

The series of screen shots of browsers shown in this document (below) illustrate the fulfillment of each of the requirements in this way:

- A. Each browser's Address bar contains the URL for a RESTful Query.
- B. The first section on the page depicts the resultant XML payload, using a DOM parser (which actually leverages a SAX parser).
- C. The second section on the page depicts the corresponding JSON payload.
- D. The third section on the page depicts the corresponding SQL Query.
- E. The last section on the page depicts the execution context for the Catalina Servlet Container — Tomcat/Catalina has an inverted Classloader hierarchy. I have written a custom method to facilitate a portable way to access assets within a Servlet Container.

NB

Converting XML that is being conveyed in its String representation is simple:

```
JSONObject resultAtRestJSON =  
    XML.toJSONObject(contentPlain.toString());
```

However, consider moving away from XML completely, to JSON, unless you really need meta-data, namespaces. JSON/BSON can bet sent more compactly across-the-wire.

<http://localhost:8088/encycbrit/rest/eb/all/topic>

localhost:8088/encycbrit/rest/ x

greg

localhost:8088/encycbrit/rest/eb/all/topic

Apps java8 router mongo job Queries all

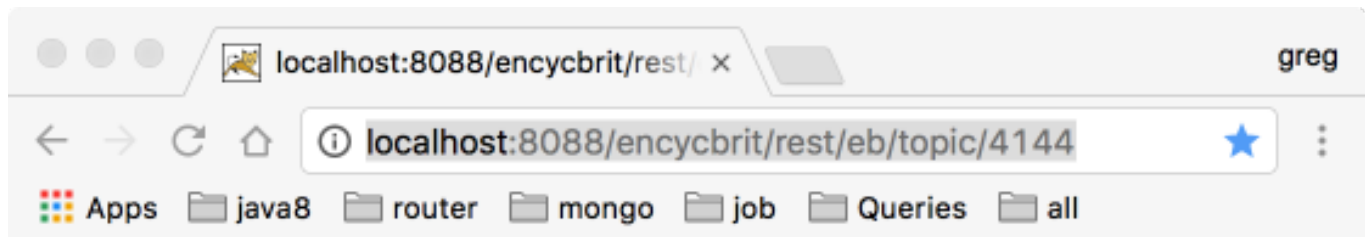
```
</url-publish>
<url-publish>
<topicid>8</topicid>
<urltitle>A-1-aircraft</urltitle>
<urlclass>technology</urlclass>
</url-publish>
<url-publish>
<topicid>11</topicid>
<urltitle>A-1-Soviet-launch-vehicle</urltitle>
<urlclass>topic</urlclass>
</url-publish>
</publish-list>
```

```
{ "publish-list": { "url-publish": [ { "topicid": 4144, "urltitle": "acrobatic-skiing-Year-In-Review-1997", "urlclass": "sports" }, { "topicid": 4143, "urltitle": "acrobatic-skiing", "urlclass": "sports" }, { "topicid": 3118, "urltitle": "ace-sports", "urlclass": "sports" }, { "topicid": 1376, "urltitle": "ablation-cluster-preparation", "urlclass": "science" }, { "topicid": 1378, "urltitle": "ablation-glaciation", "urlclass": "science" }, { "topicid": 1383, "urltitle": "ablation-layer", "urlclass": "science" }, { "topicid": 1372, "urltitle": "abl", "urlclass": "plant" }, { "topicid": 331, "urltitle": "abaca", "urlclass": "plant" }, { "topicid": 304, "urltitle": "Aarons-beard", "urlclass": "plant" }, { "topicid": 2565, "urltitle": "Acacian-Schism", "urlclass": "event" }, { "topicid": 1427, "urltitle": "Treaty-of-Abo", "urlclass": "event" }, { "topicid": 1393, "urltitle": "Ableman-v-Booth", "urlclass": "event" }, { "topicid": 1015, "urltitle": "Abel-biblical-figure", "urlclass": "biography" }, { "topicid": 1007, "urltitle": "Zainul-Abedin", "urlclass": "biography" }, { "topicid": 1010, "urltitle": "Richard-Wilhelm-Heinrich-Abegg", "urlclass": "biography" }, { "topicid": 1004, "urltitle": "abecedarius", "urlclass": "art" }, { "topicid": 323, "urltitle": "ab-ovo", "urlclass": "art" }, { "topicid": 324, "urltitle": "Aba-Nigeria", "urlclass": "place" }, { "topicid": 263, "urltitle": "Aare-River", "urlclass": "place" }, { "topicid": 265, "urltitle": "Emil-Aarestrup", "urlclass": "biography" }, { "topicid": 253, "urltitle": "aardvark", "urlclass": "animal" }, { "topicid": 257, "urltitle": "aardwolf", "urlclass": "animal" }, { "topicid": 261, "urltitle": "Aare-Massif", "urlclass": "place" }, { "topicid": 1, "urltitle": "A-poem-by-Zukofsky", "urlclass": "topic" }, { "topicid": 6, "urltitle": "Operation-A", "urlclass": "topic" }, { "topicid": 8, "urltitle": "A-1-aircraft", "urlclass": "technology" }, { "topicid": 11, "urltitle": "A-1-Soviet-launch-vehicle", "urlclass": "topic" } ] } }
```

```
select * from publish-list
```

```
EXECUTION_PATH: /OPT/CATALINAONE/WEBAPPS/ENCYCBRIT/WEB-INF/CLASSES
```

