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SP / IdP cases

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UPKI update from Japan

SP / IDP CASES

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Outline

1. Introduction
2. Shibboleth SSO
3. Problems of IdP
4. Analysis
5. Conclusion

1. Introduction

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1. Introduction

- Protected services in University
  - E-Learning, e-Syllabi, Researcher activity DB, Student portal, …
  - E-Journal, Google Apps, Windows Live, …
- Shibboleth SSO (Single Sign-on)
  - Distributed SSO Middleware
  - Identity Providers (IdP), Service Providers (SP). (and Discovery Service (DS))
- Federation
  - A trust relationship between Identity Providers (IdP) and Service Providers (SP).
  - NII of Japan deploys Shibboleth SSO Federation
  - Kyushu University joins this federation

History

2005 2006 2007 2008 2009 2010 2011

Kyushu Univ.

Joined UPK

LDAP
Password manager
University authN platform
University ID

ID Integration

Shibboleth IdP

Join UPKI-Fed (JP Federation)

kitenet (Wireless LAN)

NII, Japan

UPKI
UPKI Initiative
Server Cert. service →

eduroam.jp →

GRID →

SSO trial → **UPKI-Fed Trail** → **UPKI-Fed Federation** →

In this presentation,

- Show a case study of shibboleth IdP and SP operation in Kyushu University
- Report some problems of shibboleth IdP operation.
- Report results of two month operation.

2. Shibboleth SSO

1. Introduction
2. Shibboleth SSO
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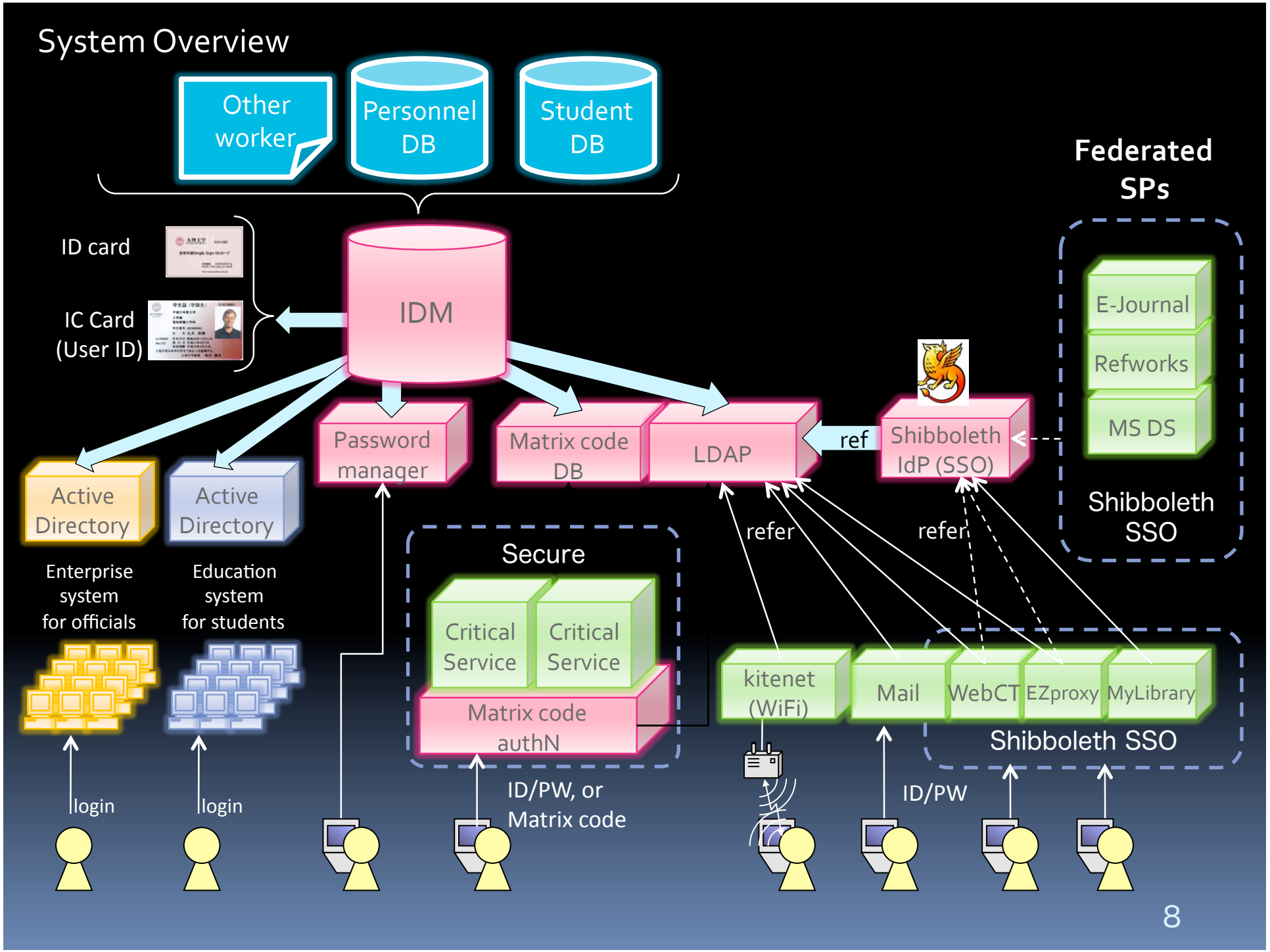
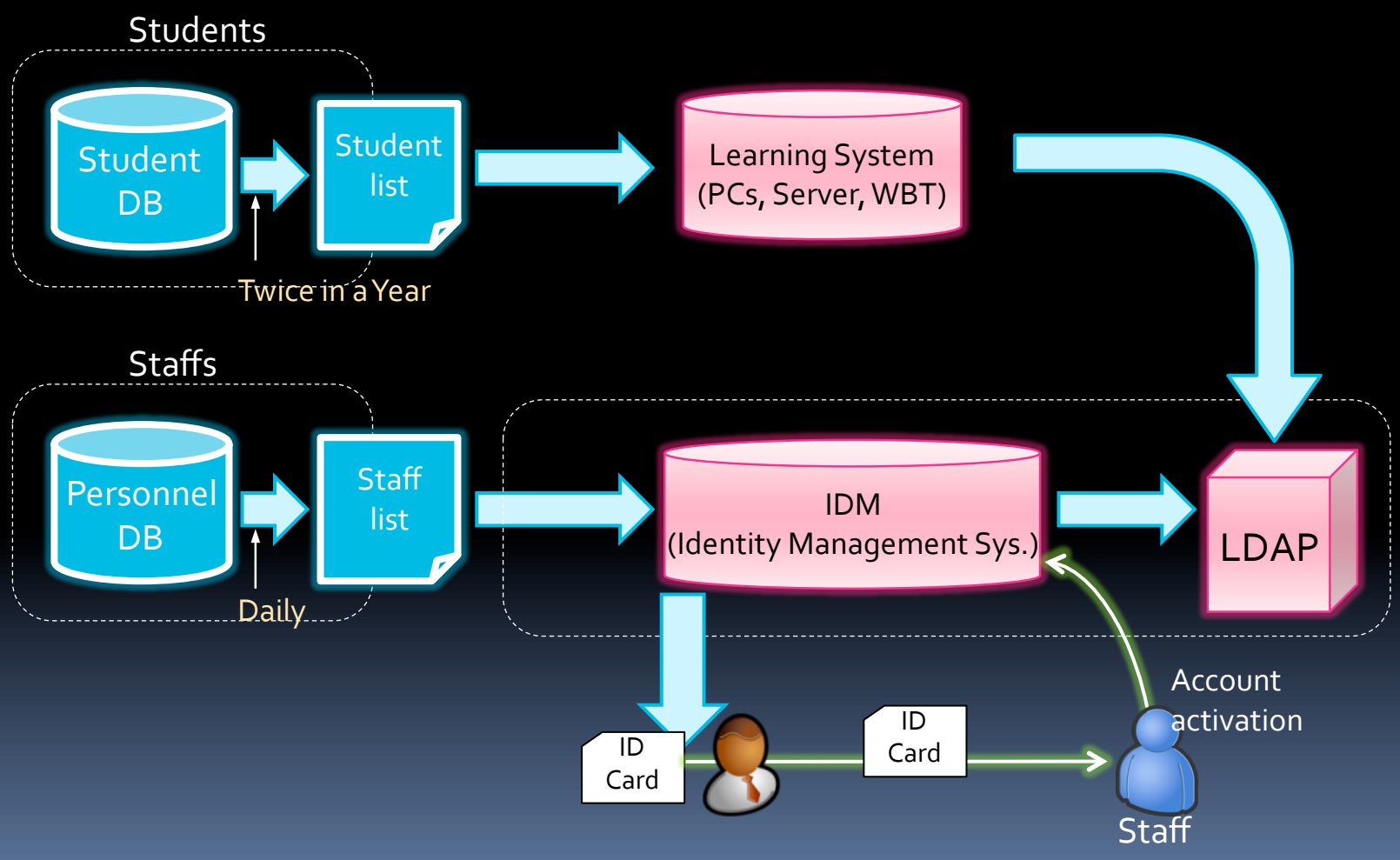
2. Shibboleth SSO

