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Cybersecurity Tips for Employees:

Educating Staff on Secure Online & Office Behavior

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The Need to Educate Employees on Cybersecurity

When developing cybersecurity programs, many businesses focus on protecting their infrastructure perimeter and device endpoints. But it's also important to consider what happens when a thereat bypasses perimeter defenses and targets an employee in the form of a malicious email or text.

86%

According to a recent PricewaterhouseCoopers survey, 86% of business executives expressed concern about cyber threats and lack of data security.

Stronger cybersecurity has become a global priority as hackers penetrate IT infrastructures with increasing frequency and sophistication. According to the FBI, phishing was the most common type of cybercrime in 2020, with incidents nearly doubling from 114,702 incidents in 2019 to 241,324 incidents in 2020. Not surprisingly, losses from business email compromise (BEC) have skyrocketed over the last year. The FBI's Internet Crime Report shows that in 2020, BEC scammers made over $1.8 billion. Coupled with the Internet of Things (IoT) and the explosive growth of mobile devices, the potential for data leaks is even more significant.

Educating employees on what it takes to protect proprietary documents and data is critical. Any data leaks—whether intentional or unintentional—could potentially damage your bottom line and your industry reputation. It only takes one incident to destroy the goodwill you worked so hard to establish.

Physical Security Precautions

The Importance of Keeping a Clean Desk

It sounds simple, but keeping a clean desk is often overlooked when talking about data security. A messy desk makes it difficult to realize something is missing, such as a folder containing printouts with customer data. A cluttered desk also leads to the discovery of any theft likely being delayed.

Encouraging employees to maintain a neat desk pays off in two ways. In addition to making paper assets more secure, employees with clean desks are more apt to be productive because they can quickly—and safely—access the tools and resources they need to do their jobs.

Common Messy Desk Mistakes

- Leaving computer screens on without password protection
- Leaving documents, mobile phones, USB drives and personal items out in the open
- Neglecting to shred documents before they go into the trash or recycling bin
- Failing to close and lock file cabinets
- Writing usernames and passwords on visible slips of paper or sticky notes
- Displaying calendars for all to see

Email Threats

Social engineering is a non-technical, malicious activity that exploits human interactions to obtain information with the intent to gain access to secure devices and networks. Such attacks are typically carried out when cybercriminals pose as credible, trusted authorities.

> An example of social engineering is an email where an employee is asked to contact a tech support hotline and is tricked into giving up credential information.

Phishing Email Compromises

One of the most common forms of social engineering is email phishing—an attempt to acquire sensitive information such as usernames, passwords and credit card data by masquerading as a trustworthy entity. Phishing is a key threat for employees. Such emails often spoof the company CEO, a customer or a business partner and do so in a sophisticated, subtle way.

Common Phishing Techniques

The scope of phishing attacks is constantly expanding, but frequent attackers tend to utilize one of these email tactics:

- Embedding links that redirect users to an unsecured website requesting sensitive information
- Installing Trojans via a malicious attachment
- Spoofing the sender address to appear as a reputable source and requesting sensitive information

How to Block Phishing Attacks

Don't reveal sensitive information

As a general rule, never give out your personal and financial information via email.

Check the security of websites

"http" indicates the site has not applied any security measures while "https" means it has.

Pay attention to website URLs

Look for variations in spellings or a different domain (for example: .com versus .net).

Verify suspicious email requests

Beware of emails requesting information. Reach out directly to the business through other means.

Keep a clean machine

Utilize the latest operating system, software and web browsers, as well as antivirus and malware protection.

96% According to Verizon's 2021 Data Breach Investigations Report, 96% of cyberattacks arrive by email.

Username & Password Management

Although it should be common sense, employees need to avoid the use of passwords that are easy for hackers to guess. Among the top ten worst passwords, according to www.splashdata. com, are those that use a series of numbers in numerical order, such as “123456.” The names of popular sports such as “football” and “baseball” are also on the list, in addition to quirky passwords such as “qwerty” and even the word “password” itself.

Emphasis should also be placed on the importance of avoiding common usernames. In analysis conducted by the information security firm Rapid7, hackers most often prey upon these 10 usernames:

