Les standards de l'OV

Journée « L'Observatoire Virtuel pour les débutants »
Vendredi 17 mars 2017

Avec le soutien de l'AS OV France
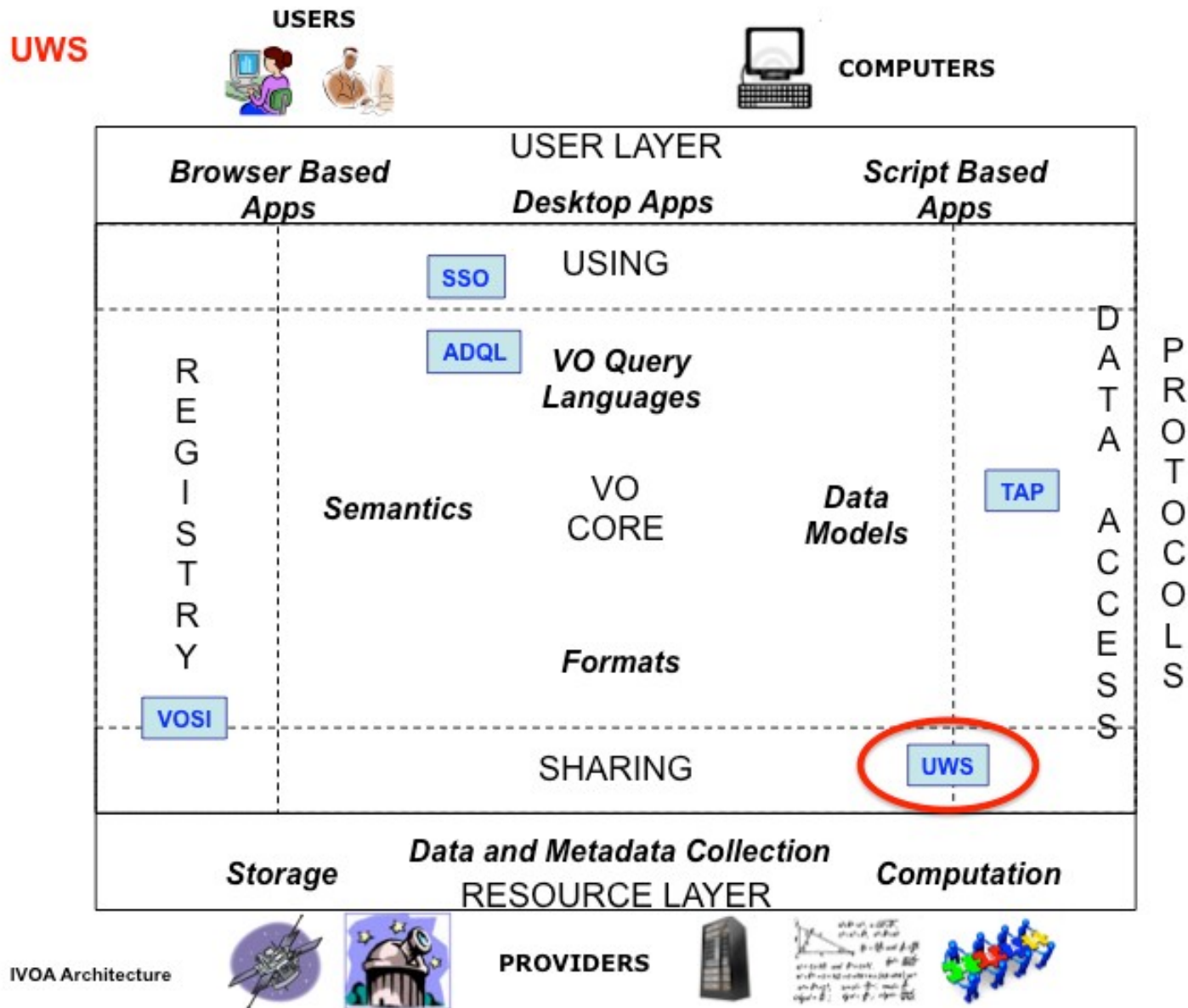
UWS

Universal **W**orker **S**ervice

Plan

- Pourquoi UWS

- Bref historique du standard

- Les concepts du standard

UWS dans l'architecture VO

Pourquoi UWS ?

