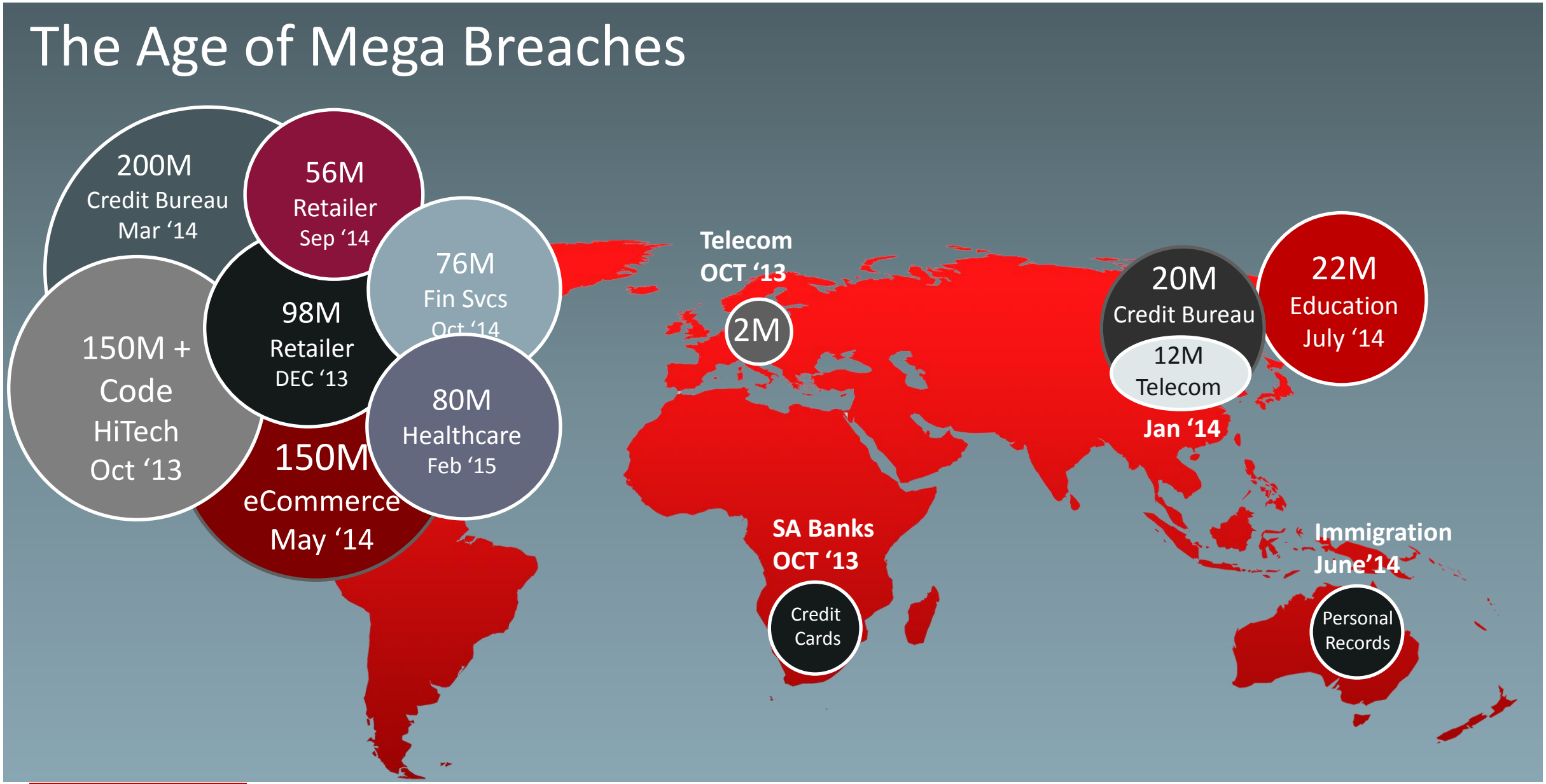
Digital and Security

Two Reasons Customers Buy Oracle Database Security

Mitigate Data Breaches

Address Regulatory Compliance

The Age of Mega Breaches



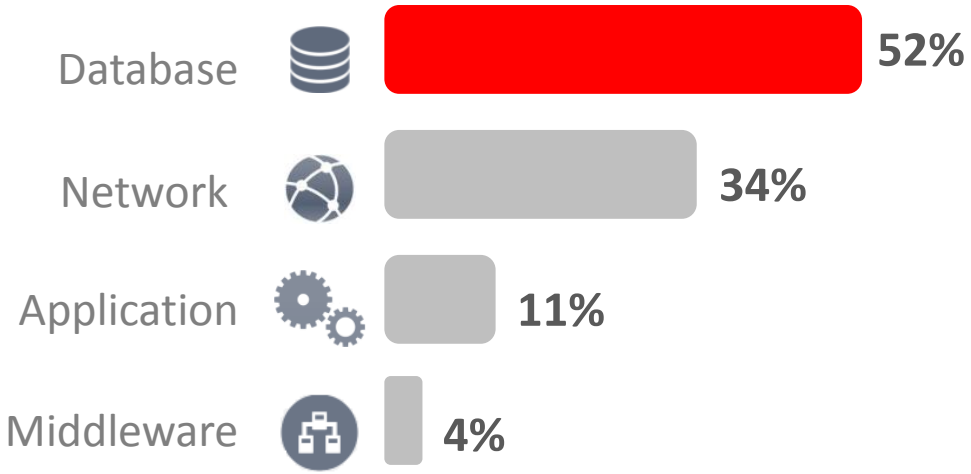
A New Hacker Economy

A Global Market for stolen Data

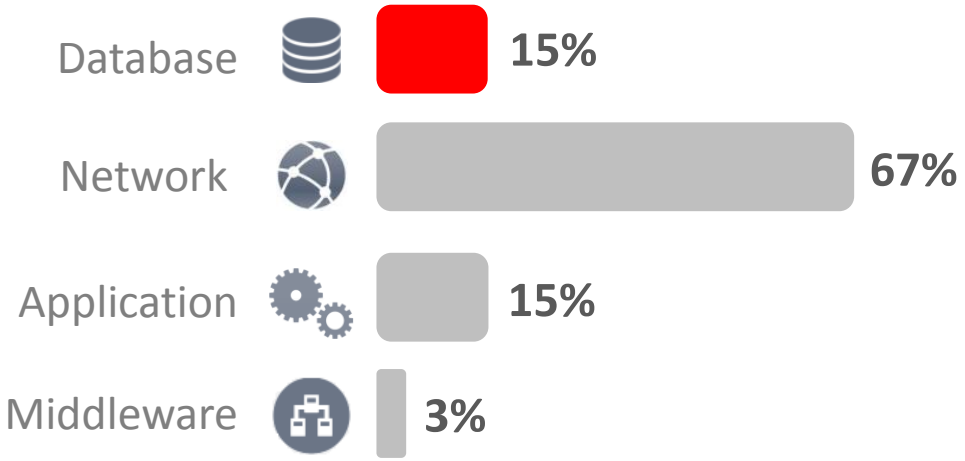
- **Rent a Botnet for some $100++**
- **Online Tutorials**
- **HaaS (Hacking as a Service)**
- **Distributed Denial of Service DDoS for hire - $2 / hour**
- **Virus / RootKit Developer Kits**
- **Point&Click Tools**

Pricelist for stolen Information	Price per Record
Fresh credit card data	$20-25
Stale credit card data	$2-7
Medical record	$50
Hijacked email account	$10-100
Bank account credentials	$10-1000

IT Layers Most Vulnerable To Attacks



Allocation of Resources To Secure IT Layer



Source: CSO Online MarketPulse, 2013

From 2007 to 2013 the increase of hacking was

1600 %

42 % of the most serious attacks against data were **SQL-Injection** attacks (Ponemon Institute 2014)

38 % of the organisations have taken steps to prevent **SQL-Injection** attacks (IOUG)

Source: CSO Online MarketPulse, 2013

Oracle Database Security Solutions

PREVENTIVE	DETECTIVE	ADMINISTRATIVE
Encryption & Redaction	Activity Monitoring	Key & Wallet Management
Masking & Subsetting	Database Firewall	Privilege & Data Discovery
Privileged User Controls	Auditing & Reporting	Configuration Management

ORACLE

ORACLE

ORACLE

ORACLE

Oracle University DB-Security

Oracle Database 12c: Security
TOC

Day	Lesson	Title
1	1	Introduction to Database Security
1	2	Understanding Security Requirements
1	3	Choosing Security Solutions
1	4	Basic Database Security
2	5	Network Security
2	6	Implementing Basic and Strong User Authentication
2	7	Using Global User Authentication
2	8	Using Proxy Authentication
2/3	9	Using Privileges and Roles