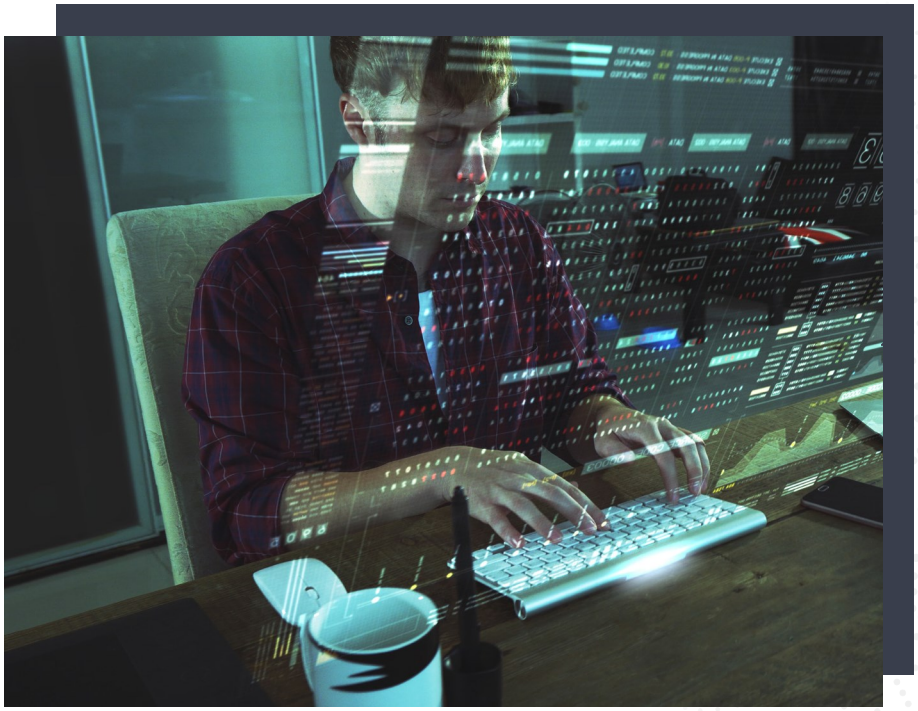
Username	administrator	Administrator	User1	Admin
Alex	Pos	Demo	db2admin	Sql

How Attackers Exploit Weak Passwords

While most websites don't store actual username passwords, they do store a password hash for each username. A password hash is a form of encryption, but cybercriminals can sometimes use the password hash to reverse engineer the password. When passwords are weak, it's easier to break the password hash.

Here is a list of common word mutations hackers use to identify passwords if they feel they already have a general idea of what the password might be:

- Capitalizing the first letter of a word
- Checking all combinations of upper/lowercase for words
- Inserting a number randomly in the word
- Placing numbers at the beginning and the end of words
- Replacing letters like "o" and "l" with numbers like "0" and "1"
- Punctuating the ends of words, such as adding an exclamation mark "!"
- Duplicating the first letter or all the letters in a word
- Combining two words together
- Adding punctuation or spaces between the words • Inserting "@" in place of "a"



Tips to Strengthen Password Security

- Change passwords at least every three months for nonadministrative users and every 45-60 days for admin accounts.
- Use different passwords for each login credential.
- Avoid generic accounts and shared passwords
- Conduct periodic audits to identify weak/duplicate passwords, and change as necessary
- Pick challenging passwords that include a combination of letters (upper- and lowercase), numbers and special characters (for example, “$”, “%” and “&”).
- Avoid personal information such as birth dates, pet names and sports.
- Use passwords or passphrases of 12+ characters.
- Use a password manager such as LastPass where users need just one master password.
- Don’t use a browser’s auto-fill function for passwords.

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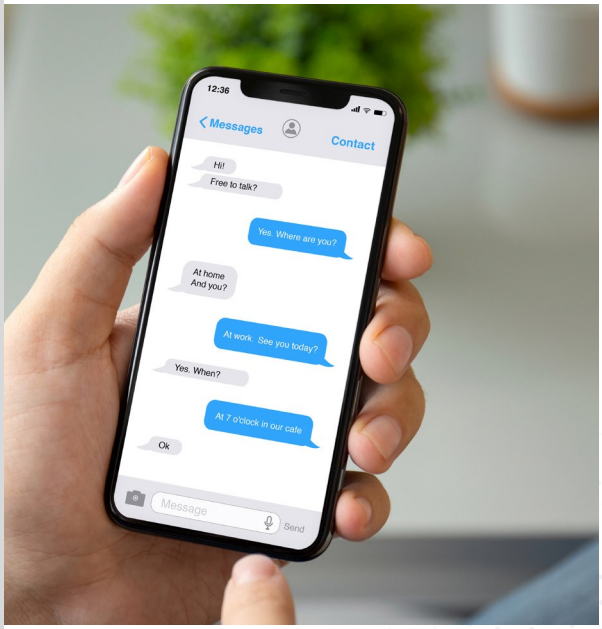
An advanced security technology to consider is two-factor authentication. After the end users log in, they receive a text message with a passcode to authenticate their ID. This approach ensures that end users not only know their passwords but also have access to their phone.

Mobile Security

Mobile security is an increasing concern as more and more companies adopt Bring Your Own Device (BYOD) environments, which allow end users to connect to corporate networks through their own (often multiple) devices. Businesses must secure these personal endpoint devices that are not completely under their control, and therefore, pose greater risks.

