



# DATA SECURITY IN A VIRTUAL ENVIRONMENT

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## REMEMBER?

Equifax?

Dropbox?

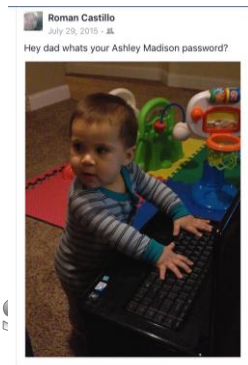
Target?

Blue Cross & Blue Shield?

The ENTIRE Federal Government?

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## ASHLEY MADISON



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## There were only 3 ZIP codes in America without any Ashley Madison accounts – here they are

**Nikolai, Alaska** Population: 94  
Winter temperatures dip to 60 degrees below zero

**Perryville, Alaska** Population: 113  
10 households have an internet connection

**Polvadera, New Mexico** Population 269  
4 square miles where there is no reception

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VERIZON DBR

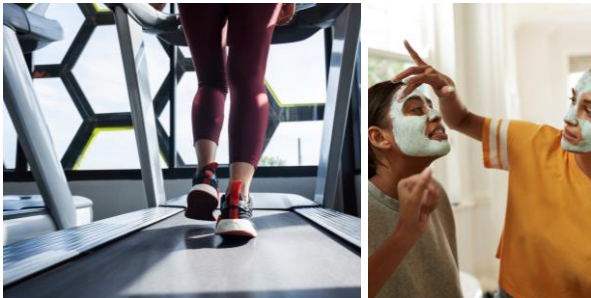
**70% of breaches involved companies with fewer than 100 employees.**



WHAT DOES A REAL ESTATE BREACH LOOK LIKE?

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AGENT SECURITY POLICY  
THE SIDE-HUSTLE

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- 1. Do you have a security policy to be provided to clients?
- 2. Do you have a security procedure followed by agents?
- 3. What does your independent contractor agreement say about files being stored by an agent?

DATA SECURITY

WHAT DOES YOUR INDEPENDENT CONTRACTOR AGREEMENT POLICY MANUAL SAY ABOUT CLIENT DATA?



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CASE STUDY

Roger is the Broker/Owner of R&R Real Estate. In 2016, Roger implemented a new "paper light" office policy that provided a system for agents to use that would eliminate the need for most of the paper accumulated in a transaction by providing most forms, note and message taking into an easy on-line system. Any documents created as part of the transaction were scanned by the agent involved or an office assistant and saved into the system. An assistant also scanned and saved any paper files created before the implementation of the system. When Roger implemented this new system, Rosie began saving her own virtual copy of each file that she had worked on as an agent. In 2021, Rosie decided to leave R&R real estate and transfer to a competing brokerage. Rosie's first task at her new brokerage was a marketing campaign with her new branding and to contact her former clients and sphere of influence and notify them of the change of her brokerage.

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DOES ROGER HAVE A PROBLEM?

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WHO REGULATES DATA AND DATA STORAGE?

The FACT Act and the Identity Theft Red Flags and Address Discrepancy Rules.

The Federal Trade Commission Act: Section 5 prohibits "unfair or deceptive acts or practices"

- False or misleading claims about privacy or data security practices.
- Failure to employ reasonable security measures that causes or is likely to cause substantial consumer harm.

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### WHERE TO BEGIN?

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### CONDUCTING A DATA AUDIT

-  What?
-  Where?
-  Why?
-  How?
-  Who?
-  When?

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### WHAT DO YOU HAVE?

- Client Name?
- Photocopy of Driver's License?
- Physical Address?
- E-mail Address?
- Social Media?
- Telephone?
- Birthdates?
- Earnest Money Check?
- Mortgage Application?
- Agency Agreement?
- Employment History?
- Divorce Decree or Marriage License?
- Credit Card numbers?




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### WHY AM I KEEPING THIS?

- State Regulations
- My accountant told me to
- My attorney told me to
- Data mining in the future




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### WHERE IS DATA STORED?

-  Filing cabinet
-  Digital file
-  The "cloud"

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### HOW IS DATA SECURED?

-  Lock
-  Encryption
-  Hmmm....

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### WHO HAS ACCESS?

