER CRIMINALS TOP THE LIST OF CONCERNS BY A WIDE MARGIN

## TOP EXTERNAL THREAT ACTOR SELECTIONS

U.S. RETAIL



CYBER CRIMINALS

CYBER-TERRORISTS

COMPETITORS

GLOBAL RETAIL



CYBER CRIMINALS

CYBER-TERRORISTS

COMPETITORS

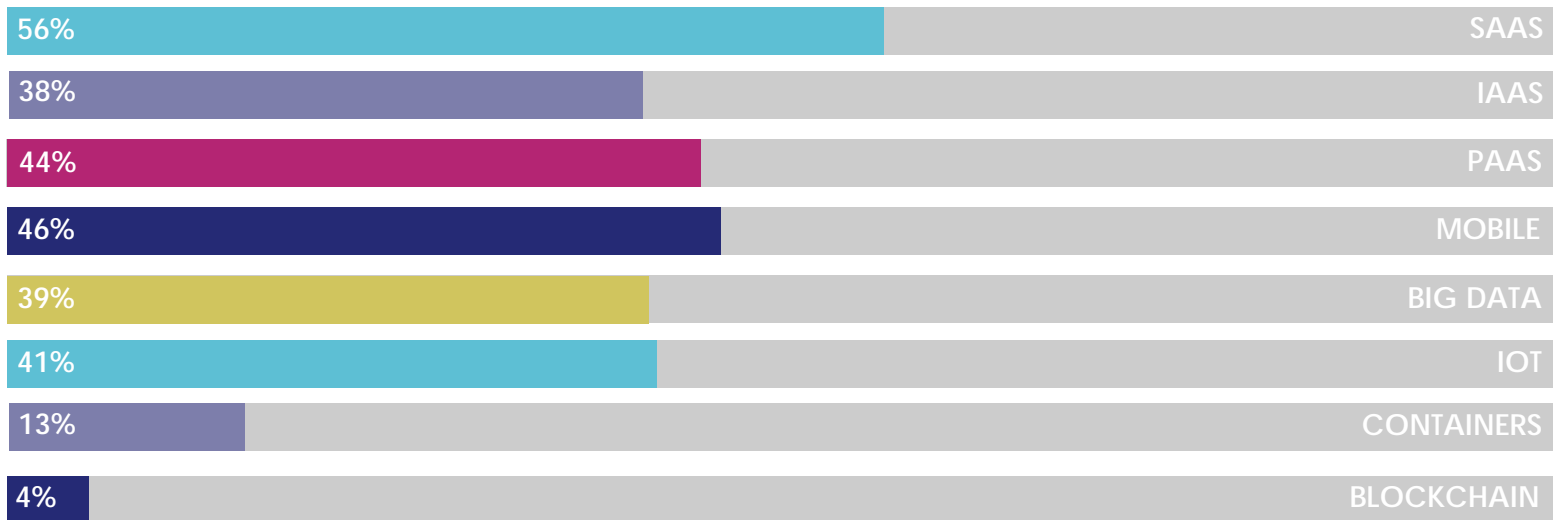
# U.S. RETAIL USING SENSITIVE DATA WITH ADVANCED TECHNOLOGIES WITHOUT DATA SECURITY TO PROTECT INFORMATION

# 53%

OF U.S. RETAIL RESPONDENTS SURVEYED ARE DEPLOYING NEW TECHNOLOGIES IN ADVANCE OF HAVING APPROPRIATE LEVELS OF DATA SECURITY IN PLACE

