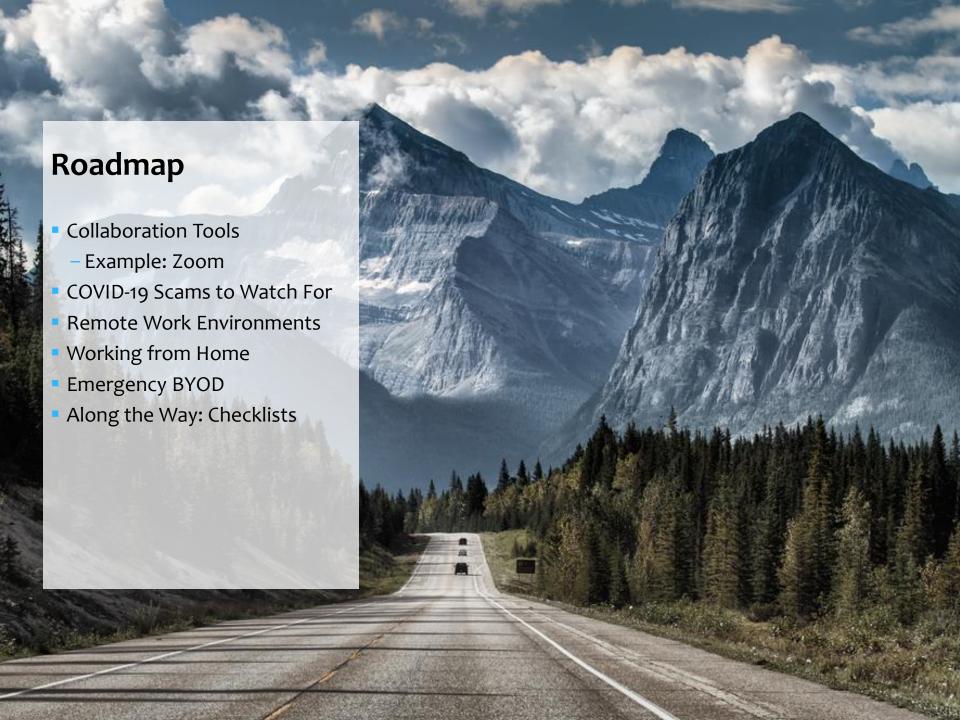
Remote Work Security



Sherri Davidoff CEO







"Chase, Citibank, educational institutions, and more"

From 10M to 200M Users...

'Every day is a crisis': Zoom boosts its security as scrutiny grows

"We've got to double down on privacy, double down on security," Zoom CEO Eric Yuan said.





FBI warns of 'Zoombombing' as more businesses, schools utilize teleconferencing

Cyber criminal

Posted: 6:12 PM, Apr





'Alcohol is soooo good': Trolls are breaking into AA meetings held on Zoom video calls and harassing recovering alcoholics

Aaron Holmes Mar 31, 2020, 1:22 PM



'Zoombombing' Becomes a Dangerous Organized Effort

Zoom, the videoconferencing app, has become a target for harassment and abuse coordinated in private off-platform chats.



Hackers "Scan" for Open Meetings

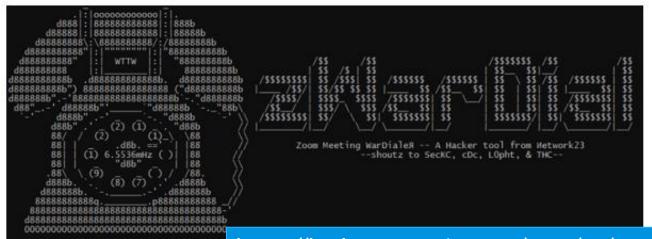
02 'War Dialing' Tool Exposes Zoom's Password

Problems

As the Coronavirus pandemic continues to force process are now holding daily meetings using vide without the protection of a password, there's a decent of "Zoom bombed" — attended or disrupted by someon data gathered by a new automated Zoom meeting disconumber of meetings at major corporations are not being

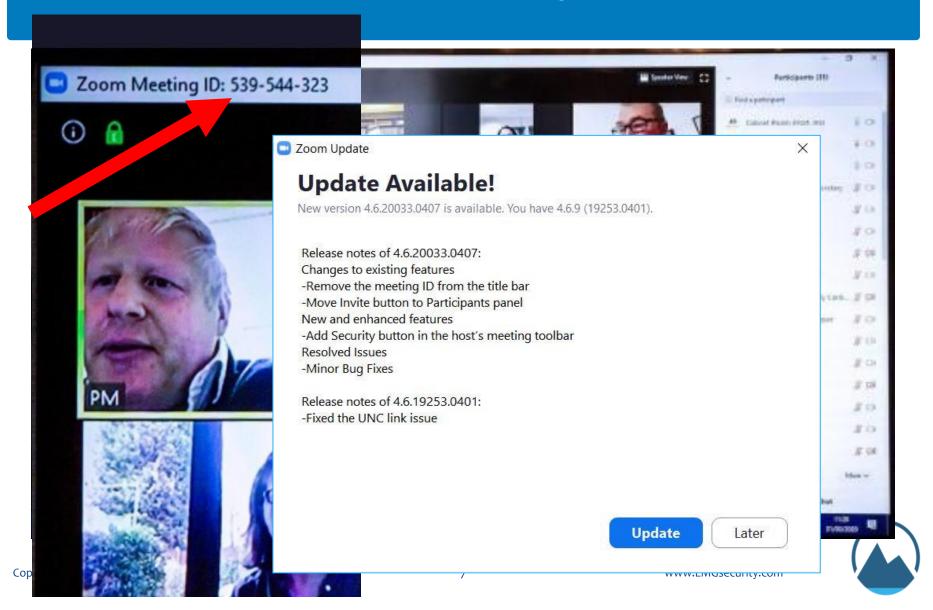
Meeting has not started

"[A] single instance of zWarDial can find approximately 100 meetings per hour, but ... multiple instances of the tool running in parallel could probably discover most of the open Zoom meetings on any given day."