- Répondre à des webservices
  - avec des temps d'exécution longs/indeterminés
  - retournant des volumes de données importants
- Fournir un patron d'exécution de webservices asynchrones standardisé (HTTP/REST)

Historique

http://www.ivoa.net/documents/UWS

- standard IVOA du groupe Grid&WebService
- 1er draft en 2005
- recommandation en V1.0 Oct. 2010, V1.1 Oct. 2016
- abstract de la Recommandation V1.1:

    « The Universal Worker Service (UWS) pattern defines how to manage asynchronous execution of jobs on a service. Any application of the pattern defines a family of related services with a common service contract. Possible uses of the pattern are also described.»

UWS concept
from UWS recast as a REST protocol
http://www.ivoa.net/documents/Notes/GWS/UWS-REST-20070226.pdf

Contents

Any asynchronous protocol needs three things.

1.A way to start a job.

2.A way to find out whether the job has finished (or failed).

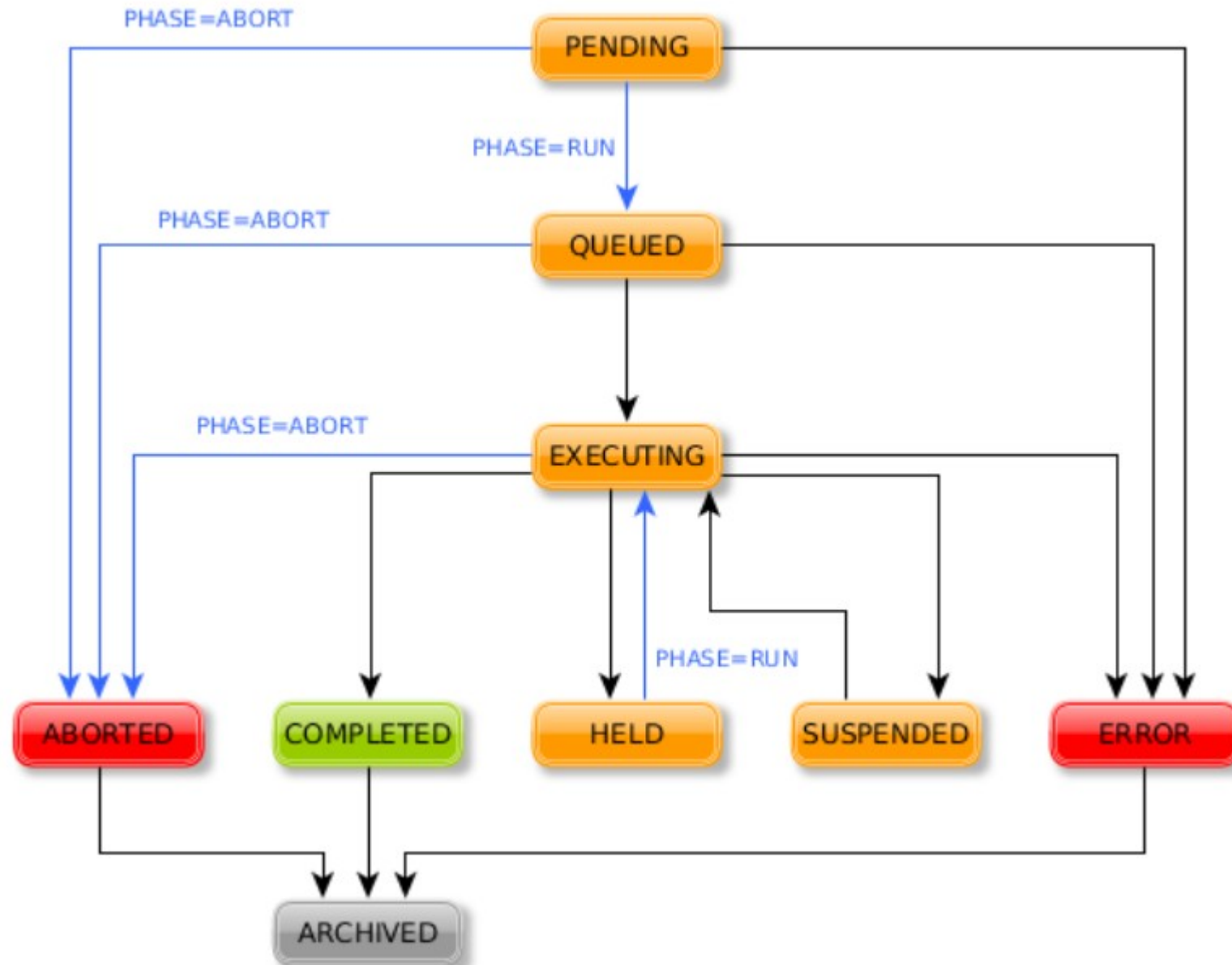3.A way to get the results of the job.