- Before Shibboleth
  - Kyushu U
    - Students 18,000
    - Staffs 7,000 (prof. 2500)
  - Campus wide authentication system (since 2007.)
  - IDM and LDAP server
    - IDM: Identity management system (Meta Directory)
    - LDAP server is used as password authenticator.


System Overview
Other worker
Personnel DB
Student DB
ID card
IC Card (User ID)
IDM
Federated SPs
E-Journal
Refworks
MS DS
Shibboleth SSO
Password manager
Matrix code DB
LDAP
ref
Shibboleth IdP (SSO)
Active Directory
Active Directory
Enterprise system for officials
Education system for students
refer
refer
Secure
Critical Service
Critical Service
Matrix code authN
kitenet (WiFi)
Mail
WebCT
EZproxy
MyLibrary
Shibboleth SSO
login
login
ID/PW, or Matrix code
ID/PW

Dataflow of IDM



Integrated Services

- WebCT (e-Learning)
- NetAcademy2 (English study)
- kitenet (WiFi)
- Campus licensed software
- Space management system
- Cute.Anyware (E-journal proxy by Library)
- Webmail (Primary e-mail service)
- Course registration and grade point management sys.,
- Researcher activity DB

SSO Policy

	Internal service	Out sourced service
Usability oriented	• Webmail • WebCT (e-Learning) • Software download site (licensed software) • University portal	• E-Journal services • RefWorks • Google Apps
Security oriented	• Financial system • Grade point management system	

Shibbolize!