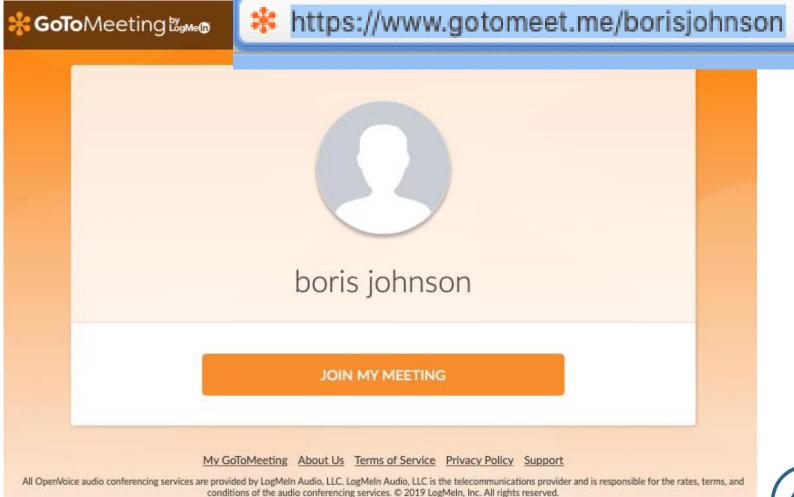


https://krebsonsecurity.com/2020/04/war-dialing-tool-exposes-zooms-password-problems/

Human Error



GotoMeeting-Bombing? (not as catchy)





Move Fast and Roll Your Own Crypto

A Quick Look at the Confidentiality of Zoom Meetings

April 3, 2020





Protectio our Data

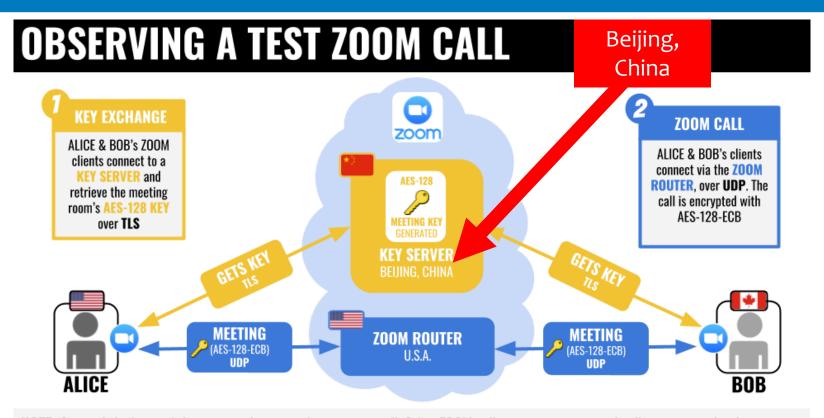
Communications are established using 256-bit TLS encryption and a shared content on be encrypted sing AES-256 encryption.

his report examines the encryption that protects meetings in the popular Zoom leconference app. We find that Zoom has "rolled their own" encryption scheme, which has gnificant weaknesses. In addition, we identify potential areas of concern in Zoom's frastructure, including observing the transmission of meeting encryption keys through hina.

Key Findings

- Zoom <u>documentation</u> claims that the app uses "AES-256" encryption for meetings
 where possible. However, we find that in each Zoom meeting, a single AES-128 key is
 used in ECB mode by all participants to encrypt and decrypt audio and video. The use
 of ECB mode is not recommended because patterns present in the plaintext are
 preserved during encryption.
- The AES-128 keys, which we verified are sufficient to decrypt Zoom packets intercepted in Internet traffic, appear to be generated by Zoom servers, and in some cases, are delivered to participants in a Zoom meeting through servers in China, even when all meeting participants, and the Zoom subscriber's company, are outside of China.

Geolocation



NOTE: Citizen Lab observed these server locations during a test call. Other ZOOM calls may use servers and call routers in other locations.

https://citizenlab.ca/2020/04/move-fast-roll-your-own-crypto-a-quick-look-at-the-confidentiality-of-zoom-meetings/

Zoom Lets Attackers Steal Windows Credentials, Run Programs via UNC Links



'Zoom is malware': why experts worry about the video conferencing platform

The company has seen a 535% rise in daily traffic in the past month, but security researchers say the app is a 'privacy disaster'



▲ Many, including the British prime minister, Boris Johnson, have been using Zoom during the coronavirus crisis. Photograph: Olivier Douliery/AFP via Getty Images

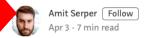
As coronavirus lockdowns have moved many in-person activities online, the use of the video-conferencing platform **Zoom** has quickly escalated. So, too, have concerns about its security.



Example of hyperbole for the Zoom discussion and horrid fear-mongering by the media and comments from individuals that are not even security researchers

This type of news is exactly what is damaging to the security industry and trust in us. @guardian

Zoom isn't Malware.





Co-authored by: David Kennedy, founder TrustedSec, Binary Defense Amit Serper, VP Security strategy and principal security researcher, Cybereason

Russ Handorf, PhD. Principal Threat Intelligence Hacker, WhiteOps

This post is NOT sponsored by or affiliated with Zoom in any way.

Zoom is not malware. Zoom is safe to use for both you personally and businesses, but you should read through on how to best protect yourself and your company. Throughout the past few days, social media (mostly infosec twitter) is gushing with various opinions and hot takes about Zoom being malware due to multiple issues found with it. Some of these issues are indeed problematic (and are/were taken care of by Zoom) and some of the issues that are being raised and discussed in social media are in fact not bugs or issues with Zoom itself but issues with the way operating systems work.



