Improving Enterprise Security with Oracle

VNISA Event

Khanh Le – Security Sales Manager

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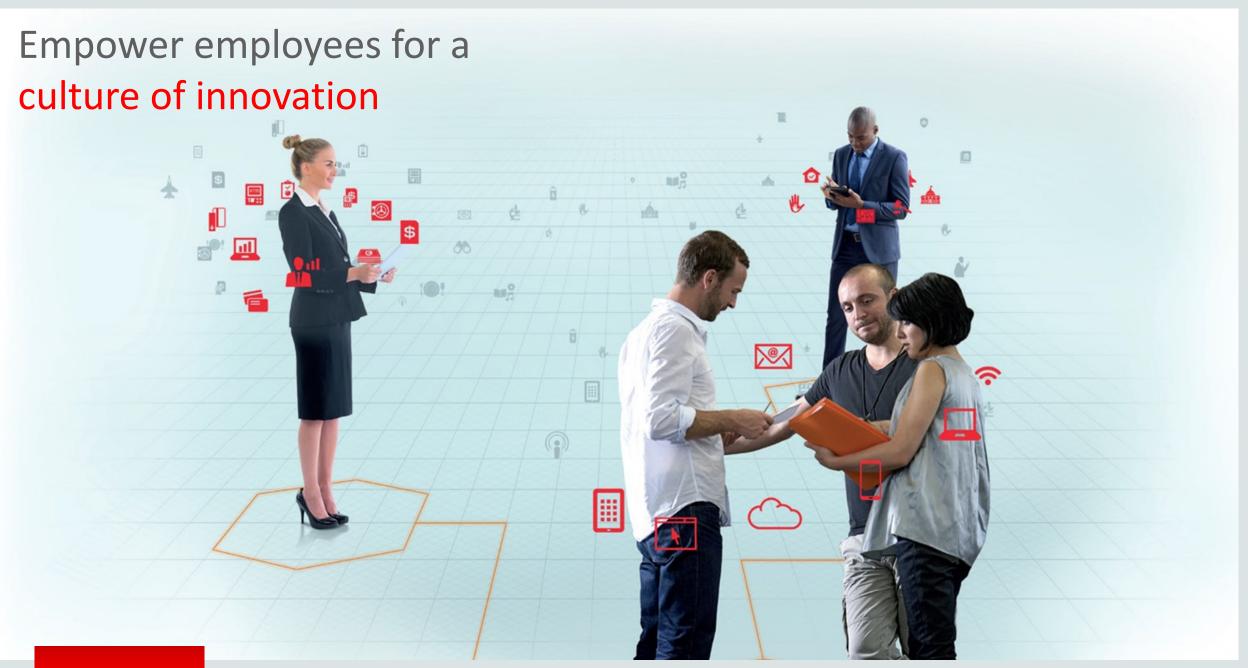Email: khanh.le@oracle.com

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ORACLE®

The digital world is bursting with limitless possibilities that link people, places and things

ORACLE®

Imagine a world full of valuable interactions that inspire customers

ORACLE

Empower employees for a
culture of innovation

ORACLE®

Open up infinite ecosystems for
new business models

ORACLE

Real businesses are moving to Digital Economy

Iberia chose Oracle Digital to turn customer journeys into inspirational and social travel experiences

It helps Proteus link ingestible sensors with mobile apps and healthcare communities

