Data Breaches –
Recent Trends and Emerging Threats

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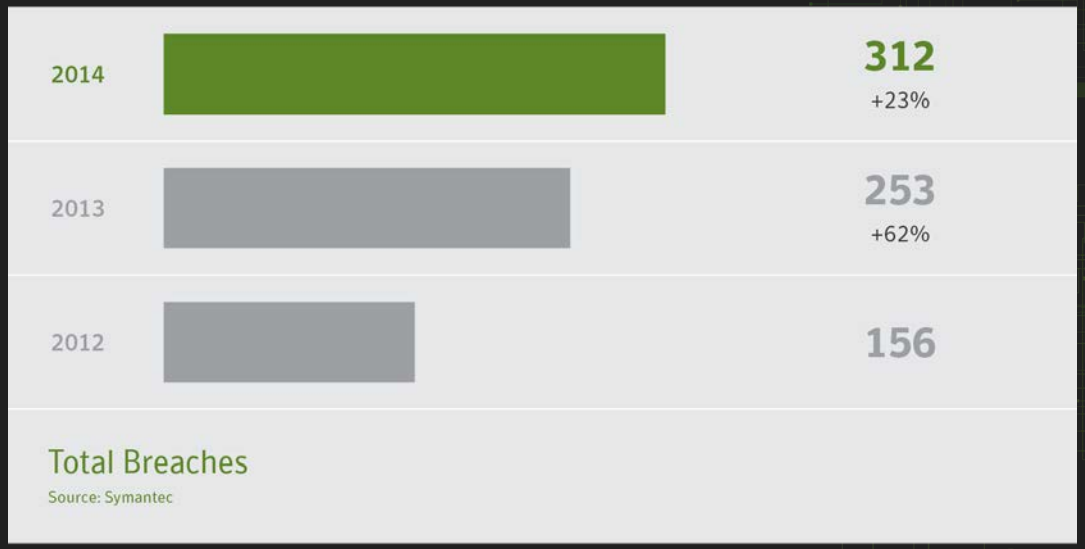
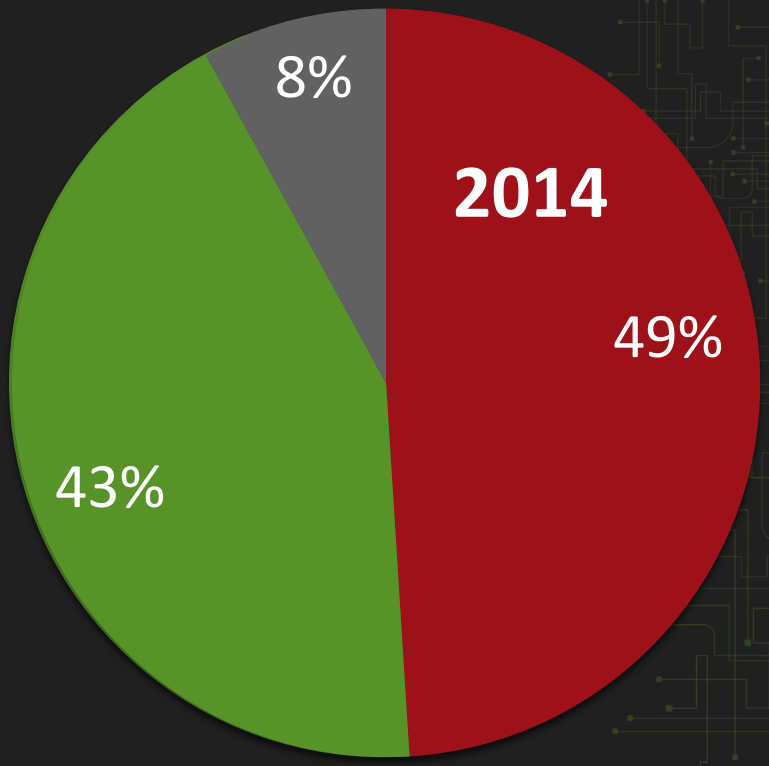
Total Breaches



- **23%** increase in 2014

- **Less Mega breaches in 2014** - 4 incidents involved more than 10 million identities exposed (8 in 2013)
- **1 in 5** breached companies did not report information on data exposed. Up from 1 in 6 (2013)

Top Causes of Data Breaches



- Attackers
- Accidentally Exposed/ Theft or Loss of Device
- Insider Theft

Symantec.

