



UTSA SBDC
COVID Business Recovery Accelerator
<https://txsbdc.org/businessrecovery/>
(210) 458-2272



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CYBER AWARE PASSWORDS



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- **Cyber Risk and Cyber Environment Primer**
- **Role of Passwords**
- **How Passwords are Compromised**
- **Password Do's and Don'ts**
- **Good / Bad Passwords**
- **2FA / MFA**
- **Password Management**
- **Resources**
- **Q&A / Wrap-up**





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impact = $g(\text{business criticality})$

$$\text{risk} = \text{likelihood} \times \text{impact}$$

likelihood = $f(\text{vulnerabilities, exposure, threats, mitigating controls})$

RISK WILL NEVER BE ZERO....NEVER EVER, EVER

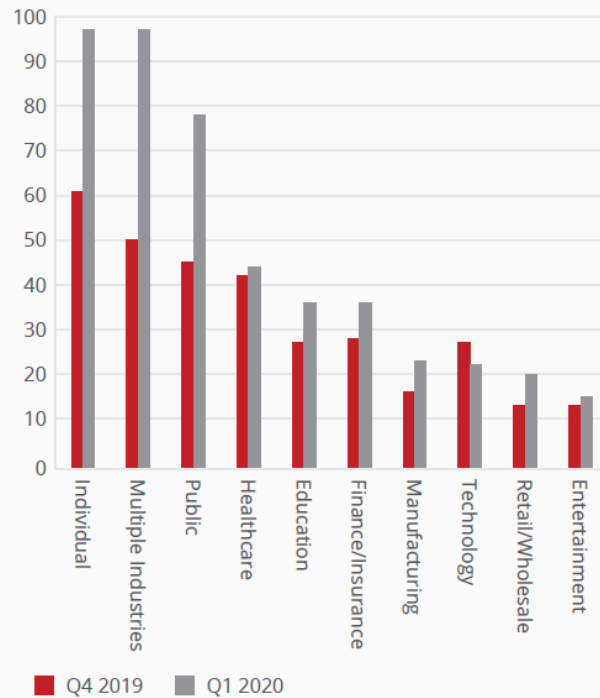


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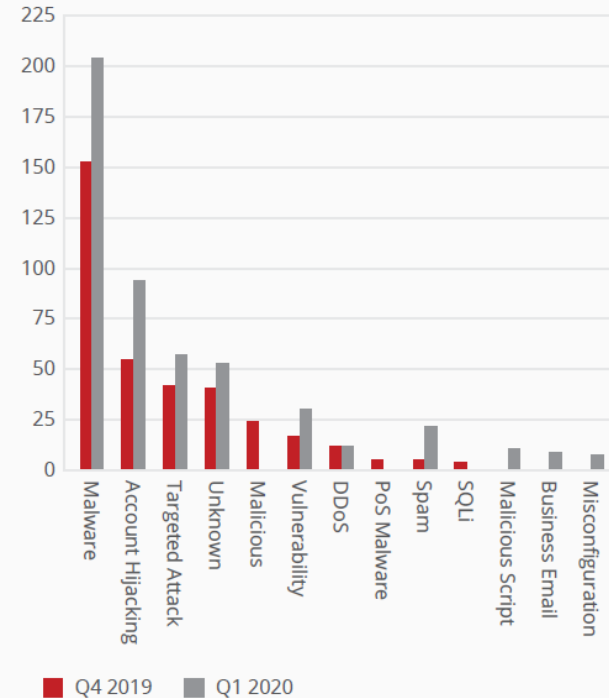
CYBERSECURITY ENVIRONMENT

Top 10 Targeted Industry Sectors



Security incidents data is compiled by McAfee Labs from several sources.

Top 10 Attack Vectors



Security incidents data is compiled by McAfee Labs from several sources.



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Support small businesses
01012020



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Hackers
attack
every
39
seconds.



43% of
cyber attacks
target small
businesses.



30% of
phishing
emails get
opened.



The average
breach costs
a company
\$21,155
a day.



Only **14%**
of companies
believe they
are prepared
for
cybercrime.



81%
of breaches leveraged
stolen or weak
passwords

(Verizon Data Breach Investigations Report 2017)



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Password Compromise

- Key Loggers
- “Discovered”
- Phishing / Social Engineering
- Brute Force
- Intercepting
- Open Source Research / Guessing
- Shoulder Surfing
- Password Spraying
- Credential Stuffing



```
[80][http-get-form] host: 192.168.100.155 login: admin password: password
[80][http-get-form] host: 192.168.100.155 login: admin password: p@ssword
[80][http-get-form] host: 192.168.100.155 login: admin password: 12345
[80][http-get-form] host: 192.168.100.155 login: admin password: 1234567890
[80][http-get-form] host: 192.168.100.155 login: admin password: Password
[80][http-get-form] host: 192.168.100.155 login: admin password: 123456
[80][http-get-form] host: 192.168.100.155 login: admin password: 1234567
[80][http-get-form] host: 192.168.100.155 login: admin password: 12345678
[80][http-get-form] host: 192.168.100.155 login: admin password: 1q2w3e4r
[80][http-get-form] host: 192.168.100.155 login: admin password: 123
[80][http-get-form] host: 192.168.100.155 login: admin password: 1
[80][http-get-form] host: 192.168.100.155 login: admin password: 12
1 of 1 target successfully completed, 12 valid passwords found
Hydra (http://www.thc.org/thc-hydra) finished at 2017-07-27 15:28:24
```




- ✔ Use a password manager
- ✔ Complex
- ✔ Non-predictable
- ✔ Use 2FA / MFA when available
- ✔ Login using HTTPS
- ✔ Change often
- ✔ Change default passwords
- ✔ Enable max login attempts
- ✔ Use pass phrases
- ✔ Give bogus security question answers

- ✘ Make short passwords
- ✘ Reuse passwords
- ✘ Share passwords
- ✘ Write passwords down
- ✘ Use “Remember Password”
- ✘ Click on suspicious email links
- ✘ Use login as password
- ✘ Use adjacent key combinations
- ✘ Use personal information

Passwords are like underwear...