Ubank nurtures customer loyalty with smart services and intelligent insight
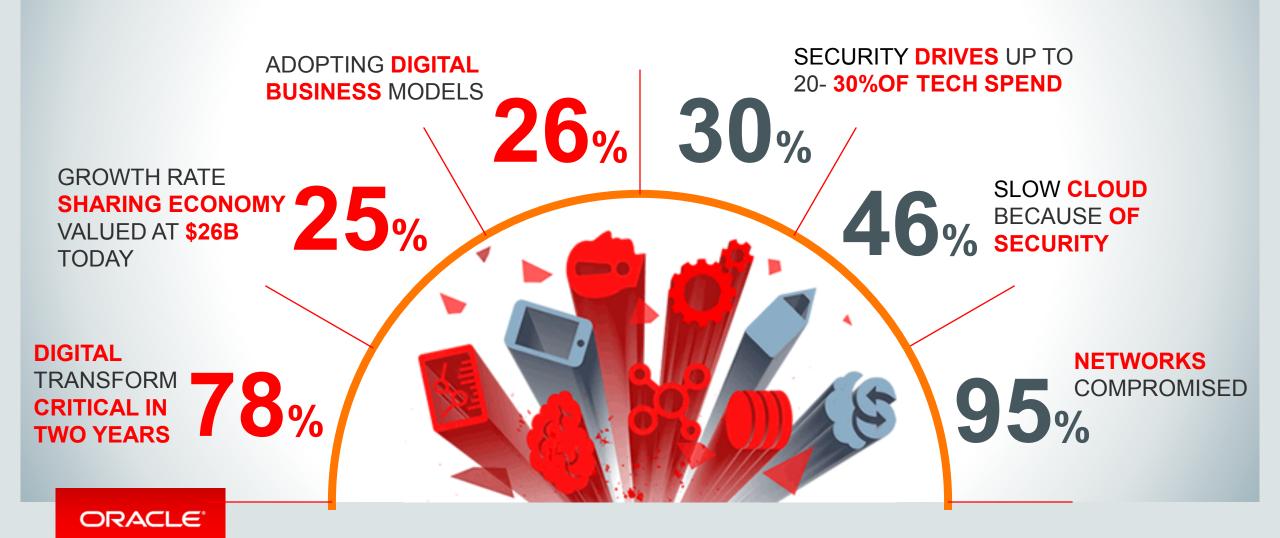
Nike uses Oracle Digital to help +8 million people track and share lifestyle choices

Infotainment

Insurance

Safety

Emergency Services

In-Car Diagnostics

Oracle Digital puts Verizon in Customers' daily lives with a connected car ecosystem of value-add services

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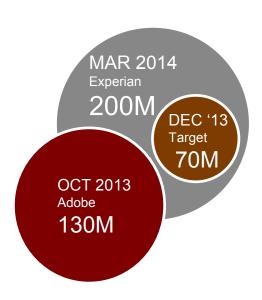
DAWN OF THE DIGITAL ECONOMY
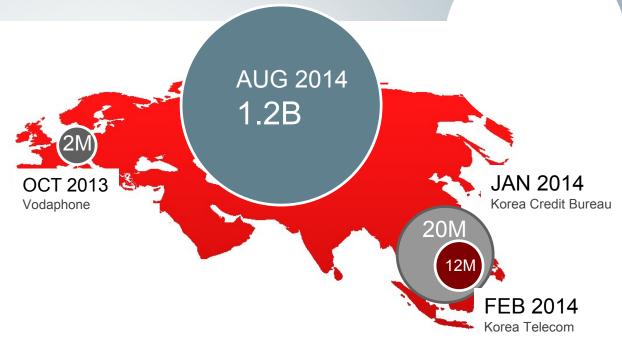
A Dramatic Shift in Enterprise Security