Mobile Device Security Challenges

- Lost, misplaced or stolen devices: Remote wiping is key to protecting sensitive business and personal information.
- Mobile malware: Hackers are now turning their attention to mobile devices and text messages. Note: While mobile malware affects Google Androids more than Apple's iOS, a few exploits exist for Apple products as well.
- Unsecure third-party apps: If breached, they can serve as a gateway to other apps and ultimately the device's operating system.



Employees who utilize unsecured public Wi-Fi are another area of concern. Hackers in the vicinity of or on the same network can overtake a device and capture sensitive data in transit. The end user can then become the victim of a man-in-the-middle attack, also referred to as hijacking. The hacker leverages the device so that it turns into an invasive device against other unsuspecting end users.

How Employees Can Secure Their Mobile Devices

Set a PIN or passcode

This is the first line of defense. If someone wants to access the device, they first need to break the code. Some device manufacturers also provide the option to automatically wipe the device after a few unsuccessful attempts.

Use remote locate tools

Several software solutions help locate lost or stolen devices through GPS and geofencing capabilities. Apple offers a service like this for mobile devices named “Find My iPhone.” For Android users, the Android Device Manager offers a similar service.

Keep devices clean

Today’s mobile phones are essentially mini computers, and they need to be cleaned up from time to time. Utilizing an antivirus and malware scanner is always a good idea.

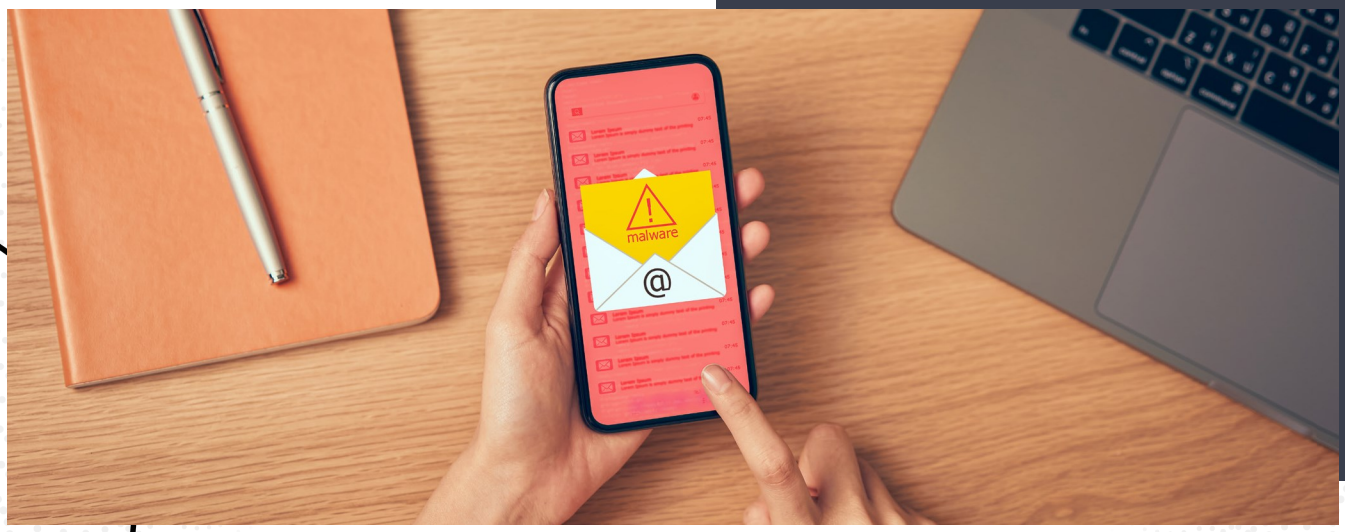
Mobile Device Management (MDM) solutions help businesses and their employees apply these best practices. By deploying an MDM platform, businesses can enforce the use of passcodes, and they can apply geofencing capabilities.

