Capabilities for IT, IOT, IIoT and OT

NIST SP 800-207A

A Zero Trust Architecture Model for Access Control in Cloud-Native Applications in Multi-Cloud Environments

The core purpose of Zero Trust Architecture (ZTA) is to enhance cybersecurity by fundamentally changing the way organizations approach network and data security. NIST publication SP 800-207A, denotes a change in focus from security controls based on segmentation and isolation using network parameters (e.g., Internet Protocol (IP) addresses, subnets, perimeter) to identities.

Why IMPRES: Supporting NIST SP 800-207A

Enhanced Security
CSOI introduces a new way of identifying hosts on the Internet using cryptographic public keys, making it improbable for attackers to impersonate hosts. This enhanced security can help protect against various types of attacks, including man-in-the-middle attacks.

Improved Privacy
CSOI separates the host's identity from its location, which enhances privacy. With traditional IP addresses, it's easier to track a host's movements and activities, but CSOI's separation of identity and location makes it more difficult for third parties to monitor users.

Mobility Support
CSOI allows a host to change its network location while keeping the same cryptographic identity. This is particularly useful for mobile devices, as they can switch between networks without changing their identity, which simplifies routing and security.

Resilience to Network Changes
CSOI can help maintain communication in the presence of network address changes, such as transitioning between IPv4 and IPv6 or dealing with network reconfigurations. This can improve network reliability and robustness.

Simplified Network Management
CSOI simplifies network management by allowing for logical addressing based on host identity rather than physical network location. This can make it easier to manage and secure large-scale networks.

Strong Authentication
CSOI provisions public-key cryptography for host authentication, providing a high level of security. This strong authentication can be valuable in various applications, such as secure communication, authentication of IoT devices, and more.

Let's start a conversation

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