ADOPTING **DIGITAL BUSINESS** MODELS

26%

SECURITY **DRIVES** UP TO 20- **30%OF TECH SPEND**

30%

GROWTH RATE **SHARING ECONOMY** VALUED AT **$26B** TODAY

25%

SLOW **CLOUD** BECAUSE **OF SECURITY**

46%

DIGITAL TRANSFORM **CRITICAL IN TWO YEARS**

78%

NETWORKS COMPROMISED

95%

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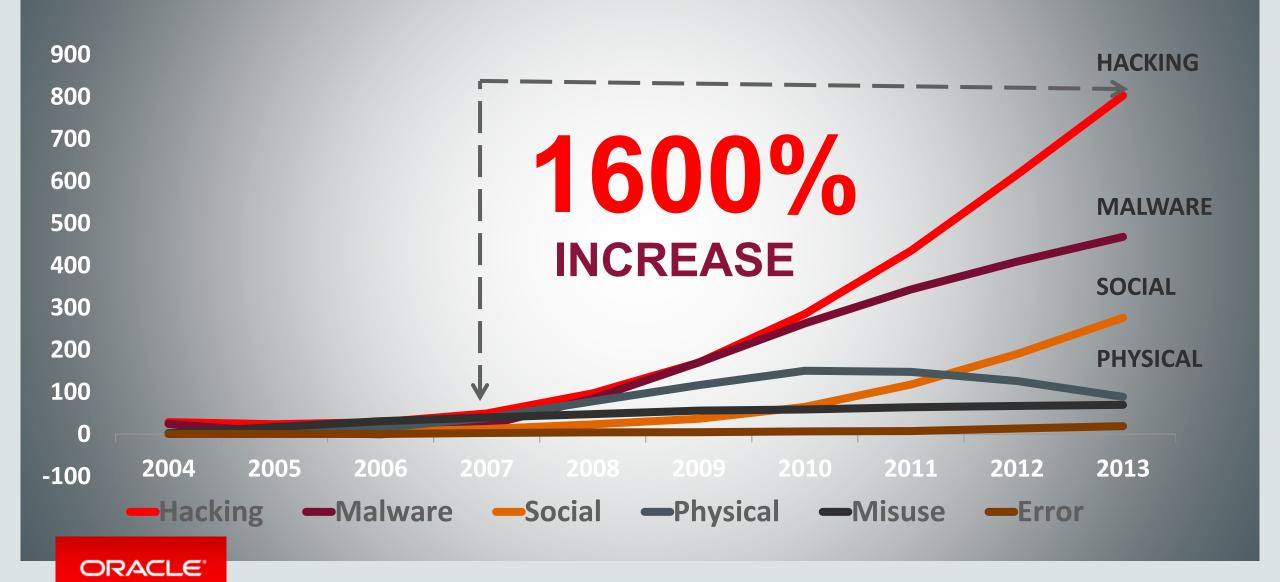
THE AGE OF MEGA BREACHES
THE PAST 9 MONTHS ALONE
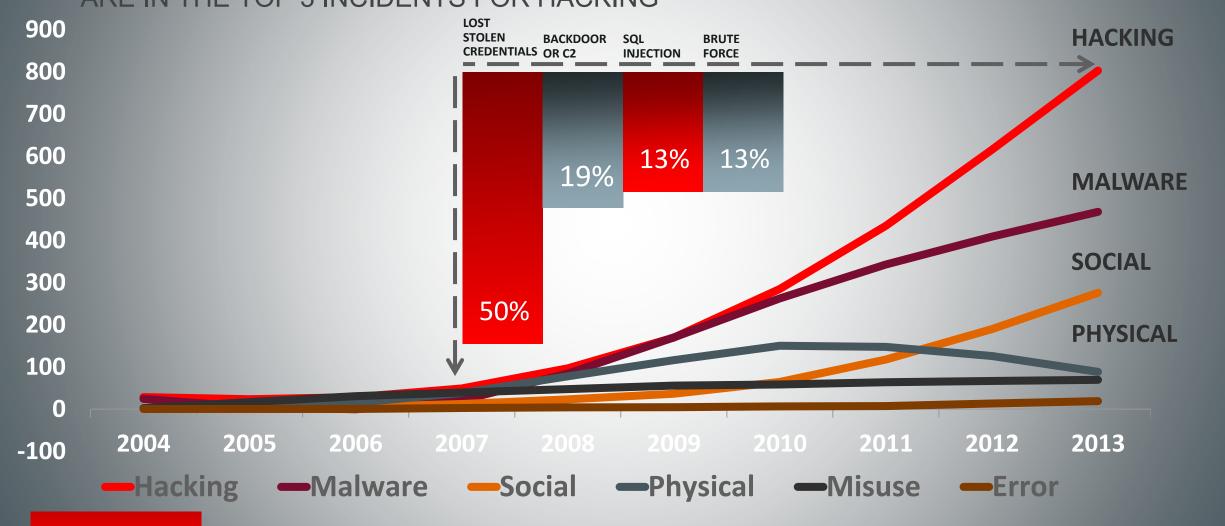
MAR 2014 Experian **200M**

