Digital Identity as a Basis for Internet Security Infrastructure

Ing. Radovan Semančík
Business Global Systems

Agenda

- Introduction

- Unified User Management

- Public Key Infrastructure

- Digital Identity

- Conclusion

Introduction

- Traditional Internet Security Systems:

    - Passwords (ad-hoc)

    - Kerberos

    - Commercial: NIS, NIS+, LanMan, SecureID,...

- Authentication/Single Sign-On only

- Need to change

    - Cross-domain SSO

    - B2B interactions

    - Web Services

Unified User Management

"Directory" Server

BGS
Business Global Systems
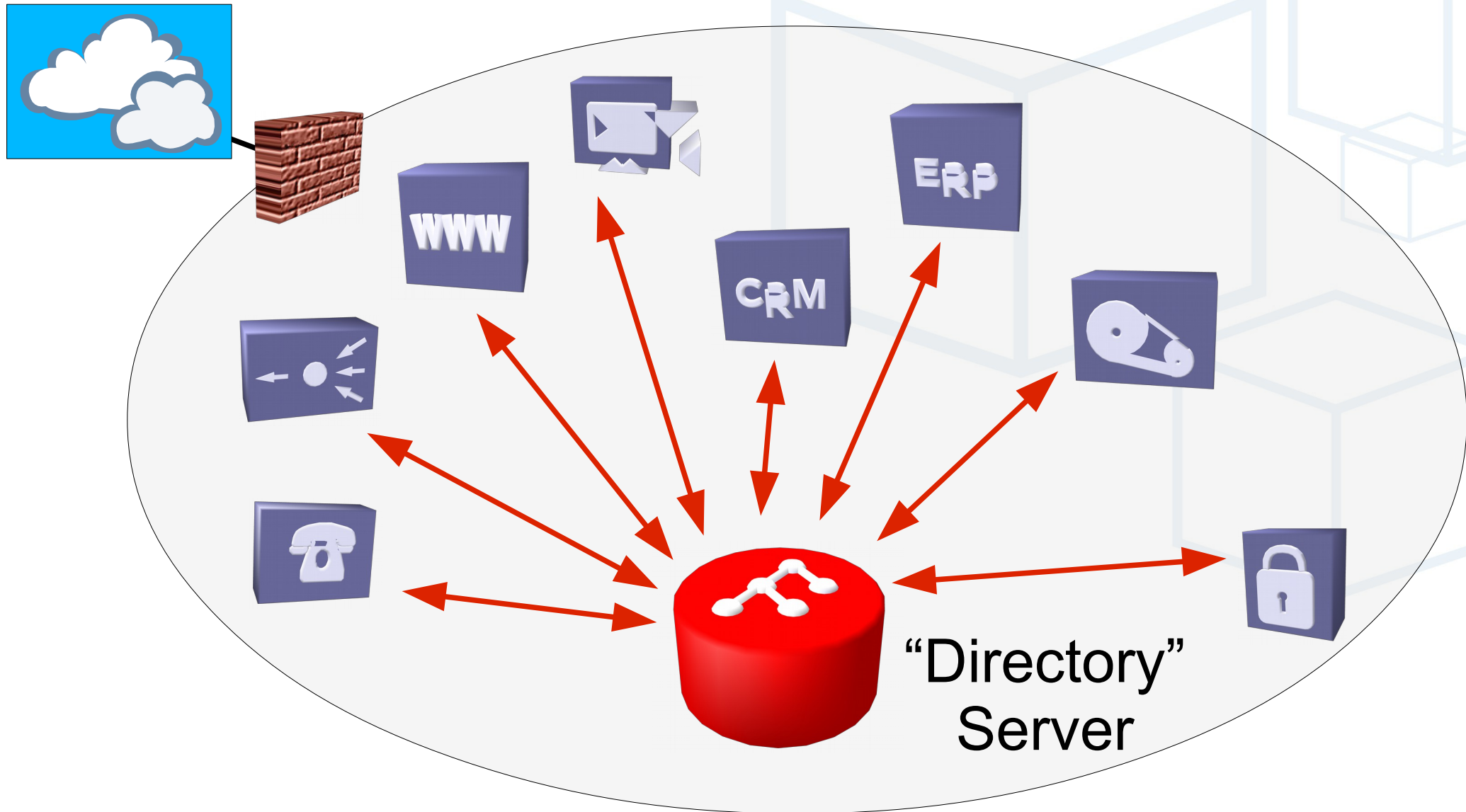
Unified User Management

- Directories (LDAP), Meta-directories, User provisioning systems, ...