Top 10 Sectors Breached (Number of Incidents)

Rank	Sector	Number of Incidents	Percentage of Incidents (100%)
1	Healthcare	116	37%
2	Retail	34	11%
3	Education	31	10%
4	Gov. & Public Sector	26	8%
5	Financial	19	6%
6	Computer Software	13	4%
7	Hospitality	12	4%
8	Insurance	11	4%
9	Transportation	9	3%
10	Arts and Media	6	2%

Top 10 Sectors Breached by Number of Incidents

Source: Symantec

Top 10 Sectors Breached (Identities Exposed)

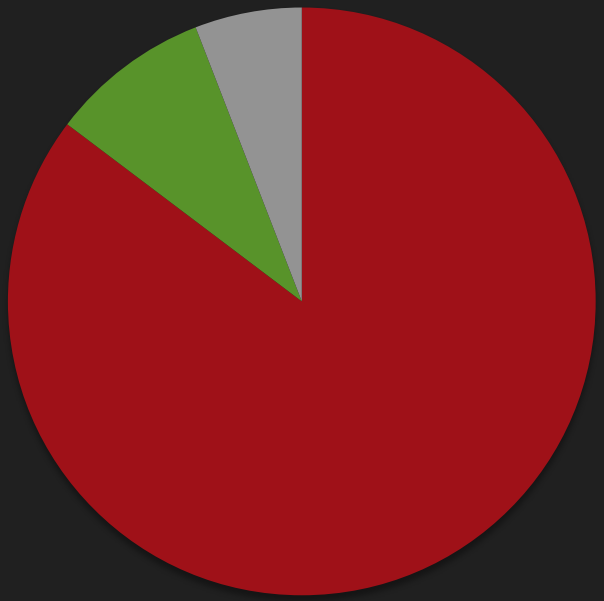
Rank	Sector	Number of Identities Exposed	Percentage of Identities Exposed (100%)
1	Retail	205,446,276	59%
2	Financial	79,465,597	23%
3	Computer Software	35,068,405	10%
4	Healthcare	7,230,517	2%
5	Gov. & Public Sector	7,127,263	2%
6	Social Networking	4,600,000	1%
7	Telecom	2,124,021	.6%
8	Hospitality	1,818,600	.5%
9	Education	1,359,190	.4%
10	Arts and Media	1,082,690	.3%

Top 10 Sectors Breached by Number of Identities Exposed

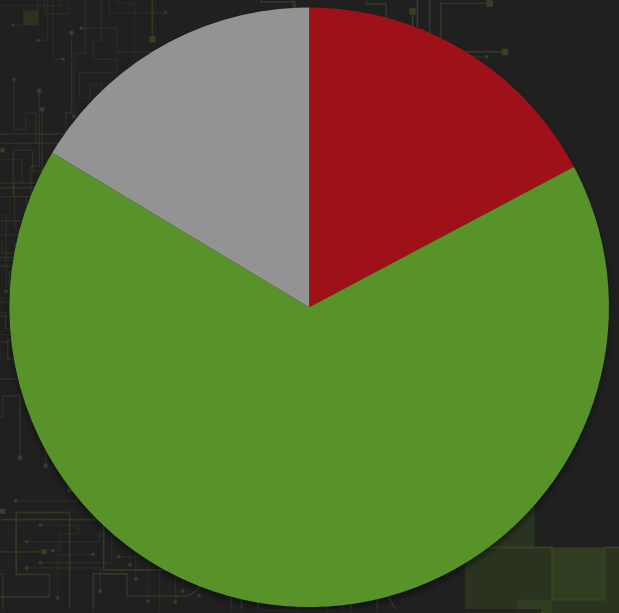
Source: Symantec

A Tale of Two Industries

Retail



Healthcare



- Attackers
- Accidentally Exposed / Theft or Loss
- Insider Theft

- **Retail top cause of breach** = Attackers
- **Healthcare top cause of breach** = Accidently Exposed/Lost or Stolen Device