DEC '13 Target **70M**

OCT 2013 Adobe **130M**

AUG 2014 **1.2B**

2M
OCT 2013
Vodaphone

20M
12M

JAN 2014
Korea Credit Bureau

FEB 2014
Korea Telecom

TOP WEB APP ATTACK PATTERNS

1. Injection attacks

2. Cross site scripting attacks

3. Broken authentication & session mgmt

4. Insecure direct object references

5. Cross site request forgery

6. Security misconfiguration

7. Insecure crypto storage

8. Failure to restrict URL access

9. Insufficient transport layer security

10. Unvalidated redirects and forwards

SCM 4.1.4.19 19 2007/07/10
<2009-10-21 13:08:59.013 CDT>:[2]:<MDS-CS_MDS>:<INFO>:<LAYER = SCM, J2SE 1.6.0_15 Charsets supported:IBM00858,IBM437,IBM775,IBM850,IBM852,IBM855,IBM857,IBM862,IBM866,ISO-8859-1,ISO-8859-13,ISO-8859-15,ISO-8859-2,ISO-8859-4,ISO-8859-5,ISO-8859-7,ISO-8859-9,KOI8-R,KOI8-U,US-ASCII,UTF-16,UTF-16BE,UTF-16LE,UTF-32,UTF-32BE,UTF-32LE,UTF-8,windows-1250,windows-1251,windows-1252,windows-1253,windows-1254,windows-1257,x-IBM737,x-IBM874,x-UTF-16LE-BOM,X-UTF-32BE-BOM,X-UTF-32LE-BOM>
<2009-10-21 13:08:59.185 CDT>:[3]:<MDS-CS_MDS>:<INFO>:<LAYER = SCM, EVENT = Default Job Pool size = 10>
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<2009-10-21 13:08:59.357 CDT>:[11]:<MDS-CS_MDS>:<DEBUG>:<LAYER = MDP, EVENT = Initialization>
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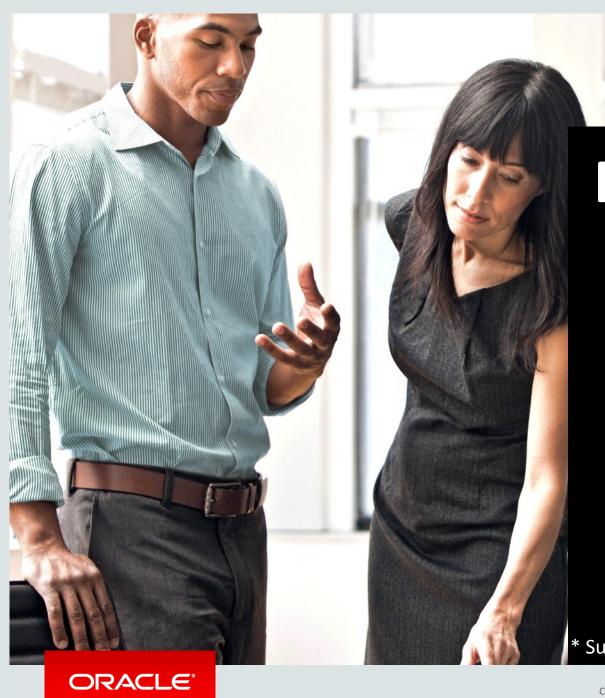
THE **NEW** DIGITAL **ECONOMY**

WILL DEPEND ON SECURITY

$3 TRILLION

LOST GROWTH - CYBER CRIME & ECONOMIC BACKLASH

World Economic Forum & Mckinsey Jan 2014

Risks to Digital Business

48%	**Ability to Manage Identity Very Important**
19%	**Well Prepared for Security Requirements**
72%	**Security is Key Challenge for Digital Business**
1.4 Billion	**Identities Stolen Last Year**
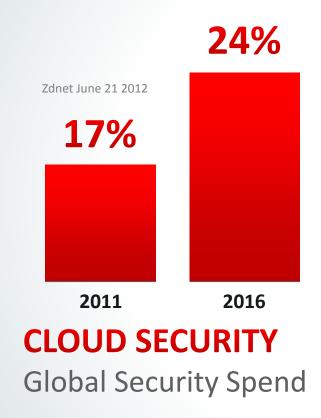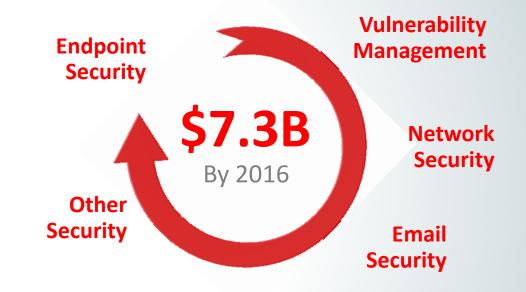
* Survey of North American IT Executives by The Economist Intelligence Unit

THE BLACK MARKET

RISE OF THE HACKER ECONOMY

CYBER SECURITY

Excessive **Access**

Stolen **Data**

External **Hacktivists**

Regulatory **Compliance**

International **Espionage**

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THE RESULT IS REACTIVE SECURITY

