

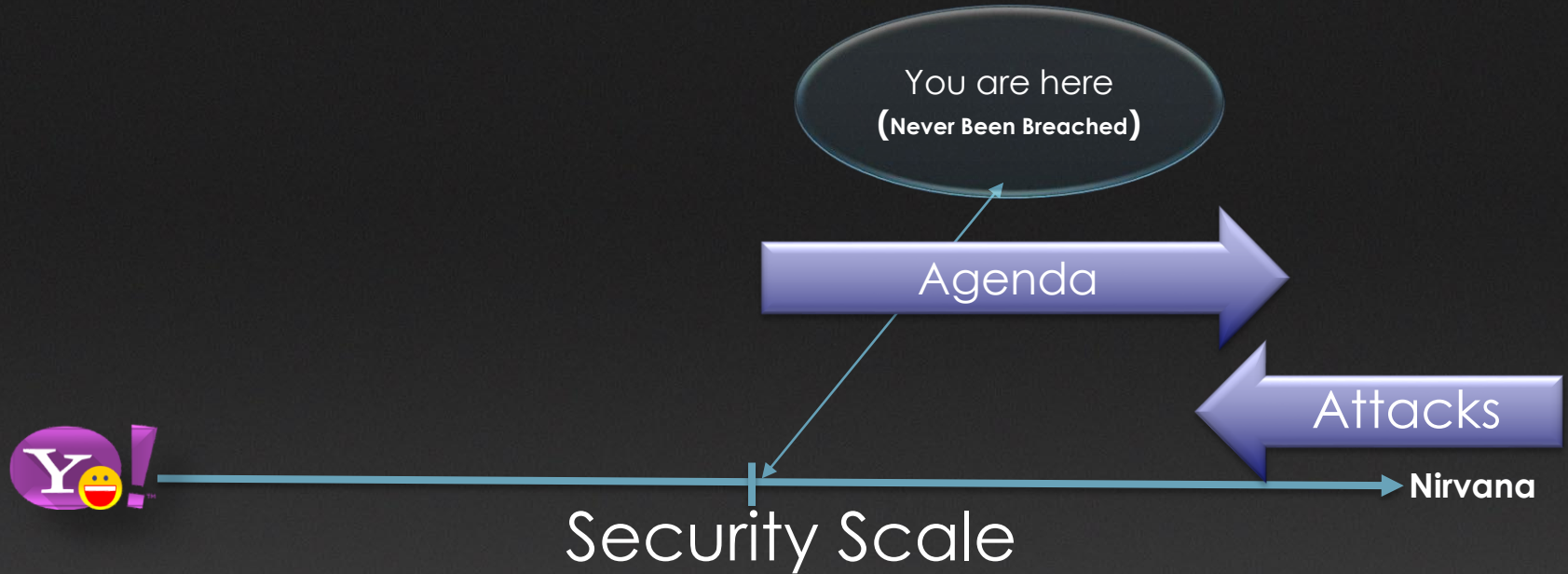


Delivering Digital Security. Today. Tomorrow. And Beyond

Manoj Bhati



Agenda



Data Economy

60

Spotify

13 New Songs Added

15,220,700 Sent

Text

Twitter

456,000 Tweets send

2.5 Quintillion bytes a day

Riders take 45,787 trips

Uber

Google

Conducts 3,607,080 searches

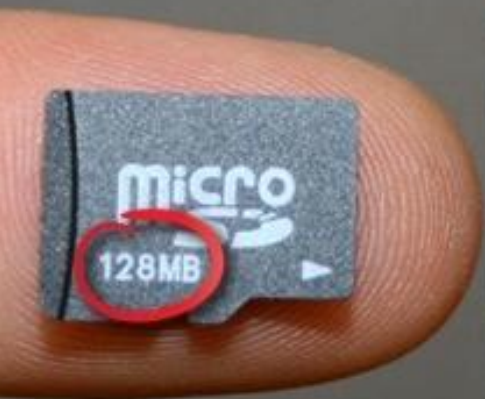
Uses 2,657,700 GB of Internet Data

Americans

Amazon

Make \$ 258,751.90

2005



2014



2019



THALES

Attacks are overcoming traditional security methods every minute

2,600,968,280

Records exposed in 2017

is a result of

1,765

data breaches globally

100% Irrelevant for 99% people

EVERY DAY

EVERY HOUR

EVERY MINUTE

EVERY SECOND

Number of records compromised

7,125,940

296,914

4,949

82

an **96%** of all data breaches involved data that was **NOT ENCRYPTED**

A full-body shot of Dr. Evil from the Austin Powers International Man of Mystery. He is bald, wearing a grey zip-up jumpsuit, and has a wide-eyed, crazed expression. He is holding up both hands in peace signs. A large, black, cylindrical nuclear missile is balanced horizontally across his shoulders. The background is a dimly lit, industrial-style room with metallic walls and some equipment visible in the shadows.

