Scholars Portal: Apps and API

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What is Scholars Portal (SP)?

We provide a shared technology infrastructure and services for 21 university libraries across Ontario.

Team: 10 technical staff, 10 librarians and a Project Manager on the last head count.

SP Services

Racer

- interlibrary loans service based on Z39.50

RefWorks

- citation management service

Journals

- repository of >20 million articles
- http://journals.scholarsportal.info/

Books

- repository of >360k books in electronic format
- http://books.scholarsportal.info

ODESI

- searching data from dozens of different statistical agencies and polling companies
- http://odesi.ca

SFX

- link resolver service

Work in Progress

Geoportal

- captures, stores, analyzes, manages and presents data with reference to geographic location data.

Integrated Search API

- previous attempt based on OpenSearch 1.1

Mobile versions of services

- currenlty available for Journals

SP Authentication

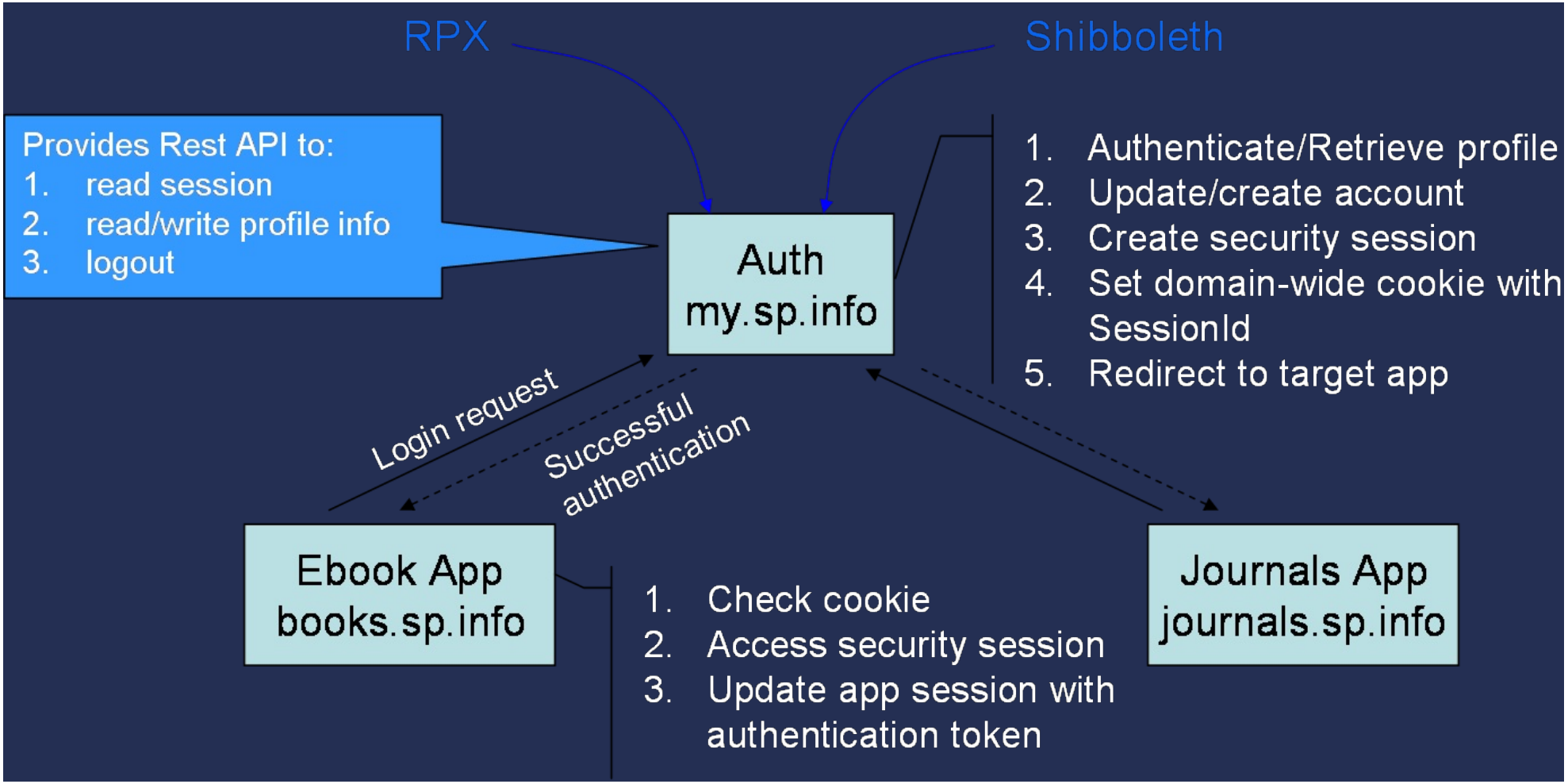
Personalized Service / User accounts

- bookmarks, notes, highlights, personal library, email alerts and etc.