# 95%

WILL USE SENSITIVE DATA IN AT LEAST ONE OF THESE ADVANCED TECHNOLOGY ENVIRONMENTS





# WITH NATIONAL REGULATIONS LIKE GDPR COMING WORLDWIDE DATA PRIVACY AND SOVEREIGNTY ARE MAKING WAVES EVERYWHERE

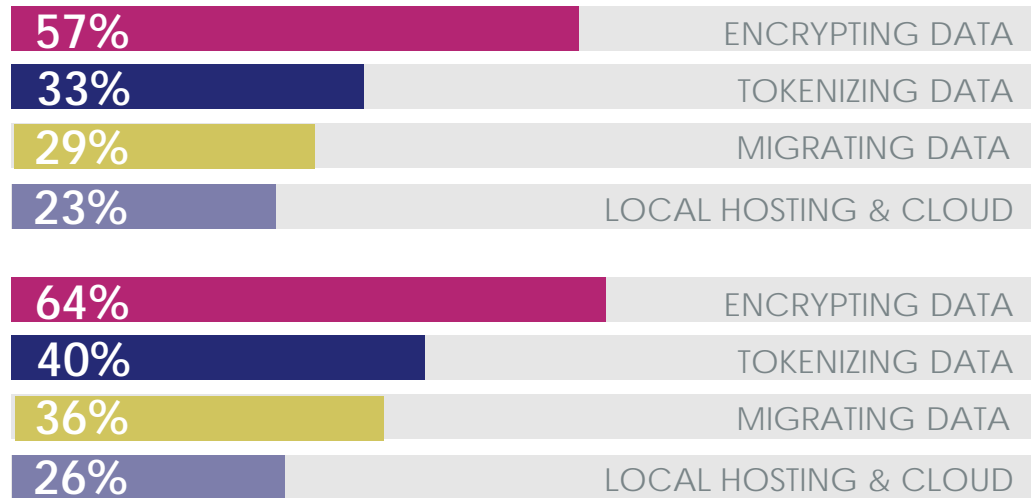


**75% - U.K.**  
**72% - GLOBAL**

Impacted by Data Privacy and  
Data Sovereignty

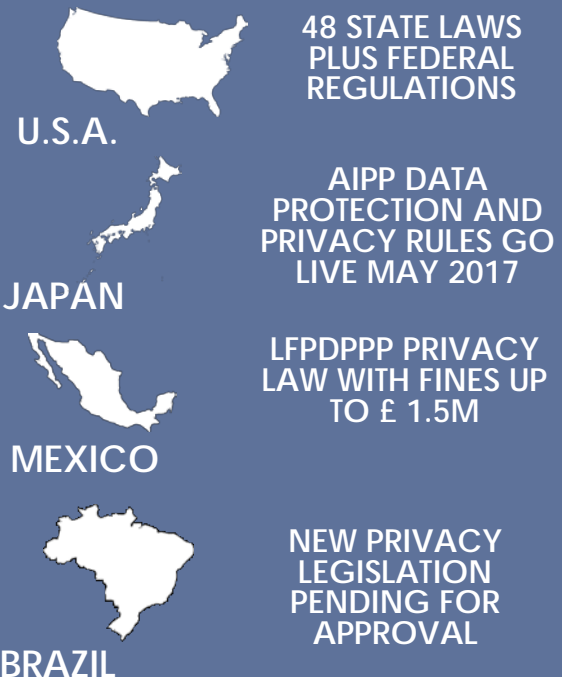
## ADDRESSING REQUIREMENTS BY:

**U.K.**



**GLOBAL**

## DATA PRIVACY/SOVEREIGNTY BEYOND GDPR



88%

OF U.S. RETAIL RESPONDENTS FELT THEIR ORGANIZATIONS WERE VULNERABLE TO DATA THREATS

19%

WERE VERY OR EXTREMELY VULNERABLE

"Today's unbroken string of high profile data breaches serves as stark proof that data on any system can be attacked and compromised."

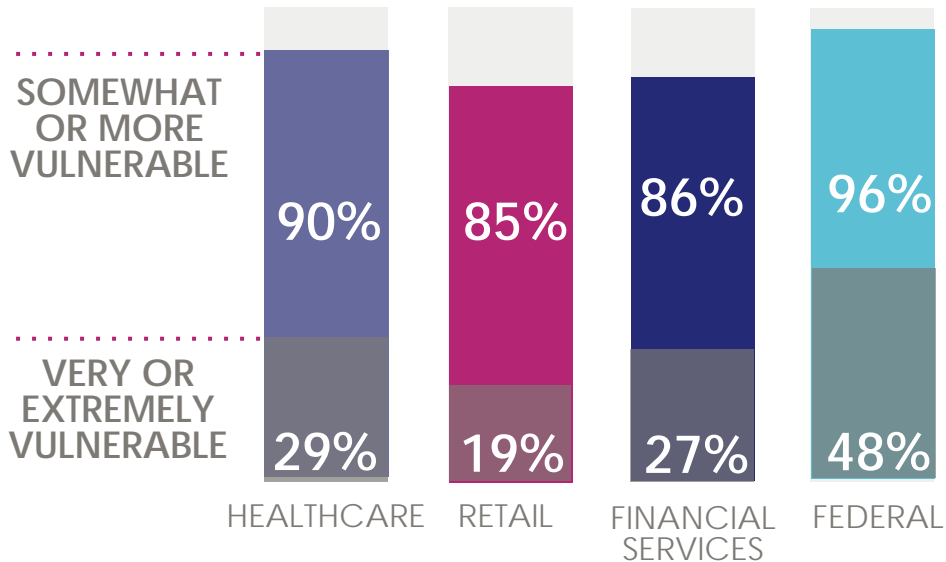
*Garrett Bekker,  
Principal Analyst  
Information Security,  
451 Research*

# U.S. RETAIL AGENCIES FEELING LESS VULNERABLE

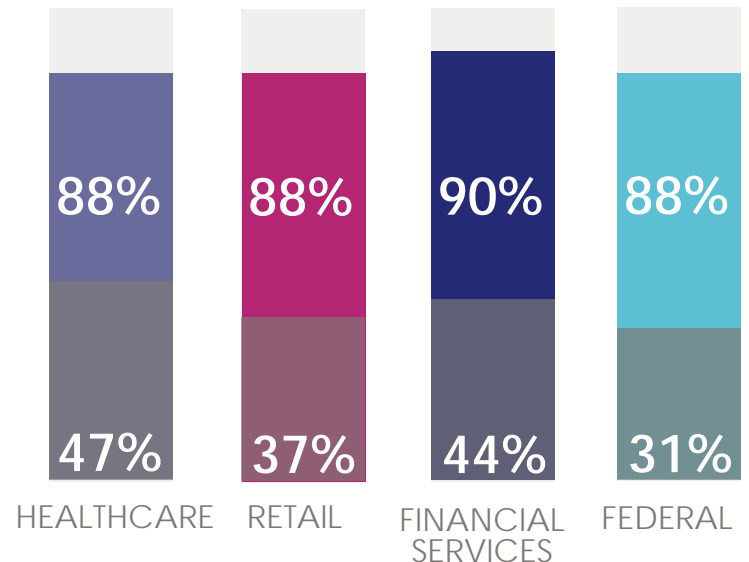
“More good news – Only 19% of U.S. retail respondents report feeling ‘very’ or ‘extremely’ vulnerable to security threats – the lowest of any respondent category and down from 39% in last year’s report, compared with 39% of global retail.