3. Problems of IdP

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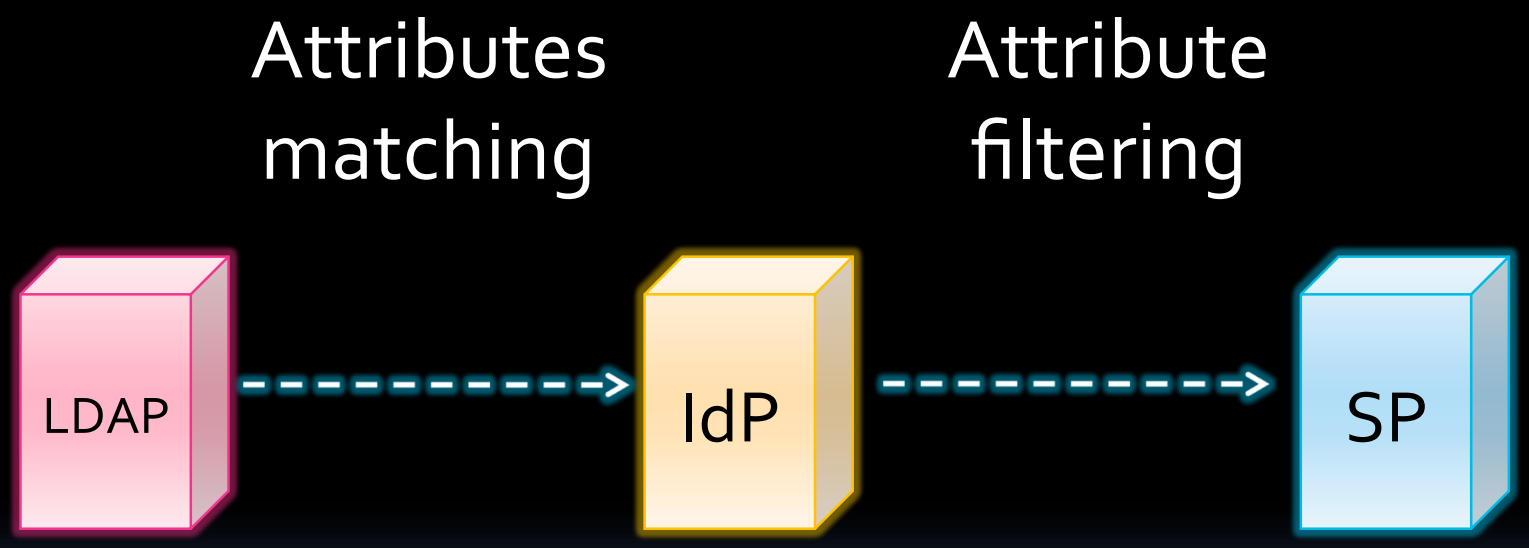
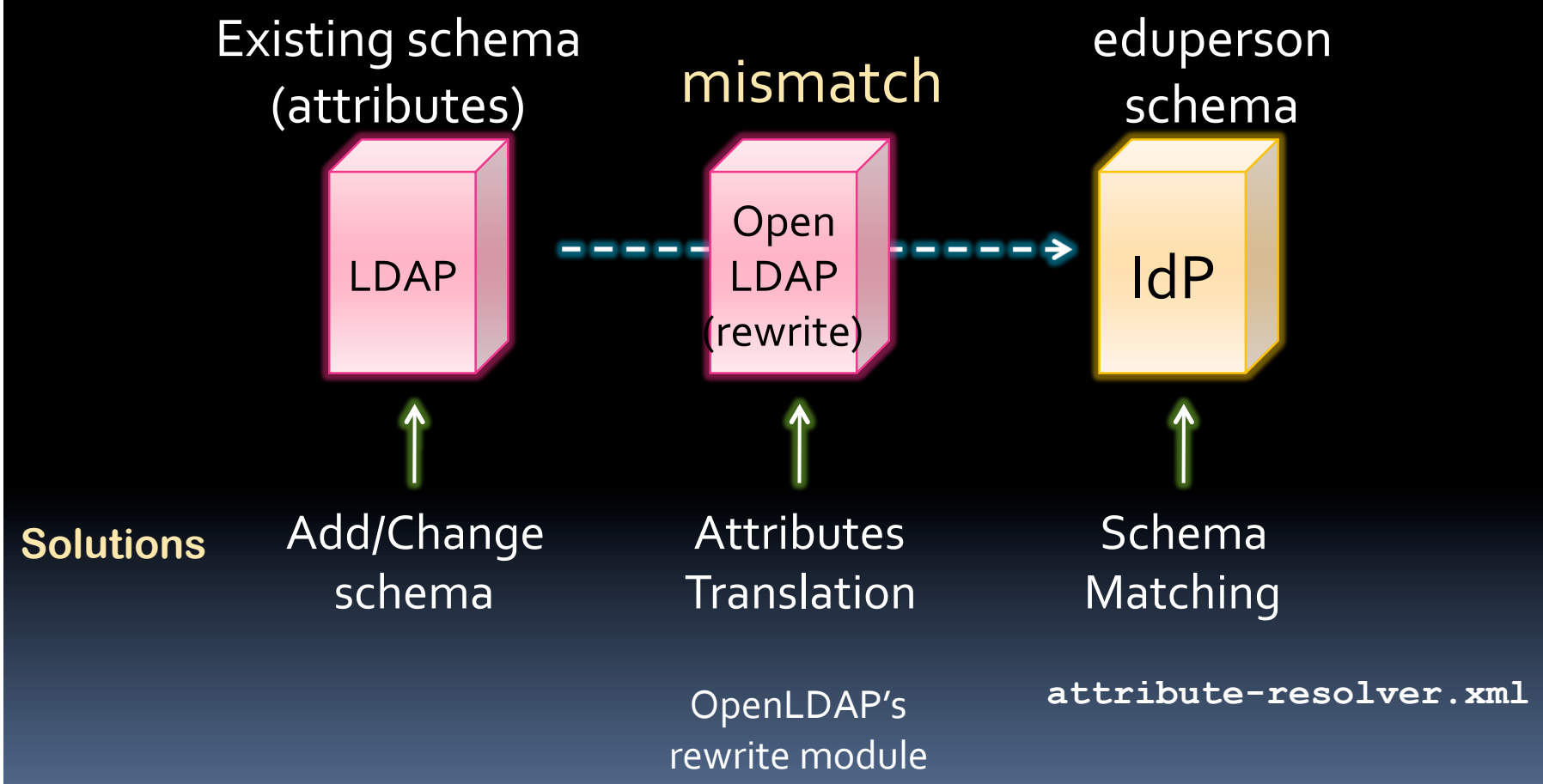
3. Problems of IdP
4. Analysis
5. Conclusion