24%

Zdnet June 21 2012

17%

2011   2016

CLOUD SECURITY
Global Security Spend

Endpoint Security

Vulnerability Management

$7.3B
By 2016

Network Security

Other Security

Email Security
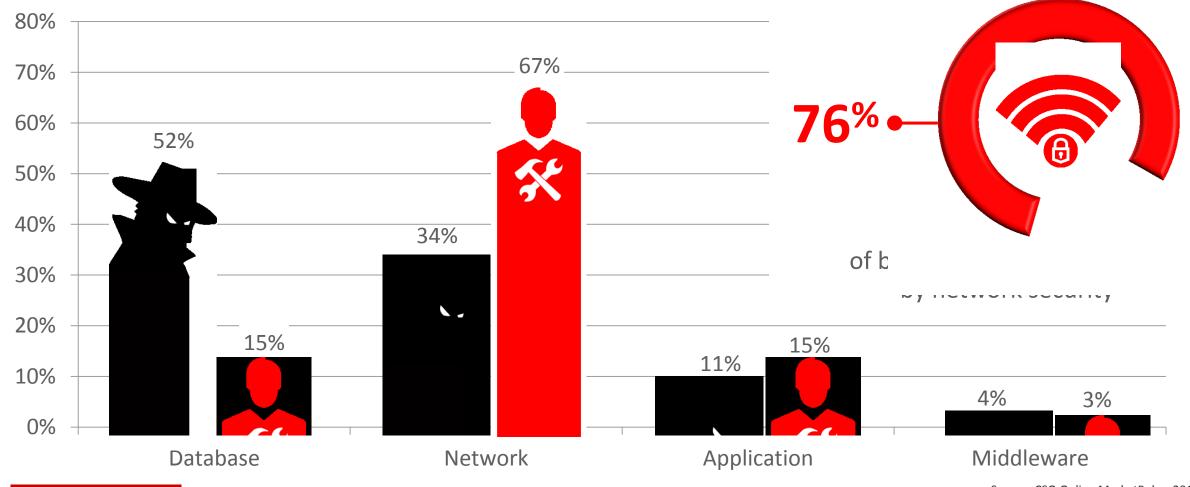
DRIVEN BY
Reactive Technologies

ORACLE®

IT Organizations Are Over-Investing in Technologies that Don't Directly Protect Critical Databases from Attack

76%

of b

by network security

Database   Network   Application   Middleware

52%   67%   34%   15%   11%   15%   4%   3%

THE RISKS ARE INSIDE

SIMPLE GOVERNANCE CAN REDUCE THE RISK EXPOSURE

50%

MALWARE PROPOGATE BY MISCONFIGURATION

VDBIR 2014

76%

OF ORGANIZATIONS TAKE 6 MONTHS+ TO PATCH DB's

IOUG 2013

85%

ATTACKS TAKE 5 MINUTES OR LESS

VDIR 2014

80%

TARGET WEAK PASSWORDS

VDIR 2014

THE DIGITAL SECURITY CONCERNS

- Malicious insiders
- Shared access
- Data privacy
- Hackers
- Orphaned accounts

- Virtual exploits
- Regulatory compliance
- Indemnification
- Availability
- Privileged users

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Security Inside Out =
SECURING ACCESS TO APPS & DATA FIRST

