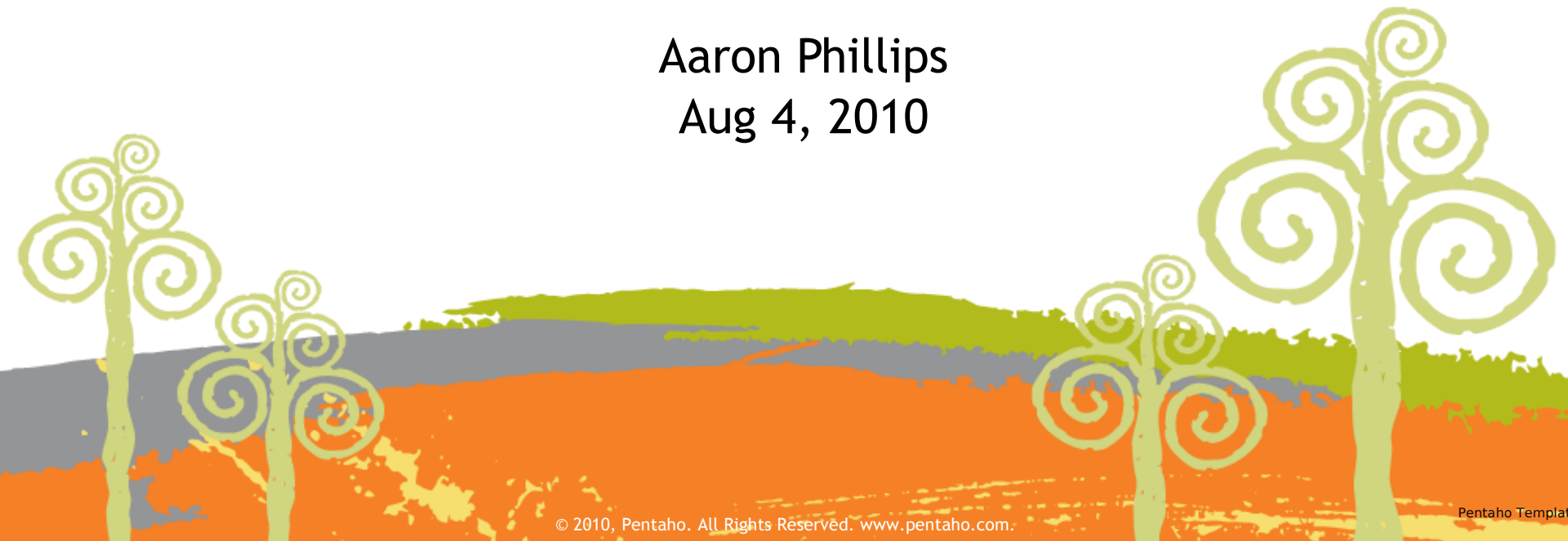




RESTful Web Services in the BIServer

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Aug 4, 2010



Different WS offerings in BIServer

BIServer has a hodge-podge of WS offerings. Attempting to doc the various services here <http://goo.gl/BQvT>

- GWT-RPC
 - JCR
 - Data Access (Metadata queries, connections, data sources)

- SOAP (XML RPC)
 - Security
 - JCR
 - Scheduling
 - ServiceAction (execute action sequence, security)
 - SolutionRepositoryService (old repo)

- */HTTP
 - ViewAction, reportviewer (prpt)
 - Data Access (XML/HTTP)

What is REST?

- Representational State Transfer
- transfer of "representations" of "resources"
- transport typically HTTP, payload can be anything, XML, plain text, JSON, etc
- URIs address a resource
- resource-oriented vs rpc
 - `http://<server>/thingthatdoesthework?operation=execute¶meter=test`
 - e.g. list my customers
 - `/customerManager?operation=list`, vs
 - `/customers/list` or just `/customers`
 - get details for my customer
 - `/customerManager?operation=getDetails&id=123456`
 - `/customers/123456`
- REST fits the HTTP protocol (media types, response codes) and enables fun things like caching of resources

REST in the BIServer

- Would simplify the sys integration story for users, having a single, well designed, straightforward, services API.
- What can be considered a “resource” in BIServer?

See a wishlist of resource URIs here <http://goo.gl/EnjC> (thanks Andy!)

- Users and Roles
- Security
- Repository (solutions and content)
- Output of solution execution
- Solution Engine itself
- Connections and Datasources
- Queries
- Scheduled jobs
- Query Metadata

What would this look like?

`/pentaho/repo/files`

returns a hierarchy of files in the root of the solution repository

`/pentaho/repo/1005`

renders content resulting from exe of solution file 1005

`/pentaho/repo/1005/acl`

give me the ACL for solution file 1005

`/pentaho/repo/1005/attr`

give me the attributes of solution file 1005

`/pentaho/repo/1005/jobs`

display list of scheduled jobs that are tied to this solution file

Community Web Services

● Why?

- Pentaho is not going to be focused on RESTful services in the foreseeable future. Focus remains on SOAP and GWT
- However, the community has shown a propensity to GTD, quite important features actually. RESTful services is one such (very imo) important feature, so the community needs to be let loose on this...

● How?

- The plugin framework has been extended to allow plugin writers to use proper Java Servlets. This feature plus a custom Jersey servlet to read plugin spring files, opens up JAX-RS to plugin writers. To write a REST service, plugin writers need only to write a POJO and mark it up with JAX-RS annotations.

● What?

- To this end, pentaho-cws was born on google code -- <http://code.google.com/p/pentaho-cws/>

CWS in action

Disclaimer: this works in “Sugar” only, and with the JCR-based repository. At this time, PUC is not wired up to talk to the JCR

0. Follow instructions on pentaho-cws home page to install pentaho-cws plugin to the BIServer (remember this must be a Sugar build)

1. Show hierarchy of (JCR) solution repository

```
curl --basic -u "joe:password" http://localhost:8080/pentaho/plugin/cws/api/repo/files | xmllint --format -
```

2. Get hierarchy for "public" folder

```
curl --basic -u "joe:password" http://localhost:8080/pentaho/plugin/cws/api/repo/files?filter=pub* | xmllint --format -
```

CWS in action

3. Get attributes of the public folder

```
curl --basic -u "joe:password" http://localhost:8080/pentaho/plugin/cws/api/repo/files/cb3f278c-03cf-43ab-b038-07b25c4acbcc/attr | xmllint --format -
```

4. Get ACL for the public folder

```
curl --basic -u "joe:password" http://localhost:8080/pentaho/plugin/cws/api/repo/files/cb3f278c-03cf-43ab-b038-07b25c4acbcc/acl | xmllint --format -
```

5. Oh, want to see that in JSON?

```
curl -H "Accept: application/json" --basic -u "joe:password"  
http://localhost:8080/pentaho/plugin/cws/api/repo/files/cb3f278c-03cf-43ab-b038-07b25c4acbcc/acl
```


Questions...