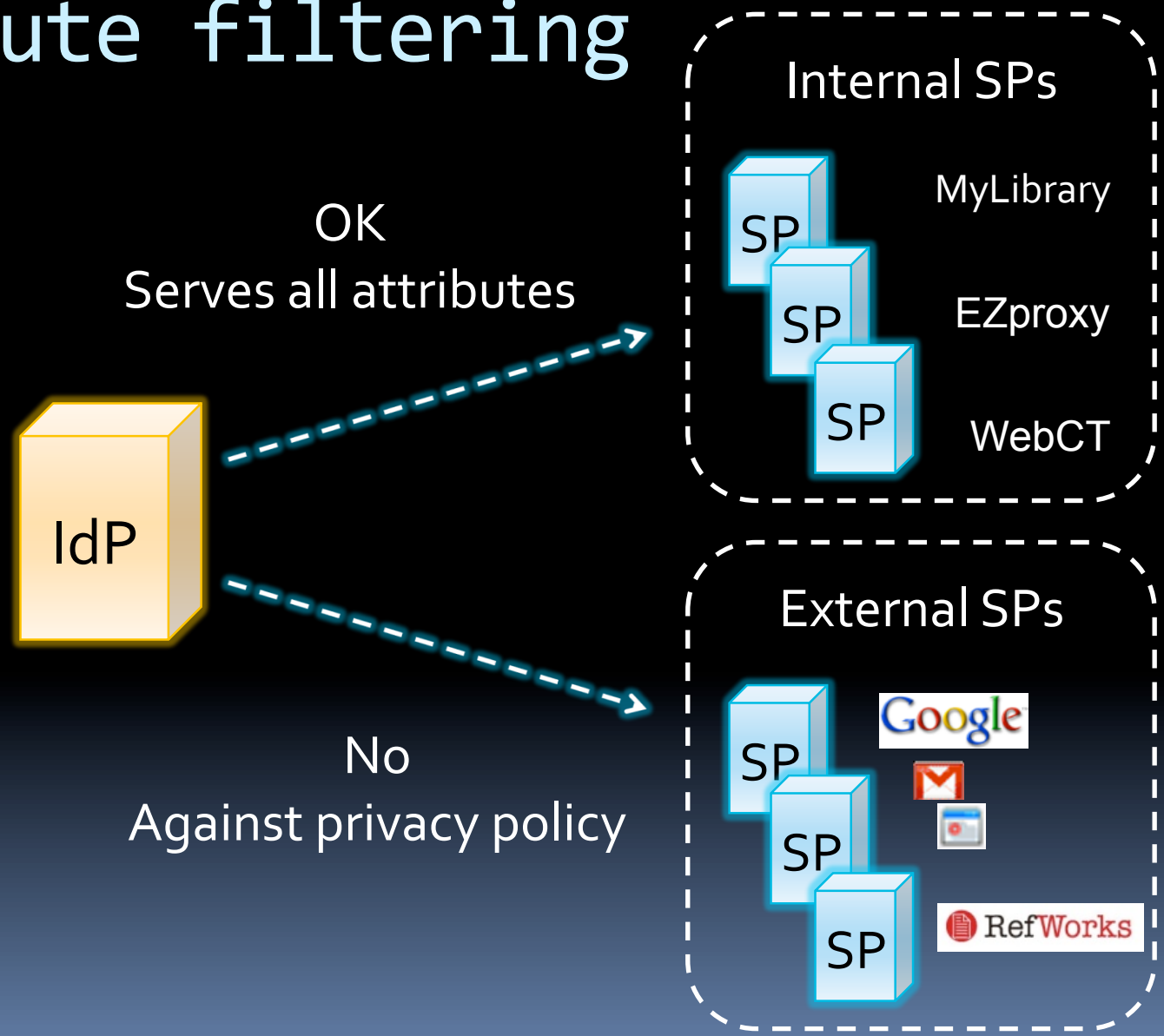
3. Problems of IdP



Attributes matching

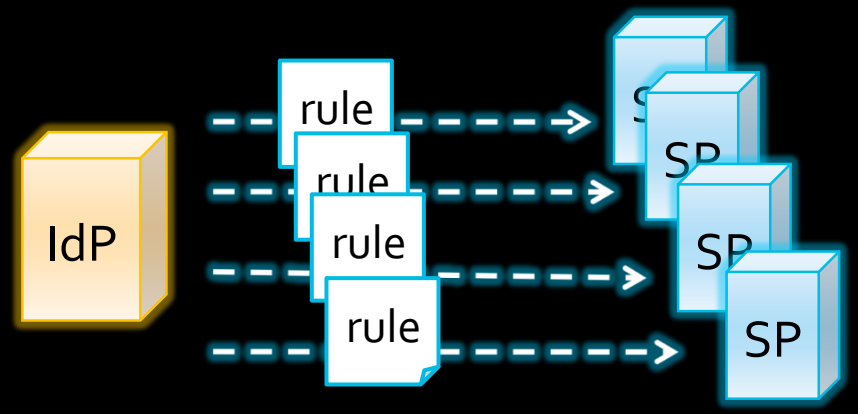


Attribute filtering

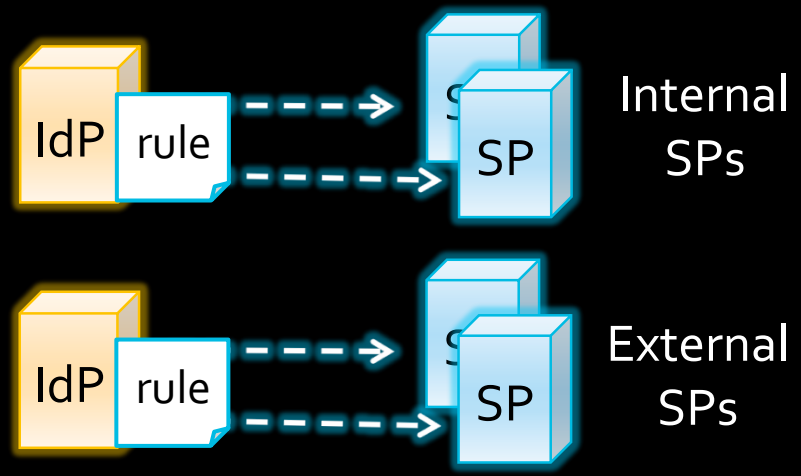


Solutions for attribute filtering problem

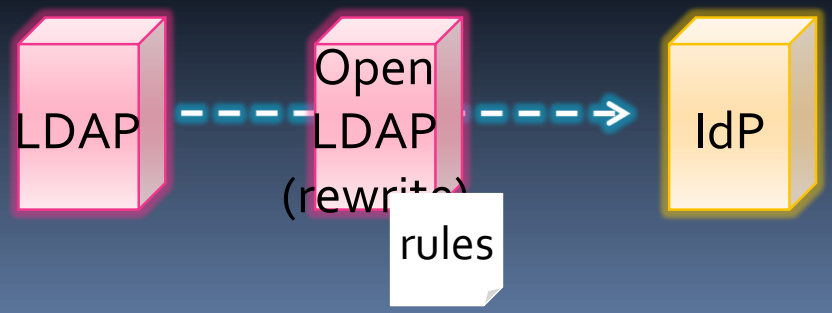
1. Write filter rules for each SP.



