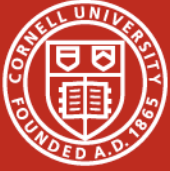# Kerberos in the Knowledge Enterprise: Cornell University

MIT Kerberos Consortium

October 20, 2009

Andrea Beesing

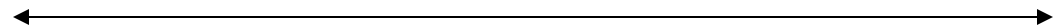amb3@cornell.edu

Topics

- Brief history
- Current architecture
  - ➤ Provisioning
  - ➤ Access management
- Policy and governance
- Example of governance in action
- Near-term challenges we anticipate

History: access management

**IT Security Office
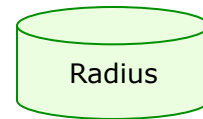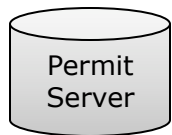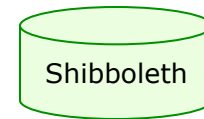Identity Management Program established**
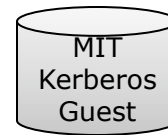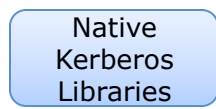
Policy and governance activities

**NetIDs first
issued to
students,
faculty, staff**

**GuestIDs
NetIDs for alumni
ApplicantIDs**

Today

1990

2000

MIT
Kerberos

Native
Kerberos
Libraries

Application
Proxies

CUWebLogin

MIT
Kerberos
Guest

Shibboleth

Active
Directory

Permit
Server

SideCar
for Mac
and
Windows

Radius

kProxy

Cloud
computing
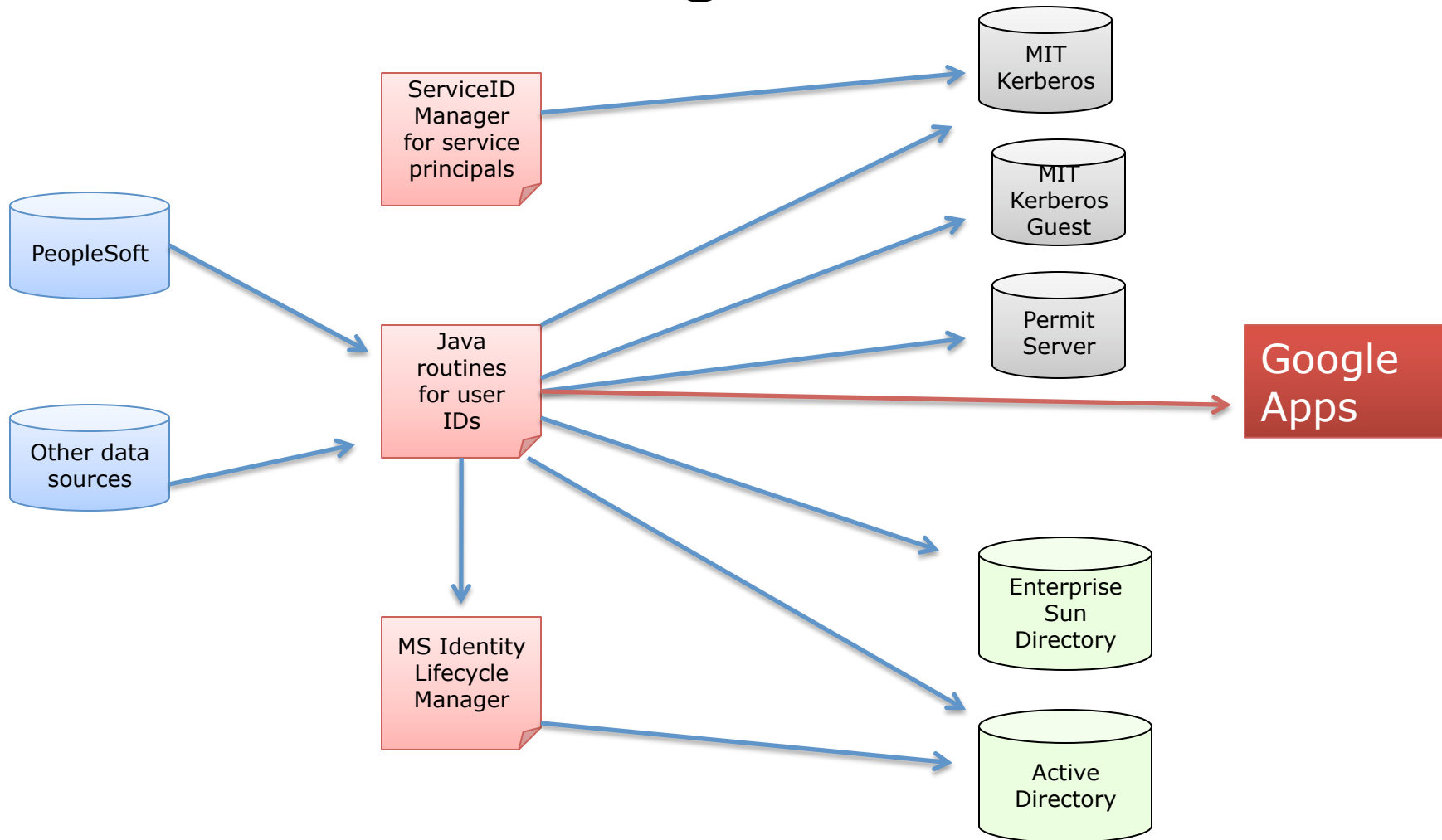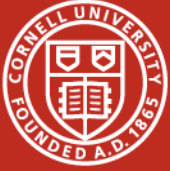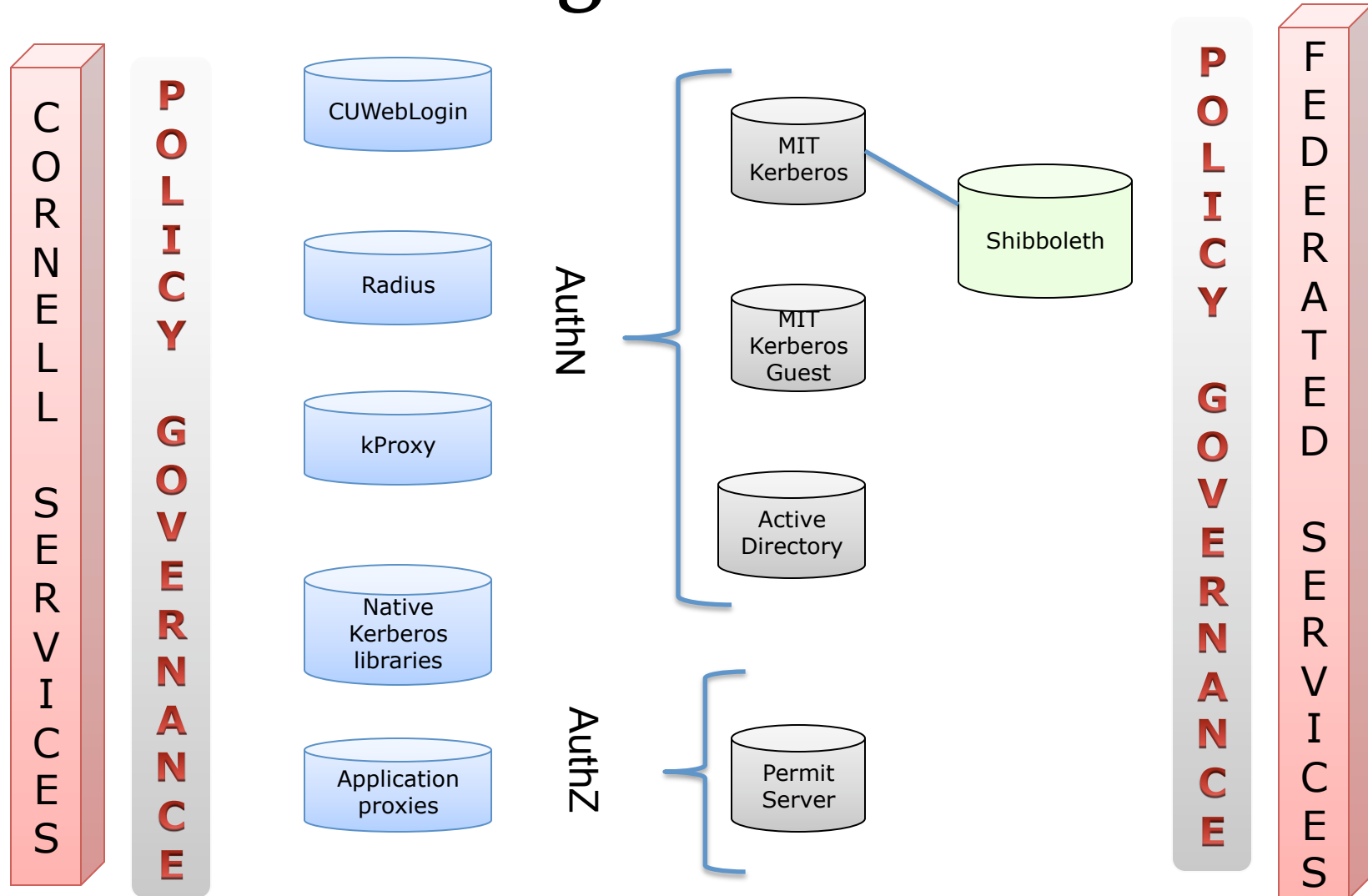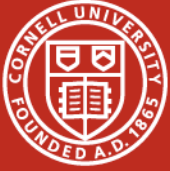
Provisioning architecture

Access management architecture

Policy and governance

- At Cornell aided by close alignment of IT Security Office, IT Policy Office, Identity Management Program

