

SECURITY UPDATE

City Manager's Conference Security Update

Presented by

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MUNICIPAL INFORMATION SYSTEMS ASSOCIATION OF CALIFORNIA

Security Definitions



Cyber Threat

A malicious act that can harm your system



Exploit

Software/script to take advantage of a vulnerability



Vulnerability

A weakness in software/hardware



Malware

A term for malicious software that is designed to disrupt



Risk

Exposure to the probability/possibility of harm



Trojans

Software/script that allows a remote user to access a computer



Worms

Software/script that replicates itself spreading infection to other computers



Ransomware

Software/script that prevents access to data unless a ransom is paid



Virus

Software/script that will erase, corrupt, change data



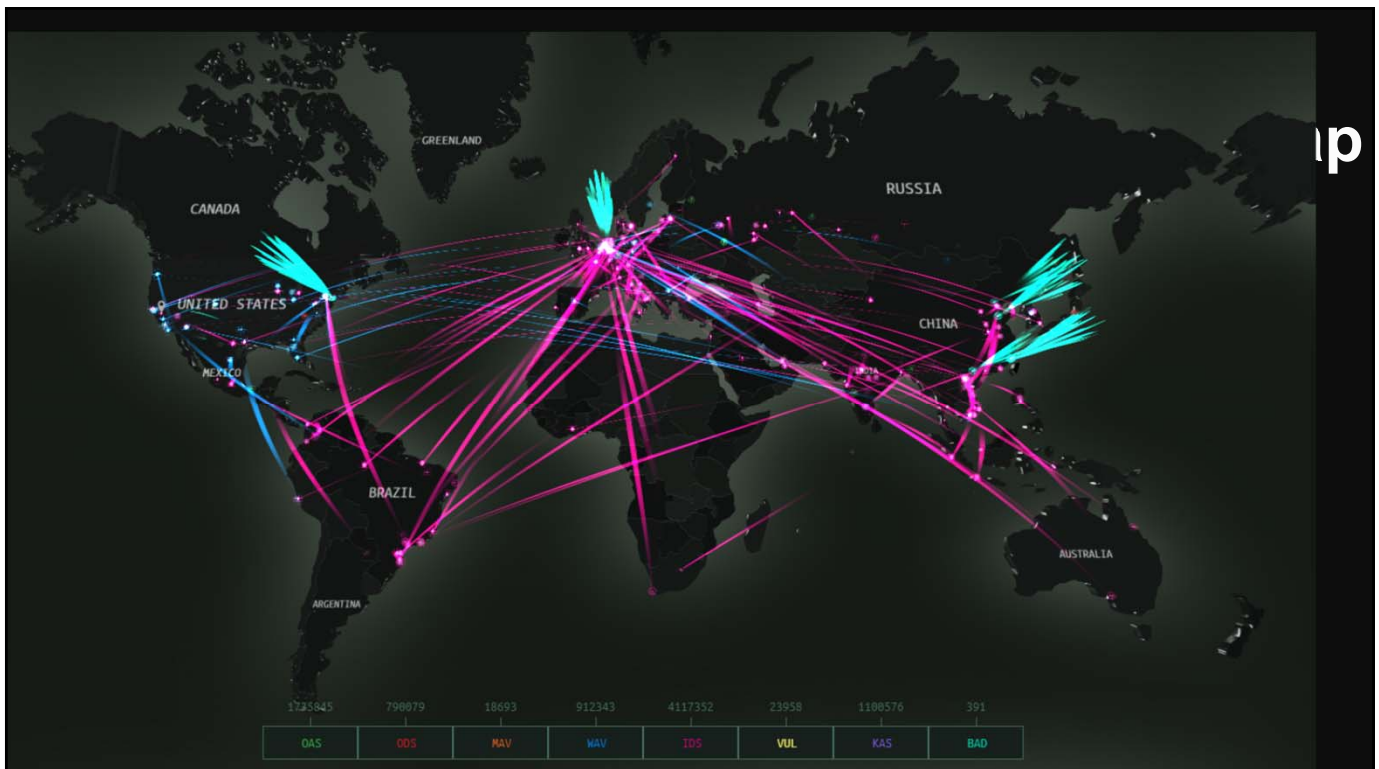
Breach

Access to information gained via an unauthorized method

IOT – Internet of Things

Devices that have Internet functionality built into them

- TV's
- Home Appliances
 - Washers
 - Dryers
 - Refrigerators
- Thermostats
- Home Locks
- Alarms
- Lighting
- Irrigation
- Cameras