2. Two IdPs



3. Filtering script

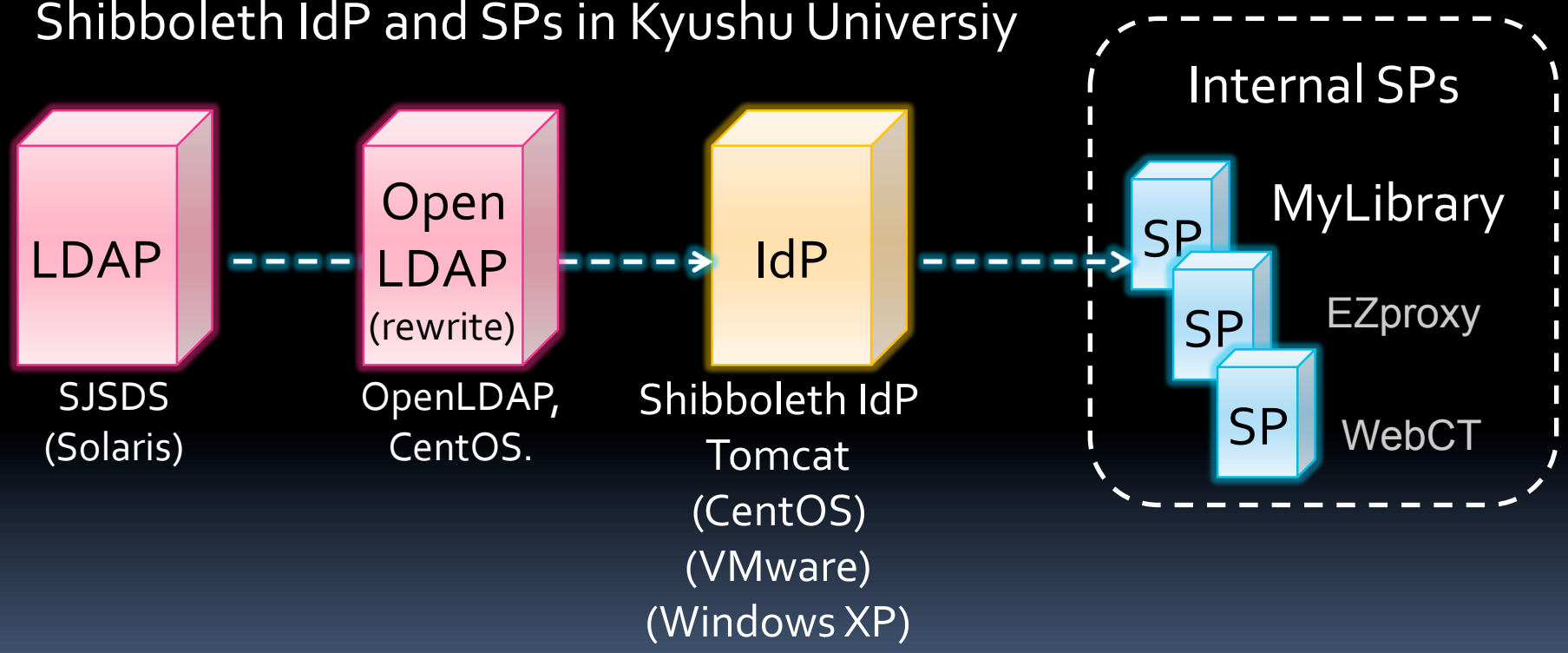


4. Analysis

1. Introduction
2. Shibboleth SSO
3. Problems of IdP
4. Analysis
5. Conclusion

4. Analysis

Shibboleth IdP and SPs in Kyushu Universiy



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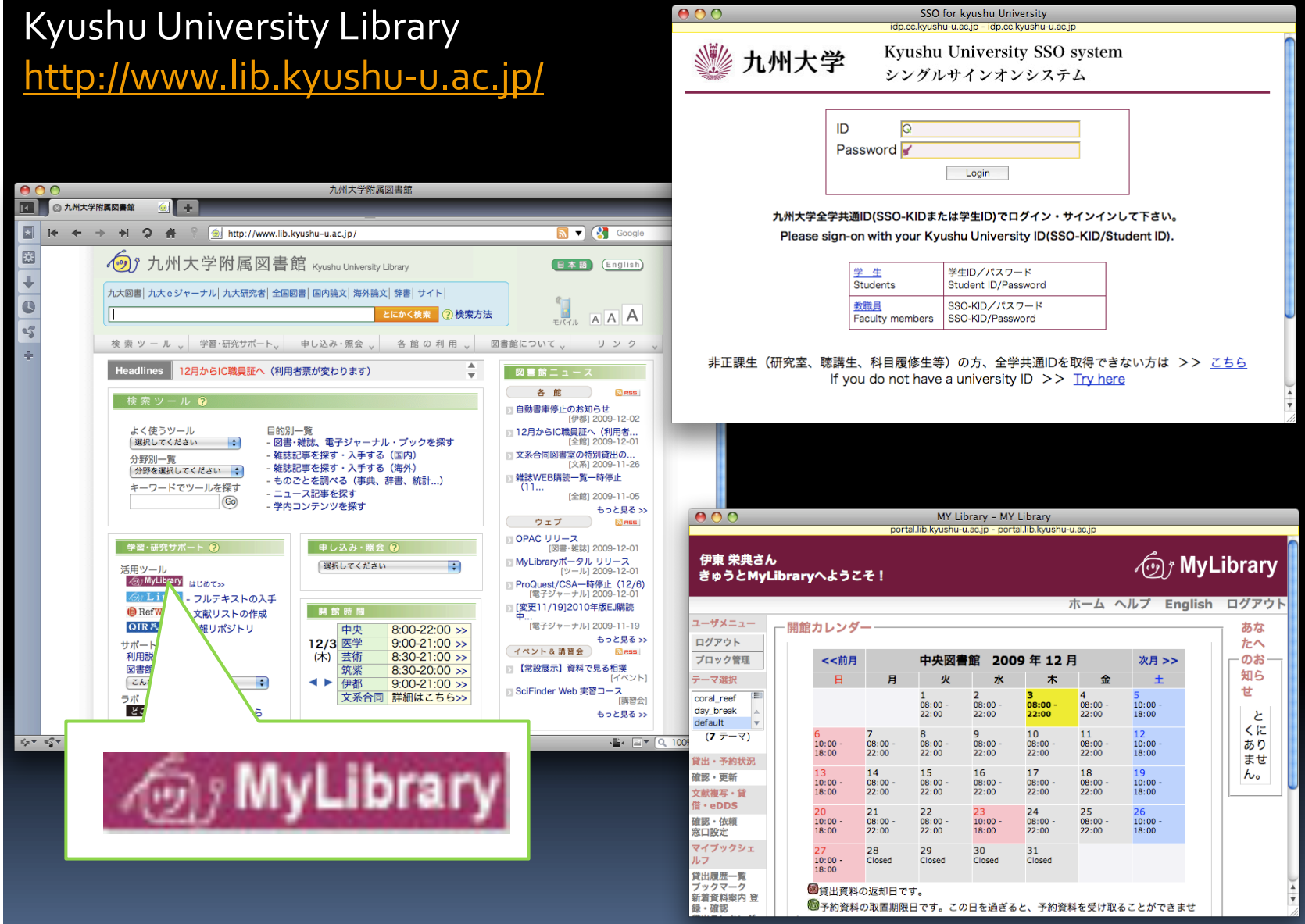