minimal protocol:

1.post to /jobs to start the job; read the job number from the response.

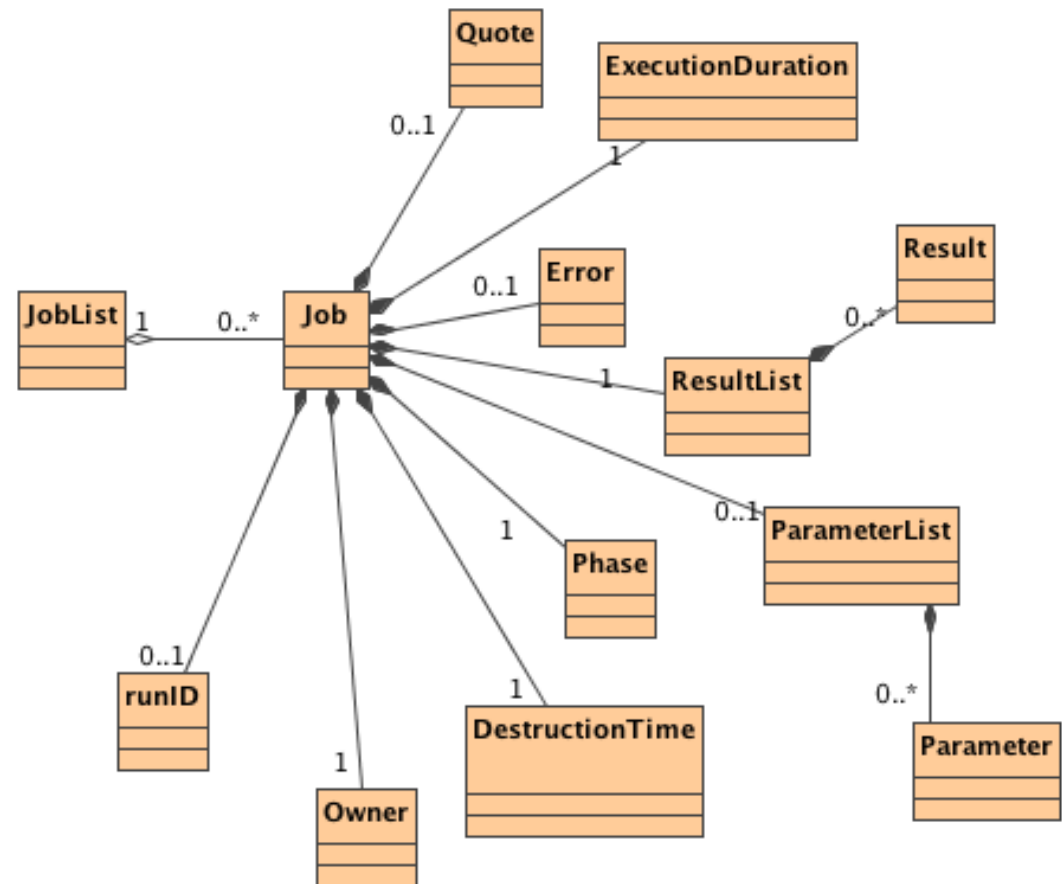2.get /jobs/42/phase repeatedly until the state changes from "working" to"finished" or "failed";