Compromised Records

According to Gemalto

First Half of 2018 there were
3,353,172,708
records compromised



First Half of 2017 there were
1,901,866,611
records compromised

56.7% Increase

18,525,816

Lost/stolen records per day

771,909

Lost/stolen records per hour

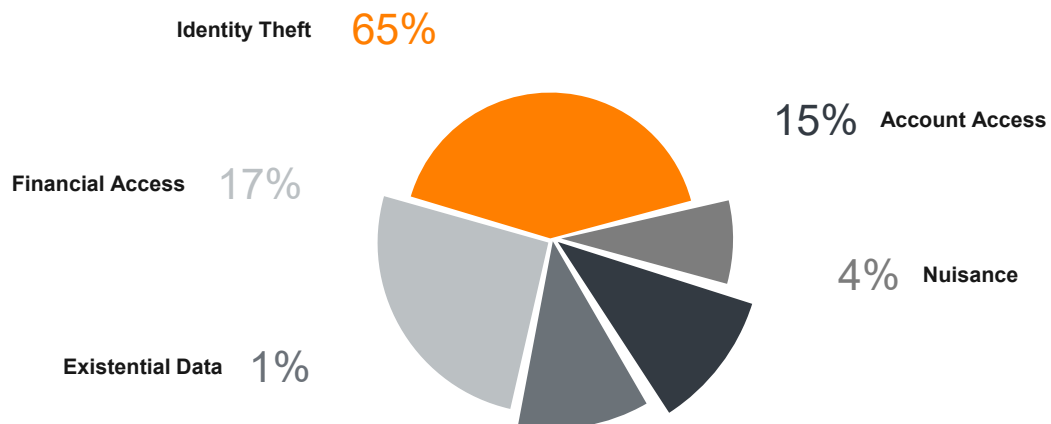
12,865

Lost/stolen records per minute

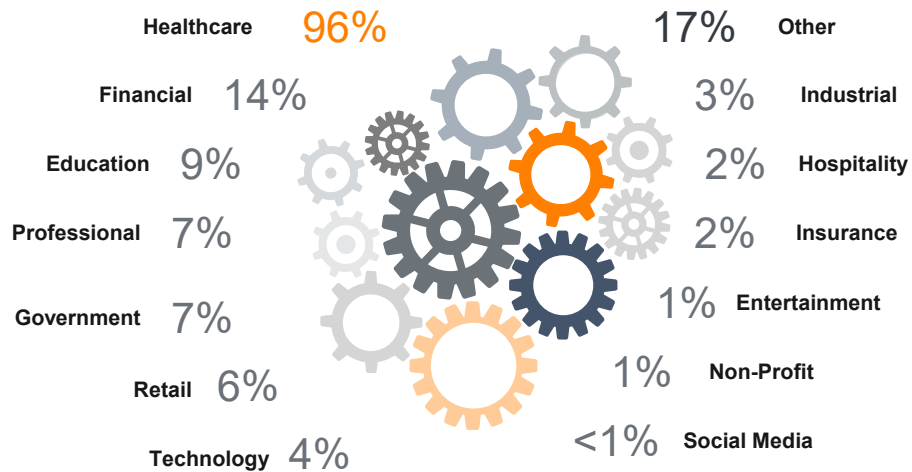
214

Lost/stolen records per second

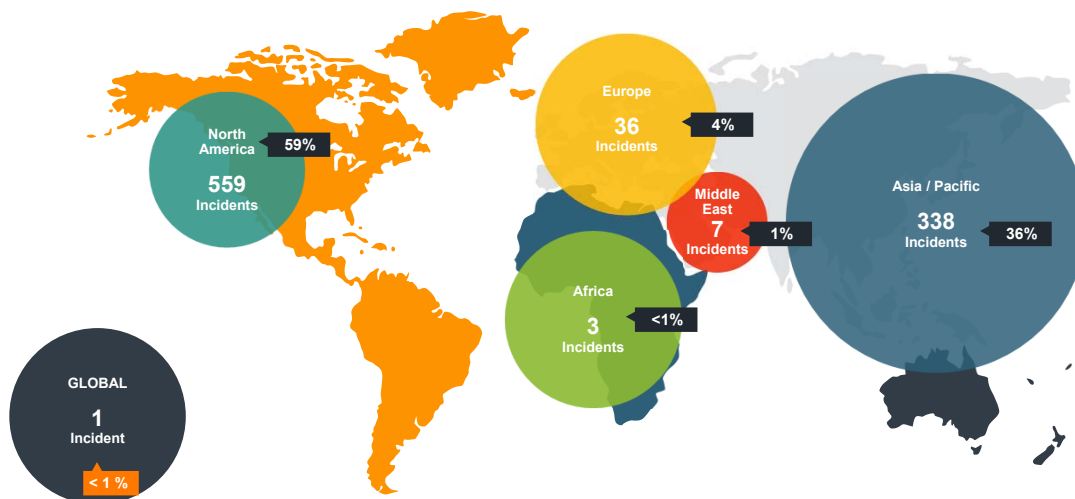
Breach Incidents by Type



Breach Incidents by Industry



Breach by Region



TOP Breaches 2018

Aadhaar (India)

1.1 Billion

March, 2018 via WhatsApp

Info Exposed: Personal Citizen Information



Under Armour (MyFitnessPal)

150 Million

Feb 2018 App Hacked

Info Exposed: Mostly nutritional information.

Marriott Starwood

500 Million

Sept 2018 Hackers accessed reservation system

Info Exposed: Guest information, phone numbers, passport info, account info, etc.



Quora

100 Million

Dec 2018 Still Uncertain – malicious 3rd party accessed system

Info Exposed: Names, profile data, addresses, etc.

Exactis

340 Million

June 2018 2 terabytes of data were somehow moved to a public site

Info Exposed: Phone numbers, email and physical interests, pet ownership, age.



MyHeritage

92 Million

June 2018 Outside server with sensitive info

Info Exposed: Email addresses and hashed passwords.

TOP Breaches 2018

FaceBook

87 Million

Sept 2018 Cambridge Analytica Scandal – user info illegally harvested

Info Exposed: Profile info, political beliefs, private messages, friend networks.



Newegg

50 Million

Sep 2018 Hack/credit card skimmer by Magecart

Info Exposed: Credit card info

Elasticsearch

82 Million

Nov 2018 Unknown – audit revealed an unguarded database

Info Exposed: Individual and business information – names, addresses, phone numbers, IP addresses, etc.



Chegg

40 Million

Sep 2018 Unauthorized party gained access from [chegg.com](https://www.chegg.com) database

Info Exposed: Names, email addresses, usernames, passwords, shipping addresses

Google+

52.5 Million

Nov 2018 Software Glitch

Info Exposed: Exposed profiles, job titles, email addresses, birth dates, age, relationship status