Think like a bad guy



Script Kiddies

Organised Gangs

CAAS
(Cybercrime AAS)



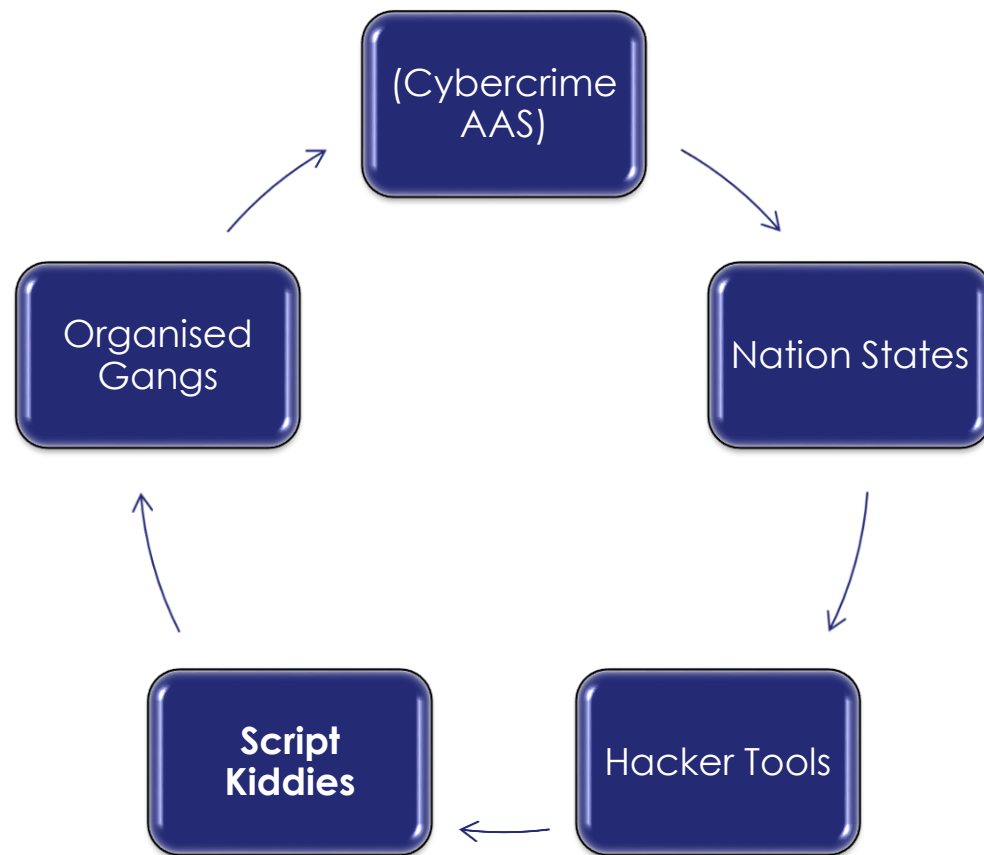
Nation States

THALES

Duqu, “Son of Stuxnet”

- **What it is**
 - A trojan announced by Symantec on 20 October 2011
- **What it targets**
 - Microsoft Windows
- **How it spreads**
 - Zero-day exploit in Microsoft Word documents
- **What it does**
 - System profiler and **info-stealer**
 - Exfiltrates data to C&C servers
 - Unspecified companies in France, Netherlands, Switzerland, Ukraine, India, Iran, Sudan, Vietnam, UK, Austria, Hungary, Indonesia...
- **Who did it**
 - No attribution to date

- **Why “Son of Stuxnet”?**
 - Methodology and portions of code identical to Stuxnet
 - Effects and purpose appear different



RESEARCH

ATM malware is being sold on dark web market

20gmr1fz dthnwkez.onion/orders.php

[Most Visited](#) [Learn more about Tor](#) [The Tor Blog](#)

Rent-A-Hacker

Free test ...for
serious
customers"

contact me:
ICQ-

"There are disc
regular cli

○ service:

- There are discounts for regular clients
- Free test for 5-10 minutes (only for serious customers)
- Anonymity (no one knows who did have a particular test)
- In the case of the order refunds for the remaining tests

Account Hacking Program	\$12.99 (See more details on page 10)
Hacked Instagram Accounts in Bulk	1,000 - 10,000 accounts \$15 - \$60
Botnet: Blow-Bot Banking Botnet	Monthly Basic Rental \$750 Monthly Full Rental \$1,200 Monthly Support \$150
Disdain Exploit Kit	Day \$80 , Week \$500 , Month \$1,400
Stegano Exploit Kit: Chrome , FireFox, Internet Explorer, Opera, Edge	Unlimited Traffic, Day \$2,000 Unlimited Traffic, Month \$15,000
Microsoft Office Exploit Builder	Lite exploit builder \$650 Full Version \$1,000
WordPress Exploit	\$100
Password Stealer	\$50
Android Malware Loader	\$1,500
Western Union Hacking Bug For World Wide Transfer	\$300
DDoS Attacks	Week long attack \$500 - \$1,200
ATM Skimmers: Wincor, Slimm, NCR, Diebold	\$700 - \$1,500
Hacking Tutorials	Multiple Tutorials \$5 - \$50

Cracking **Order** **Faps** **Contact** [Home](#) [About Us](#) [Privacy Policy](#) [Terms of Service](#) [FAQ](#) [Contact Us](#) [Feedback](#) [Sitemap](#) [Help](#) [Home](#) [About Us](#) [Privacy Policy](#) [Terms of Service](#) [FAQ](#) [Contact Us](#) [Feedback](#) [Sitemap](#) [Help](#)

Email Password Cracking made easy!!

We are the fastest team for the best of your knowledge. Make sure that the email address we entered correctly. Once submitted, check your email for a confirmation mail. Add our email address in your address book. To prevent our emails and the growth standing in high faster. Once you verify the order by clicking on the confirmation link sent to you, we will process your order.

Your Name:

Your Email Address:

Confirm your Email address:

Your Country:

☐ Need Login? ☐ Login? [Join Us Information you can](#)

Your Zip Code:

Your Phone Number:

Your Zip Code:

Your City:

Your State:

Your Country:

Your Language:

Optional Information:

How you received:

Your Referral (that ID):

Your Referral (that ID):

Preferred Mode of Payment:

[Send a friend \(if you want\)](#)

Nice introduction

Your victim details

**"where did you heard
about us?"**

netis

nets, RATs, virus, ransomware and malware creation.

Elitehackingervices •

Peasant



3-2017, 01:24 AM (This post was last modified: 11-26-2017, 03:08 PM by Elitehackingservices.)

