OPAL Dashboard with DUCKLING Tools

Brian Zhang
CNIC, Beijing
July 19, 2011

Proposed Project

- Develop a Dashboard Similar to the Opal Dashboard locates @ ws.nbcr.net/opal2, and add user control by using duckling's tools.
- The Dashboard should show all the applications (services) deployed on NBCR web server (ws.nbcr.net)
- Based on each application's metadata, dashboard should Automatically Generate User Interfaces (forms), and collect information upon submit.
- Collected information will be submitted to that application's Service URL, and request to run job based on those information.

Proposed Project (cont'd)

- As in return from the service, Dashboard will get a Output URL and store it into database reference it with current user.
- Users can see previous job submissions in the Job History page.

Dashboard via Duckling

Login & Register Page

Home Page

Welcome 系统管理员! Log out My Account My Prefs Edit Mode Help Full Screen 语言
协同工作环境套件
首页 通知公告 讨论区 文档管理 意见建议 使用帮助 联系我们 datadist Dashboard
Welcome!
Menu
Home
Service List
Job History
Home Page
Welcome to Dashboard!
National Biomedical Computation Resource (NBCR)
Computer Network Information Center (CNIC)
Collaboration Environment Research Center (CERC)
Duckling
The Opal Toolkit
×××× 协同工作环境 Powered by Duckling2.1 (DCT 5.1.29)

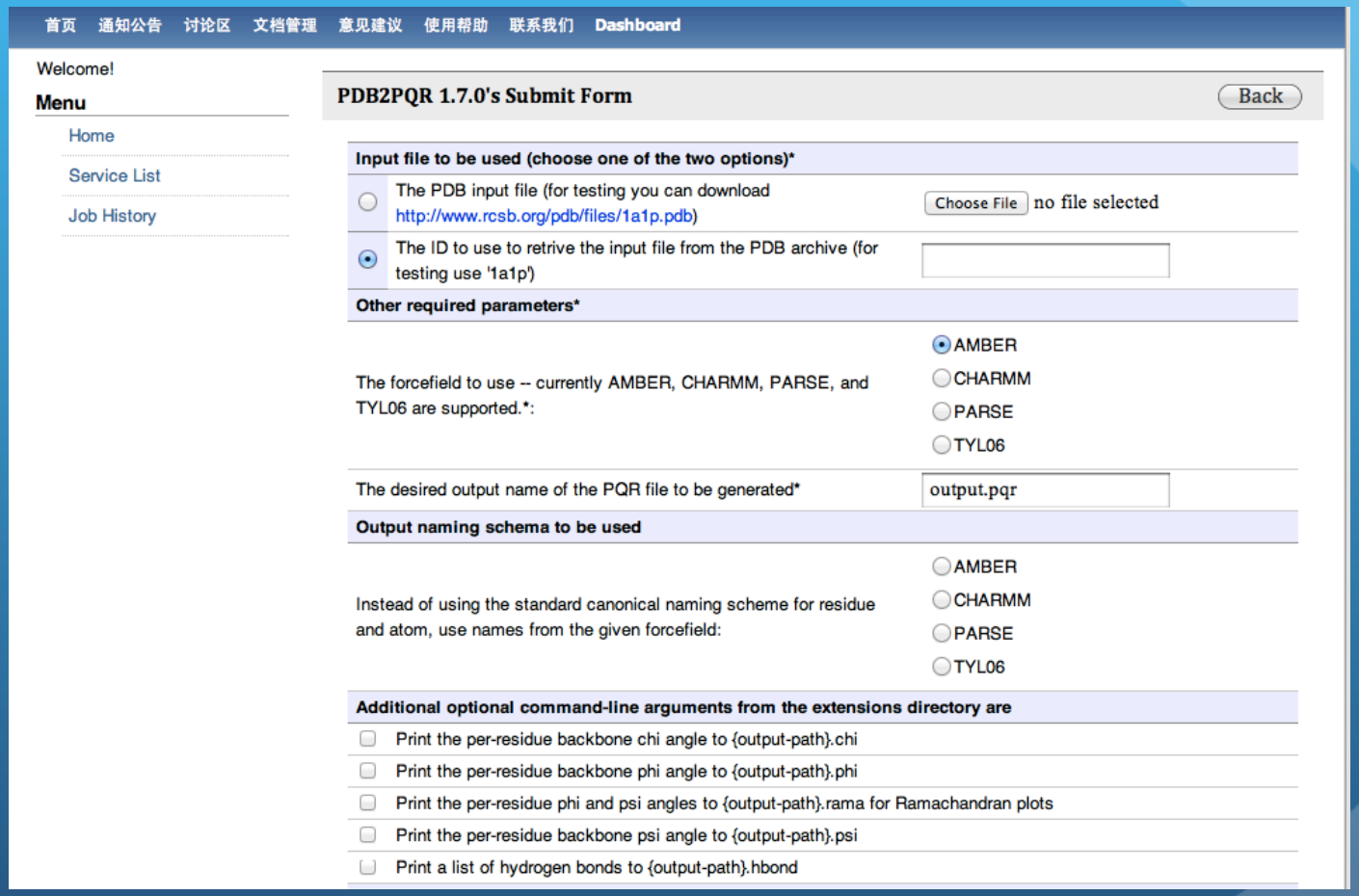
Application List Page

Application’s metadata

- Application’s metadata are requested from application’s service URL by using Opal2’s function ：AppServicePortType.getAppConfig();
- There are four types of application metadata:
  - Flag: Chackbox.
  - Tagged Parameter: Parameters with tag id.
  - Untagged Parameter: Parameters without tag id.
  - Groups: Specify groups for the above three type, a group may exclusive, in this case, we need to add ratio button for user to choose.