Garrett Bekker  
Principal Analyst, Information  
Security, 451 Research

## U.S. Verticals



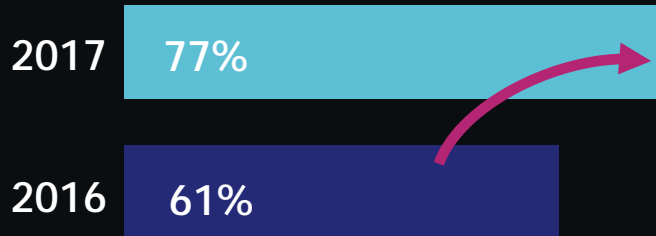
## Global Verticals





# 77%

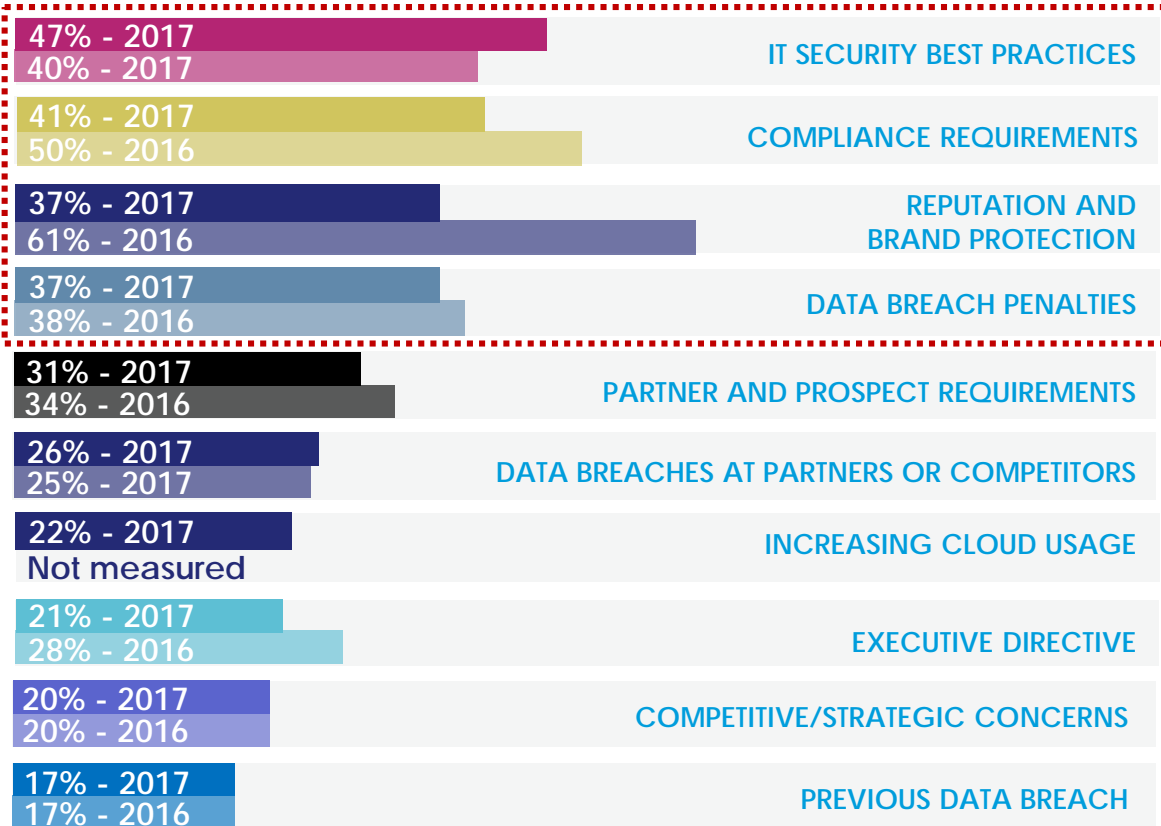
EXPECT THEIR  
SPENDING ON  
IT SECURITY TO  
INCREASE



- UP FROM 61% IN 2016
- GLOBAL AVERAGE 73%

# BEST PRACTICES TOP COMPLIANCE ON U.S. RETAIL IT SECURITY SPENDING PRIORITY LISTS

## IT SECURITY SPENDING PRIORITIES (RATES OF TOP 3 SELECTION)



**“GIVEN THE WIDESPREAD EFFECT OF PCI-DSS IN RETAIL, WE ARE SOMEWHAT ENCOURAGED TO SEE OTHER MOTIVATIONS FOR SPENDING GAINING GROUND. IT’S ALSO WORTH NOTING THAT U.S. RETAIL HAD THE LOWEST RATINGS (53%) FOR COMPLIANCE BEING ‘VERY’ OR ‘EXTREMELY’ EFFECTIVE AT SECURING DATA , A LARGE DROP FROM 65% A YEAR AGO AND BELOW THE 59% GLOBAL AVERAGE.”**

