Introduction to Cyber Security

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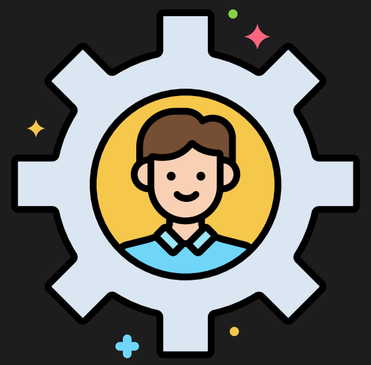
What is Exactly is Cyber Security?

Cyber Security



Individuals

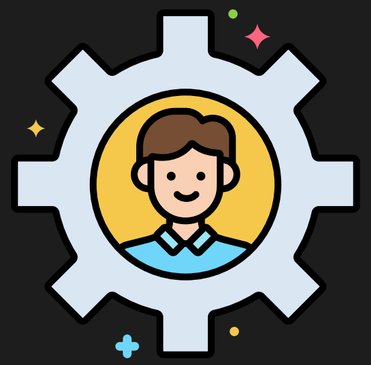
Small Business Owners

Online Business

Service Provider

Government

Cyber Security (Individuals)



Individuals

Cybersecurity means authorized access to personal data and malware-free devices.

Cyber Security (Small Business)

Small Business Owners

Protecting credit card data and implementing data security standards at point-of-sale registers is cybersecurity.

Cyber Security (Online Business)

"Cybersecurity involves securing servers that are regularly accessed by untrusted outsiders."

Online Business

Cyber Security (Service providers)

Protecting numerous data centers that house servers hosting virtual servers for different organizations is an essential aspect of cybersecurity.

Service Provider

Cyber Security (the government)

Establishing different data classifications with unique laws, policies, procedures, and technologies is a key aspect of cybersecurity.

Government

Cyber Security (For us)

Cybersecurity is a branch of information security that protects electronic data and systems that store and process it. In contrast, information security encompasses the security of all forms of data. (for example, securing a paper file and a filing cabinet)

Technical person

Class Activity

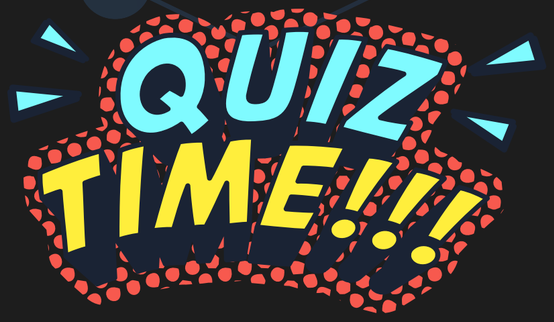
Which of the following is the primary focus of cybersecurity for individuals?

A. Protecting credit card transactions

B. Maintaining data classifications

C. Control over personal data and device functionality

D. Protecting virtual servers



Class Activity

A small business owner is concerned about cybersecurity.

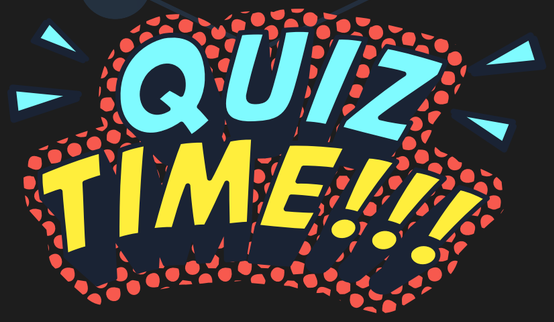
Their top priority should be:

A. Establishing server security for online interactions

B. Complying with data security standards at point-of-sale

C. Setting up data centers and virtual servers

D. Classifying data according to government regulations



Class Activity

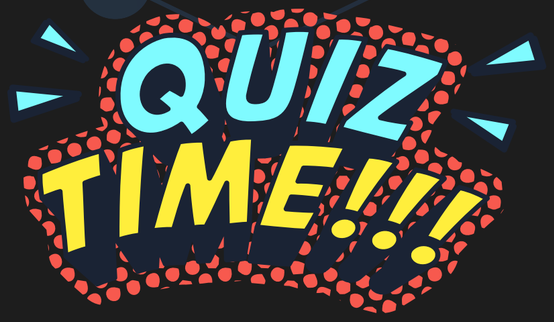
What is likely the biggest cybersecurity concern for firms conducting online business?

