IAM approaches in factory environment

CF webinar

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NETOX
CREATING TRUST

CYBER FACTORY NO.1
CF#1

Netox in brief

Netox Oy

2021 Netox Oy acquires elfGROUP Cybersecurity services Ltd business to expand and strengthen cyber expertise in its various areas

2020 Strengthening expertise on public sector, Data protection as a service, ITIL 4 and ITIL SIAM Operating model in production

2019 Netox received an investment from Bocap Investment Oy to further strengthen the growth in the IT- and cybersecurity field / Winner of Service Desk of the year award

2018 Netox Cloud Data Center reform

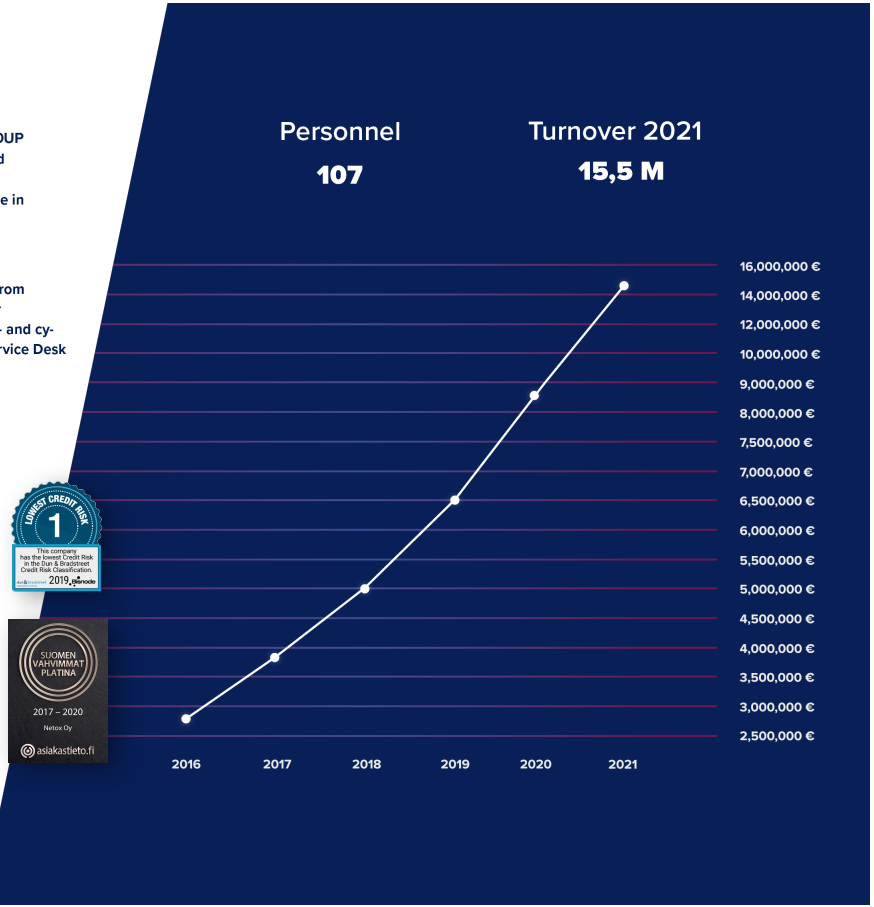
2015 Netox joined national Cyber Trust program aimed to further develop the national cybersecurity level

2014 Netox expertise was certified: ISO 9001, ISO/IEC 20000-1, ISO/IEC 27001

2013 Netox Cloud Data Center launch

2007 Production model was updated to match ITILv3 standards

2004 Netox Oy was founded



Why we need IAM?
The importance of identity

“Identity and access management (IAM) is about defining and managing the roles and access privileges of individual network entities (users and devices) to a variety of cloud and on-premises applications.”

- Identity management is the foundation for holistic security solution
- We can only address the anomalies we can see
- Compliancy to regulations

IAM in factory of the future

Information Technology (IT) and Operational Technology (OT)

Information technology (IT) refers to anything related to computer technology, including hardware and software.

Operational technology (OT) refers to the hardware and software used to change, monitor, or control physical devices, processes, and events within a company or organization.