*Garrett Bekker,  
Principal Analyst  
Information Security,  
451 Research*

# DATA PRIVACY LAWS ARE MAKING WAVES EVERYWHERE

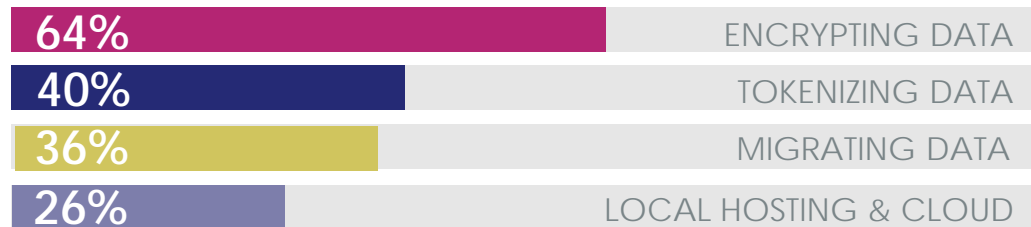
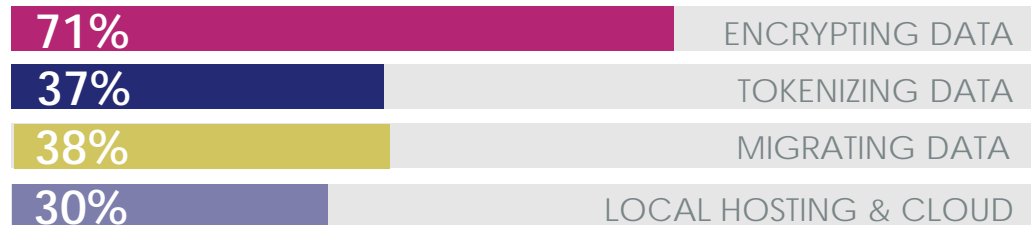


**80% - U.S. RETAIL**  
**72% - GLOBAL**

Impacted by Data Privacy Laws  
including 48 U.S. State Regulations

## ADDRESSING REQUIREMENTS BY:

## U.S.



## GLOBAL

**100+ NATIONAL DATA  
PRIVACY/SOVEREIGNTY  
REGULATIONS WORLDWIDE**



**EUROPE**

**GDPR GOES  
LIVE MAY 2018**



**JAPAN**

**AIPP DATA  
PROTECTION AND  
PRIVACY RULES LIVE  
MAY 2017**



**MEXICO**

**LFPDPPP PRIVACY  
LAW WITH FINES UP  
TO £ 1.5M**



**AUSTRALIA**

**NEW DATA BREACH  
DISCLOSURE  
REQUIREMENT  
ENFORCEMENT  
BEGINS  
FEBRUARY 2018**

# OLD HABITS DIE HARD – INVESTING HEAVILY IN NETWORK/END POINT SECURITY AS THEY BECOME LESS EFFECTIVE AND LESS RELEVANT

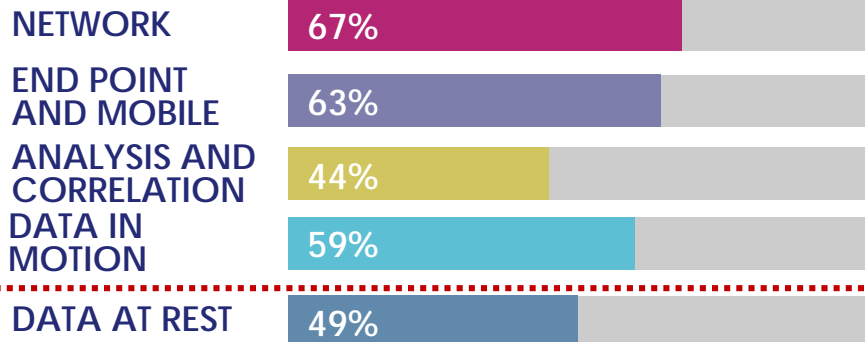
# 88%

+8% FROM 2016

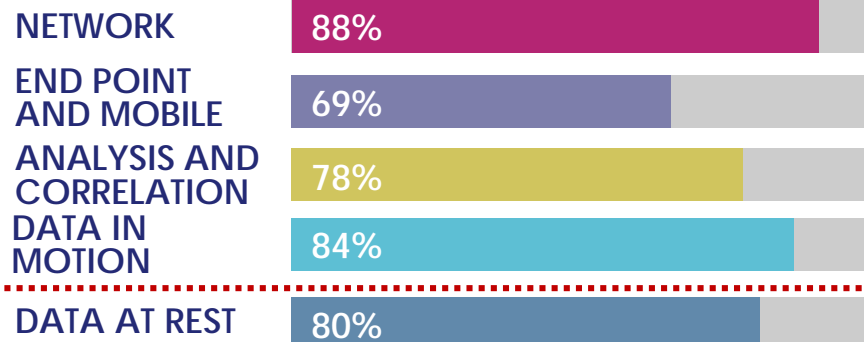
BELIEVE NETWORK SECURITY VERY/EXTREMELY EFFECTIVE AT PROTECTING DATA

“... 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.”