... offering a load of rats botnets and various viruses and ransomware for sale.

I can contact me on elitehackingservices@gmail.com or skype [tiasolove](#).

Prices vary depending on what you need.

How Are We Prepared For Cyber Attack

There is no perimeter.

You cannot "fight back"

It's not a fight of equals

There are no rules.

It's not a one to one fight.

Attacker is always anonymous

Attacker have to succeed just once

The intention is not just to defeat the defence

You may think you have unbeatable Security



**Till you have been
hit by a someone
no one knew
about.**



Is cloud answer?





Pizza as a Service 2.0

<http://www.paulkerrison.co.uk>

Tradition
On-Premises
(legacy)

Conversation

Friends

Beer

Pizza

Fire

Oven

Electric / Gas

Homemade

Infrastructure as a
Service
(IaaS)

Conversation

Friends

Beer

Pizza

Fire

Oven

Electric / Gas

Communal
Kitchen

Containers as a
Service
(CaaS)

Conversation

Friends

Beer

Pizza

Fire

Oven

Electric / Gas

Bring Your Own

Platform as a
Service
(PaaS)

Conversation

Friends

Beer

Pizza

Fire

Oven

Electric / Gas

Takeaway

Function as a
Service
(FaaS)

Conversation

Friends

Beer

Pizza

Fire

Oven

Electric / Gas

Restaurant

Software as a
Service
(SaaS)

Conversation

Friends

Beer

Pizza

Fire

Oven

Electric / Gas

Party

Configuration

Functions

Scaling...

Runtime

OS

Virtualisation

Hardware



You Manage



Vendor Manages

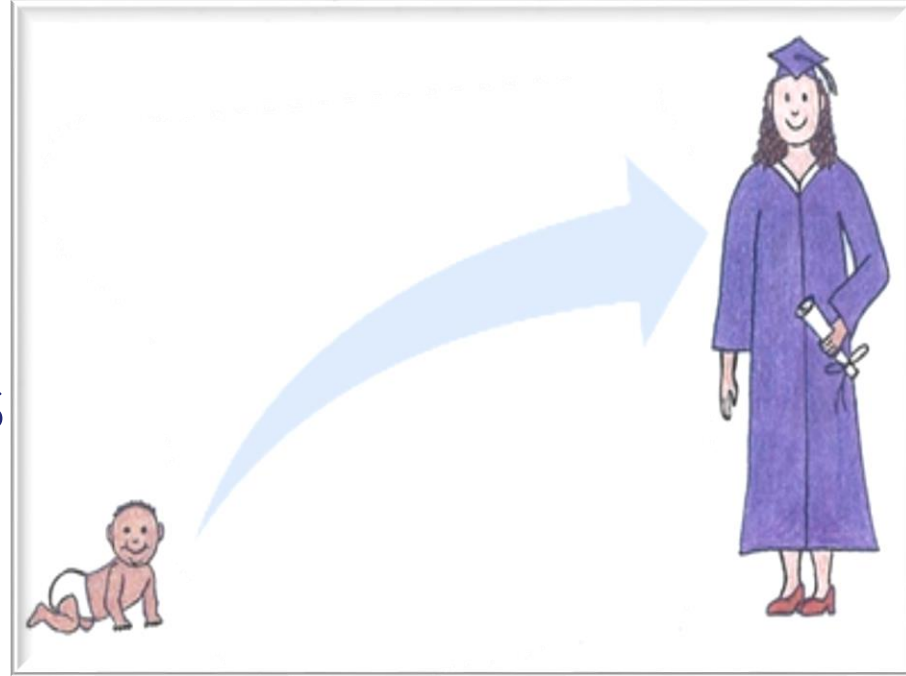
Ten Years worth of problem in six months

Traditional Datacenter



vs

Cloud





Why we fail?



Who is more scary???



