

Network Security

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What is Network Security?

- **Definition:** Network security is the protection of the underlying networking infrastructure from unauthorized access, misuse, or theft
- It's like a digital gatekeeper, ensuring that only the right people or systems have access to sensitive information and resources.

Why Network Security Matters

- Keeps personal and sensitive information safe
- Prevents unauthorized users from accessing or damaging computer systems.
- Protects businesses and organizations from cyber-attacks
- Ensures safe communication and data exchange over networks.

The History of Network Security

- Early Days of Network Security:
 - Early computers were often stand-alone, with limited connectivity to other machines.
 - Security focused on physical protection and simple passwords.
- Rise of Networks and the Internet
 - As networks and the internet grew, so did the need for more sophisticated security measures.
 - Early network security threats included basic viruses and worms.

Evolution of Network Security

- 1990s: Early Firewalls and Anti-virus Software were made
- 2000s: Rise of Complex Attacks and Cybercrime
- 2010s: Advanced Persistent Threats and Data Breaches

What Network Security Looks Like Today

- Modern Strategies:
 - Firewalls
 - Intrusion Detection and Prevention Systems
 - Encryption
 - Multi-Factor Authentication
 - Artificial Intelligence (AI) and Machine Learning
- Key Challenges
 - Ransomware
 - Zero day Vulnerabilities
 - Human Error

Questions for Review

1. What are some of the most common types of network security attacks?
2. How have the various threats to network security changed over time? How have our security measures improved in return?
3. What measures should you take to minimize your networks' vulnerability? How might malicious actors circumvent your security? Are there threats you have no control over?

Relevant Articles on Network Security

- Showcases the seriousness of network security
- Earliest breach on the list was from 2012
- Reason for attacks
- Repercussions of attacked companies

The 15 biggest data breaches of the 21st century

Analysis

Nov 08, 2022 • 14 mins

Application Security

Cybercrime

Data and Information Security

Data breaches affecting millions of users are far too common. Here are some of the biggest, baddest breaches in recent memory.

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- Malware
- Computer Virus
- Computer Worm
- Phishing
- Botnet
- Distributed Denial of Service (DDoS) Attacks
- Man-in-the-middle
- Ransomware
- 5G Based Attacks
- SQL Injection Attacks

Top 10 Common Types of Network Security Attacks Explained

Network security attacks have gained momentum over the past years, which highlights the need for network defenders. Learn more about network security attacks and their types.

By **CISOMAG** - September 4, 2021



- Network Segmentation
- Zero Trust Network Access [ZTNA]
- Remote Access VPN
- Sandboxing
- Hyperscale Network Security

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What is Network Security?

Network Security protects your network and data from breaches, intrusions and other threats. This is a vast and overarching term that describes hardware and software solutions as well as processes or rules and configurations relating to network use, accessibility, and overall threat protection.

Network Security involves access control, virus and antivirus software, application security, network analytics, types of network-related security (endpoint, web, wireless), firewalls, VPN encryption and more.

[Read the Frost & Sullivan Report](#)

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Network Security Articles

- [Network Management](#)
- [Network Security Architecture](#)
- [Network Security Best Practices](#)
- [Top Network Security Issues](#)
- [Network Security vs Application Security](#)

Get Started

- [Check Point Network Security](#)
- [Check Point Infinity](#)

Benefits of Network Security

Network Security is vital in protecting client data and information, keeping shared data secure and ensuring reliable access and network performance as well as protection from cyber threats. A well designed network security solution reduces overhead expenses and safeguards organizations from costly losses that occur from a data breach or other security incident. Ensuring legitimate access to systems, applications and data enables business operations and delivery of services and products to customers.

Types of Network Security Protections

Firewall

Packet Tracer

https://drive.google.com/file/d/1i2VVkmDk3_RXchNivq6AFKaJL0Uyno-1/view?usp=sharing