## IT SECURITY DEFENSE SPENDING INCREASES



## RATES OF EFFECTIVENESS FOR PROTECTING DATA



# COMPLEXITY AND POTENTIAL PERFORMANCE IMPACTS

## TOP BARRIERS TO DATA SECURITY DEPLOYMENT

PERCEPTION OF  
COMPLEXITY  
UNIVERSALLY THE TOP  
BARRIER

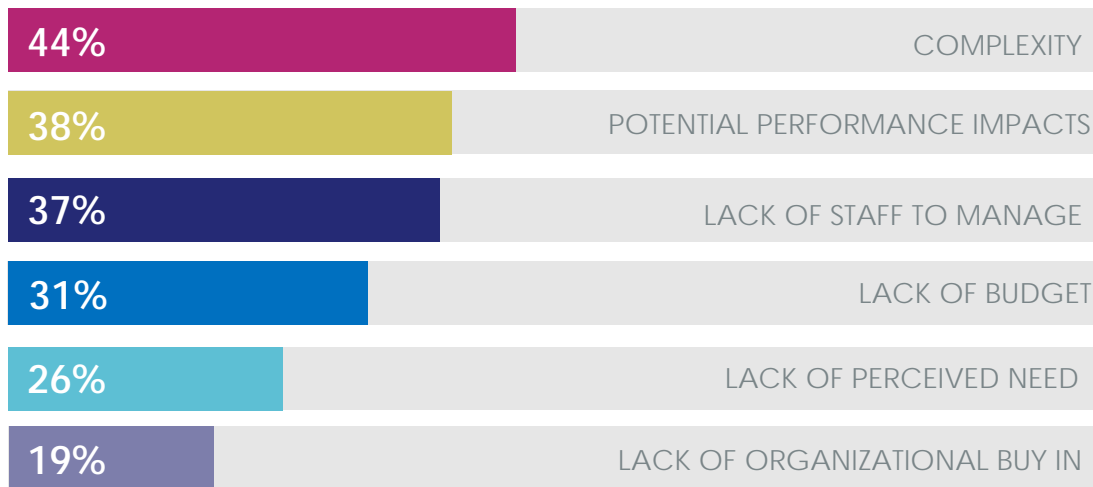
44%

GLOBAL – 50%

PERCEIVE  
COMPLEXITY AS THE  
TOP BARRIER TO  
ADOPTION DATA  
SECURITY

"...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*

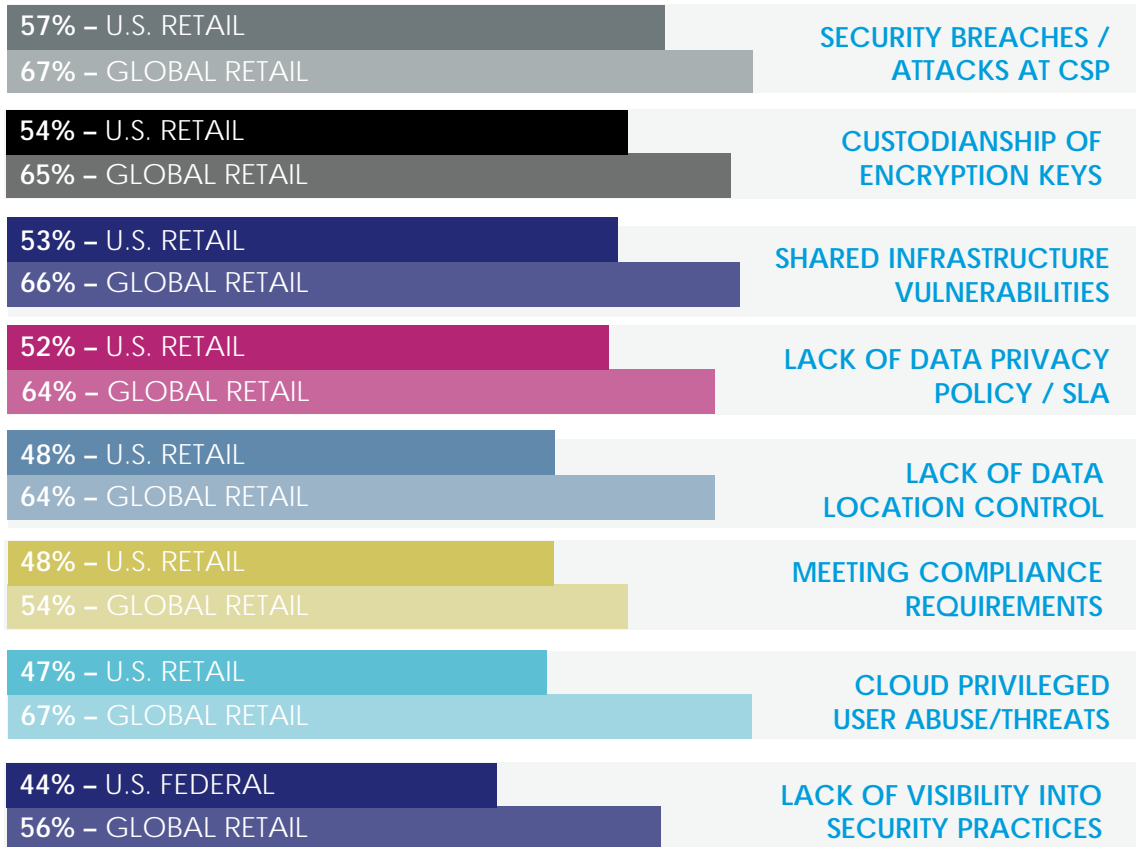