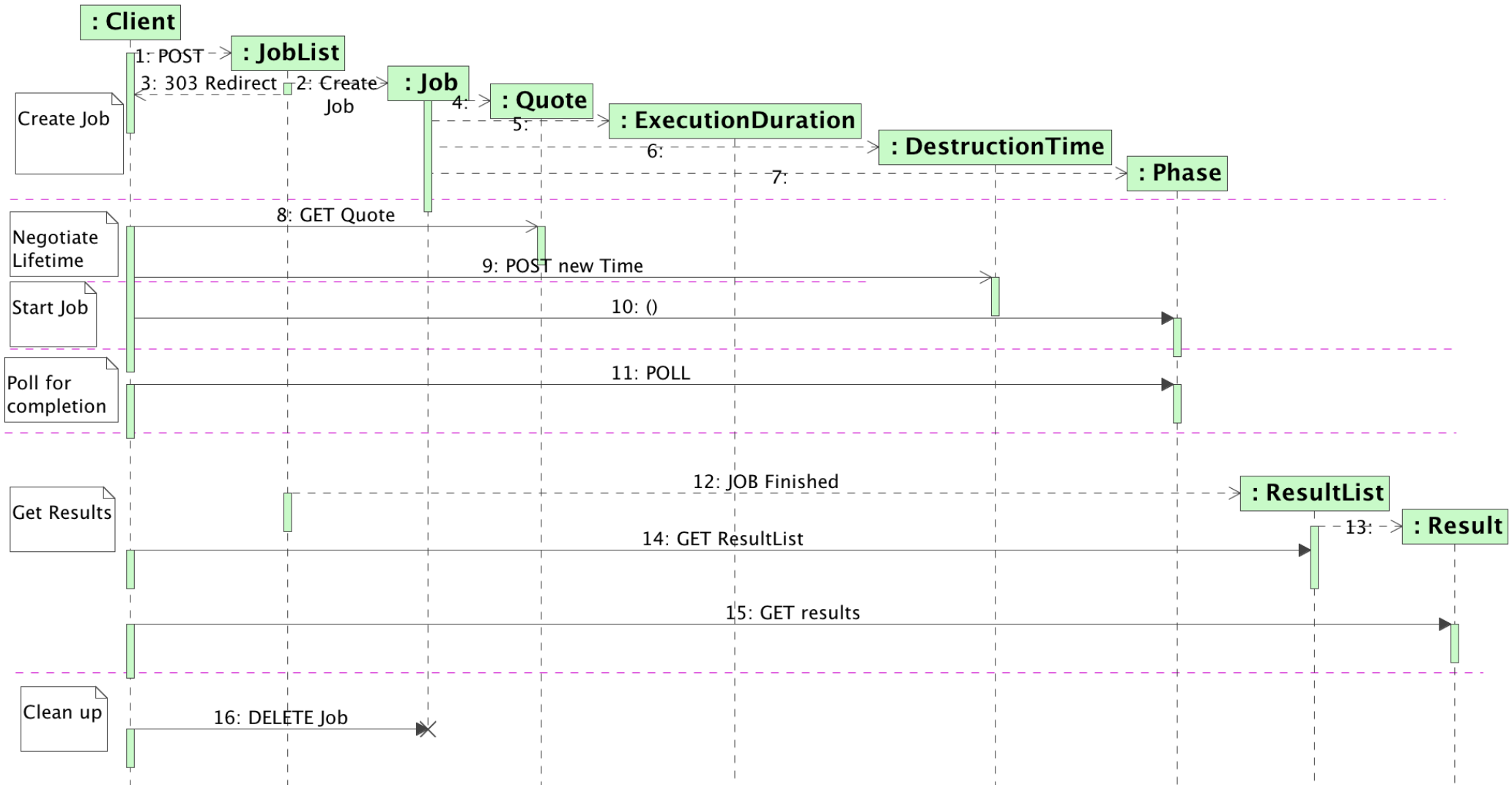3.get /jobs/042/results.