- Good for isolated (enterprise) environment

- Mostly LDAP-based solutions

  - LDAP does not maintain long-term user session

  - Limited support for dynamic attributes and services

  - Limited Internet-size scalability

  - Global directory ("X.500" model) infeasible

Public Key Infrastructure

- Based on public key cryptography

- In common use on the Internet
  - X.509, SSL/TLS, IPsec (IKE), S/MIME

- Naming problem
  - X.509 originally extension to X.500 – global directory service assumed

- Privacy problem
  - What attributes to include in the certificate?

- Complexity problem
  - User-side processing makes deployments difficult
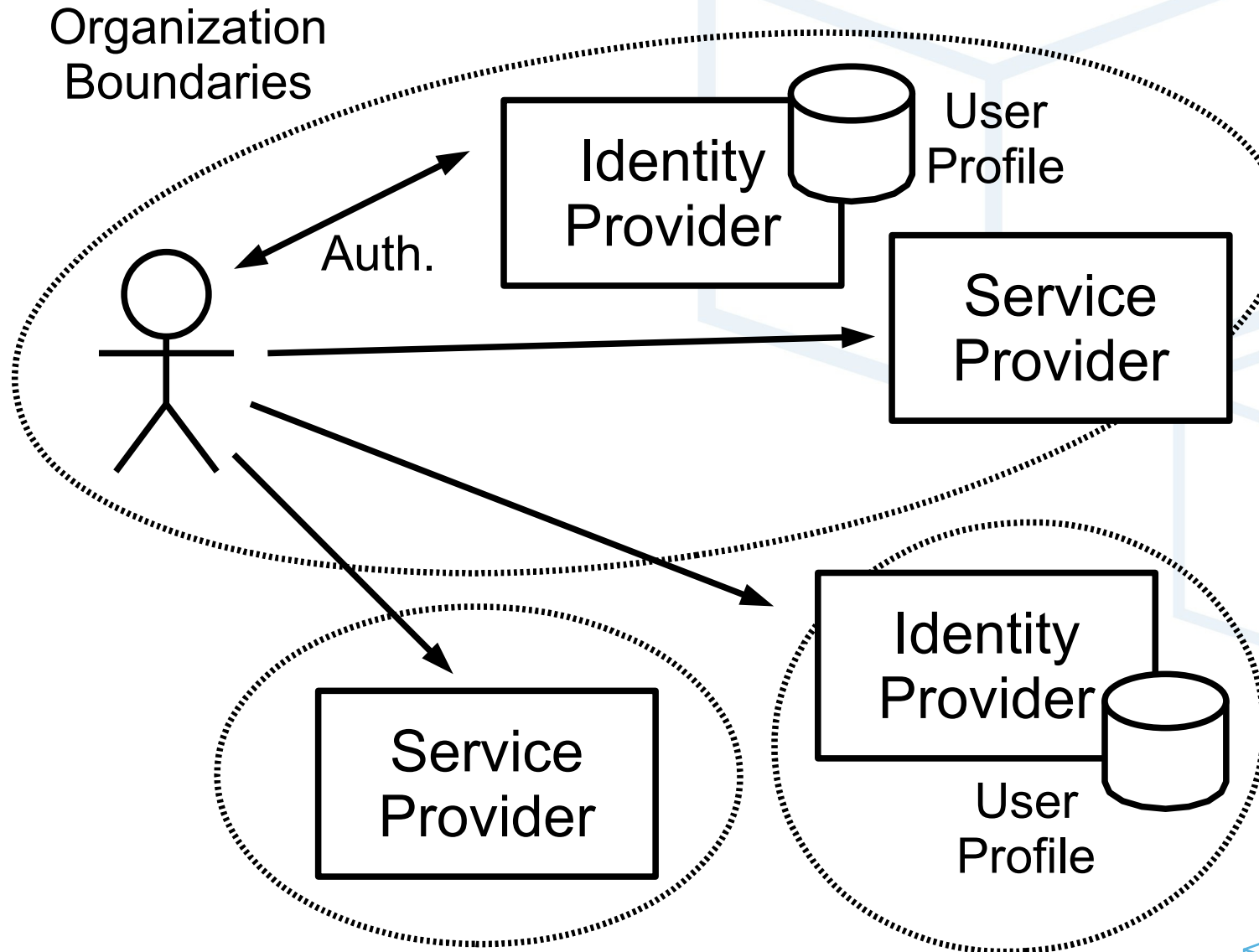
Digital Identity

