



# Cyber Security

## Quick Reference Guide

### Security Risks

Businesses worldwide are at risk for security breaches. While large, well-known companies seem like a likely target, small and medium-sized organizations and individuals are also at risk. There are many ways data can be compromised, including viruses, phishing scams, hardware and software vulnerabilities, and network security holes.

#### Did you know?



**11%** of U.S. adults have had personal information stolen



**1 in 5** people have had an email or social media account hacked



**98%** of software applications are vulnerable



Only **40%** of adults know how to protect themselves online

### Confidential Information

When dealing with security, confidentiality means private information is never viewed by unauthorized parties. Confidential information must only be accessible to those authorized to view the sensitive data. Confidential information includes:

#### Personal Information

- Social Security Number
- Home Address
- Salary History
- Performance Issues
- Credit Card Numbers

#### Corporate Information

- Processes
- Customer Lists
- Research and Development
- Business Strategies
- Objectives and Projections

### Firewalls



A firewall acts like a security guard and prevents unauthorized people or programs from accessing a network or computer from the Internet. There are hardware-based firewalls, which create a protective barrier between internal networks and the outside world, and software firewalls, which are often part of your operating system.

### Passwords

The first line of defense in maintaining system security is using complex passwords. Use passwords that are at least 8 characters long and include a combination of numbers, upper and lowercase letters, and special characters. Hackers have tools that can break easy passwords in just a few minutes.

#### How Long Does it Take to Crack a Password?

There are 2 kinds of passwords:

#### Simple

Lowercase letters only

#### Complex

Upper & lowercase letters, numbers, & special characters

Complex passwords are  
**EXPONENTIALLY**  
More difficult to crack  
**Use them!**

Here's how long it takes to crack a password when it's **simple** vs. **complex**

Characters	Password	Time to crack
8	ghiouhel ghiouH3l	4 hours, 7 min 6 months
9	houtheouh Houtheo!2	4 days, 11 hours 1060 years
10	ghotuhilh gh34uhilh!	112 days 1500 years
11	wopthiendhf w3pthi7ndh!	8 years, 3 months 232,800 years
12	whithgildnzq @hi3hg5ldnq!	210 years 15,368,300 years

Source: mywot.com

## Malware

Malware is short for "malicious software." It is written to infect the host computer. Common types of malware include:



Replicating computer program that infects computers



Hijacks your computer or browser and displays annoying advertisements



Secretly tracks your internet activities and information




Malicious program that tries to trick you into running it

## Online Browsing

Browsers communicate to websites with a protocol called HTTP, which stands for Hyper Text Transfer Protocol. HTTPS is the secure version of HTTP. Websites that use HTTPS encrypt all communication between your browser and the site.



 <https://www.website.com>

Secure sites have an indicator, like a padlock, in the address bar to show the site is secure. You should always ensure security when logging in or transferring confidential information.



 <http://www.website.com>

Sites without HTTPS are not secure and should never be used when dealing with personal data. If you are simply reading an article or checking the weather, HTTP is acceptable.

## Network Security

- Use Wi-Fi password security and change the default password
- Set permissions for shared files
- Only connect to known, secure public Wi-Fi and ensure HTTPS-enabled sites are used for sensitive data
- Keep your operating system updated
- Perform regular security checks
- Browse smart!



## Email and Phishing

A phishing email tries to trick consumers into providing confidential data to steal money or information. These emails appear to be from a credible source, such as a bank, government entity, or service provider. Here are some things to look for in a phishing email:

### Grammatical Errors

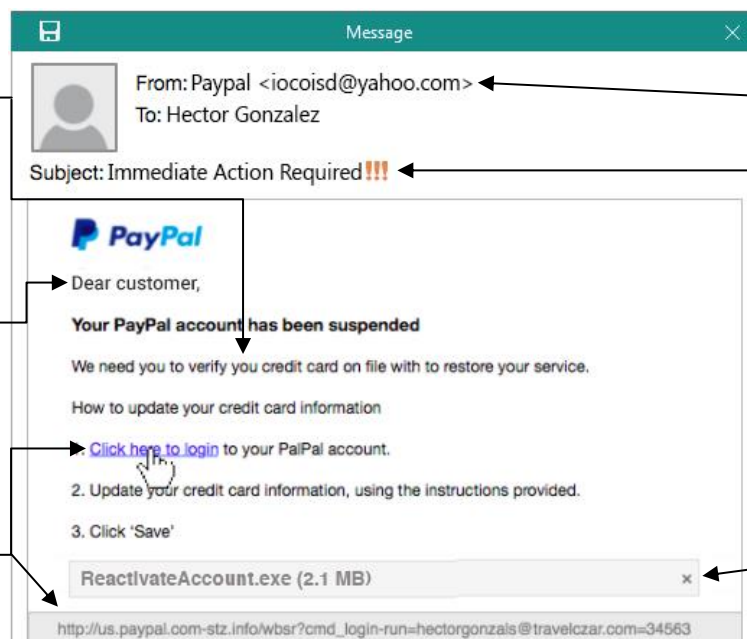
Spelling mistakes and poor grammar

### Generic References

Not being addressed by your name

### Hover Link

Always check where links lead before clicking



### Sender's Address

The address should be correlated with the sender

### Immediate Action

Beware of anything that calls for urgent action

### Attachments

Never open an attachment you aren't expecting