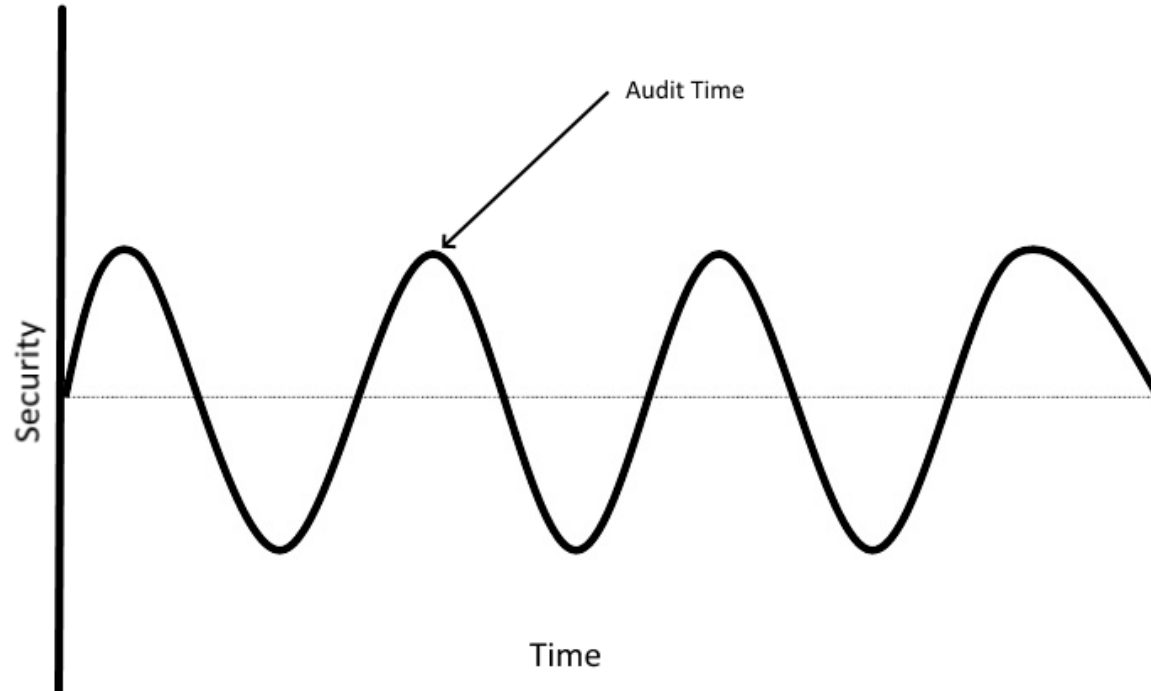
Hackers



Security Team

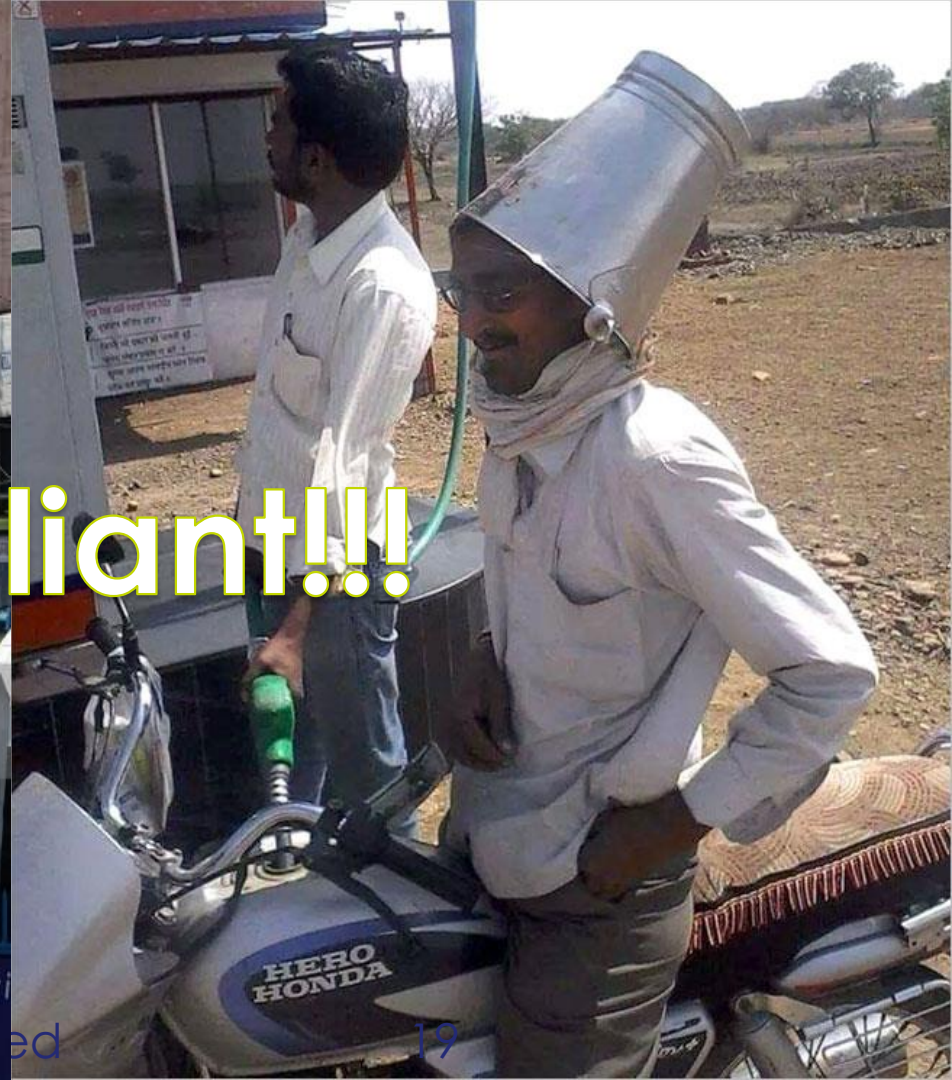


Audits Make You Secure?





Compliant!!!