Design objectives:

- Use existing accounts
  - School's authentication infrastructure (Shibboleth)
  - OpenId (Janrain Engage aka RPX)
- Easy integration with various SP applications

Architecture

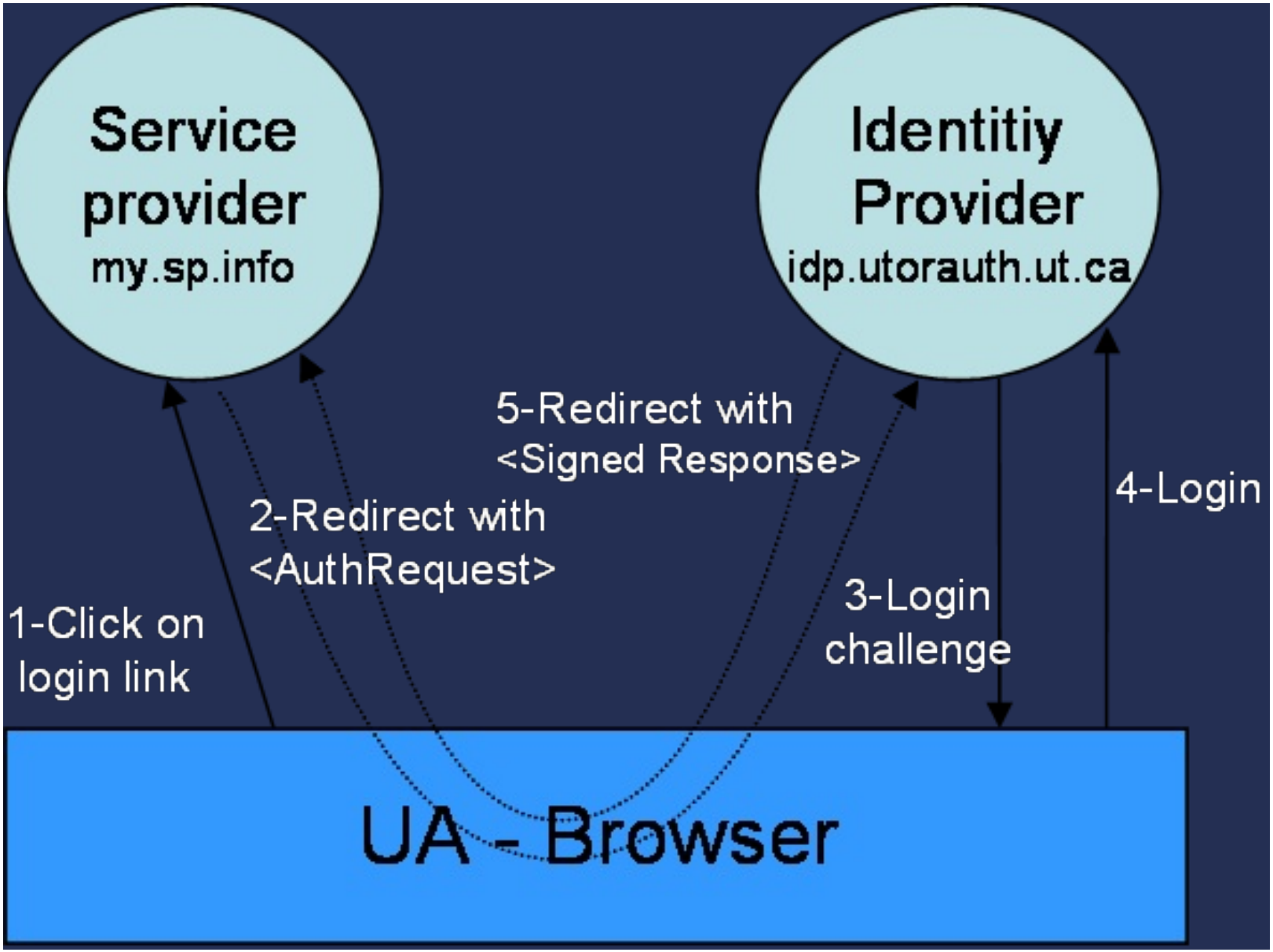


Shibboleth

- A project by Internet2:

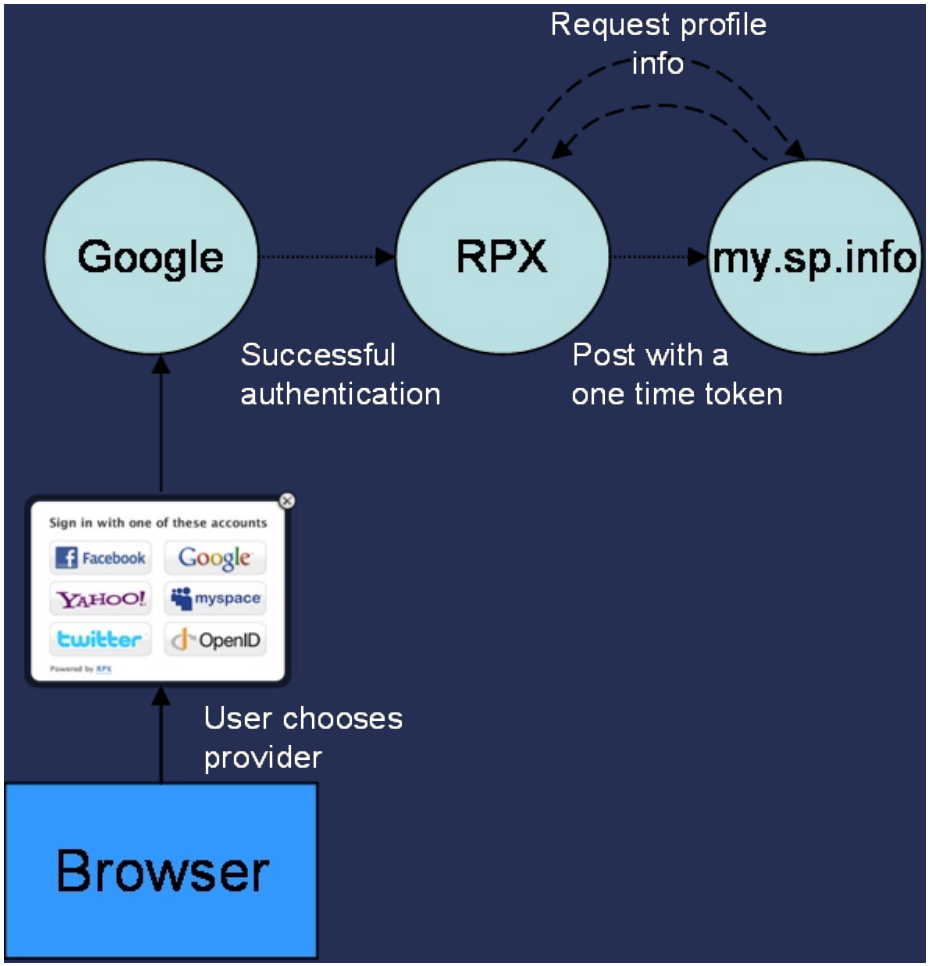
  “provides cross-domain single sign-on and attribute-based authorization”

- Used by many academic institutes. Canadian Access Federation in Canada
- Three components:
  - Browser (user)
  - Service Provider (us)
  - Identity Provider (schools)
- Attributes we requested:
  - *persistent-id* : used as persistent identifier to link returning users to their account
  - *email* (encouraged) : used to provide alert service to users
  - *affiliation* (optional) : used to provide differentiated service for various kinds of users (faculty, staff, etc…)
  - *common name* (optional) : used to fill user profiles


Service
provider
my.sp.info
Identitiy
Provider
idp.utorauth.ut.ca
5-Redirect with
<Signed Response>
2-Redirect with
<AuthRequest>
4-Login
1-Click on
login link
3-Login
challenge
UA - Browser

Janrain Engage (RPX)

- Abstracts authentication for Google/Yahoo!/MSN/Facebook etc.
- Imports profile info and provides unified API to access them



Example

1. Include the widget in your login page.
2. User will be redirected to return URL after authentication.
3. Extract the *token* parameter from the POST data.
4. Use the token to make the auth_info API call:
   - URL: `https://rpxnow.com/api/v2/auth_info`
   - Parameters:
     - apiKey: c04ad3eddbf6dbc918e9e0f5b36b5320eced0e63
     - Token: The token value you extracted above
5. Parse the response and extract the identifier. A sample JSON response:

```
{'stat': 'ok',
  'profile': {
    'identifier':'https://google.com/accounts/
                  o8/id=AItOawkOjEZcd',
    'email': 'chunkybacon@gmail.com',
    'preferredUsername': 'Chunky Bacon' } }
```

RefWorks API

- “Exposes the majority of RefWorks functionality in a REST format”
- Divided into classes that handle specific functionalities:
  - Attachments, Authentication, Authors, Descriptors, Periodicals, Folders, Batch, Deleted, ImportFilter, Manuscript, MyList, OutputStyle, Properties,PubMed, Reference, Retrieve, RSS, SavedSearch, ShareProperties, Subscriber, SubscriberPrefs, User, Utility, Z39
- We use Spring’s RestTemplate to access RefWorks API on the backend

Example

1. `Ajax.Request("refworks/folders.html")`
2. Controller extract *RWSessionId* from session and uses restTemplate to access:

```
http://refworks.scholarsportal.com/api2/
class=folder&method=all&sess=a23d4&
accesskeyid=wd$3wrfderddml&expires=1224873890294&
signature=SAvNT7%2Fq9R3TflOqzaTSfB%2B6VJg%3D
```

3. XML response or error codes are translated to a json response.
4. Json response is returned to client.

Lessons Learned

- Single sign-out is not really working
- Proxies considered harmful!
  - URL rewriting
- Provide separate test page for sys admins
- Privacy = no email address for you!
- Creating html5 slides is easy, making them look good not so much!