

OSLC API

TWCloud adds OSLC support and now exposes model element data following OSLC Architecture Management (AM) (<http://open-services.net/ns/am#>) vocabulary. Along with core OSLC services provided in TWCloud, this enables smooth integration with other OSLC-compatible tools by linking resources in Linked Data fashion. Here are the key points behind current TWCloud OSLC provider implementation:

- OSLC root services document URI can be found using the following pattern - `http(s)://TWC_IP:PORT/oslc/rootservices`.
- Each of the model elements is exposed using the following URI pattern - `http(s)://TWC_IP:PORT/oslc/am/{projectID}/{elementID}`.
*Note: the *elementID* here is an Element Server ID.
- We expose the following model element properties:
 - `rdf:type` (<http://www.w3.org/1999/02/22-rdf-syntax-ns#type>) - represents architecture resource type, which according to OSLC AM vocabulary is always a Resource (<http://open-services.net/ns/am#Resource>).
 - `dcterms:modified` (<http://purl.org/dc/terms/modified>) - stands for the last element modification date.
 - `dcterms:identifier` (<http://purl.org/dc/terms/identifier>) - the Element Server ID as used in element's URI pattern.
 - `dcterms:title` (<http://purl.org/dc/terms/title>) - the name of the element

Sample RDF/XML representation of element data

```
<?xml version="1.0" encoding="UTF-8"?>
<rdf:RDF
  xmlns:oslc="http://open-services.net/ns/core#"
  xmlns:oslc_am="http://open-services.net/ns/am#"
  xmlns:dc="http://purl.org/dc/terms/"
  xmlns:dcterms="http://purl.org/dc/terms/"
  xmlns:rdf="http://www.w3.org/1999/02/22-rdf-syntax-ns#"
  xmlns:rdfs="http://www.w3.org/2000/01/rdf-schema#">
  <rdf:Description rdf:about="https://localhost:8111/oslc/am/blacff2d-4396-4314-9dba-477d573ede16/50775427-bce2-4de4-b747-8ab82d294237">
    <rdf:type rdf:resource="http://open-services.net/ns/am#Resource"/>
    <oslc:serviceProvider rdf:resource="https://localhost:8111/oslc/am/blacff2d-4396-4314-9dba-477d573ede16/services"/>
    <dcterms:modified rdf:datatype="http://www.w3.org/2001/XMLSchema#dateTime">May 16, 2018 2:08:52 PM</dcterms:modified>
    <dcterms:identifier rdf:datatype="http://www.w3.org/2001/XMLSchema#string">50775427-bce2-4de4-b747-8ab82d294237</dcterms:identifier>
    <dcterms:title rdf:parseType="Literal">Engine</dcterms:title>
  </rdf:Description>
</rdf:RDF>
```

- Currently we have neither OSLC delegated dialog nor querying services exposed.
- We offer OSLC UI previews through integration with [CC4TWC](#). For more information, check [Publishing an OSLC resource](#).

OAuth 1.0a authentication

In order to ensure secure access to server resources via OSLC, OAuth 1.0a authentication protocol is used.

OAuth 1.0a requires consumer key and secret to be known before starting the authentication process flow:

- Consumer key - currently it needs to be generated manually via service exposed in the root services document. The following HTTP POST request should be made to a consumer key generation service (`ifs:oauthRequestConsumerKeyUrl`):

HTTP request body

```
{
  "name": "consumerNameGoesHere",
  "secret": "validOAuthSecretGoesHere"
}
```

HTTP response body

```
{  
  "key": "generatedConsumerKeyShouldBeHere"  
}
```

- Consumer secret - valid OAuth consumer secrets are specified in [TWCloud's Authentication server properties file](#).