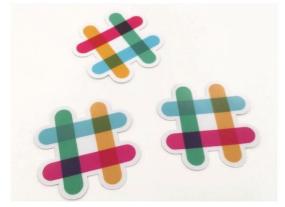
Zoom Security Checklist

- ✓ Ensure "Require a password when scheduling new meetings", "Require a password for instant meetings", and "Require password for participants joining by phone" are on.
- ✓ Turn off "Embed passwords in meeting link for one-click join"
- ✓ Ensure "Use Personal Meeting ID when scheduling a meeting" and "Use Personal Meeting ID when starting an instant meeting" are off.
- ✓ Don't post meeting links to public places.
- ✓ Utilize the "waiting room" feature to ensure only authorized users join the call.
- ✓ Ensure "Join before host" is disabled.
- ✓ Restrict remote control to host only.
- ✓ Make sure hosts are familiar with "mute," "hold" and similar controls.
- ✓ Use a strong password, a minimum of 14 characters.
- ✓ Utilize MFA whenever possible.
- ✓ Utilize a full-tunnel VPN to protect users.
- ✓ Restrict NTLM through GPO.
- ✓ Ensure users have strong endpoint protection.



Beyond Zoom: How Safe Are Slack and Other Collaboration Apps?





Cyber Security News Hacking News News Vulnerabilities

Slack Patch Critical Vulnerability Allowing **Automated Account Takeovers**

March 17, 2020 & Abeerah Hashim 990 Views account takeover, Accounts Hijacking, bug, Bug Bounty, bug

High-Severity Cisco Webex Flaws Fixed





The high-severity flaws, existing in Webex Player and Webex Network Recording Player, can allow arbitrary code execution.

COVID-19's effect on work footprints has created an unpr challenge for IT and security staff. Many departments are enable collaboration apps for all — but without proper see can be a big risk.



"What About Microsoft Teams?"

- Very advanced compliance options
 - ISO 27001, ISO 27018, SSAE16, SOC1,
 SOC2, HIPAA EU Model Clauses
 (EUMC)
- Regional data allocation (Americas, UK, EU, Middle East & Africa, APAC.
- FIPS-compliant encryption key exchange
- Encryption at rest & transit
- Installer/update vulnerability
 - https://nvd.nist.gov/vuln/detail/CVE-2019-5922





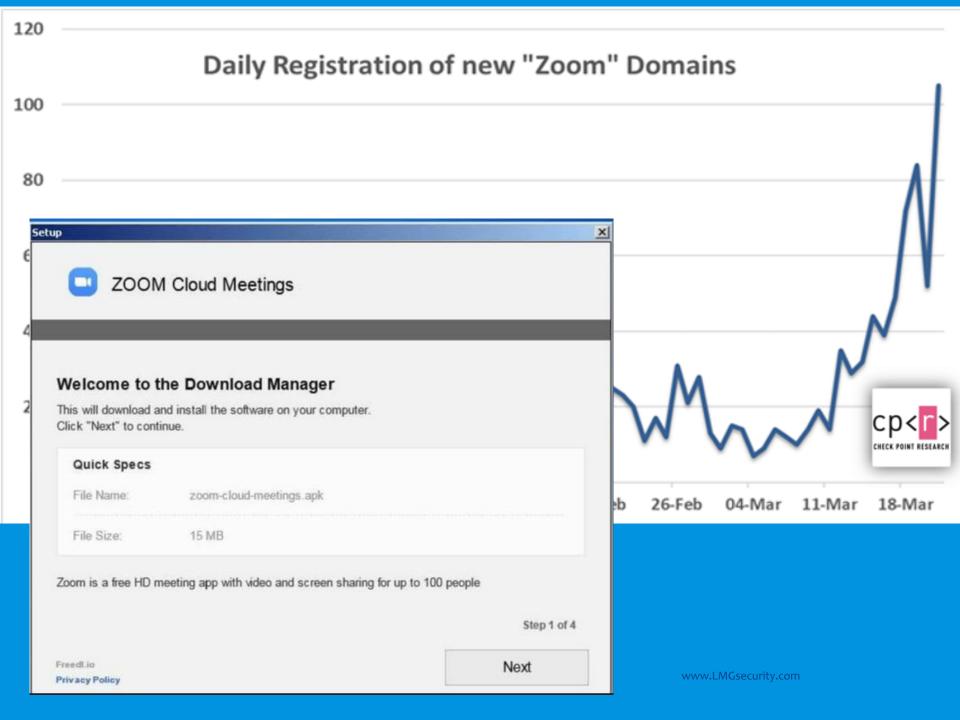


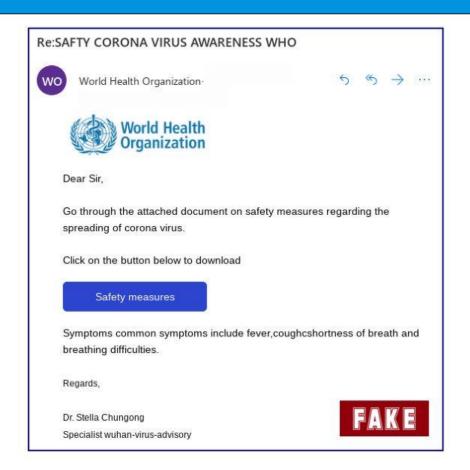
Cloud Cybersecurity Checklist

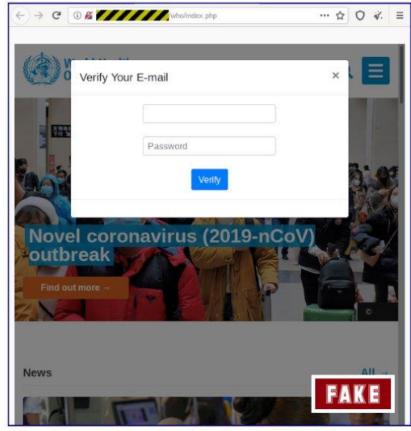
- 1. Access and Sharing 8. Termination of
- 2. Authentication
- 3. Encryption
- 4. Ownership
- 5. Location
- 6. Backups
- 7. Monitoring and Logs

- 8. Termination of Service
- 9. SecurityAssessments
- 10.Compliance
- 11.Incident & Breach Response

www.l



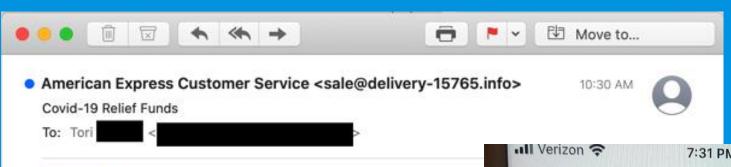




COVID-19 phishing impersonating the WHO

WHO-themed phishing site

https://www.bleepingcomputer.com/news/security/world-health-organization-warns-of-coronavirus-phishing-attacks/