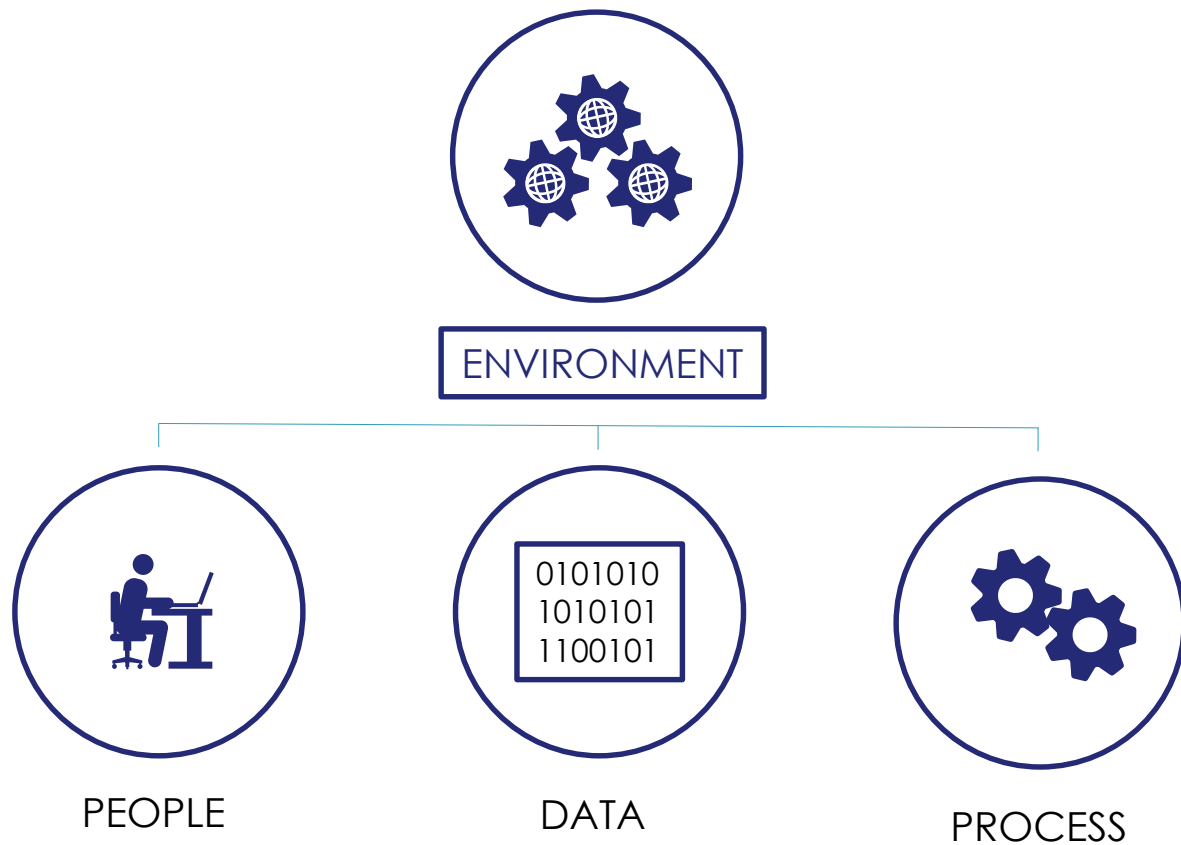
Access Control Simplified

www.thalesgroup.com



Question

- If accounts team receive an email from CxO for making a payment to a particular individual/organization, would they confirm the details by call/text/chat?
- If yes, how many times?

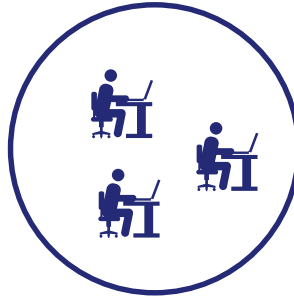




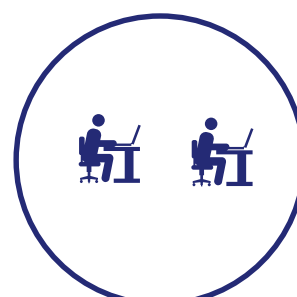
PEOPLE



EMPLOYEES



3RD PARTIES



CONTRACTORS



SOLUTIONS



AUTHENTICATION



ENCRYPTION



KEY MANAGEMENT



ROOT OF TRUST

What's Wrong With Passwords?



We knew the problem with static passwords even before we started to use them in cyber space



The solution was to increase the security of the passwords however everyone forgot to consider how many passwords humans can remember.

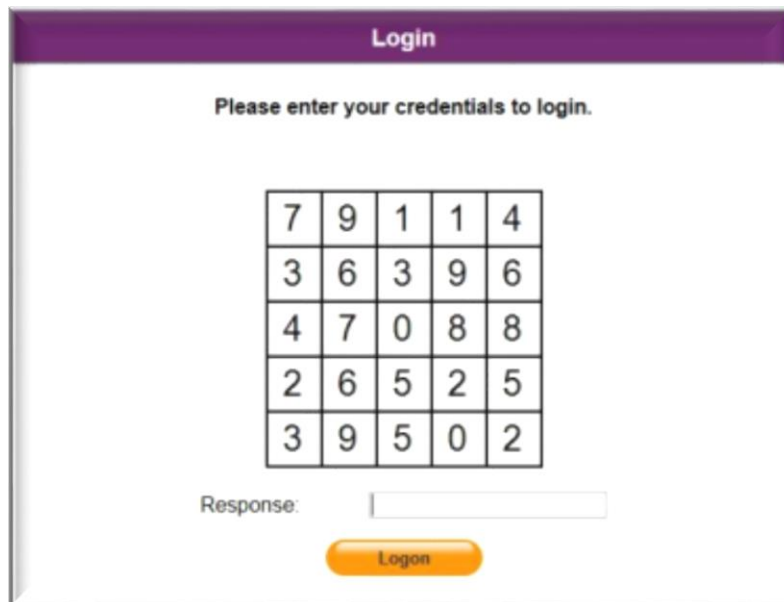
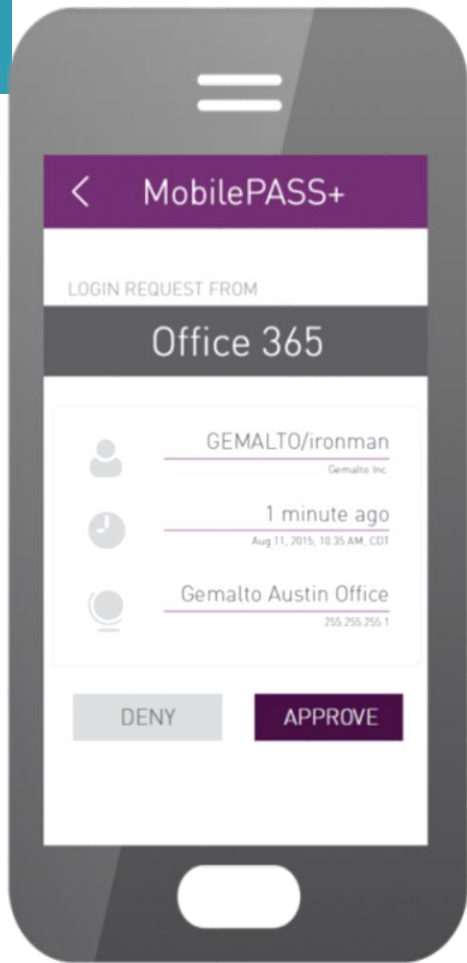
User Experience vs Security