PERCEIVED BARRIERS TO ADOPTING DATA SECURITY



# TOP RETAIL CONCERNS WITH CLOUD/SAAS ENVIRONMENTS

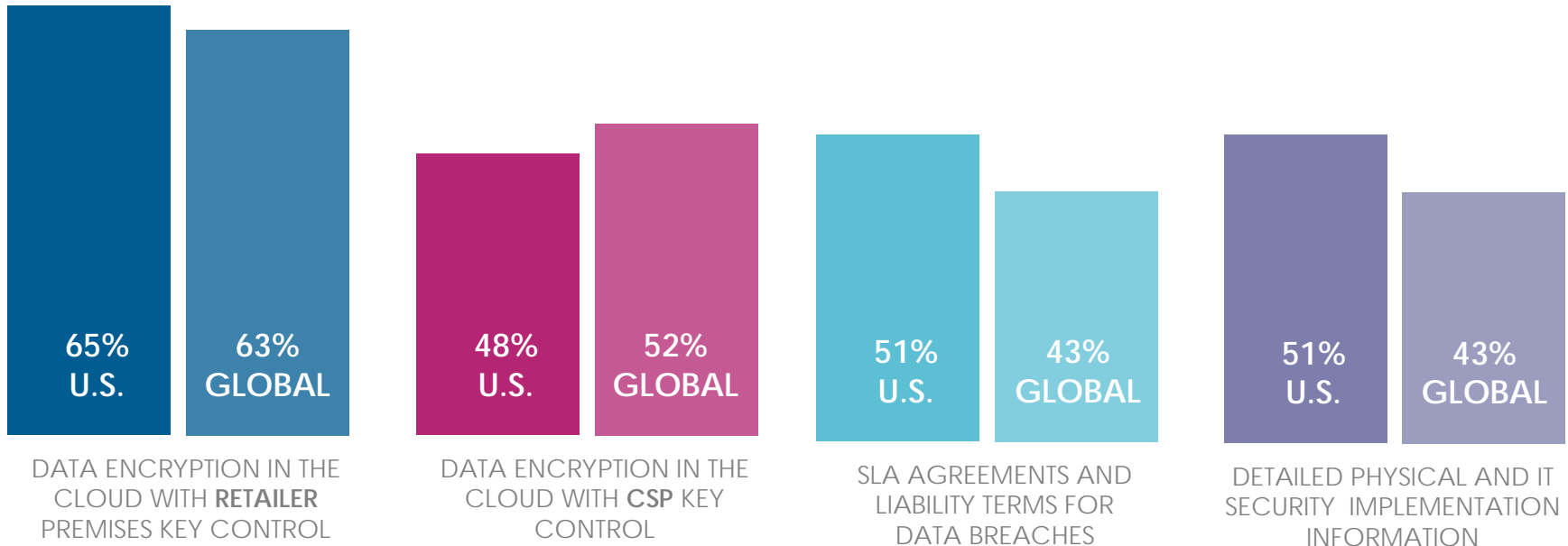
## RATES OF VERY OR EXTREMELY CONCERNED



“For U.S. retail the top cloud security concern is security breaches/attacks at the service provider (57%), which also ranked number one globally at 59%. Custodianship of encryption keys was second (54%) and vulnerabilities from shared infrastructure third at 53%.”