Hello Valued Member,

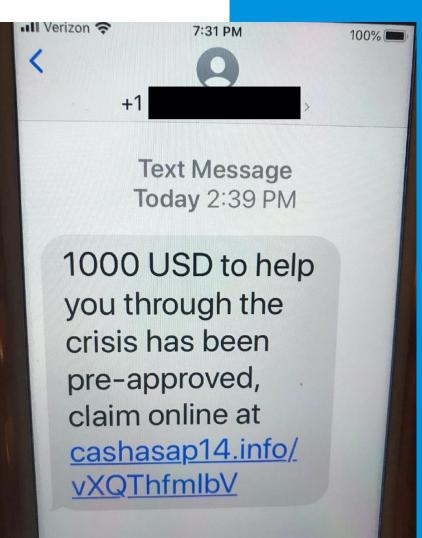
\$2400 has been assigned for you because of the covid-19 relief stimulus bill You are to authenticate your account to be propagated onto our updated sen You have 48 hours to complete the authentication, otherwise your account m Please tap here proceed.

Note: Late pay https://docs.google.com/document/d/e/

2PACX-1vQVI9yIqOK3C-3srmNPRoWNC1aeO4r

Thank you, cqKyEKX4FsHWR5pKPTC29mRzA0oxW7pZnYx American Exp

Okaeb_jglfHmVv/pub



uthentication

Remote Work Scams

From: "Imgsecurity.com VR" <gNdes@zoo.ox.ac.uk>
Subject: Imgsecurity 3 Missed Call - Ref: AhwMq

Date: April 1, 2020 at 1:30:23 PM MDT

To: news@lmgsecurity.com

Message from Trusted server.

Office 365 Voice-Mail

Dear news:

You have an incoming voice-message in your voice-portal

as of Wednesday 11, March 2020.

You can listen or download here .

Listen/Download



Product Scams - Masks

From: "Alice" < Kmdohealth@163.com > Subject: Re:Re:mask order

Date: March 26, 2020 at 3:28:26 PM MDT

To: <info@imgsecurity.com>
Reply-To: <Kmdohealth@163.com>

Dear friend,

How are you? First, I wish you have a good health.

I am Alice who Mainly supplies three layer masks, KN95 FFP2, FFP3 masks, Infrared Thermometer, temperature gun, disposable gloves; Protective clothing, protective masks and other protective materials.

We are big factory located in Shenzhen China, producing Thermometer and Face Mask, these days, we get many enquiry and bulk quantity orders from many different countries,

I wonder if I can help you? If you want a trail order, feel free email me.

From: "lvy" <asianmask_china@163.com>

Subject: surgical masks

Date: March 21, 2020 at 4:06:48 PM MDT

To: < training@lmgsecurity.com>

Reply-To: <asianmask_china@163.com>

Dear sir,

Good morning, i am Ivy from Professional mask factory, and we can supply sanitizer gel.

First, I wish you have a good health, recently the virus spread seriously, so we everyone

Our products include General surgical masks and professional surgical masks. The efficiency of bacterial filtration is at least 95%. (BFE 95) The Picture is our Disposable surgical mask.







HERE ARE WHAT RECENT USERS ARE SAYING

Guido Zambrano Torre

The coronavirus probably has a stronger ability to spread than the World Health Organization has estimated so far.



Isabel Jara

The higher the number, the more transferable the virus is and the higher the risk for rapid spread. When the reproduction number falls below 1.0, the epidemic is likely to die out.

Magdaliza Negreira



Our review shows that the coronavirus is at least as transmissible as the SARS virus. And that says a great deal about the seriousness of the situation.



Albert Jing

The studies consisted of estimations of the growth rate based upon the cases observed in the Chinese population, and based upon statistical and mathematical methods.

Mitch and Stacey

Melissa Grafster

The World Health Organization

Due to the recent outbreak for the Coronavi Organization is giving away vaccine kits. Ju

You just need to add water, and the drugs and vaccines are ready to be a pellets containing the chemical machinery that synthesises the end prothat tell the drug which compound to create. Mix two parts together in a ready.

ORDER NO

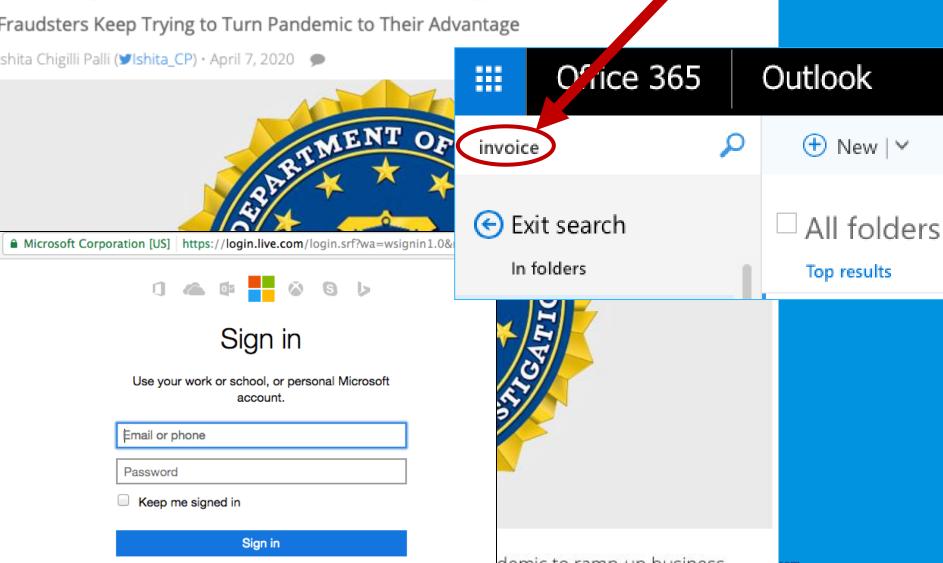
Phone Scams



"For only \$79 our highly trained technicians will do a full air duct cleaning and sanitation to make sure that the air you breathe is free