- On-line security server model

- Based on Security Assertion Markup Language (SAML) – OASIS Standard

- User profile manager: Identity Provider
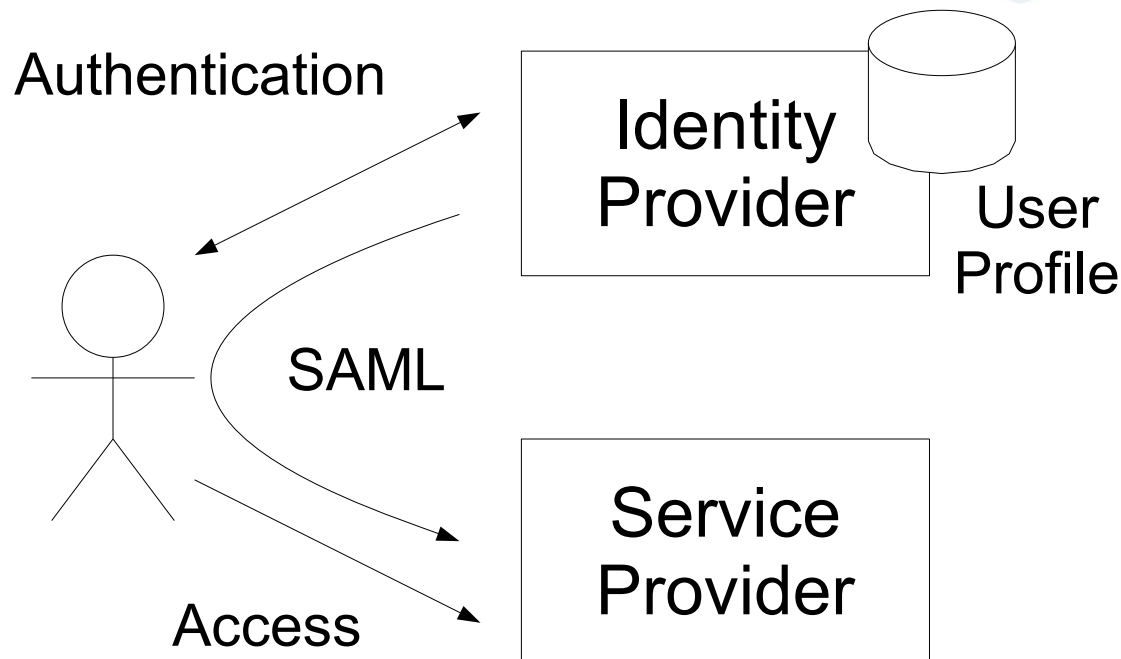
Digital Identity on the Internet

- Global Internet environment
    - No global ID
    - No single provider
    - Privacy
- Pseudonyms (user handles)
- User profile split among different identity providers
- Different trust levels

BGS
Business Global Systems

Digital Identity on the Internet

Conclusion

- Traditional security systems no longer feasible

- Unified User Management good in enterprise

- Public Key Infrastructure as a support system

- Digital Identity services

  - Simplified Sign-On

  - User profiles

  - Web applications security framework

  - Web Services security

Questions?

Thank you ...

Ing. Radovan Semančík

Business Global Systems, a.s.
Pluhová 2
83248 Bratislava

semancik@bgs.sk