UWS – états du job

UWS – propriétés du job

```xml
<uws:job version="1.1" xsi:schemaLocation="http://www.ivoa.net/xml/UWS/v1.0 UWS.xsd"
xmlns:xml="http://www.w3.org/XML/1998/namespace" xmlns:uws="http://www.ivoa.net/
xml/UWS/v1.0" xmlns:xlink="http://www.w3.org/1999/xlink" xmlns:xsi="http://
www.w3.org/2001/XMLSchema-instance" xmlns:uwsc="urn:uwscustom">
  <uws:jobId>cea-agdevel.jb.man.ac.uk-130.88.24.18-1242749568029-508182314</uws:jobId>
  <uws:runId>myjobref</uws:runId>
  <uws:ownerId xsi:nil="true"/>
  <uws:phase>COMPLETED</uws:phase>
  <uws:creationTime>2009-05-19T17:01:44.038Z</uws:creationTime>
  <uws:startTime>2009-05-19T17:12:48.038Z</uws:startTime>
  <uws:endTime>2009-05-19T17:12:49.041Z</uws:endTime>
  <uws:executionDuration>86400</uws:executionDuration>
  <uws:destruction>2009-05-29T17:12:48.035Z</uws:destru
  <uws:parameters>
    <uws:parameter id="scaleFactor">1.8</uws:parameter>
    <uws:parameter id="image" byReference="true"> http:
    jobid123/param/image</uws:parameter>
  </uws:parameters>
  <uws:results>
    <uws:result id="correctedImage" xlink:href="http://
    result/image" size="3000960" mime-type="image/fits"
    attribute"/>
  </uws:results>
  <uws:errorSummary type="transient" hasDetail="true">
    <uws:message>we have problem</uws:message>
  </uws:errorSummary>
  <uws:jobInfo>
    <any>
      <xml>
        <thatyouwant/>
      </xml>
    </any>
  </uws:jobInfo>
</uws:job>
```

UWS - séquence

That's it

URI	Description	Representation
/{jobs}	the Job List	the <jobs> element in the UWS schema
/{jobs}/{job-id}	a Job	the <job> element in the UWS schema
/{jobs}/{job-id}/phase	the Phase of job {job-id}	One of the fixed strings
/{jobs}/{job-id}/executionduration	the maximum execution duration of {job-id}	Integer number of seconds.
/{jobs}/{job-id}/destruction	the destruction instant for {job-id}	[std:iso8601]. If no destruction time then return empty string.
/{jobs}/{job-id}/error	any error message associated with {job-id}	any representation appropriate to the implementing service
/{jobs}/{job-id}/quote	the Quote for {job-id}	[std:iso8601] If no quote available then return empty string.
/{jobs}/{job-id}/results	any results of the job {job-id}	the <results> element in the UWS schema.
/{jobs}/{job-id}/parameters	any parameters for the job {job-id}	the <parameters> element in the UWS schema.
/{jobs}/{job-id}/owner	the owner of the job {job-id}	an appropriate identifier as discussed in section 3

www.ivoa.net/documents/UWS/