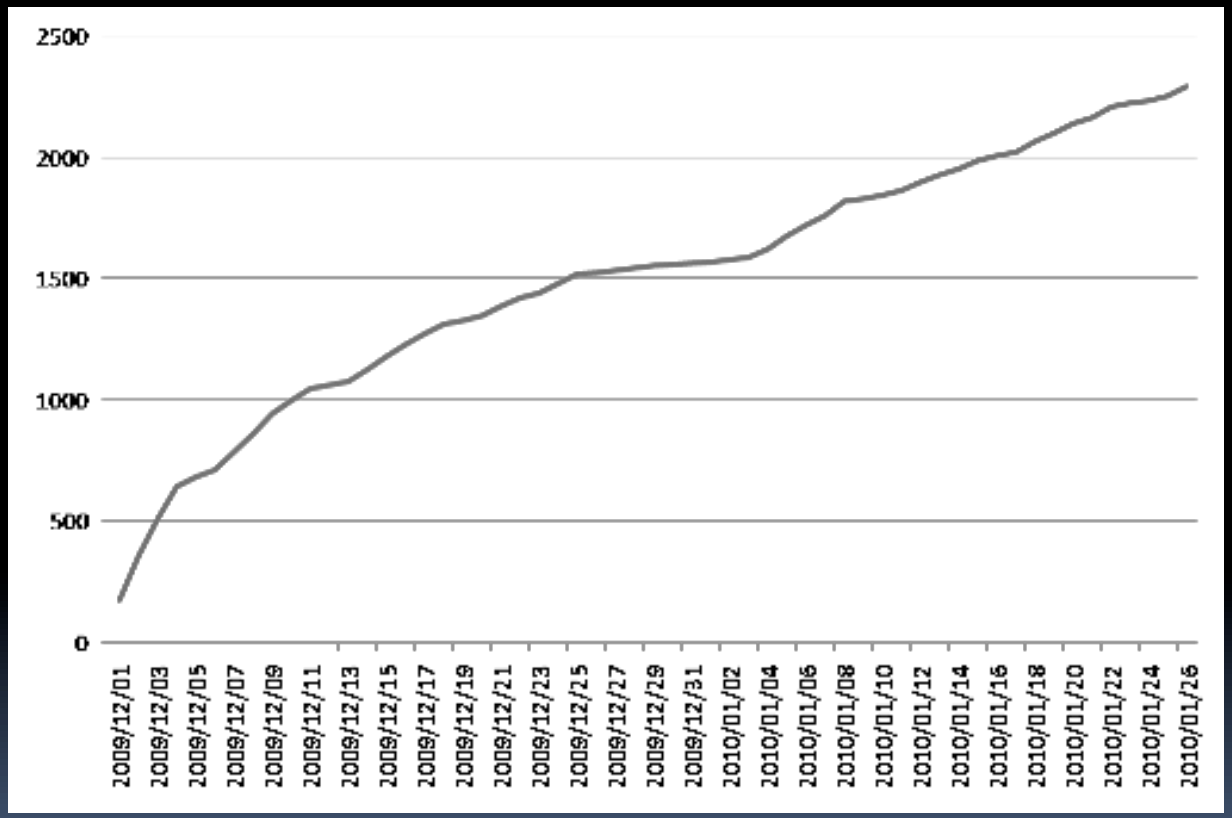
IdP

SP

Results

- Two months operation
  - Just serviced in at Dec. 1, 2009.
- No serious trouble.
- Some trivial matters.
  - Some users bookmark the IdP site.
    - *404 Not Found: /idp/Authn/Password 7time(s)*
    - He/She can’t access to the service which he/she wants.