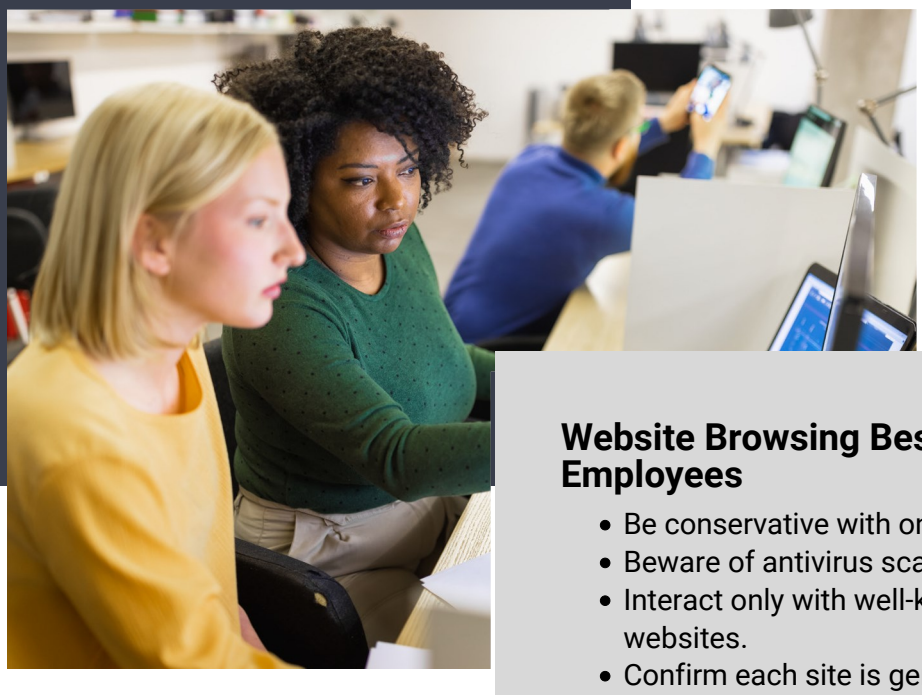
Secure Website Browsing

When end users venture out onto the Internet, it's easy to get tangled up in the vast web of threats. Some threats are readily apparent, but others are well hidden.

Malvertising is a form of malicious code that distributes malware through online advertising. It can be hidden within an ad, embedded on a website page or bundled with software downloads. This type of threat can be displayed on any website, even those considered the most trustworthy.

Another website browsing threat involves social media. According to an article in The Huffington Post, some of the most common Facebook hacks and attacks include clickjacking, phishing schemes, fake pages, rogue applications, and the infamous and persistent Koobface worm. Twitter isn't immune to security issues either. According to CNET News, just 43% of Twitter users could be classified as "true" users. The other 57% fell into a bucket of "questionable" users.





Website Browsing Best Practices for Employees

- Be conservative with online downloads.
- Beware of antivirus scams.
- Interact only with well-known, reputable websites.
- Confirm each site is genuine.
- Determine if the site utilizes SSL (Secure Sockets Layer), a security technology for establishing encrypted links between web servers and browsers.
- Don't click links in emails. Go to sites directly instead.
- Use social media best practices.

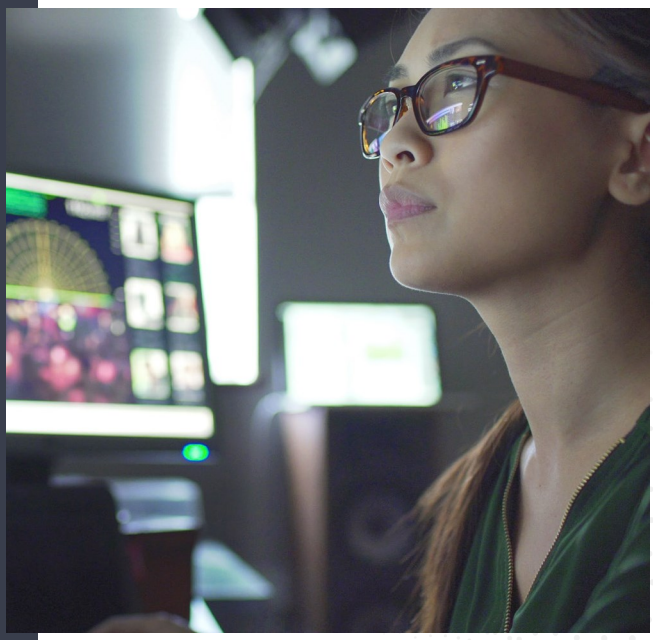
Websites are one of the most common sources of attack. This makes keeping up-to-date browsers paramount for all employees.

The Value of an MSP in Ensuring Employee Cybersecurity

Partnering with a Managed Services Provider (MSP) that focuses on IT security can bolster your cybersecurity defenses. This is especially true when it comes to employee training. All the tools and solutions in the world can't protect your business from human error.

Here are some of the benefits of working with a mobile device management MSP:

- Keep employee devices updated with the latest antivirus software.
- Apply updates to programs and applications, and patches to operating systems, as they become available.
- Provide security assessments to identify mobile security weaknesses.
- Offer guidance on how to mitigate mobile security risks.



Viruses can also do serious harm to information, so consider MSPs who can provide complete endpoint management. Endpoint technology scans downloaded apps and devices for any threats and provides a heads-up if malicious activity is detected.

Education & Technology – a Winning Cybersecurity Combination

Strengthening your business' cybersecurity posture begins with educating your employees. The tips provided within this eBook can go a long way in making sure sensitive information does not fall into the wrong hands. In today's world of advanced hackers, your confidential information is at risk, but a comprehensive cybersecurity defense can stack the odds in your favor.

Let's talk about your needs and how we can help!

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