3	10	Using Privilege Analysis
3	11	Using Application Contexts
3	12	Implementing Virtual Private Database
3/4	13	Implementing Oracle Label Security
4	14	Oracle Data Redaction
4	15	Oracle Data Masking and Subsetting
4	16	Implementing Transparent Sensitive Data Protection
4	17	Encryption Concepts
4/5	18	Using Application Based Encryption
5	19	Applying Transparent Data Encryption
5	20	Applying File Encryption
5	21	Auditing Database Users, Privileges, and Objects
5	22	Auditing DML Statements
5	A	Oracle Virtual Private Database Policy Groups
5	B	Encrypting Network Traffic
5	C	General Security Reports
5	D	Source Code

Oracle Database 12c: Security
Description and Content

Oracle Advanced Security

Comply with privacy and regulatory mandates that require companies to encrypt and redact application data such as credit cards, social security numbers, or personally identifiable information (PII). By encrypting data at rest and masking data whenever it leaves the database, Oracle Advanced Security provides the most cost-effective solution for comprehensive data protection.

Oracle Label Security

Designed to meet public-sector requirements for multilevel security and mandatory access control, Oracle Label Security provides a flexible framework that both government and commercial entities worldwide can use to manage data access on a “need to know” basis.

Oracle Data Masking and Subsetting

Comply with data privacy and protection mandates that restrict the use of actual customer data. With Oracle Data Masking and Subsetting Pack, sensitive information such as credit card or social security numbers can be replaced with realistic values, allowing production data to be safely used for development, testing, or sharing with out-source or off-shore partners.

Hardware and Software
Engineered to Work Together


ORACLE®