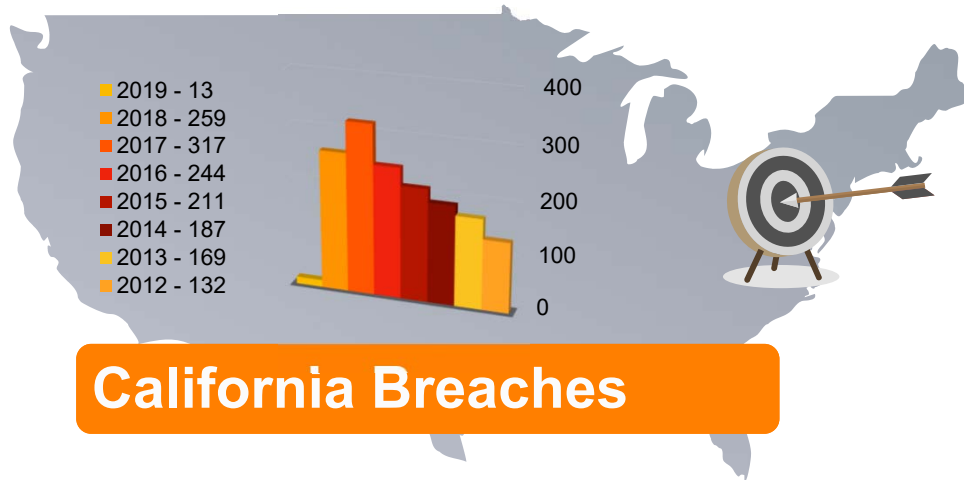


Panera

37 Million

April 2018 Website weakness

Info Exposed: Names, addresses, birthdate, last 4 digit customer info, email addresses.



California Breaches

 Every business or agency must report breaches

California Civil Code § 1798.29(e);
 California Civil Code § 1798.82(f)
 Current List: <https://oag.ca.gov/privacy/databreach/list>

5
2018 City Breaches

2
2017 City Breaches

1
2016 City Breaches

1
2014 City Breaches

What to Expect in 2019

- Ransomware Continue
 - Maybe Not as Prevalent
 - More Sophisticated
- Privacy Laws Get More Complex/Stronger– e.g. California
- Multi Factor Authentication will Increase
 - Biometrics Instead of Passwords?
- Security Will Increase
 - Expect Microsoft to Re-Position its Advanced Protection
 - Other Security Enhancements
- Surveillance will be a Bigger Target (as will IOT Devices)



What to Expect in 2019

- Shortage of Cyber Security Experts
- Malware to be More Sophisticated
- Securing Cloud Data will Continue to Pose a Challenge
- Phishing will Get More Targeted and More Sophisticated
- End Users will be Smarter and More Educated
- Major Cloud Provider Breach??



California Privacy Law

- **Begins January 2020**
 - **New Disclosures for Personal Data**
 - Businesses must disclose
 - **New Rights to Deletion**
 - Personal data must be deleted upon request
 - **New Rights to Opt-Out**
 - **New Requirements for Children/Teen Data**
 - **Non-Discrimination**
 - Can't deny goods/services, provide different level of services, quality, price, etc.
 - **New Employee Training Requirements**
 - **New Website Notice Requirements**
 - **Can't Sell Personal Information**
- **Local Governments will have to comply with provisions**



What can you do as an Organization?



What can you do Personally (at work)?

- **Be Informed**
 - Know patterns of email messages
 - Hover over the return address
 - If you aren't expecting it – don't click on it
 - Financial Organizations don't send general emails
- **Have a strong password and change it often**
- **Educate yourself on current trends**
 - Via your IT Department, etc.
- **Use Mobile Devices with Care**
 - Many apps have permissions.



Resources and Organizations

- Virus/Security vendor
 - Trend
 - Sophos
 - Symantec
- Security Companies
 - Optiv
 - AMS.Net
- Security Organizations
 - MS-ISAC
 - ISACA
- MISAC
 - Security Committee
 - ListServ
 - Annual Conference Sept 27th – Oct 2nd (Monterey, CA)



Websites to Visit

- Thycotic – Data Breaches
<https://thycotic.com/company/blog/2018/07/31/the-6-most-disturbing-data-breaches-in-2018-so-far/>
- SecureWorld Cyber Maps
<https://www.secureworldexpo.com/industry-news/6-live-cyber-attack-maps>
- Gemalto Security
<https://www.gemalto.com/review>
- CSO – 9 Cyber Security Predictions for 2019
<https://www.csoonline.com/article/3322221/security9-cyber-security-predictions-for-2019.html>
- California Office of the Attorney General Data Security Breaches
<https://oag.ca.gov/privacy/databreach/list>
- Breach Level Index
<https://breachlevelindex.com/>

Q&A



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