IDENTITY MANAGEMENT

Mobile Security

Identity Governance

Directory Services

Access Management

DATABASE SECURITY

Encryption & Redaction

Privileged User Control

Key Management
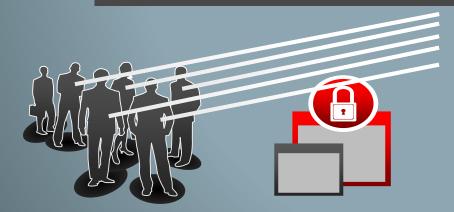
Activity Monitoring

Configuration Management
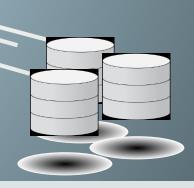
Database Firewall
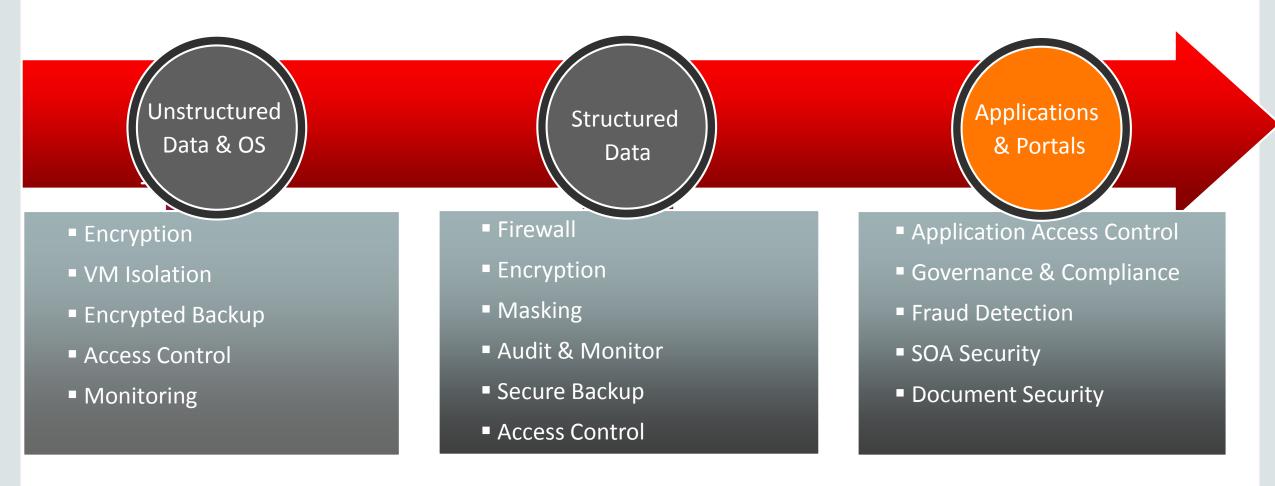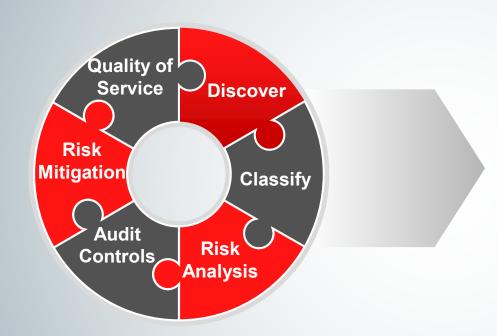
Inside Out Approach to Infrastructure Protection
Protect information where it resides throughout its lifecycle

Unstructured Data & OS

- Encryption
- VM Isolation
- Encrypted Backup
- Access Control
- Monitoring

Structured Data

- Firewall
- Encryption
- Masking
- Audit & Monitor
- Secure Backup
- Access Control

Applications & Portals

- Application Access Control
- Governance & Compliance
- Fraud Detection
- SOA Security
- Document Security
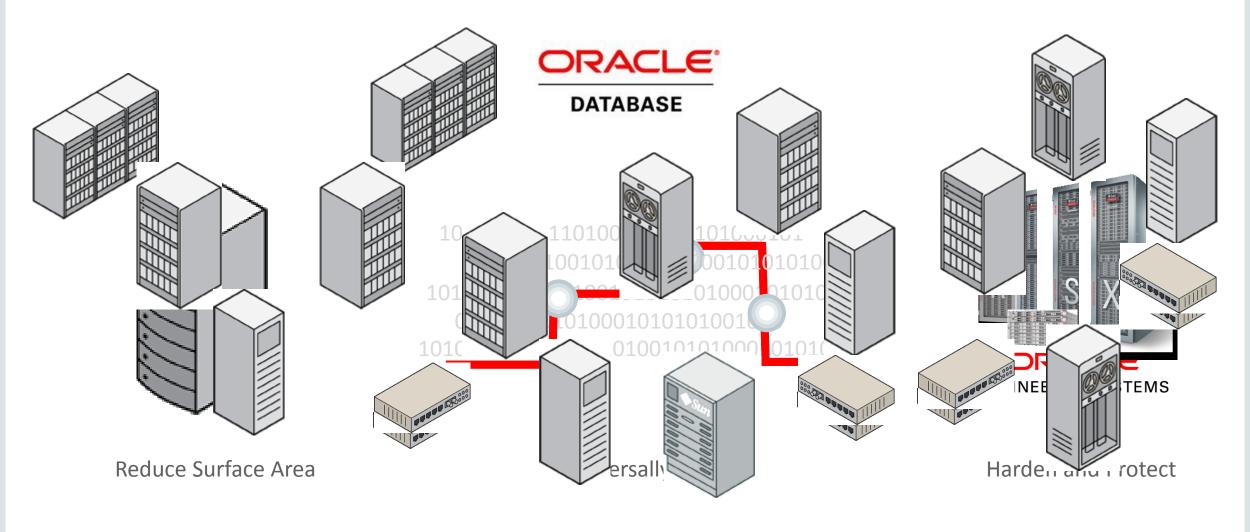
TAKE A **SYSTEMATIC** VIEW