- **Retail** = 11% of incidents, but 59% of identities exposed
- **Healthcare** = 37% of incidents, but only 2% of identities exposed

Value of Information Sold on Black Market

Item	2014 Cost	Uses
1,000 Stolen Email Addresses	$0.50 to $10	Spam, Phishing
Credit Card Details	$0.50 to $20	Fraudulent Purchases
Scans of Real Passports	$1 to $2	Identity Theft
Stolen Gaming Accounts	$10 to $15	Attaining Valuable Virtual Items
Custom Malware	$12 to $3500	Payment Diversions, Bitcoin Stealing
1,000 Social Network Followers	$2 to $12	Generating Viewer Interest
Stolen Cloud Accounts	$7 to $8	Hosting a Command-and-Control (C&C) Server
1 Million Verified Email Spam Mail-outs	$70 to $150	Spam, Phishing
Registered and Activated Russian Mobile Phone SIM Card	$100	Fraud

- Black Market Data is back in this year's ISTR.

Credit Card Data vs. Health Care Record

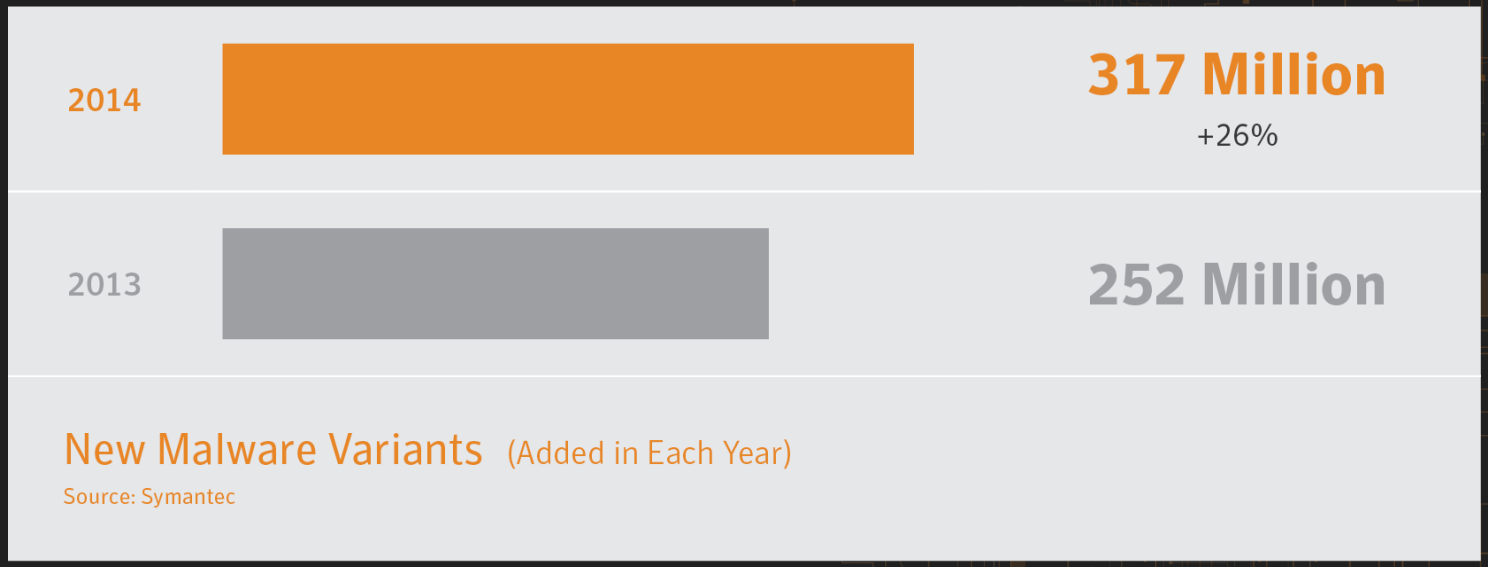
Credit Card

- Easily changed/replaced
- Short-lived value