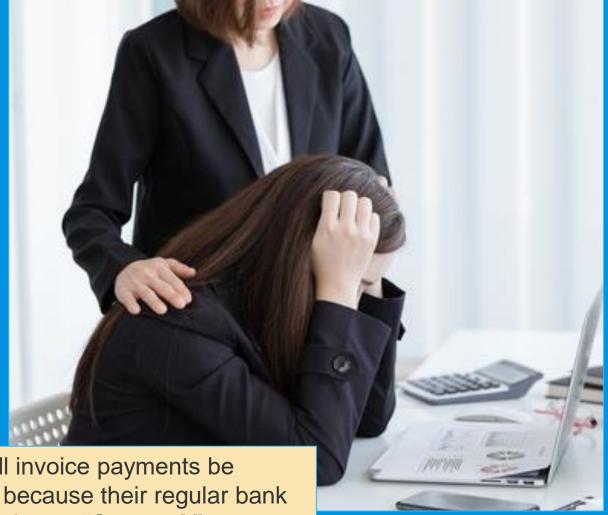


FBI: COVID-19-Themed Business Email Compromise Scams Surge



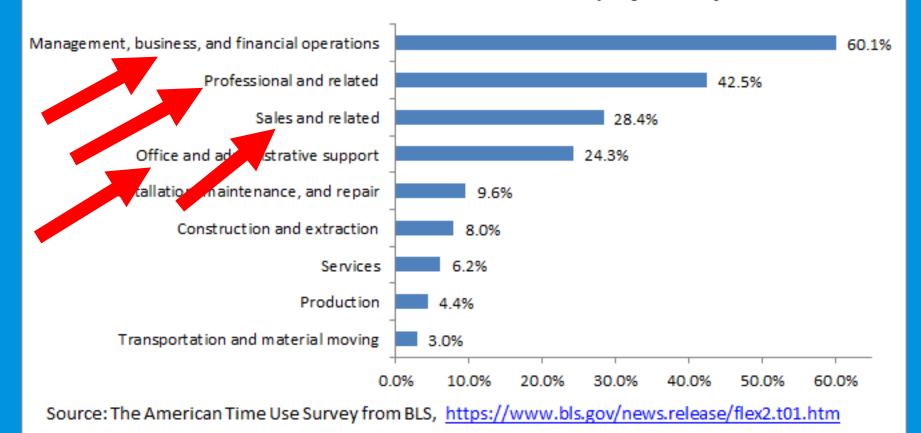
No account? Create one!

demic to ramp-up business varned this week.



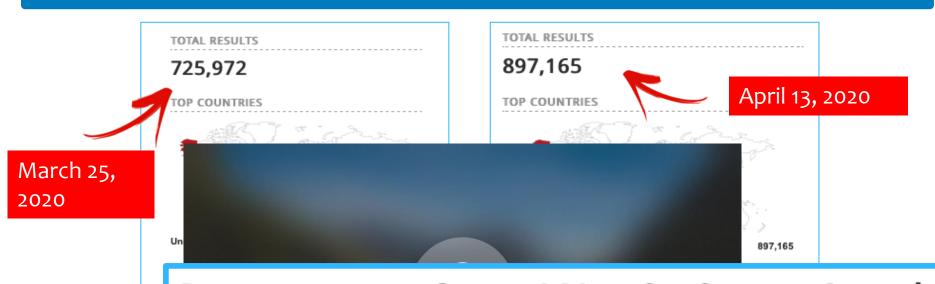
"The client requested that all invoice payments be changed to a different bank because their regular bank accounts were inaccessible due to "Corona Virus audits." The victim sent several wires to the new bank account for a significant loss before discovering the fraud."

Share of workers who can telework, by occupation



Released Sept 2019

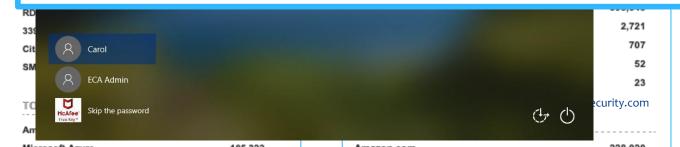
Going Up: Exposed Login Interfaces



Ransomware Gangs' Not-So-Secret Attack Vector: RDP Exploits

But RDP Attack Overuse Leads Other Hackers Back to Botnets, Researchers Find

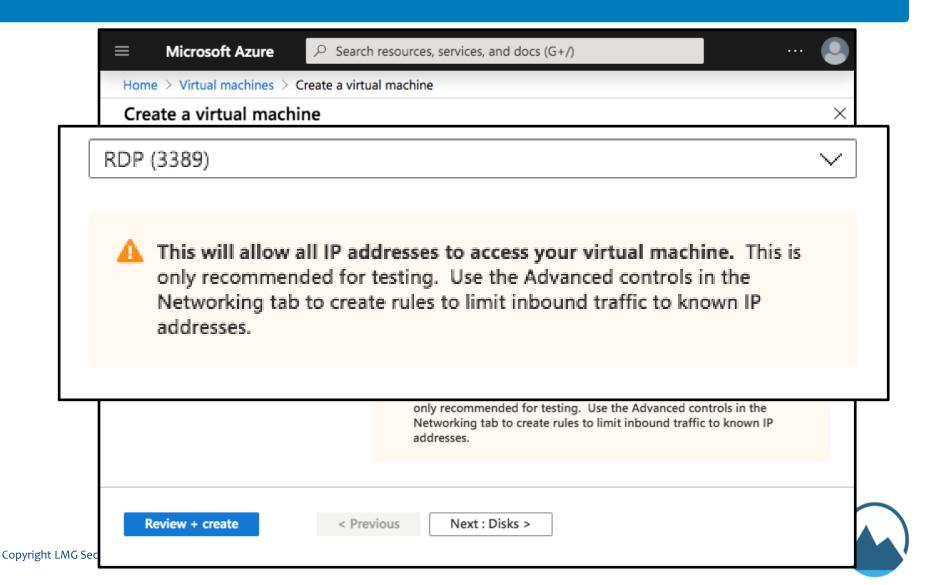
Mathew J. Schwartz (Yeuroinfosec) • November 4, 2019