*Garrett Bekker  
Principal Analyst, Information Security, 451 Research*

# WHAT CAN CSPS AND SAAS PROVIDERS DO TO INCREASE RETAIL CLOUD ADOPTION?

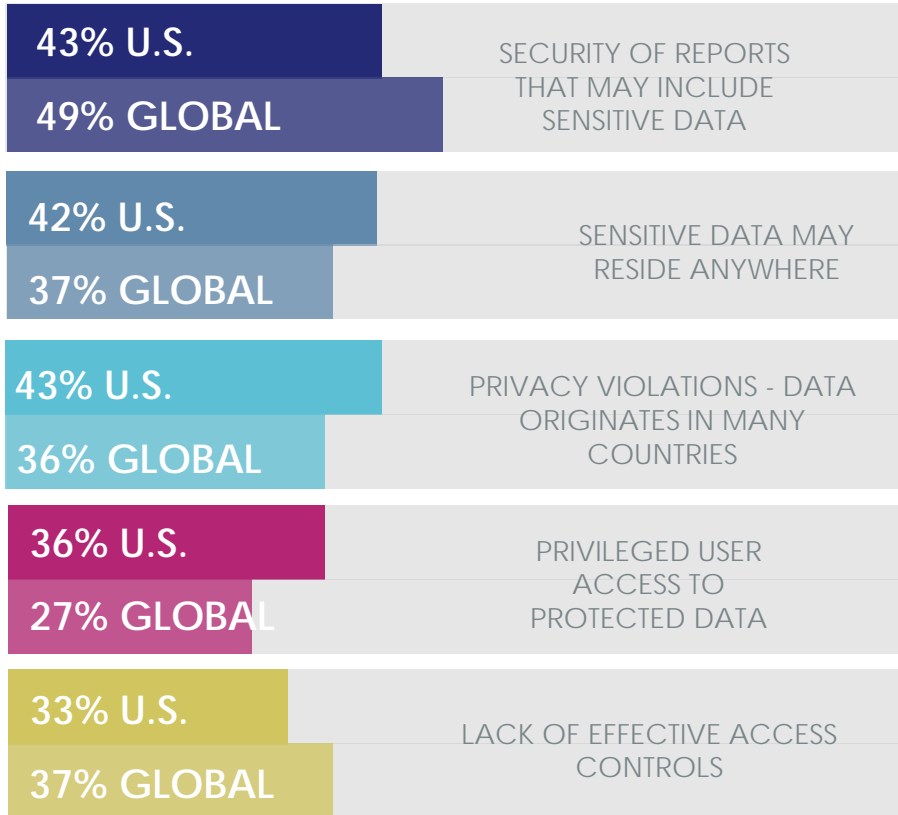


“For cloud security controls, both U.S. retail (65%) and global retail (63%) prefer encryption with local key storage by a wide margin over other options, and ahead of the overall global average of 61%.

*Garrett Bekker  
Principal Analyst, Information  
Security, 451 Research*

# BIG DATA – TOP RETAIL DATA SECURITY CONCERNS AND STATS

## TOP 5 CONCERNS



# IOT ADOPTION IS HIGH FOR U.S. RETAIL

## USE OF SENSITIVE DATA A CONCERN

93%

ADOPTING IOT

41%

ALREADY USING  
SENSITIVE DATA IN IOT

45%

VERY CONCERNED ABOUT  
SENSITIVE DATA IN IOT

### TOP 5 DATA SECURITY CONCERNS FOR IOT

40% - PROTECTING SENSITIVE DATA  
GENERATED BY IOT

36% - PRIVILEGED USER ACCESS  
TO DATA AND DEVICES

28% - PRIVACY VIOLATIONS  
GENERATED BY IOT

26% - IMPACT OF ATTACKS  
ON IOT DEVICES

23% - LOSS OR THEFT  
OF IOT DEVICES

### TOP 5 CONTROLS NEEDED TO INCREASE IOT ADOPTION

65% ENCRYPTION OF DATA

58% - ANTI-MALWARE  
FOR DEVICES

54% SECURE ID & AUTHENTICATION

43% - ANOMALY DETECTION/  
BEHAVIORAL ANALYSIS

36% - IOT NETWORK  
ISOLATION

# CONTAINERS: TOP SECURITY CONTROLS TO INCREASE

## RETAIL INDUSTRY CONTAINER ADOPTION AND USE

90%+

DEPLOYING  
CONTAINERS  
THIS YEAR.

BUDGET THE TOP BARRIER  
TO DEPLOYMENT

56%

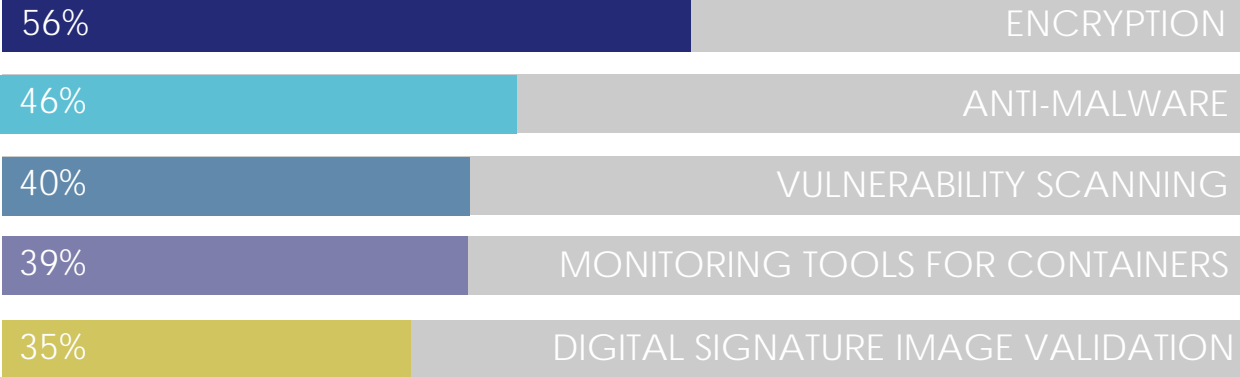
U.S.