Health Record

- Name/ID/Health History cannot be changed
- Long-term value

New Malware Variants



- Almost 1 million new threats created each day in 2014

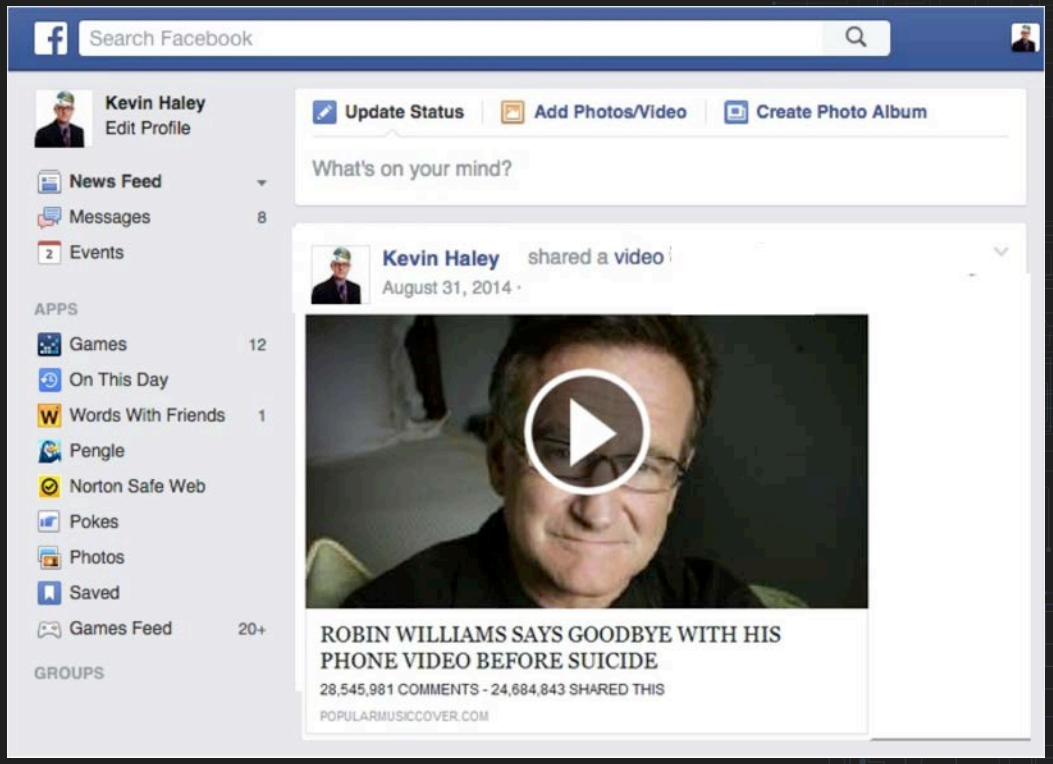
Virtually Aware Malware

```
If Virtual Machine
Then
        Stop Running
Or
        Send False Data
Or
        Take Evasive Action
        -Delay Execution
        -Wait for User Action
        -Hide
```

```
If VMDK exists
Then
        Mount VM
        Infect
Repeat
```

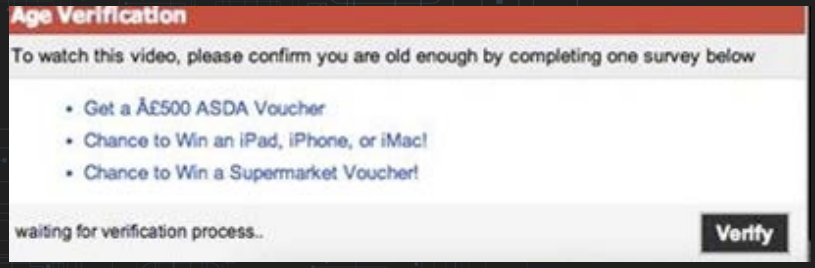
- In 2014 up to **28%** of malware was “virtual machine aware”
- Some malware (like Crisis) searched for virtual images

Manual Sharing – An Example



- In August celebrity Robin Williams passed away
- He did not film a goodbye video

Manual Sharing – An Example



- To view the video users were forced to share it
- Then take a survey or “update” software
- The video never played

Thank you!

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