Copyright LMG Securit

Insecure Defaults



Stolen Credentials

Remote Desktop Connection

Remote Desktop
Connection

Conquier del: 3333

User name computer/Raymand
You will be asked for pederifalt when you con

HACKED WINDOWS REMOTE DESKTOP (RDP / VPS)

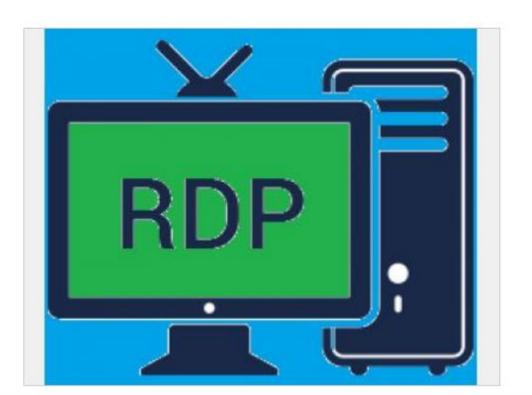
Vendor Skyscraper (1900) (4.94*) (@ 210/1/1) (* 23/0/0)

Price \$0.00241 (\$15.6)

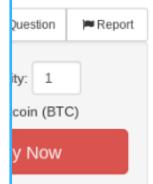
Ships to Worldwide, Worldwide

Ships from Worldwide

Escrow No



DP) with A



ws 10

cheap price!



Servers : Win

All IPs are fre

- Lifetime : 1 da

Worldwide co

Copyright LMG Securit

How Hackers Break In



Top Threat action varieties in breaches, Verizon Data Breach Investigations Report 2019

"Hackers don't break in, they log in"

- Bret Arsenault, Microsoft



Akamai: We Saw 61 Billion Credential Stuffing Attacks in 18 Months + INCREASE / DECREASE TEXT SIZE -

ED TARGETT EDITOR



You can check to see if your username and password have been leaked.

Mark Hachman (PC World (US online)) on 18 January, 2019 08:25

















dd to favorites

Authentication Methods

- Something you know (Type 1)
- Something you have (Type 2)
- Something you are (Type 3)
- •Multifactor = more than one



Authenticator Apps



- Cheap & easy options
- Office365
- Google
- Duo

www.LMGsecurity.com/passwords



2FA Best Practices

- Use strong 2FA (ie an app)
 - -How-to videos are here: https://lmgsecurity.com/passwords
- Turn off SMS-based authentication
- Check that your cloud providers support strong authentication



"Not All Two-Factor Authentication is Created Equal" https://www.LMGsecurity.com/not-all-two-factor-authentication-is-created-equal/



Use A VPN

- Prevent server exposure
- Encrypt your communications
- Scan remote devices for patches & A/V
- Split tunnel vs. full tunnel
- Segment



Security Cleanups & Configuration Checks

- Security Cleanups!
- Virtual Desktop Infrastructure (VDI)
- Virtual Private Cloud (VPC)
- VPN Configuration
- Perimeter port scanning



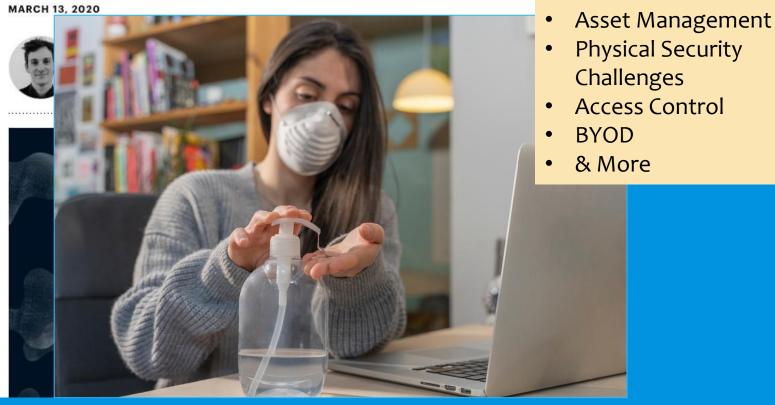
https://www.LMGsecurity.com/remote-security/