**Fired IT worker changed password, wants \$200K to fix it, college says** 12 / 17

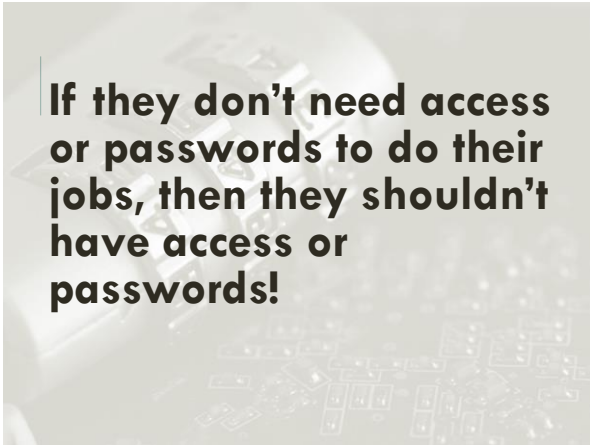
USA TODAY  
Vic Ryckaert 8 hrs ago

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INDIANAPOLIS — A fired IT employee took his revenge on a for-profit online college before he left, changing a password on an account that stored email and course material for 2,000 students, the Indianapolis-based online school has alleged in a

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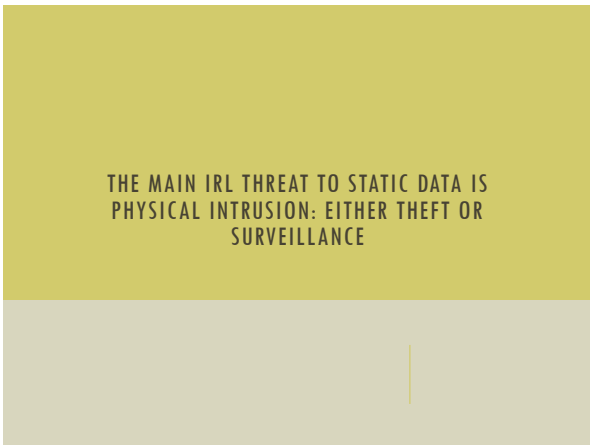


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## ESI BEST PRACTICES

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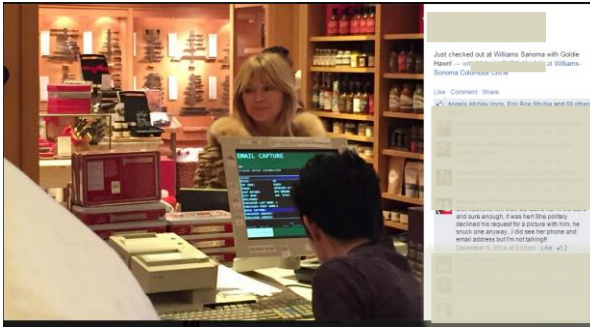
## IRL SECURITY

**Lock static data that contains personally identifiable information.**

**Limit access to data.**

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Consider Computer Placement



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Position	Password	Number of users	Time to crack it	Times exposed
1. ↑ (2)	123456	2,543,285	Less than a second	23,597,311
2. ↑ (3)	123456789	965,435	Less than a second	7,870,694
3. (new)	picture1	371,612	3 Hours	11,190
4. ↑ (1)	password	360,467	Less than a second	3,759,316

**PASSWORDS (YES, PASSWORDS)**

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Nearly 17 percent of people are safeguarding their accounts with "123456."

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**WHAT ABOUT MY STICKY NOTES?**

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### Top 5 password manager recommendations from PC MAG 8/22

	<b>Keeper Password Manager &amp; Digital Vault</b> Best for Secure Cross-Platform Password Management
	<b>Zoho Vault</b> Best for Sharing Features
	<b>Bitwarden</b> Best for Open-Source Password Management
	<b>LastPass</b> Best for Ease of Use
	<b>AgileBits 1Password</b> Best for Password Organization

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## REMINDERS

Password Resets – don't use the same password forever!

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## UPDATES!!!!


Patches (not just for jeans anymore)



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## Software updates (apply patches)

- Developers create "patches" when a weakness is discovered.
- A major weakness of Zoom in early 2020 allowed hackers to capture passwords of users. This was "patched" in April, but not all users applied the patch.



Real Estate Speakers.com / BettsWorks, Inc.  
May 21  
Proud of this team! The presenters have been meeting every week, help each other & share skills on virtual training.

Just a side note- if you're taking a picture of screen shot and want to post it on social media- make sure it's not the most unflattering picture ever taken in the history of pictures....