Application Page (metadata)

Application Page (metadata)



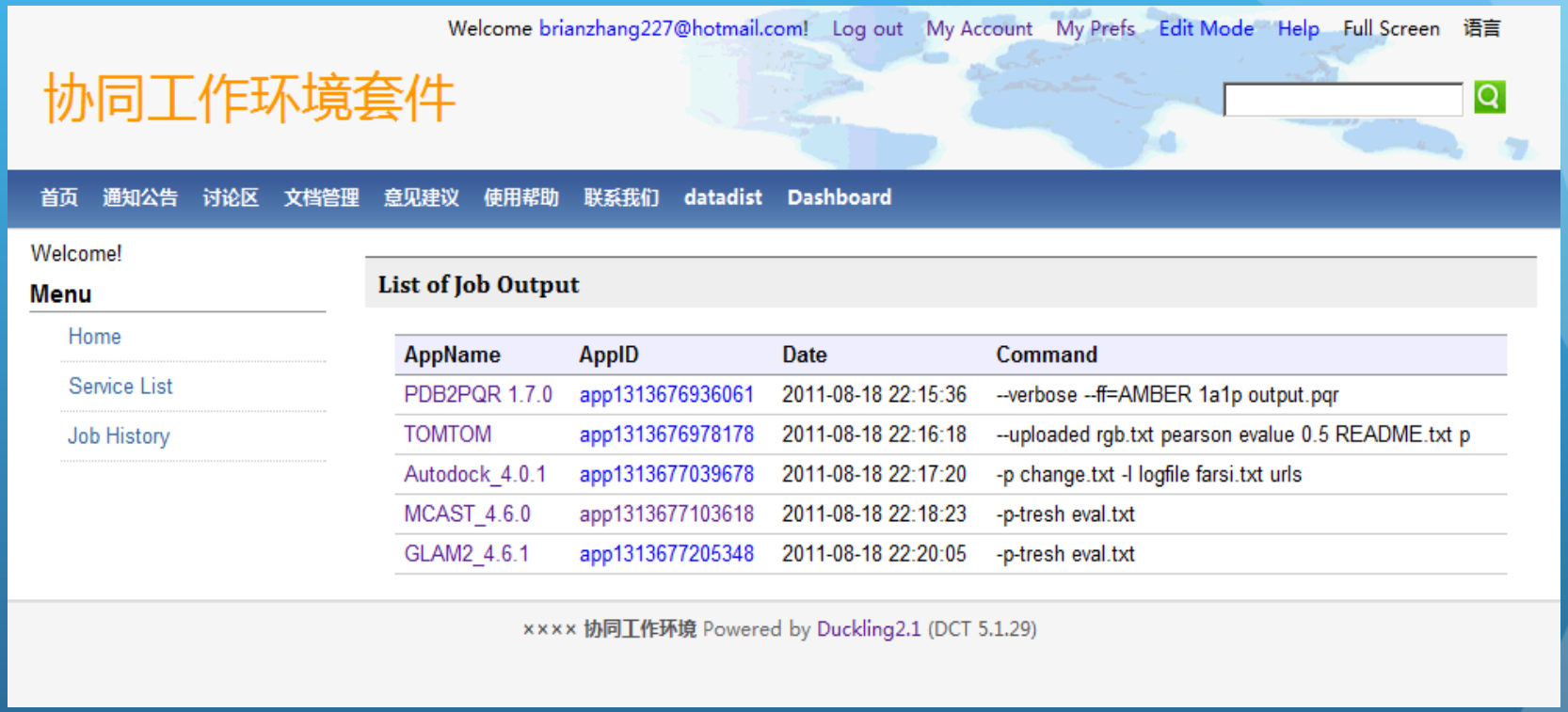
Application Page (basic)

Job Submission

- There are two basic information we need to send to server:
  - Command
  - Uploaded Files
- Service will return a Job ID in return of job request, based on ID, we can go to ws.nbcr.net/jobid (output URL) to get all the uploaded files, and job output file(result).

Job Result Page

Job History Page



Database

- There are three tables for database dashboard:
  - Users: contains information about user including email, name, company, job title, cell phone number, register date.
  - Jobs: contains all the job submission including job id, output URL, submit date, command, reference to Users.
  - Services: contains information about services including service name, service URL, service usage.
- There are also Duckling database to save user email, and password…

What I have Learned

- Spring MVC Portalet
  - Easier and More futures than Struct.
- MySQL Database
- Jquery and CSS
- Duckling (installation)
- Setup Linux Server.
- Myeclipse on Win7.

Things can be improved

- Validation for metadata application page.
- Save application metadata into database (MongoDB)
- User Control page for admin (userlevel = 0).
- A page where user can change their information including password.
- Register email validation by umt, not dashboard's database.
- Add more duckling tools.

CNIC

- Dr. Kai Nan
- Dr. Kevin Dong
- Dr. Jianjun Yu
- Guangyuan Liu
- Fang Qian

National Science Foundation

- IOSE-071072

UCSD PRIME

- Dr. Gabriele Wienhausen
- Dr. Peter Arzberger
- Teri Simas

UCSD NBCR

- Dr. Wilfred Li
- Jane Ren
- Wendy Fang