Kerberos in the Knowledge Enterprise: Cornell University

MIT Kerberos Consortium
October 20, 2009
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Topics

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

NetIDs first issued to students, faculty, staff 1990

1990

2000

Policy and governance activities

GuestIDs
NetIDs for alumni
ApplicantIDs

Today

MIT Kerberos
Native Kerberos Libraries
SideCar for Mac and Windows

Application Proxies
CUWebLogin

MIT Kerberos Guest
Radius
kProxy

Shibboleth
Active Directory
Cloud computing
Access management architecture

- CUWebLogin
- Radius
- kProxy
- Native Kerberos libraries
- Application proxies
- MIT Kerberos
- MIT Kerberos Guest
- Active Directory
- Permit Server
- Shibboleth
- Permit Server
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
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