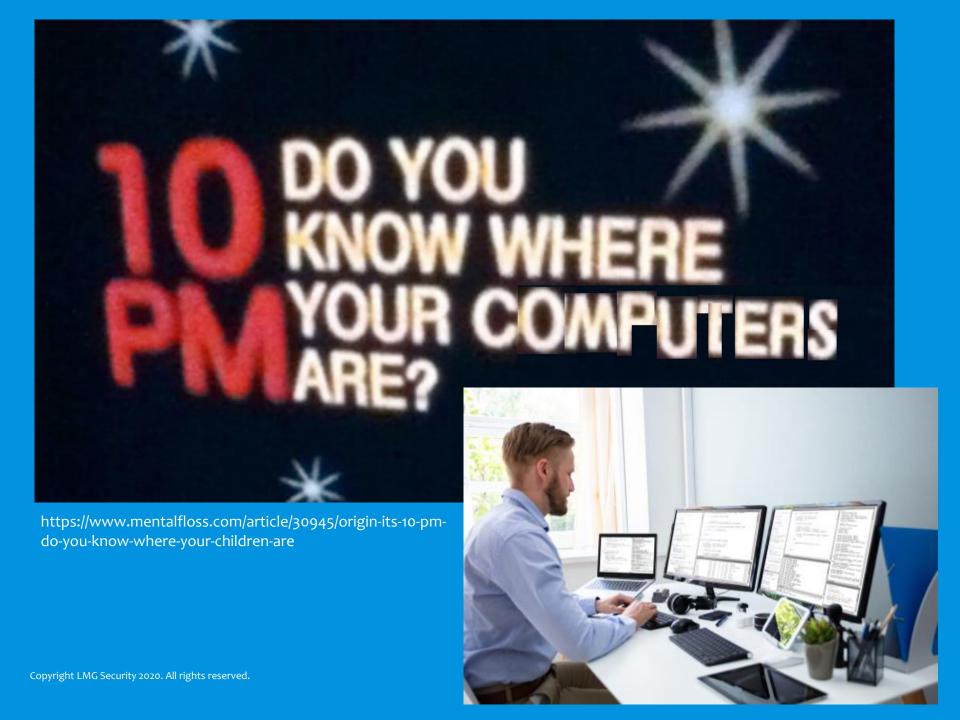




The Coronavirus Is Creating a Huge, Stressful Experiment in Working From Home

Even before the pandemic struck, remote work was accelerating in the U.S. But the next few months will be a very strange test of our white-collar future.





Asset Management

- Employees have brought home equipment
 - -Monitors
 - -Computers
 - -Keyboards & Mice
 - -Desks & Chairs
 - -Locks etc







Asset Management

- Keep track!
 - -Survey
 - -Checkout system
 - -Periodic checks (don't wait 4 months)
- New equipment
 - −le. No sharing headsets
- Consider what happens w/ furloughs/layoffs





Define Your Workspace & Communicate Boundaries













Sharing != Caring

Set a password & PIN

Screen locking



























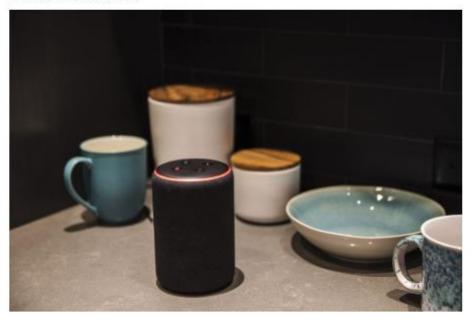
"What About Active Listening Devices Like Alexa/Google Home?"

- "What's a good policy for active listening devices in an employee's home, like Alexa or Google Home?"
- Activate accidentally 1.5 to 19 per day
- Consider going to a different room for sensitive conversations

https://moniotrlab.ccis.neu.edu/smart-speakers-study/

Locked-Down Lawyers Warned Alexa Is Hearing Confidential Calls

By Crystal Tse and Jonathan Browning March 20, 2020, 10:59 AM MDT



An Amazon Echo Plus smart speaker. Photographer: Andrew Burton/Bloomberg

Hey Alexa, stop listening to my client's information.



























Clear Policies NDA?













Use Locks

Do Not Write Down Passwords

Clean Desk Policy

Lost/Stolen Devices

A Stolen Laptop Contained Data For More Than 114,000 Patients At Truman Medical Centers

By DAN MARGOLIES . DEC 18, 2019



- Laptop stolen from vehicle
- Data breach
- "Password-protected"
 - –Unencrypted?
- Rapid deployment = errors





Lost/Stolen Devices - Defense

- Policy
 - Sample policy template!
 - https://www.LMGsecurity.com/ resources/remote-work-policytemplate/
- Encryption
- Laptop locks
- Training
- Clear reporting process







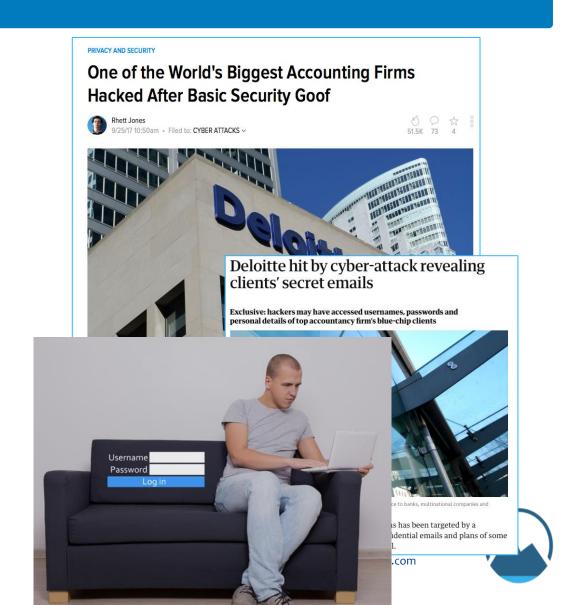
Remote Work Security Tips for Employees

- Know your organization's remote work policies and follow them.
- Watch out for phishing emails and phone scams.
- Define your physical workspace and communicate boundaries.
- Do not share computers or mobile devices that contain sensitive data with family members or roommates.
- Set a strong password or PIN for all devices. Do not re-use passwords.
- Use a password manager.
- Use MFA.
- Lock your screen whenever you step away from your computer, particularly if you are in a shared living space.
- Use a privacy screen to help prevent unauthorized access.

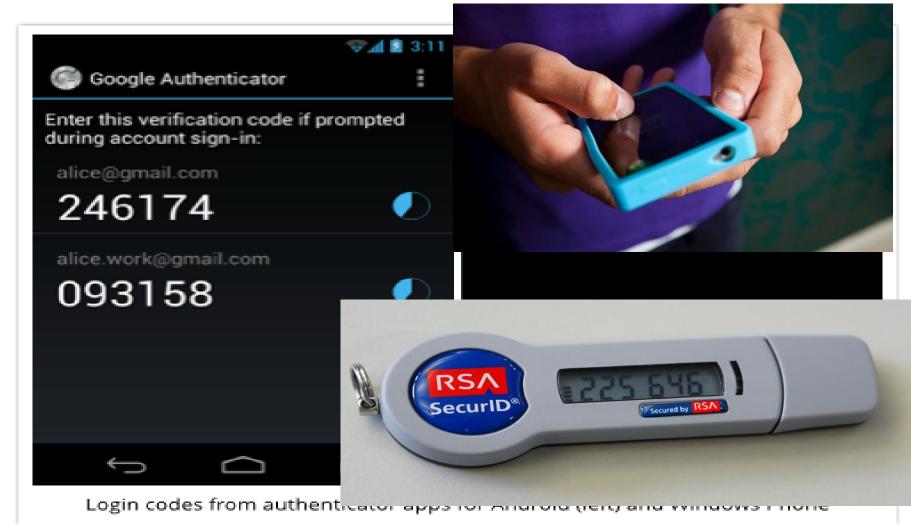
- Use locks when possible, such as lockable doors or storage spaces.
- Maintain a clean desk. Even if employees do not have locks, putting sensitive information out of sight helps to protect it from accidentally being viewed.
- Secure your home wireless network.
- Follow your organization's secure disposal policies.
- Do not copy sensitive work data to your personal computers or mobile devices without authorization.
- Keep track of what company devices/furniture you have at home. Provide this information to your company proactively, if possible.
- Immediately report anything suspicious to an appropriate contact at your organization.