Trusted identity and access management

- Scalability
- Visibility
- Role based access
- Entry / exit process

TOP threats

- Malware infiltration via external hardware and removable media
- Supply Chain Attacks
- Nation-State Attacks
- Malware infection via Internet and Intranet
- Phishing Attacks
- IP Theft
- Equipment Sabotage
- DDoS attacks and IoT-botnets

Main requirements for IAM in CF#1

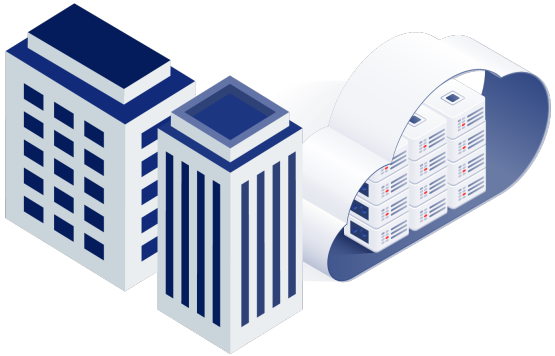
- Solution should be able to change access control dynamically, e.g., when asset or device becomes obsolete
- Support for decision making processes
- Trust model should utilize Machine Learning
- Must provide configuration for user profiles
- Trust model and solution should not affect on production processes
- Trust model must take into account the Human interaction: Configuration, user profiles, MFA, instructions include
- Solution must comply with industry standards and best practices (for example: PKI, OAuth, SAML, OpenID connect)
- Utilize new and emerging technologies such as Blockchain and e-SIM
- Stronger authentication, e.g., Multifactor Authentication (MFA) where needed
- Zero Trust -solution should be investigated: Network design dependency, segmentation
- Zero Trust -solution should be investigated: Device and user identity control, including technical control
- for full visibility of the network
- Must comply with Cloud interfaces
- Must comply with security requirements in the factory: Multiple levels of security
- Must comply with security requirements in the factory: Including PACS (may be considered as support system)
- Must function without cloud connection

IAM approaches in CF#1

On premises IAM

- Security controls in house
- Supply chain attack through 3rd party provider more difficult
- Can support more stringent requirements

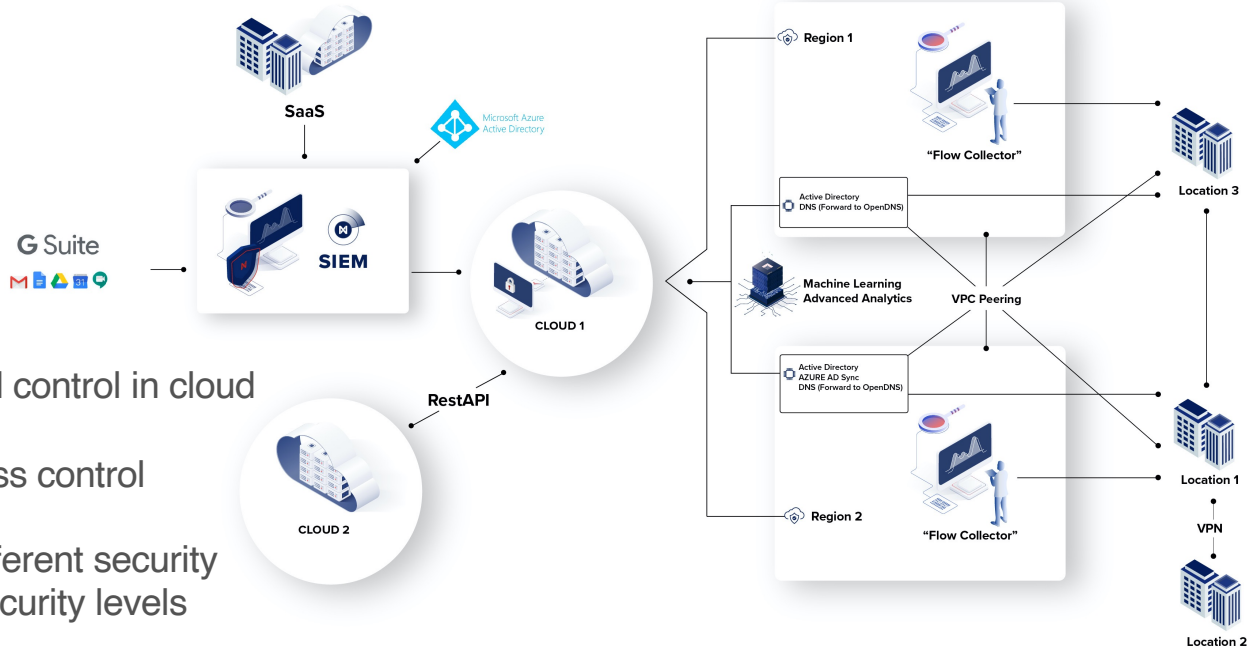
Cloud based IAM



- More scalable
- Can be managed as a service
- Easier to support various regulations

T5.1 Human/Machine access & trust management

The Identity and Access Management (IAM) solution in FoF requires scalable and dynamic model that can operate in hybrid cloud environment



Monitoring and control in cloud

Dynamic access control

Support for different security models and security levels

IT and OT environments

Utilizing Machine Learning (ML)

Thank you!

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