CompTIA Security + 4.0 Identity and Access Management

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Title: Identity and Access Managements Concepts
Subtitle: CompTIA Security+ (SY0-501)

4.1 Identity and Access Managements Concept

- 4.1 Compare and contrast identity and access management concepts.
  - Identification, authentication, authorization and accounting (AAA)
    - Identification
      - Presenting a claim of identity to a system (username)
    - Authentication
      - Checks that verify the identity claim to a system (password)
      - "Who or what are you?
    - Authorization
      - Determining the actions, access level or tasks that an identity can perform within a system(permissions)
      - Enforcing policies
      - "What are you allowed to do?"
    - Accounting
      - Measuring the resources that authorized users consume or access
      - Logging statistics
      - "What did you do?
  - Multifactor authentication
    - Something you know
      - Password, PIN, Secret Question
    - Something you have
      - Token, Smartcard, RFID device, Proximity card, keyfob
    - Something you are
      - Biometrics
      - Behavioral and physiological (retinal pattern vs. voice pattern)
    - Somewhere you are
      - Restrict or Allow access based on location
      - GeoLocationing
      - travel schedule, proximity to work
      - Great for road warrior connections
        - Traveling salesperson using mobile devices
    - Something you do
      - Keystroke Patterns, signature analysis,
      - gait pattern(walking) as we get more wearables through accelerometer sensors
  - Federation
    - Also known as federated identity management
    - A form of SSO in which two or more systems trust the identities and authentication of each other
    - MSA, Google, Facebook Login
  - Single sign-on
    - A method in which an end user can log into a system once and does not require an additional password
    - Password vaulting
      - Password Managers like: LastPass, Norton Identity Safe
    - Federations
      - MSA, Google, Facebook Login
      - See diagram
  - Transitive trust
    - See diagram