Choose very complex password

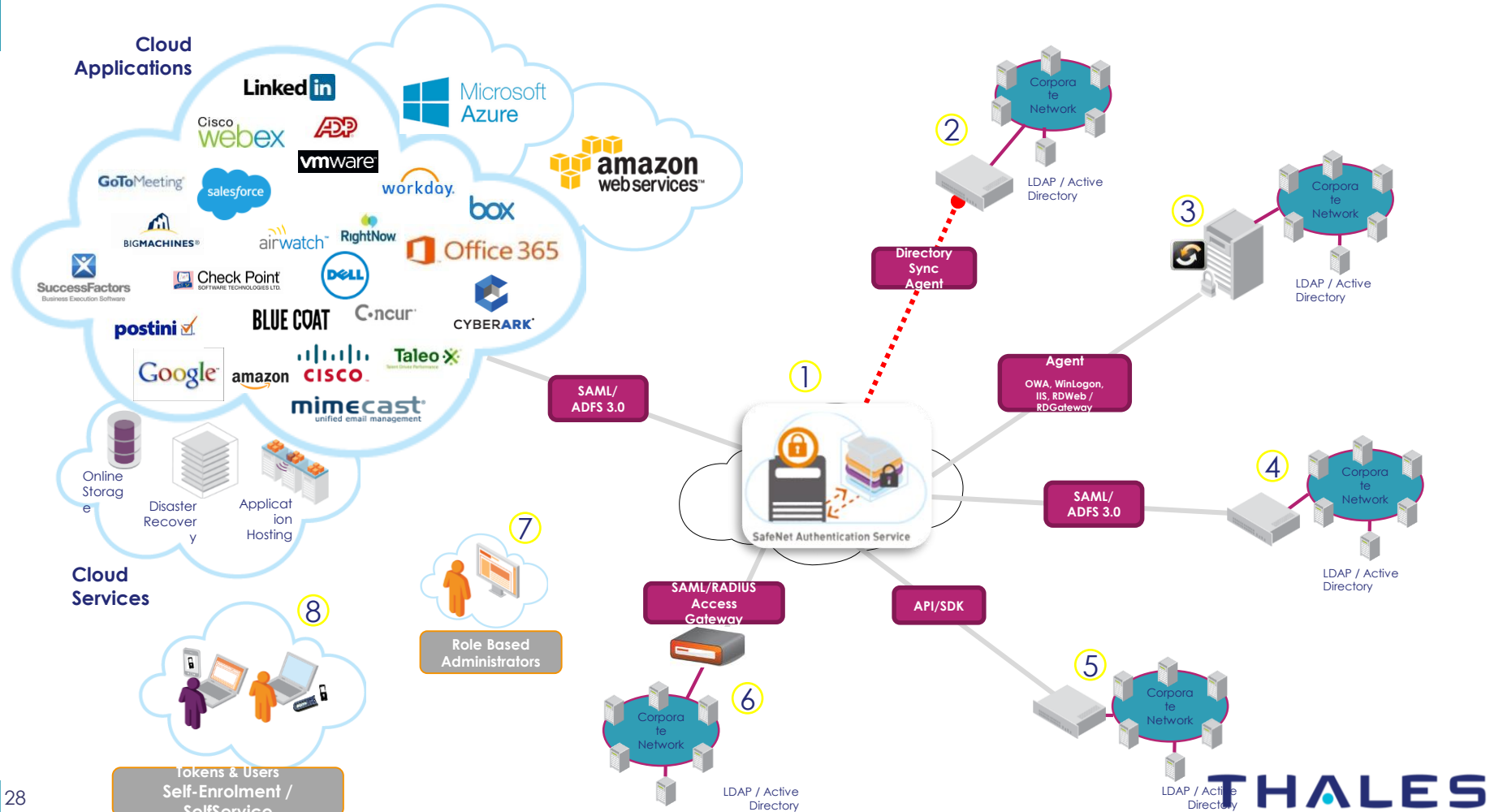


Enter password for each application





Where To Enable Two Factor A



THALES



Single Sign On

www.thalesgroup.com



Single Sign On



Single Sign Off



Network



Cloud



IT



Legacy Web



VDI

Orchestration / Business Logic

Policy Management

Risk Assessment

Geo fencing

SSO Session Management

AUTHENTICATION



OTP Push



PKI

* * *

Password Kerberos



Windows Hello



FIDO



3rd Party

DEVICES



CONTEXT



THALES



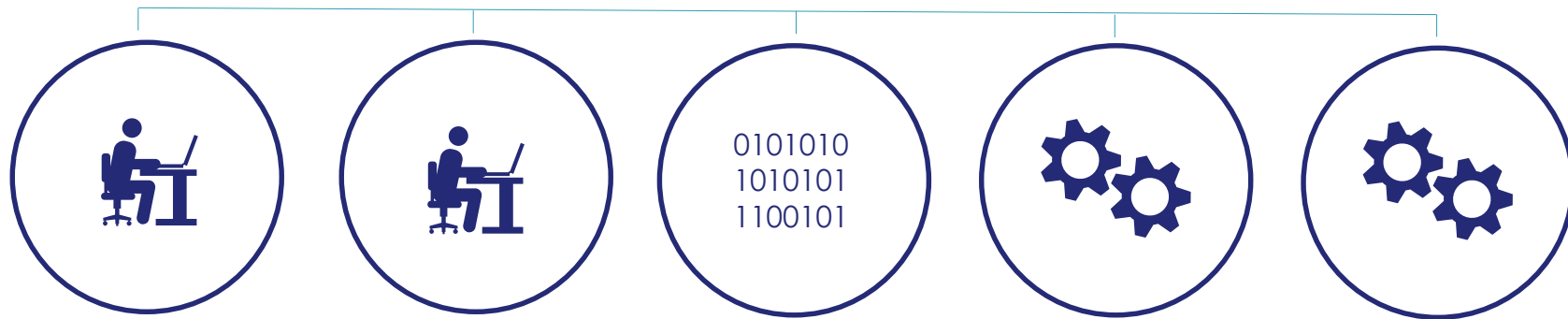
Data Security Simplified

www.thalesgroup.com





DATA LOCATIONS



DB

FILE

FOLDER

VM

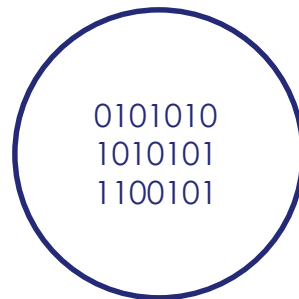
NETWORK



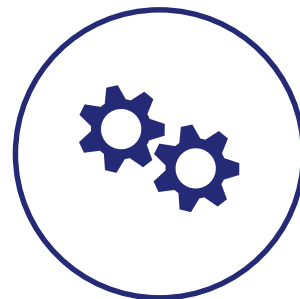
PII



CREDIT CARD



HEALTH CARE



TRADE SECRETS



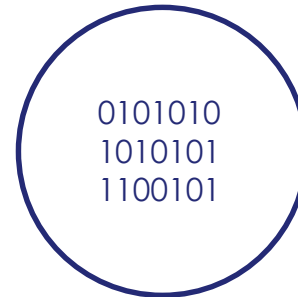
SOLUTIONS



AUTHENTICATION



ENCRYPTION



KEY MANAGEMENT



ROOT OF TRUST

#1: Why is Encryption Secure?

Example: AES128 = $3,4 \times 10^{38}$ Keys

Assuming
a Super Computer can calculate ~ 1 Billion Keys / second,
we have 100 Super Computers,
we find the key in the 1%.

Finding the Key takes 10^{22} years. Universe is 10^{11} years old.

However When We Need Speed With Security The Picture Is Little Different



#2: Why do we need external Key Management?

No one tries to crack encryption by calculating the keys...