A. Preventing malware on personal devices

B. Securing servers accessed by the public

C. Protecting credit card information

D. Authorizing individual user access to data



Class Activity

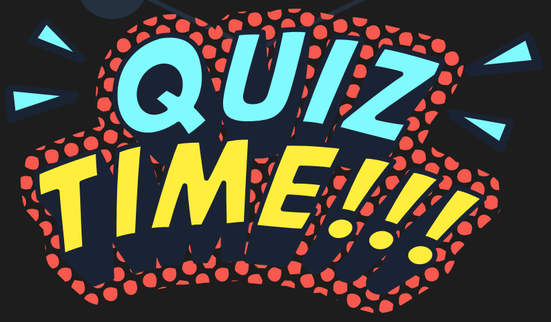
Shared service providers primarily need to focus their cybersecurity efforts on:

A. Classifying and labeling government data

B. Implementing secure point-of-sale systems

C. Safeguarding large-scale data centers

D. Monitoring individual user behavior



Class Activity

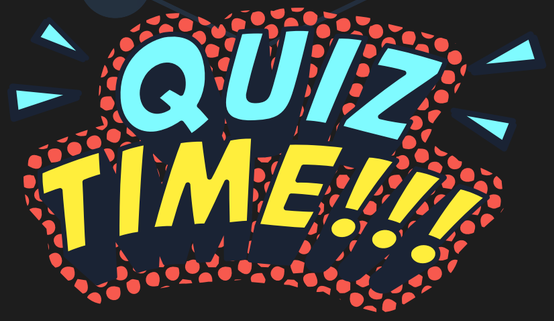
The government's approach to cybersecurity often involves

A. Limiting malware infections on citizen devices

B. Setting up secure connections for the public

C. Creating data categories with specific security protocols

D. Maintaining point-of-sale hardware at businesses



Class Activity

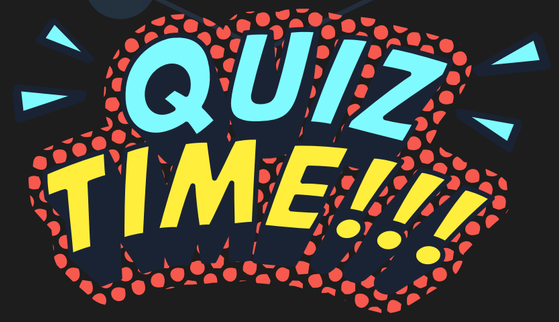
Protecting personal data means ensuring:

A. Only authorized people can access the data

B. Devices are classified by security levels

C. No malware exists anywhere on the network

D. Servers are secure from any intrusion



Class Activity

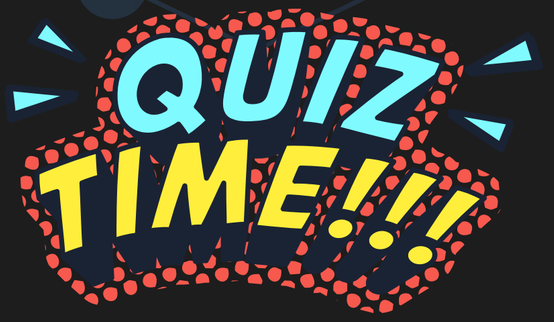
Small business owners concerned with cybersecurity should NOT focus on:

A. Point of sale security

B. Government standards

C. Protecting customer data

D. Setting up virtual servers



Class Activity

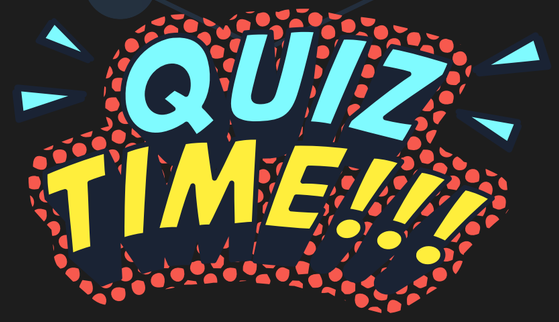
The main difference in cybersecurity focus between small businesses and individuals is:

A. Individuals don't need to worry about malware

B. Small businesses have customer data to protect

C. Individuals focus on device functionality

D. Small businesses don't have data classification concerns



Class Activity

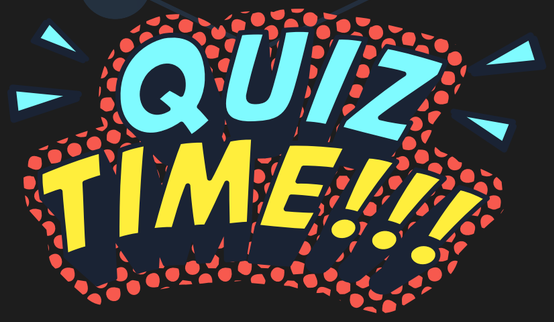
Which group is LEAST likely to be concerned with point-of-sale security?