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## Lessons learned in 2020



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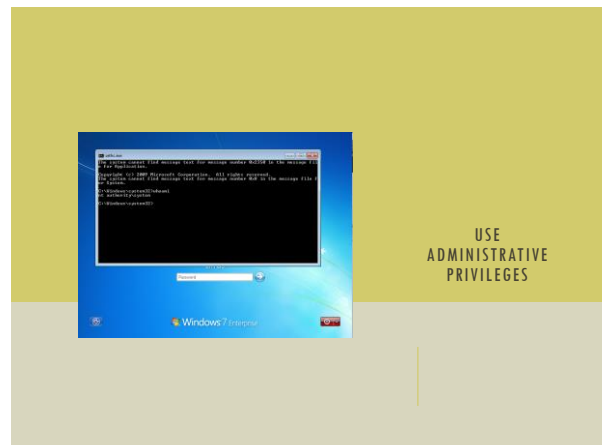
## zoom

- In December of 2019 had 10 million users- passed 200 million in beginning of April 2020
- System weaknesses allowed an attacker to take over the microphone or camera on Mac/iOS & steal passwords on windows. This was "patched" on 4/1/20
- **Zoom Bombing**
  - Use password protection for all meetings
  - Don't post the meeting on-line or through a social platform.
- **Privacy Concerns**
  - Zoom has admitted it "incorrectly suggested" that they provide end-to-end encryption. (they don't)
  - If you're using the ios app- your info is shared with Facebook.
  - All you pms through the platform during a session are made available to the host at the end.

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- Google Duo: Allows up to 12 in the group chat and has end-to-end encryption.
- Facetime: If everyone is an ios user, FT is available for up to 32 users and it encrypts. Doesn't have the option to share screen to 'walk through' a document.
- Webex: Video calls up to 100 with end-to-end encryption and has a free option.
- GoToMeeting: 14 day free trial than \$12 a month w/up to 150 people. Is encrypted and allows you to share screen.
- WhatsApp: End to end encryption is always on- it can't be turned off. Uses your data plan or wi-fi not cellular allows for video conferencing for small groups.

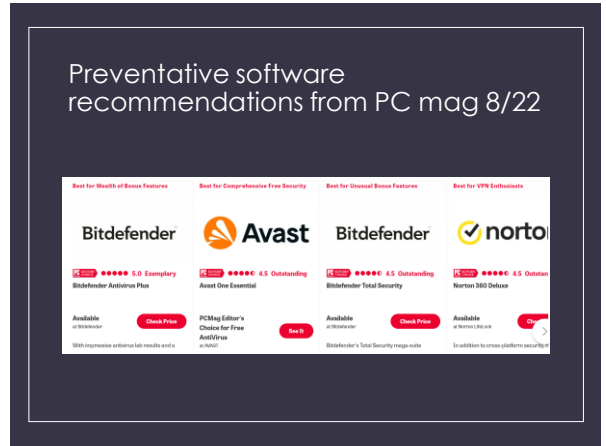
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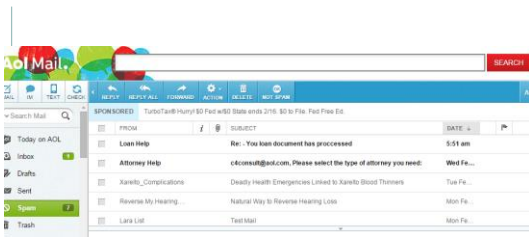
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E-MAIL RISKS

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THE INTERNET OF THINGS



What devices in your home or office are connected to the internet?



Are those devices regularly updated?



What other entities do those devices connect to?

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HEY SIRI:  
RECORD MY  
CONFIDENTIAL  
CONVERSATION AND  
SEND IT TO RANDOM  
STRANGERS



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## E-MAIL RISKS

- Phishing
- Spear Phishing
- Social Engineering
- Doppleganger Domains

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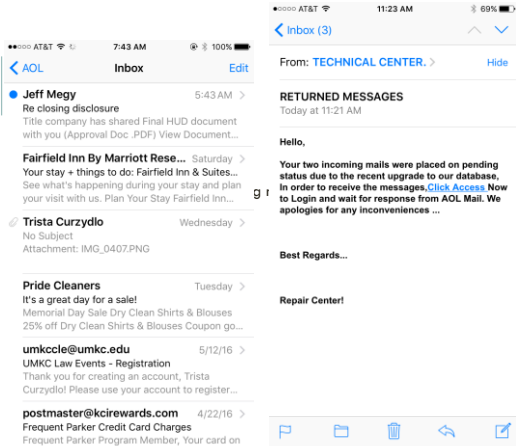
## E-MAIL RISKS

### Phishing and Spear Phishing

Who is this person and why are they e-mailing me?