52%

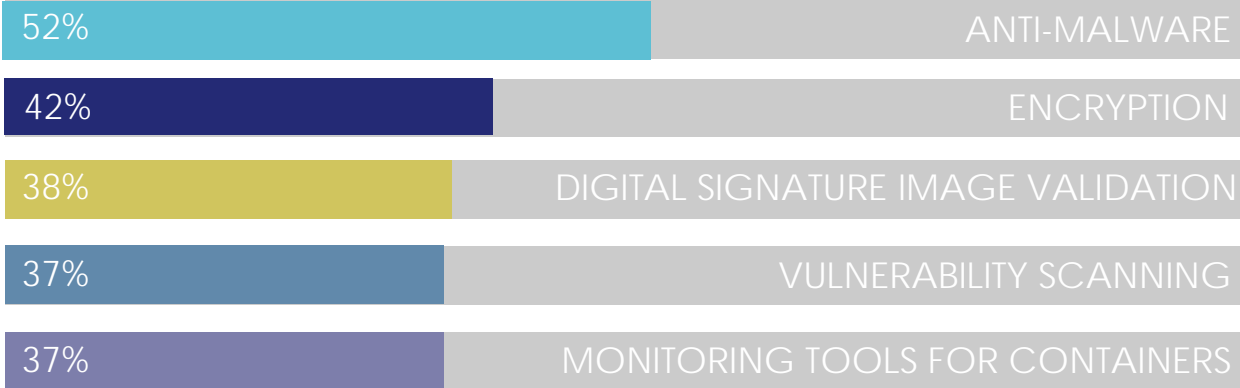
GLOBAL

"Security concerns, the top barrier in most vertical and geographic segments, is a distant second (40%) in U.S. retail and in global retail (42%).

### U.S. RETAIL



### GLOBAL RETAIL



# ENCRYPTION ENABLES DIGITAL TRANSFORMATION IN RETAIL

## A KEY TOOL REQUIRED FOR ADVANCED TECHNOLOGY ADOPTION

### CLOUD

#### ENCRYPTION ENABLING FURTHER ADOPTION OF CLOUD

65%

U.S.

DATA ENCRYPTION IN THE CLOUD WITH **AGENCY** PREMISE KEY CONTROL

GLOBAL

63%

### BIG DATA

#### ENCRYPTION OFFSETS TOP SECURITY CONCERNS

U.S.

43%

43%

42%

PRIVACY VIOLATIONS  
SECURITY OF REPORTS  
SENSITIVE DATA EVERYWHERE

36%

49%

37%

GLOBAL

### IOT

#### THE TOP TECHNOLOGIES NEEDED TO EXPAND USAGE

U.S.

66%

54%

DATA ENCRYPTION  
SECURE DIGITAL IDENTITY  
(AN ENCRYPTION TECHNOLOGY)

48%

54%

GLOBAL

### CONTAINERS

#### ENCRYPTION A TOP CONTROL NEEDED TO ENABLE GREATER ADOPTION

45%

56%

GLOBAL RETAIL

U.S. RETAIL

# BEST PRACTICE RECOMMENDATIONS

GARRETT BEKKER, 451 RESEARCH

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 agencies 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

# OUR SPONSORS





# 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

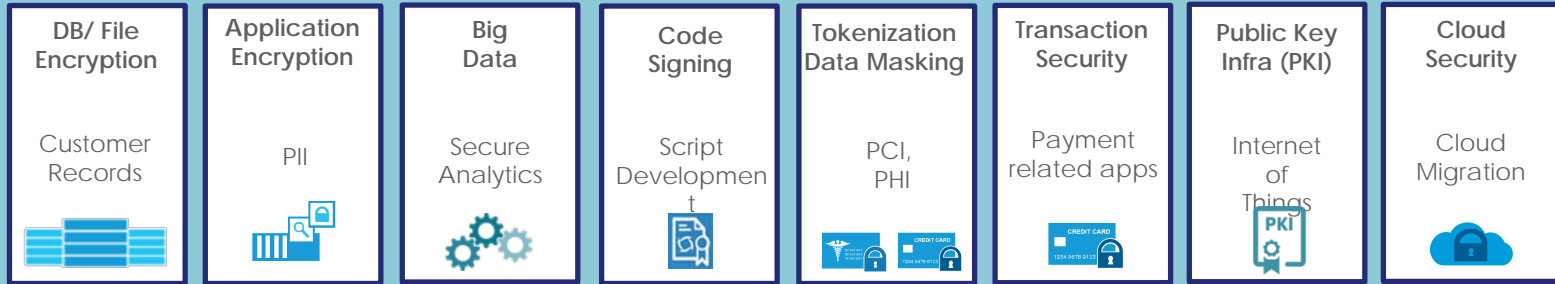
Thales e-Security provides companies everything they need to protect and manage their data and scale easily to new environments and requirements—encryption, advanced key management, tokenization, authorization, privileged user control, and HSMs.

## ■ Our customers

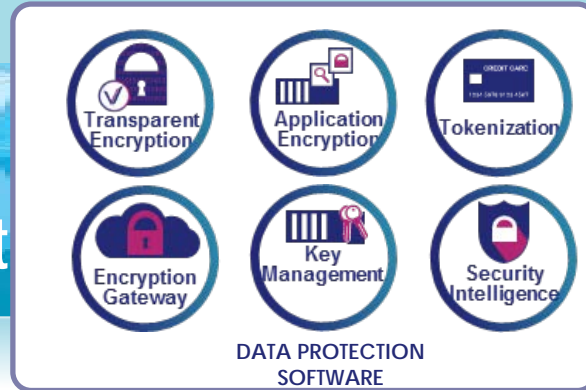
Our customers include 19 of the world's 20 largest banks, four of the world's five largest oil companies, 27 NATO country members and 15 of the Fortune 25.



# Our solutions protect data while eliminating complexity, inefficiency and cost



## Use Cases



# 2017 THALES DATA THREAT REPORT

## Trends in Encryption and Data Security

RETAIL EDITION