# IAM | Ivan Notes 2022

## access control services

- identification
- ▼ authentcation
  - ▼ knowledge
    - password
    - passphrase
    - questions
  - ▼ ownership
    - ▼ OTPs
      - hard tokens
      - soft tokens
      - synchronous
      - asynchronous
  - ▼ characteristics Biometric
    - ▼ psychological
      - fingerprint
      - hand geometry
      - vascular pattern
      - facial
      - iris
      - retina
    - ▼ behavioral
      - voice
      - signature
      - key stroke
      - gait (walk)
    - ▼ Errors

- Type 1 false reject
- Type 2 false accept
- crossover error rate (CER)
- single/multifactor
- authenticator assurance levels (AAL)
- ▼ Authorization
  - ▼ discretionary (owner decides)
    - Rule
    - Role
    - Attribute / content
  - non-discretionary
  - mandatory (system decides)
- ▼ Accountability
  - principle of access control

## **▼** SSO

- ▼ single sign-on, access systems within the same org
  - ▼ Kerberos
    - ▼ compoenents
      - user/client
      - key distribution center
      - authentication service
      - TGT
      - ticket granting service
      - service tickets
      - service
    - symmetric encryption only
  - ▼ Sesame
    - symmetric & asymmetric encryption

## Federation

▼ federated identity mgmt (FIM), access systems across multiple entities

- ▼ trust relationship
  - principal / user
  - identity provider
  - relying party / service provider
- ▼ SAML
  - tokens
  - assertions written in XML
  - ▼ components
    - profiles
    - bindings
    - protocol
    - assertion
- WS-federation
- OpenID
- OAuth

## • session management

# Access control principles

- SoD
- Need to know
- Least Priv

## Administration approaches

- centralized
- decentrazlied
- hybrid

## ▼ IDaaS Identities

- cloud
- synced
- linked
- federated