Network security device detection attacks

Article Overview

Network security devices detect and prevent attacks, but adversaries often use evasion techniques to bypass them, including rogue devices, pattern obfuscation, and AI-driven phishing.

Overview of Network Security Devices

Network security devices are designed to monitor, analyze, and protect network traffic from unauthorized access, malware, and other cyber threats. Common devices include firewalls, intrusion detection systems (IDS), intrusion prevention systems (IPS), and rogue device detection tools . These devices ensure the confidentiality, integrity, and availability of network resources by identifying suspicious activity and alerting administrators or automatically blocking threats .

Types of Detection Attacks

Attackers often target the detection mechanisms of network security devices to evade monitoring:
• Rogue Device Exploitation: Unauthorized hardware, such as rogue access points or IoT devices, can be connected to a network to bypass security controls. These devices may intercept credentials, spread malware, or act as entry points for attackers . Detection systems monitor for unrecognized endpoints to mitigate this risk.
• IDS/IPS Evasion Techniques: Attackers use methods to avoid triggering alerts in in...

Article Content

What is an Intrusion Detection System?

An Intrusion Detection System (IDS) is a network security technology originally built for detecting vulnerability exploits against a

Top 16 Network Security Devices [Updated 2025]

A network security device is a vital tool used to protect computer networks from unauthorized access and malicious

10 Types of Network Attacks and How to Prevent Them

Understanding the most common types of network attacks—and how to detect and prevent them—is essential for

Network Security Threats & Vulnerabilities Explained

What are network security threats and vulnerabilities? Types of attacks in network security

Modern NDR for Modern Networks | Vectra AI Platform

The only AI-powered NDR platform built to protect modern networks from modern attacks. Instantly see and stop attackers across

12 types of wireless network attacks and how to prevent them

Network, IT and security admins involved in managing wireless networks have to secure those networks to protect

IoTPredictor: A security framework for predicting IoT device

This section discusses and compares relevant security measures that are effective in predicting IoT device behaviours,

Basic Network Attacks in Computer Network

Network attacks are malicious activities aimed at compromising the confidentiality, integrity or availability of computer

Top Network Security Devices for 2025

Explore the top network security devices for 2025 and keep your business safe from online threats.

A comprehensive survey on IoT attacks: Taxonomy, detection

Hence, the primary objective of this survey is to examine the diverse security attacks and develop a taxonomy that can

A comprehensive review on detection of cyber-attacks: Data sets ...

The ever-increasing network density makes it difficult for cyber-security professionals to monitor every movement on

Network Security

Network security protects networks and the data they carry from unauthorized access, misuse, and cyberattacks. It

What is network security?

Why network security matters Enterprise networks support critical business operations and connect users, devices, applications, and

Detection of Network Attacks using Machine Learning and Deep

Anomaly-based network intrusion detection systems are highly significant in detecting network attacks. Robust

Cisco Secure Network Analytics

Forewarned is forearmed Detect attacks in real time across the dynamic network with high-fidelity alerts enriched with

What Is Network Detection and Response (NDR)?

Learn about network detection and response (NDR), including the features, the benefits, how it''s deployed, and why NDR is evolving

Understanding Network Attacks: Types, Trends, and Mitigation

Addressing Evolving Tactics As the landscape of network security evolves, so too do the tactics employed by

What Is Network Security? Definition and Types | Fortinet

Network security protects organizations'' data, employees, and customers from various attacks. Discover the types of network

Network Attacks Detection Methods Based on Deep Learning

In this paper, we offer a review on attack detection methods involving strength of deep learning techniques.

Securing Network Infrastructure Devices

Learn about the threats and risks associated with network infrastructure devices and how you can protect your network

What Is Network Detection and Response

Network detection and response (NDR) solutions use a combination of advanced analytical techniques and machine learning to

What Is Threat Detection and Response (TDR)? | Microsoft Security

Threat detection and response (TDR) is the proactive process of identifying and mitigating security risks or malicious activity to

A Survey: Network Attack Detection and Mitigation Techniques

Network attack detection and mitigation systems (NADMS) is developed as defending software to detect malicious

Advanced Hybrid Techniques for Cyberattack Detection and Defense

Also, a cross-validation technique was used with the test data to ensure no overfitting. The proposed methodology has

What Is the Role of AI in Threat Detection?

Discover how AI enhances threat detection through machine learning, real-time analysis, and predictive security, enabling you to

Exploring the landscape of network security: a comparative analysis of ...

This research explores various techniques to achieve effective attack detection. Multiple research methods have been

Intrusion detection system

An intrusion detection system (IDS) is a device or software application that monitors a network or systems for malicious activity or

Intrusion Detection System (IDS)

An Intrusion Detection System (IDS) is a security tool that monitors network traffic or system activities to detect

Detection and mitigation of cyber-attacks in software defined networks ...

This systematic literature review provides an extensive examination of Machine Learning (ML), Deep Learning (DL),

What is Threat Detection and Response? Cybersecurity Guide

Learn how threat detection and response works, including key techniques like threat intelligence, incident response, and threat

What Is An Intrusion Detection System (IDS)?

Intrusion Detection System (IDS) monitors network traffic and searches for known threats and suspicious or malicious activity. Learn

Surge of Attacks Targeting Network Infrastructure Devices

Based on the recent surge of attacks on network devices by Russian state-sponsored cyber actors, the US-CERT has

Network detection solution | Fortinet

Expose hidden threats with a unified network detection and response solution that uses advanced analytics, machine learning,

Contact Us

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