- Policies addressing fundamental aspects of access management: who, what, how

- Formation of the IT Security Council to help guide implementation of policy

  ➢ Minimum Requirements for Integrating Services with Central Authentication

IT Policy Framework
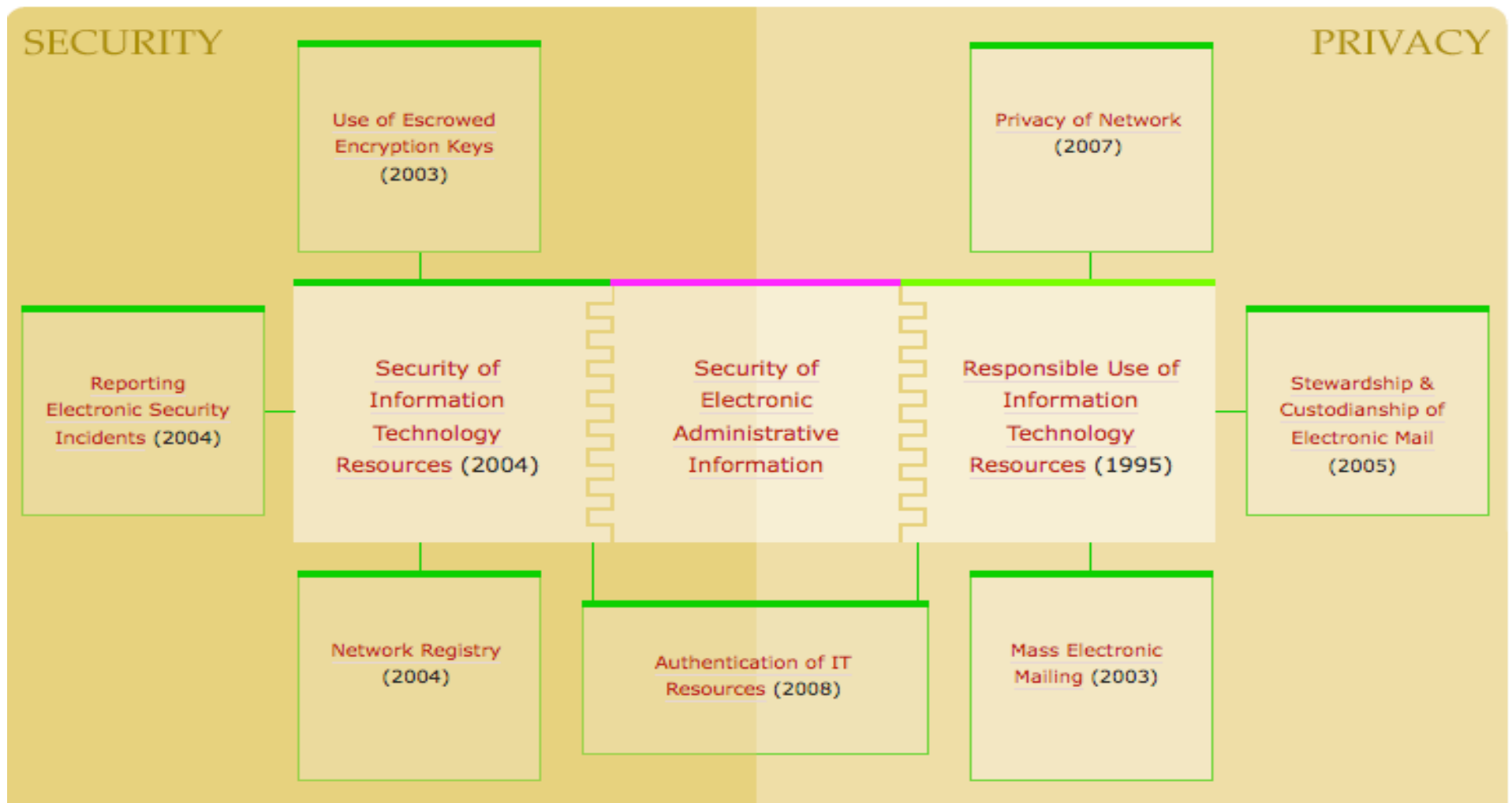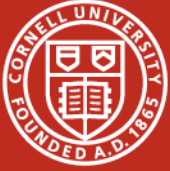
Present day challenges/solutions

- Case study:Google Apps deployment
- Demonstrates evolution of decision making process from IT-centric to business-centric
- Decision to synchronize Kerberos password
- Factored into decision
  - ➢ Reality of current IT services model
  - ➢ Security of vendor environment
  - ➢ Realistic view of how security is achieved
  - ➢ Usability

Challenges on the horizon

- Limitations of single-factor authentication
- Duplication of infrastructure components: are both MIT Kerberos and Active Directory necessary?
- Impact of Cloud Computing on access management solutions and operations
  - ➢ Ex: responding to requests from CU Police