STRATEGIC approach that aligns with business requirements and automates controls. Establishes ongoing **INTELLIGENCE**

Creating an Information Fortress with Oracle Systems

Reduce Surface Area

Harden and Protect

66%

SENSITIVE DATA

RESIDES IN RELATIONAL DATABASES

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SECURITY REQUIRES
IDENTITY

80%

Attacks target
weak passwords

84%

Target
user interaction

76%

Exploit stolen
credentials

MOST FREQUENT ATTACK VECTOR & POINT OF CONTROL

Source: 2013 Verizon Data Breach
Investigations Report

Source: 2013 Verizon Data Breach
Investigations Report

Source: 2013 Verizon Data Breach
Investigations Report

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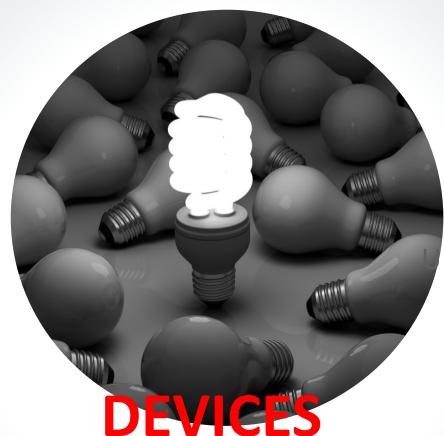
THE NEW PERIMETER

PEOPLE

Employees, Contractors
Costumers & Partners

DATA

Unstructured & Structured

DEVICES

Phones, Servers,
Laptops, Tablets

PREVENTIVE
PREVENT THE THREAT

- **CONFIGURE & PATCH**
- **ACCESS CONTROL**
- **USER LIFECYCLE**
- **AUTOMATED REMEDIATION**

DETECTIVE
MANAGE THE RISK

- **ACCESS CERTIFICATION**
- **ACTIVITY MONITORING**
- **ANOMALY DETECTION**
- **IDENTITY ANALYTICS**

EXAMPLES
ORACLE COULD MITIGATE
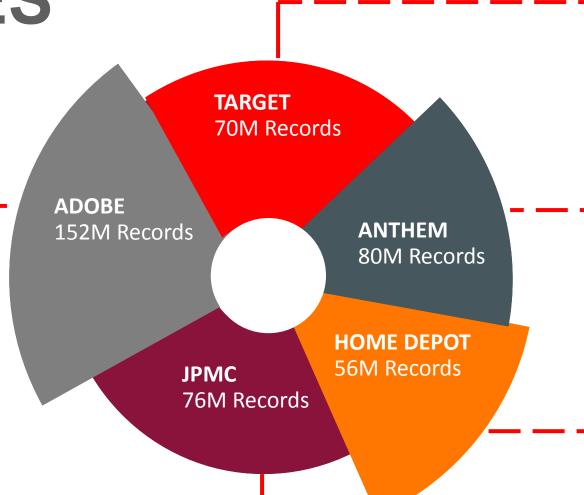
DEFAULT PASSWORD
ORACLE SOLUTION
- *Regular password reset*
- *Strong password policy*

WEAK PASSWORDS
ORACLE SOLUTION
- **Multi-factor authentication**
- **Automated configuration & patching**

