

Cyber Security Trends Impacting the Public Sector

Threats, trends, and recommendations

CERTIFIED PUBLIC ACCOUNTANTS & BUSINESS CONSULTANTS



Introductions

- Jimmy Dominguez, City of Westminster
- Rob Rudloff, Partner Cyber Security Services, RubinBrown LLP

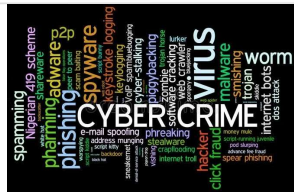
2



Cyber Security – Last Year in Review



What we hoped hackers were doing



What they were really doing....

3



Cyber Attacks - Motivation

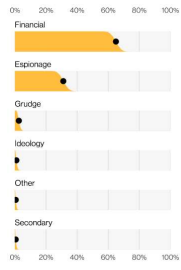


Figure 58. Top Motives in Basic Web Application Attacks breaches (n=251)

Verizon Data Breach Investigations Report, 2022



4

Statistics from 2021

Industry	Incidents				Breaches			
	Total	Small (1-100)	Large (100+)	Unknown	Total	Small (1-100)	Large (100+)	Unknown
Total	23,896	2,065	636	21,995	5,212	715	255	4,242
Accommodation (72)	156	2	1	153	69	1	1	67
Administrative (54)	39	5	7	27	19	3	5	11
Agriculture (8)	243	1	1	241	39	1	0	38
Construction (23)	127	21	7	99	57	8	5	44
Education (8)	1,241	12	48	1,081	282	57	15	210
Entertainment (7)	215	12	5	198	96	6	3	87
Finance (52)	2,527	103	50	2,374	690	56	32	602
Healthcare (82)	849	36	14	799	571	14	10	547
Information (8)	2,561	59	25	2,477	378	27	10	341
Management (55)	8	1	2	5	2	0	0	2
Manufacturing (31-33)	2,337	168	74	2,095	338	54	22	262
Mining (2)	231	0	0	231	132	0	0	132
Other Services (8)	193	16	1	183	101	8	1	92
Professional (5-6)	3,566	1,095	144	3,327	881	263	52	366
Public Administration (82)	2,782	110	88	2,584	837	74	25	438
Real Estate (8)	19	1	1	17	10	1	0	9
Retail (44-45)	629	107	68	454	241	54	35	152
Transportation (48-49)	305	26	38	241	137	17	23	97
Utilities (22)	172	20	14	138	47	14	3	30
Website Tools (42)	194	79	33	112	68	38	8	22
Unknown	5,434	11	11	5,412	651	1	3	647
Total	23,896	2,065	636	21,995	5,212	715	255	4,242

Table 2. Number of security incidents and breaches by victim industry and organization size
Verizon Data Breach Investigations Report, 2022



5

Overall

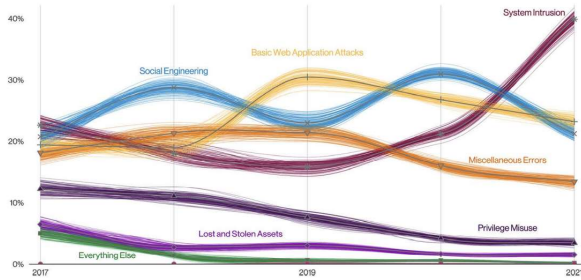
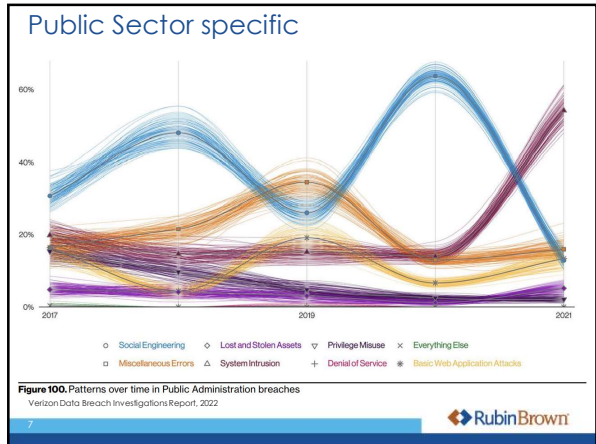


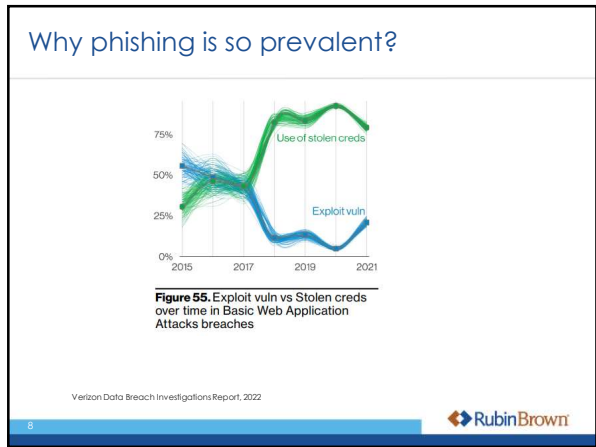
Figure 33. Patterns over time in breaches

Verizon Data Breach Investigations Report, 2022



6





- ### What can we do about it?
- Protect and Enable People
 - Improve Processes
 - Invest in Technology
- 9

People

- Use a Password Manager
- Security Awareness Training
- Encourage Reporting

Regan Gomez regan.gomez@rubinbrown.com
To: You
Subject: Reference Report.pdf
11:14 AM

From: Checkel Sentinel sentinel@checkel.com
Sent: Tuesday, July 29, 2020 11:04 AM
To: RubinBrown@rubinbrown.com
Subject: Reference Report

Office 365

Checkel Sentinel has shared this document with you

Hi,

Please review the attached report. Feel free to contact us if you have any questions.

Do you have a moment? I am tied up in a meeting and there is something I need you to take care of.

We have a pending invoice from our Vendor. I have asked them to email me a copy of the invoice and it will appreciate it if you can handle it before the close of banking transactions for today.

I can't take calls now so an email will be fine.

Best,
Regan

10

Technology

- Multi-Factor Authentication EVERYWHERE Possible!!
- Backup Solution(s)
- Endpoint Protection
- Monitoring

Authenticator

- RubinBrown123
130 882
- LastPass
684 456
- Atom AD
782 405
- KnowBe3
782 405
- Amazon
360 967
- Bank Financial
342 499

11

Process and Plans

- Assess and Update
- Incident Response Plan
- Disaster Recovery Plan
- Business Continuity Plan

```

    graph TD
      Design --> Implement
      Implement --> Operate
      Operate --> Assess
      Assess --> Design
  
```

12

Resources

- Colorado Statewide Internet Portal Authority (SIPA)
- Multi-State Information Sharing and Analysis Center (MS-ISAC)
- Department of Homeland Security (DHS)
- Cybersecurity & Infrastructure Security Agency (CISA)

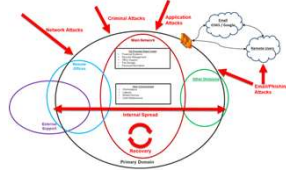


13

RubinBrown

Next Steps

- Assess the Organization
 - Understand Strengths and Weaknesses
 - Make Informed Decisions
 - Actively Manage Risk



14

RubinBrown