Emergency BYOD

- Different risk model
- Higher-risk web surfing
- Games, utilities, unknown apps
- Maybe no antivirus
- No continuous monitoring
- Case: Biomedical company
 - IT admin used home computer
 - -Pwd saved in Chrome
 - Infected
 - -Ransomware & data theft
 - Major operational damage



Remember: Multi-Factor Authentication





"How Secure Are Cloud Storage Vendors?"

- "How secure are the cloud storage vendors like DropBox and Microsoft OneDrive?"
- Varies a lot
- Terms of Service
- Vulnerabilities/Hacking
- Stolen Passwords



Only as secure as their users!



Where is Your Data?

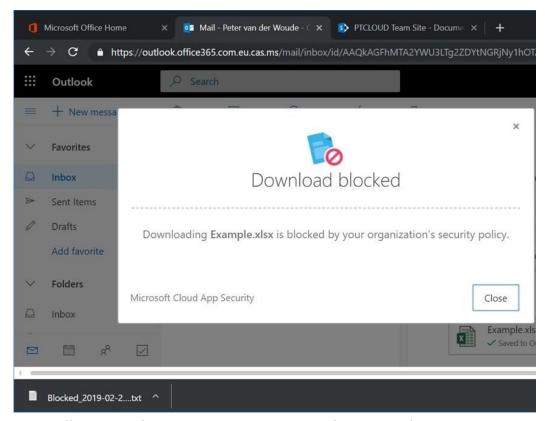
- Downloads from cloud/email
- Send to personal email/cloud
- USBs
- Printers
- Spyware/malware concerns
- Lack of proper encryption
- Coronavirus furloughs/layoffs?





Restrict Downloads

- Require use of <u>approved</u> cloud storage
- Restrict downloads when used from:
 - -Unmanaged devices
 - -IP Address/Location

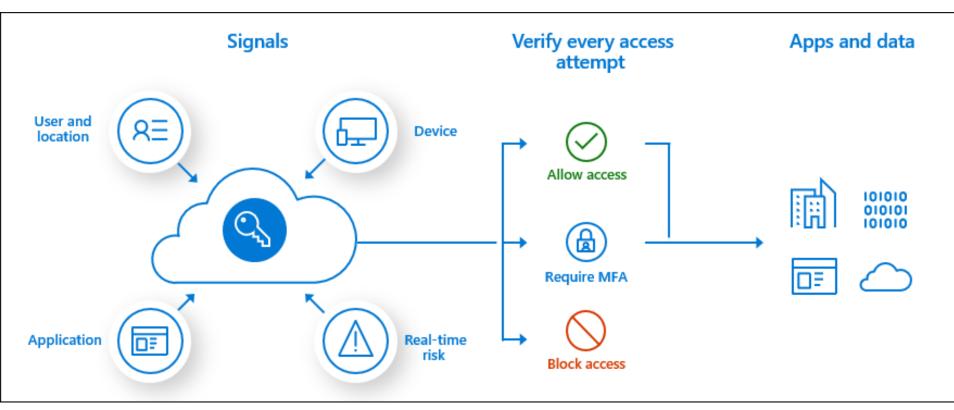


https://ii.wp.com/www.petervanderwoude.nl/wordpress/wp-content/uploads/CAS-Example-EXOo2.jpg?ssl=1



Enable Cloud Security Features

• Microsoft Azure's "Conditional Access":





Mobile Device Management (MDM)

- Remote Wiping of Data
- Location Tracking
- Antivirus
- Policy Enforcement
 - -Screen locking
 - -PINs
- Etc.





Emergency BYOD Checklist

58

For IT

- ✓ Establish policies
- ✓ Require a PIN/passcode
- ✓ Implement MFA
- ✓ Deploy antivirus
- ✓ Enable cloud security features
- ✓ Restrict downloads
- ✓ Consider MDM deployment
- ✓ Distribute physical security tools
- ✓ Publish incident reporting hotline



For Employees

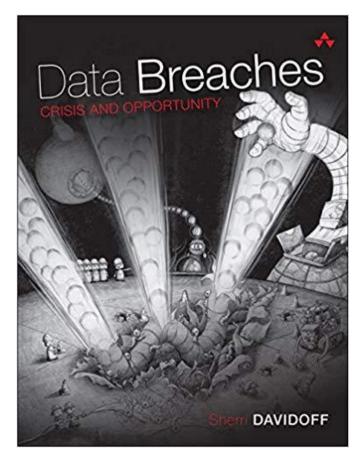
- ✓ Know your org's BYOD policies
- ✓ Put a strong/PIN passcode on devices
- ✓ Don't share devices
 - ✓ If you must, make a separate account
- ✓ Lock your screen
- ✓ Install antivirus and keep it up-to-date
- ✓ Use only approved file-sharing
- ✓ Don't download sensitive data w/o permission
- ✓ Try not to print sensitive data
- ✓ Don't download/install high-risk applications or engage in risky web surfing
- ✓ Report lost/stolen devices immediately



Questions?

- Sherri Davidoff
- Email: info@LMGsecurity.com
 - -Phone: 406-830-3165
 - **S**sherridavidoff
- Find me on **Linked** in







Note

Disclaimer

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