UNENCRYPTED DATA
ORACLE SOLUTION
- *Database encryption*
- *Password management*

UNPATCHED SERVER
ORACLE SOLUTION
- *Multi-factor authentication*
- *Automated configuration & patching*
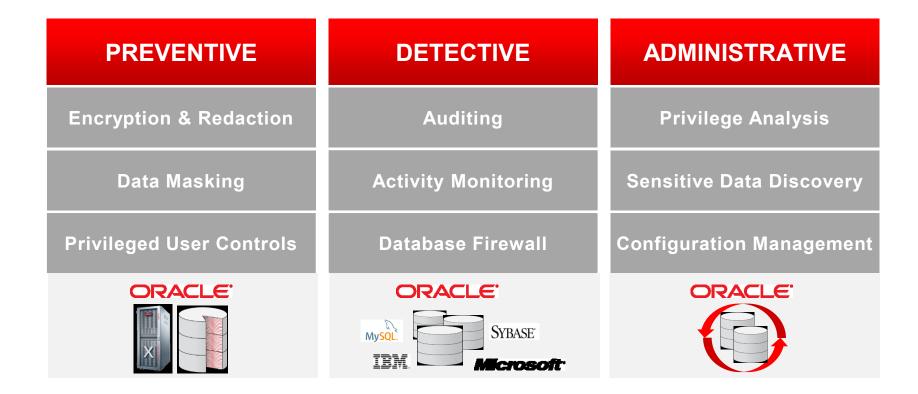
STOLEN CREDENTIALS
ORACLE SOLUTION
- *Multi-factor authentication*
- *Web-fraud detection*
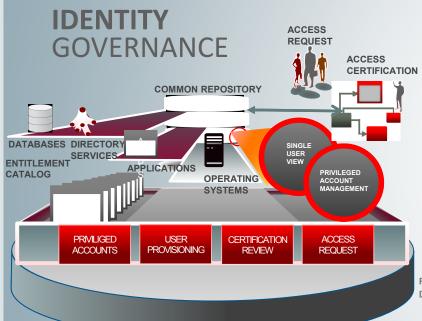
TARGET 70M Records
ANTHEM 80M Records
HOME DEPOT 56M Records
JPMC 76M Records
ADOBE 152M Records
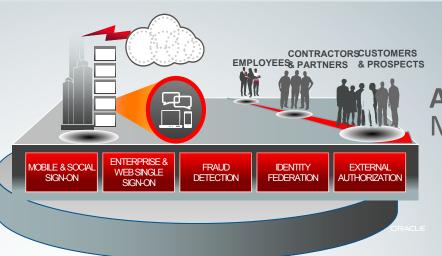
ORACLE®

INTEGRATED
IDENTITY STACK

ACCESS MANAGEMENT

EMPLOYEES | CONTRACTORS & PARTNERS | CUSTOMERS & PROSPECTS

MOBILE & SOCIAL SIGN-ON	ENTERPRISE & WEB SINGLE SIGN-ON	FRAUD DETECTION	IDENTITY FEDERATION	EXTERNAL AUTHORIZATION

IDENTITY GOVERNANCE

ACCESS REQUEST

ACCESS CERTIFICATION

COMMON REPOSITORY

DATABASES | DIRECTORY SERVICES

ENTITLEMENT CATALOG

APPLICATIONS

OPERATING SYSTEMS

SINGLE USER VIEW

PRIVILEGED ACCOUNT MANAGEMENT

PRIVILIGED ACCOUNTS	USER PROVISIONING	CERTIFICATION REVIEW	ACCESS REQUEST

MOBILE SECURITY

APPLICATION STORE

SECURE WORKSPACE

DATA LEAK PREVENTION

FRAUD DETECTION

SELF SERVICE

SIGN-ON

MOBILE SECURITY SUITE

DIRECTORY SERVICES

NAMING SERVICES

HOST ACCESS CONTROL

INTEGRATED INTEROPERABLE

LOW TCO

EXTREME SCALE

DEVICE AUTHN

USER AUTHENTICATION

LOCATION DATA

THOUSANDS | MILLIONS | BILLIONS | 10s of BILLIONS

VIRTUAL DIRECTORY	META DIRECTORY	LDAP DIRECTORY

ORACLE

Oracle Red Stack

Purpose Built for Security

Applications
Middleware
Database
Operating System
Virtual Machine
Networking
Servers
Storage

Certified Together

Managed Together

Deployed Together

PERFORMANCE Supported Together

MANAGABILITY Upgraded Together

Tested **SCALABILITY** Together

Secured **SECURITY** Together

Engineered **INTELLIGENCE** Together

ORACLE®

Building Your Information Fortress from Data Center to Cloud with the Industry's Broadest Security Portfolio

Applications	Applications	Governance Risk & Compliance, Access & Certification Review, Anomaly Detection, User Provisioning, Entitlements Management
Platform	Middleware	Mobile Security, Privileged Users, Directory Services, Identity Governance, Entitlements Management, Access Management
	Database	Encryption, Enterprise Key Management, Database Firewall, Masking, Redaction, Privileged User Control, Auditing, Secure Configuration
Infrastructure	Operating Systems & Virtual Machine	Application + User Sandboxing, Delegated Administration, Anti-Malware System, Data + Network Protection, Zero-Downtime Patching, Compliance Reporting, Secured Application Lifecycle, Secure Live Migration, Immutable Zones, Independent Control Plane
	Servers, Storage & Networking	Cryptographic Acceleration, Application Data Integrity, Verified Boot, Disk Encryption, Secured Backup, Storage Key Management

THANK YOU FOR LISTENING

Integrated Cloud
Applications & Platform Services

ORACLE®