It's easier to use the key and decrypt the data

Separate Keys from Data and Store/Manage Keys securely



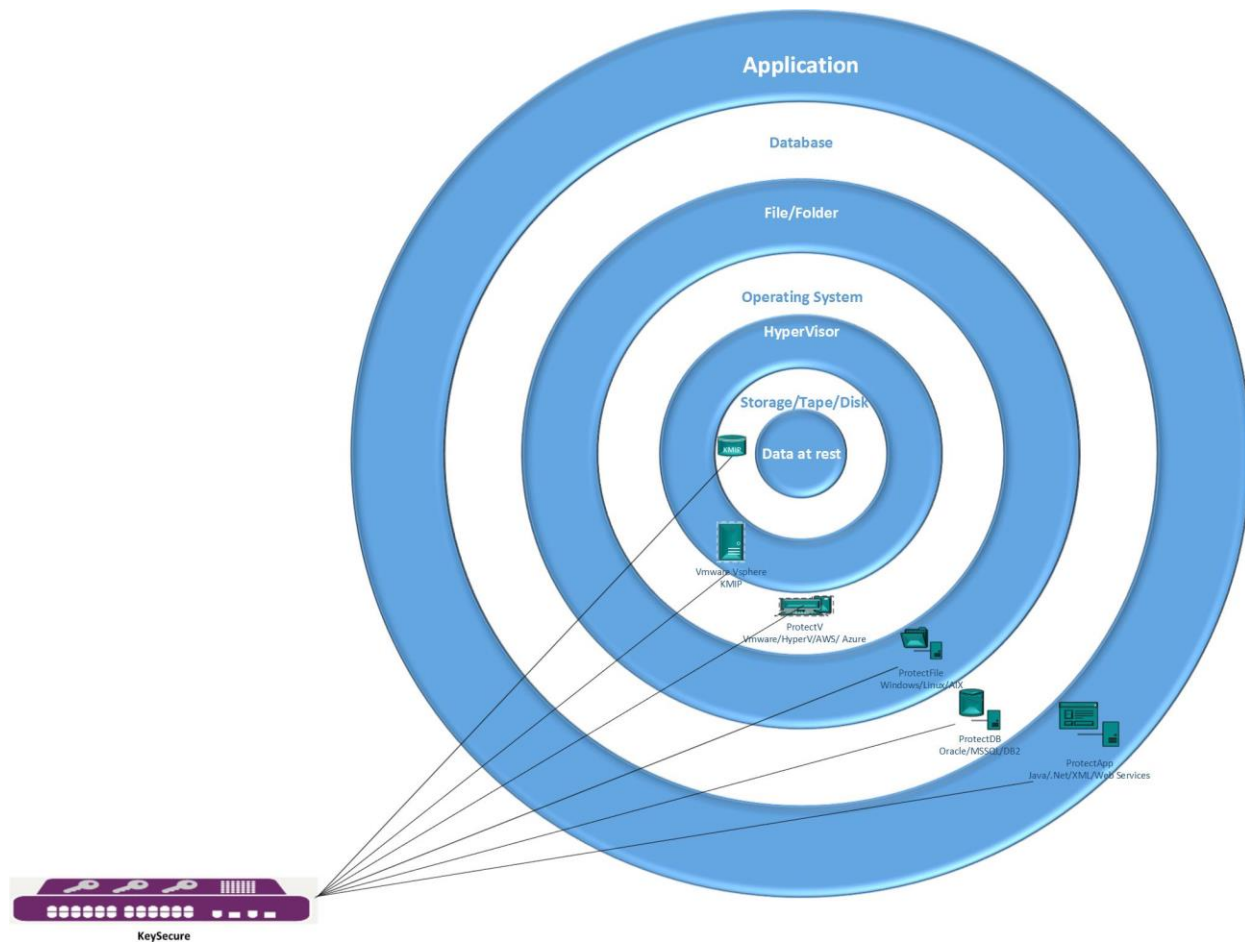
Data Encryption Simplified



A close-up shot of a dragon's head, likely from the movie 'The Hobbit: The Desolation of Smaug'. The dragon's mouth is wide open, revealing a dark interior and rows of sharp, pointed teeth. Its scales are dark and spiky. In the foreground, the back of a person's head with long, flowing white hair is visible, looking towards the dragon. A speech bubble is overlaid on the image, containing the text:

Honey,
Do you know how
to ride this thing?

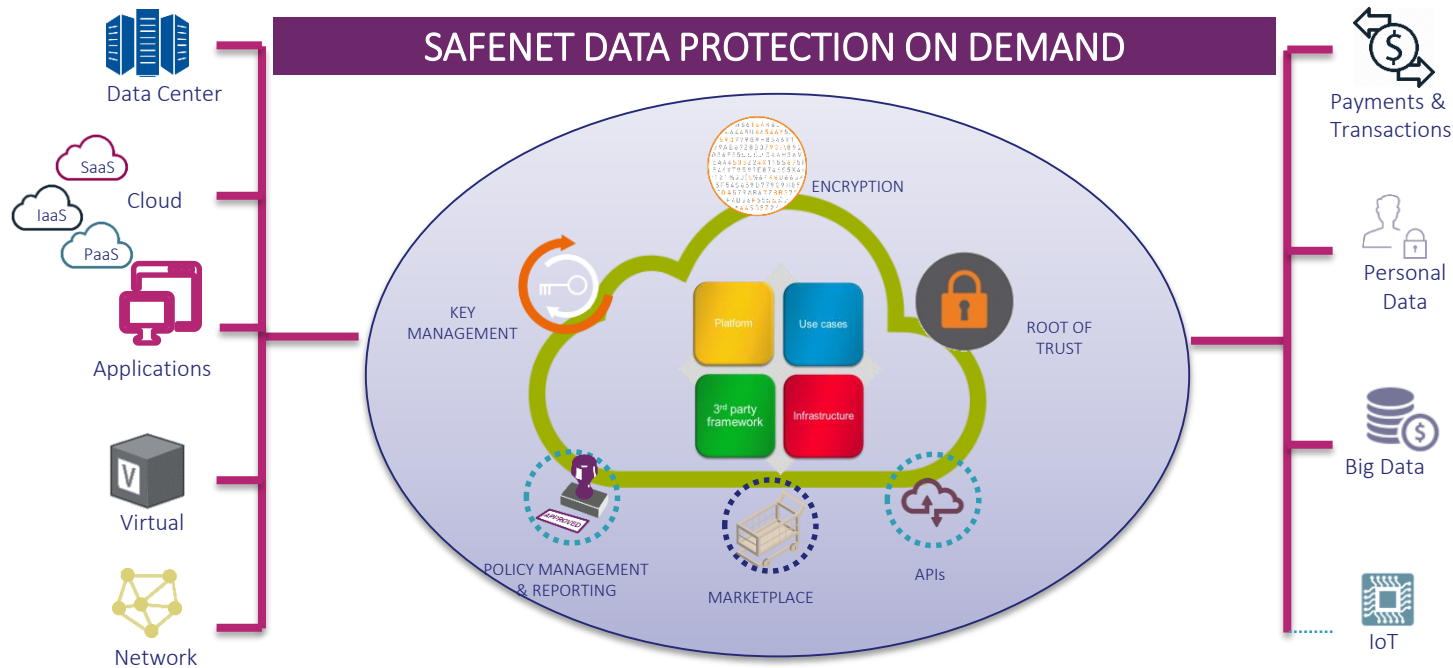
Where to Encrypt and Manage Keys?



Data Protection Now Available On Demand

Protect Everywhere

Protect Everything



Taking Traditional HSM and Encryption and Making it Consumable as a Service

Benefits for Customers

Designed to offer security-as-a-service quickly and easily



Zero upfront investment



White labelled versions



Easy to integrate into hundreds of applications



Centralized management



Multi-tenant capabilities



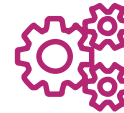
User friendly marketplace



Cloud-based pricing



Third-party API support



Automated:-
Deployments,
Billing, etc

A white semi-trailer truck is driving on a road. The side of the trailer features the text "ON THE ROAD TO SUCCESS, THERE ARE NO SHORTCUTS." in large blue letters. Below this, in smaller blue text, is "JOIN OUR TEAM", "800-668-0322", and "shaffertrucking.com". To the right of this text is a logo for "SHAFFER TRUCKING" featuring a stylized truck. At the rear of the trailer, another sign reads "OUR MOST VALUABLE RESOURCE SITS 63 FEET AHEAD." in black letters. In the foreground, the rear of a dark car is visible, with "C240" on the trunk. A silver SUV is also visible on the left. A traffic light and a road sign are in the background.

Thank you, Drive Through

Manoj.Bhati@thalesgroup.com



Thank you

Manoj.Bhati@thalesgroup.com

www.thalesgroup.com

