

# What are the most important tools and technologies for safeguarding information r...

[Technology](#)



3. What are the components of an organizational framework for security and control? Firms need to establish a good set of both general and application controls for their information systems. A risk assessment evaluates information assets, identifies control points and control weaknesses, and determines the most cost-effective set of controls. Firms must also develop a coherent corporate security policy and plans for continuing business operations in the event of disaster or disruption.

The security policy includes policies for acceptable use and identity management. Comprehensive and systematic MIS auditing helps organizations determine the effectiveness of security and controls for their information systems. 4. What are the most important tools and technologies for safeguarding information resources? Firewalls prevent unauthorized users from accessing a private network when it is linked to the Internet. Intrusion detection systems monitor private networks from suspicious network traffic and attempts to access corporate systems.

Passwords, tokens, smart cards, and biometric authentication are used to authenticate systems users. Antivirus software checks computer systems for infections by viruses and worms and often eliminates the malicious software, while antispyware software combats intrusive and harmful spyware programs. Encryption, the coding and scrambling of messages, is a widely used technology for securing electronic transmissions over unprotected networks.

Digital certificates combined with public key encryption provide further protection of electronic transactions by authenticating a user's identity.

Companies can use fault-tolerant computer systems or create high-  
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availability computing environments to make sure that their information systems are always available. Use of software metrics and rigorous software testing help improve software quality and reliability.