FROM	SUBJECT	DATE
Multiple Sclerosis Tre...	Multiple Sclerosis Treatment Guide	Mon Se...
Debbie Rowland	Purchase Short Sale Closing	Mon Se...
Mark Ian	Change of Purchase Price	Mon Se...
ALDI	Please accept this Thank You Gift from ALDI	Mon Se...

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## E-MAIL RISKS

### Social Engineering

"I know this person and they're asking me to do something, I should do it"

- ✓ Don't hit "reply" start fresh or forward using the address in your contacts or from a business card.

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## SOCIAL ENGINEERING THROUGH SOCIAL MEDIA

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## E-MAIL RISKS

### Doppelganger Domains

• Domains that mimic legitimate domains used to misdirect traffic or "vacuum" misaddressed e-mails.

- [trista@tristac.com](mailto:trista@tristac.com) vs [trista@trista\\_c.com](mailto:trista@trista_c.com)
- [www.tristac.com](http://www.tristac.com) vs. [www.tristac.realtor](http://www.tristac.realtor)

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Be Careful  
Unexpected Attachments  
Develop a System

Top Ten Reviews ranked:

1. HP SecureMail
2. DataMotion
3. Proofpoint
4. EdgeWave
5. Trend Micro

### E-MAIL MANAGEMENT

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### ENCRYPT E-MAIL MESSAGES

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### ENCRYPT STORED E-MAIL

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MOBILE DEVICES

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## APPLICATIONS

What permissions?

Download only from trusted sources.

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## GOING ROGUE

You may not see  
Russia from here,  
but the Russians can  
see you...

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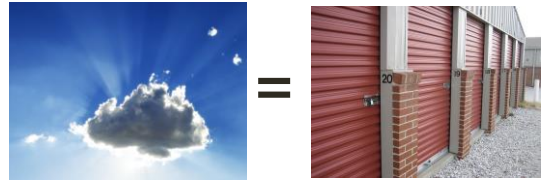
**It has been  
estimated that you  
spend about a year  
of your life looking  
for things you have  
lost.**

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**THERE ARE OVER 2.3 BILLION  
SQUARE FEET OF SELF STORAGE  
RENTABLE SPACE IN THE U.S.  
IN 2013, 87% OF THAT SPACE WAS  
OCCUPIED.**

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“Cloud computing is a model for enabling convenient, on-demand network access to a shared pool of configurable computing resources that can be rapidly provisioned and released with minimal management effort or service provider interaction”



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### 3<sup>RD</sup> PARTY VENDOR AGREEMENTS

1. Collection of Promises Made to Consumer
2. Collection of Promises Explicitly NOT Made to the Consumer
3. Obligations That Consumers Must Accept

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### 3<sup>RD</sup> PARTY VENDOR

Security  
Tech Support  
Reliability  
The Fine Print

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SECURITY

Encryption  
Physical Location  
Security Support  
Access

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**How and when is support available?**

**Is the support staff of the vendor prepared to assist individuals with all levels of IT skills?**

TECH SUPPORT

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RELIABILITY

**Will there be times when you cannot access the data you've stored?**

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THE FINE PRINT

**Following termination, does the vendor keep any copies of the data that was stored?**

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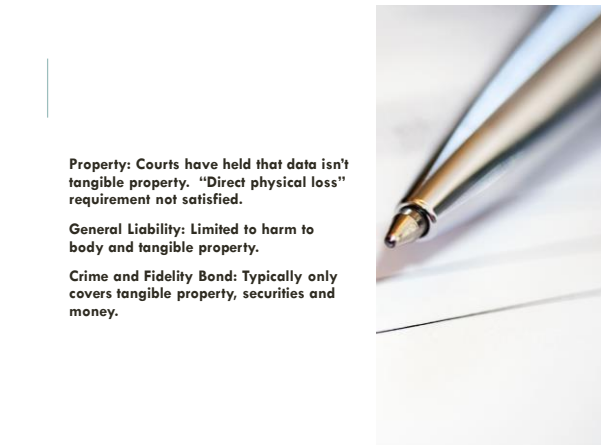
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