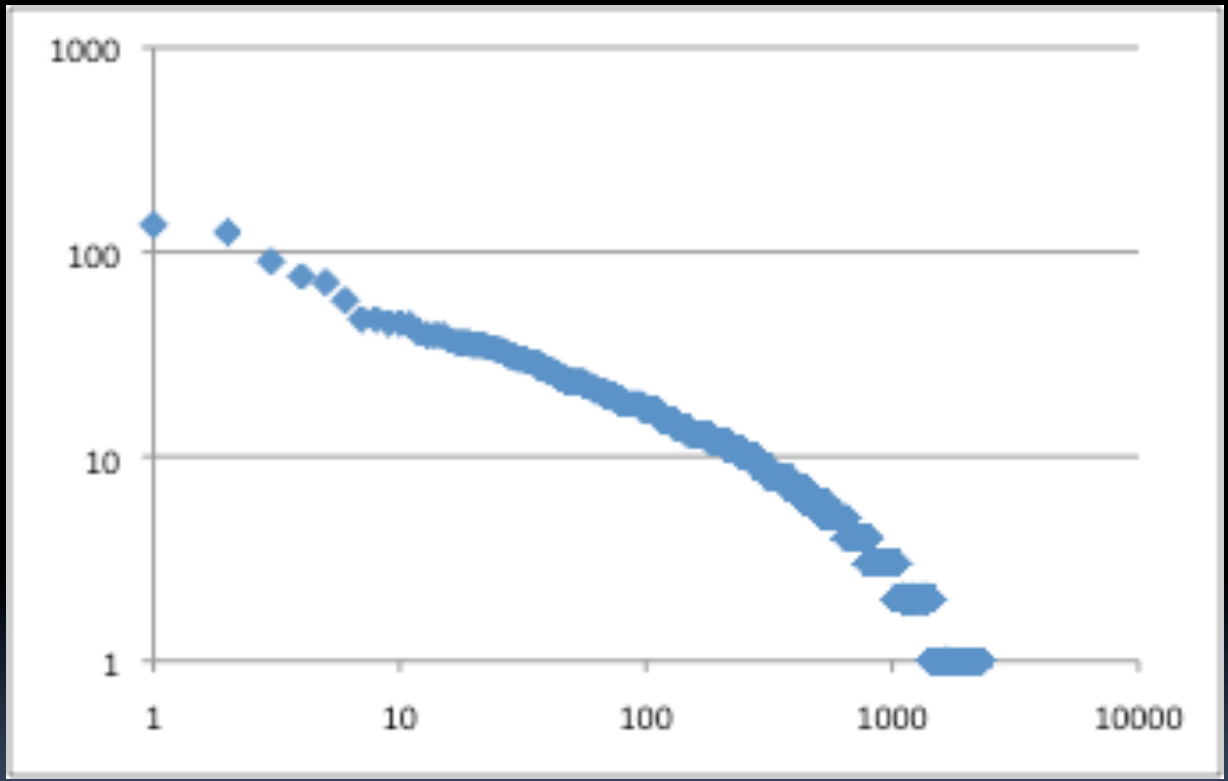
Statistics: Unique users



at Jan.26,2010.

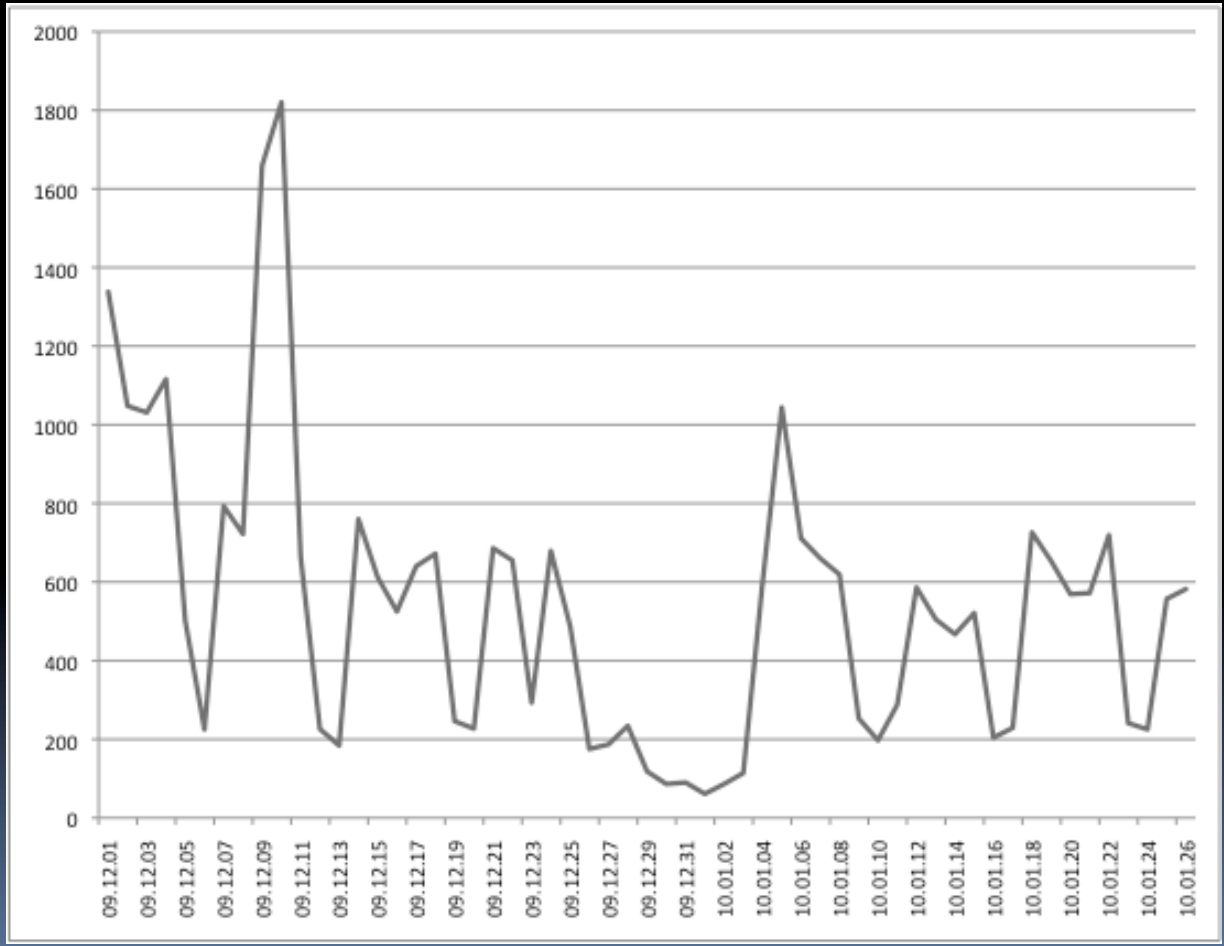
Students	1815	18000
Staffs	467	7000 (2500)
Total	2291	25000