A. Shared service providers

B. Firms conducting online business

C. The government

D. Small business owners



Class Activity

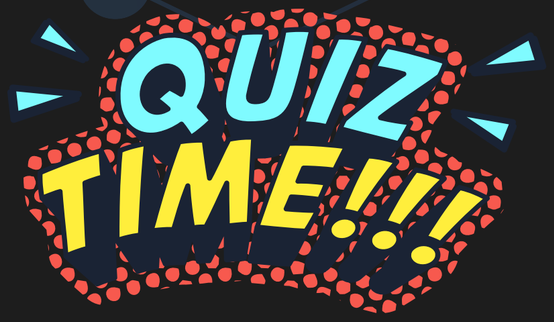
A cybersecurity threat that applies to ALL the groups mentioned in the examples is:

A. Unauthorized data access

B. Physical theft of point-of-sale devices

C. Government changes in data classification

D. Public server failures



Cybersecurity before & after

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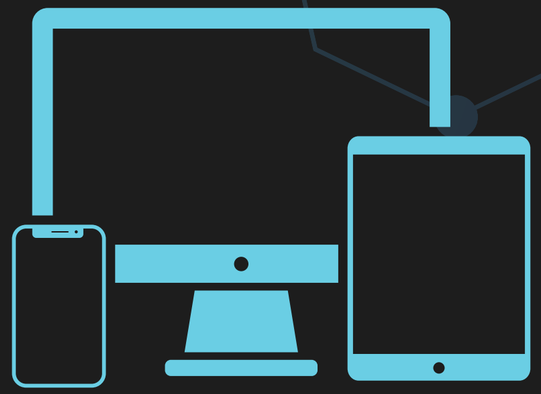
Keep Changing

Technology Change

Data

Internet



Smart Devices

Cryptocurrency

Cyber Security Then (Data)

Physical security was key

- locked cabinets,
- controlled access,
- limited hours.

Cyber Security Now (Data)

Digital storage requires complex

- Always-on security.
- Authentication,
- Authorization,
- Secure data delivery,
- Constant protection against attacks is essential.

Cyber Security (Internet)

- The Internet's evolution expanded attack surfaces, allowing hackers to disrupt infrastructure, influence elections, and steal vast sums.
- Cybercrime wasn't very lucrative pre-internet. The growth of online banking and commerce changed that, causing a surge in malicious activity.

Cyber Security (Smart Devices)

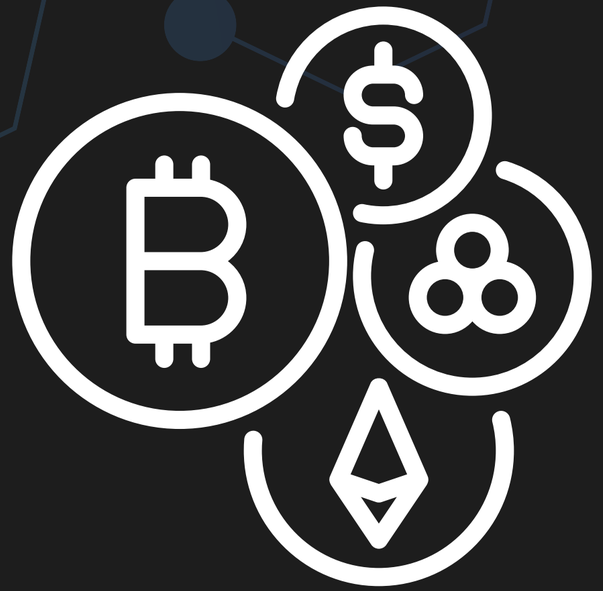
Smart devices and global sourcing pose new cybersecurity challenges.

- The IoT explosion has replaced secure machines with hackable ones.
- Cheap IoT devices from unknown overseas suppliers introduce security flaws into homes and businesses via the global supply chain.

Cyber Security (Cryptocurrency)

Cybercriminals increasingly use cryptocurrency to fund their operations and evade detection.

- Ease of transferring stolen funds



Cyber Security (Social Shifts)

Societal changes regarding information sharing and online connectivity dramatically expand the toolkit for cybercriminals.

- Oversharing on Social Media
- Demand for Accessibility
- Digital Shift
- Global Interconnectivity

Social Change

Cyber Security (Economy Model shift)

Globalization and outsourcing significantly expand the attack surface, requiring new cybersecurity strategies such as:

- Protecting data in transit across borders
- Preventing backdoors in code or hardware sourced internationally
- Targeting less secure suppliers as a way to infiltrate main targets

Globalization

The goal of Cyber Security

Understanding the principles of **Confidentiality, Integrity, and Availability** serves as the foundation for a cybersecurity strategy. This knowledge is beneficial in comprehending hackers' objectives and attack methods.

Why do we care about Cybersecurity?

- Privacy risks
- Financial risks
- Professional risks
- Business risks
- Personal risks
- Physical danger risks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Q&A