Change yours
often.



Don't share them
with friends.



The longer,
the better.



Be mysterious.



Don't leave yours
lying around.



New Password:

DallasMavs

Super weak

New Password:

GoSpursGo!

Strong

Quiz

QiU1!PbJ9

aBT8E4o?

off the mark.com

by Mark Parisi





<https://haveibeenpwned.com/>



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Two Factor (2FA) and Multi Factor (MFA) Authentication





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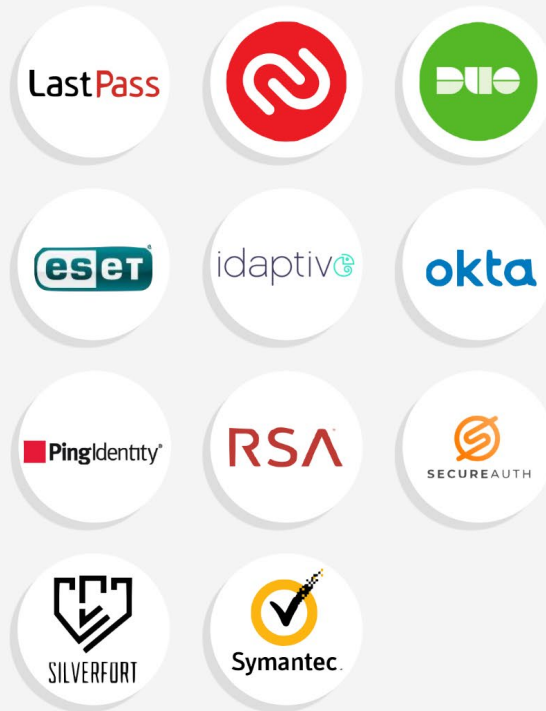




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The **Top** MFA Solutions for Business



Password Managers



A Password Manager is usually a computer program or application that allows users to securely store and manage their passwords.



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- ✓ Ability to Sync
- ✓ Strong Encryption
- ✓ Password Generator
- ✓ 2FA / MFA
- ✓ Website and Apps

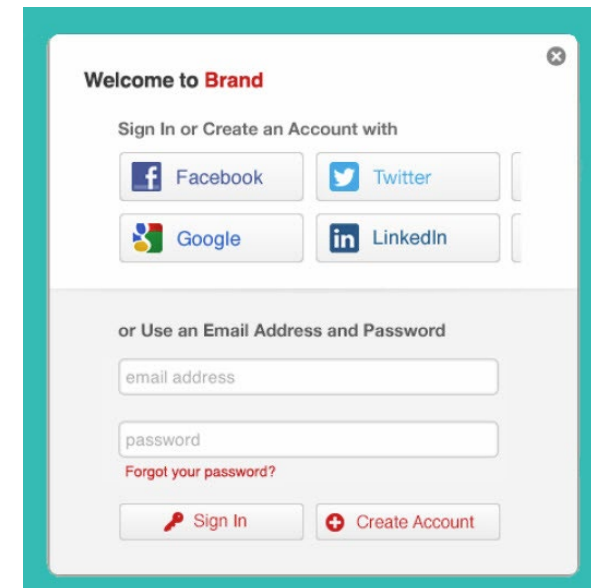
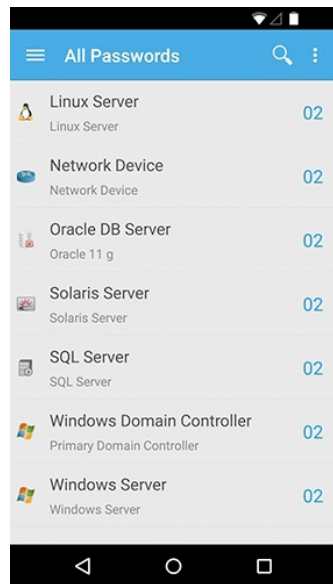




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Password Managers for Business





LastPass *

Keeper

KeePass

Sticky Password *

1Password *

Devolutions Password Hub

Dashlane *

Roboform *

Passwordstate

NordPass



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NIST Special Publication 800-63
Secure Online Password Generator
Have I Been Pwned?

UK National Cyber Security Centre Password Managers Guide

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Aug 31, 1:00 PM Small Business Emergency Preparedness

Sep 8, 10:00 AM Cybersecurity CMMC Roundtable Discussion

Sep 10, 9:00 AM CMMC Level 1 Training

Sep 24, 10:00 AM Cyber Aware : Social Engineering

Building the Texas Economy One Business At a Time



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Each program within the Institute is funded through various state and federal programs,
and respective service areas differ according to that particular program's mission.