<http://localhost:8088/encycbrit/rest/eb/topic/4144> GOOD



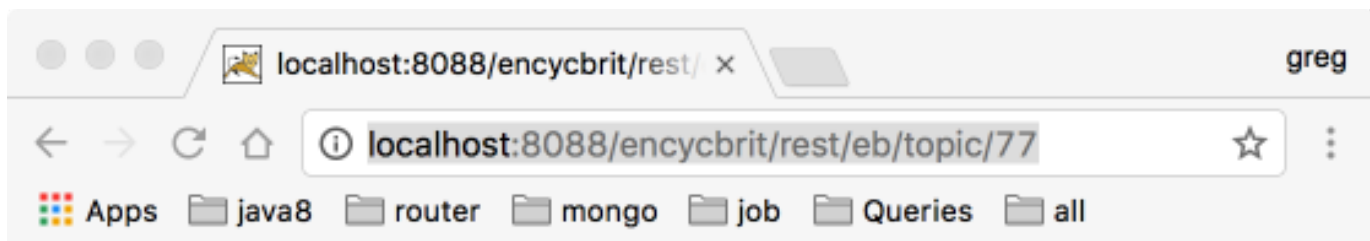
```
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<url-publish>
<topicid>4144</topicid>
<urltitle>acrobatic-skiing-Year-In-Review-1997</urltitle>
<urlclass>sports</urlclass>
</url-publish>
```

```
{"url-publish":{"topicid":4144,"urltitle":"acrobatic-skiing-Year-In-Review-1997","urlclass":"sports"}}
```

```
select topicid, urltitle, urlclass from publish-list where topicid = '4144'
```

EXECUTION_PATH: /OPT/CATALINAONE/WEBAPPS/ENCYCBRIT/WEB-INF/CLASSES

<http://localhost:8088/encycbrit/rest/eb/topic/77> BAD



```
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<url-publish>
  <topicid>77</topicid>
  <error> URL Not Found </error>
  <cause>topic 77 not in database </cause>
</url-publish>
```

EXECUTION_PATH: /OPT/CATALINAONE/WEBAPPS/ENCYCBRIT/WEB-INF/CLASSES

<http://localhost:8088/encycbrit/rest/eb/class/class-name/animal> GOOD



localhost:8088/encycbrit/rest/ x greg

localhost:8088/encycbrit/rest/eb/class/class-name/animal ☆

Apps java8 router mongo job Queries all

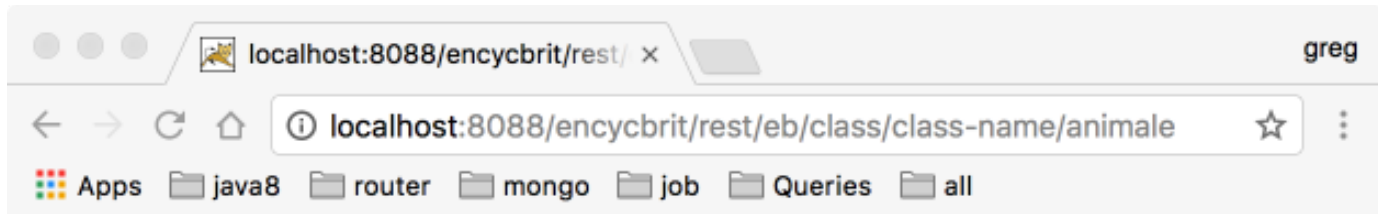
```
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<url-publish>
<topicid>253</topicid>
<urltitle>aardvark</urltitle>
<urlclass>animal</urlclass>
</url-publish>
<url-publish>
<topicid>257</topicid>
<urltitle>aardwolf</urltitle>
<urlclass>animal</urlclass>
</url-publish>
```

```
{ "url-publish": [{ "topicid": 253, "urltitle": "aardvark", "urlclass": "animal" },
{ "topicid": 257, "urltitle": "aardwolf", "urlclass": "animal" } ] }
```

```
select topicid, urltitle, urlclass from publish-list where urlclass = '?'
```

EXECUTION_PATH: /OPT/CATALINAONE/WEBAPPS/ENCYCBRIT/WEB-INF/CLASSES

<http://localhost:8088/encycbrit/rest/eb/class/class-name/animal> BAD



```
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<url-publish>
  <topicid>animale</topicid>
  <error> URL Not Found </error>
  <cause>topic animale not in database </cause>
</url-publish>
```

EXECUTION_PATH: /OPT/CATALINAONE/WEBAPPS/ENCYCBRIT/WEB-INF/CLASSES