Statistics: Rank-Freqency

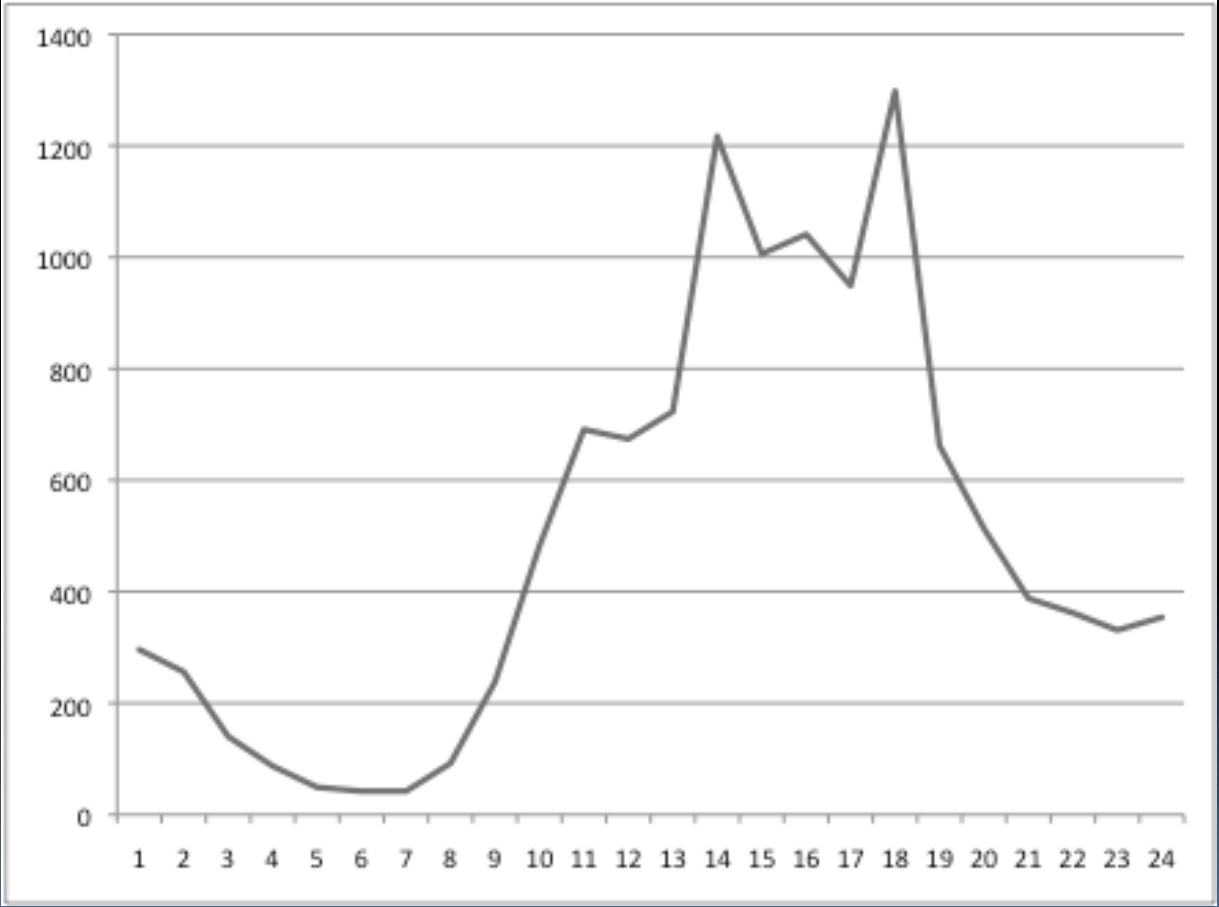


Top 200 users (10% users) occupy 41.2% access.

Statistics: Daily access



Statistics: Hourly access



Most user access at afternoo.

5. Conclusion

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2. Shibboleth SSO
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5. Conclusion

- A case study of Shibboleth IdP in a university
- Two problems for IdP construction
  - Attribute matching
  - Attribute filtering
- Two months operation
  - No serious trouble.
  - Got statistics
    - No over load

Thank you for your attention.