# Appendix - API Specification

The APIs specified below support the creation and retrieval of representations of a User Realm.

A User Realm is a context for the registration and authentication of a user, which comprises a unique integer identifier, a unique name, an (encryption) key and a description.

For the purposes of this exercise all that is required is to implement APIs to create (store) and retrieve the entity:

* JSON and XML representations must be supported.
* No security (authentication or authorisation) checks are required on the APIs. The code for generating the encryption key can be stubbed, returning any string.

## Create Realm

### Purpose

Creates a new realm including the generation of an encryption key. (Note, for the purposes of this test the key generation / algorithm can be stubbed).

### Request

#### XML Representation

POST /service/user/realm HTTP/1.1

Content-Type: application/xml; charset=utf-8

<realm name="realmName">

<description>realmDescription</description>

</realm>

#### JSON Representation

POST /service/user/realm HTTP/1.1

Content-Type: application/json; charset=utf-8

{

"name": "realmName",

"description": "realmDescription"

}

### Response

#### Success

##### XML Representation

HTTP/1.1 201 Created

Content-Type: application/xml; charset=utf-8

Date: Tue, 15 Nov 2010 08:12:31 GMT

<realm id="1234" name="realmName">

<description>realmDescription</description>

<key>realmKey</key>

</realm>

##### JSON Representation

HTTP/1.1 201 Created

Content-Type: application/json; charset=utf-8

Date: Tue, 15 Nov 2010 08:12:31 GMT

{

"id": 1234,

"name": "realmName",

"description": "realmDescription",

"key": "realmKey"

}

#### Errors

If the mandatory realm name is not supplied:

##### XML Representation

HTTP/1.1 400 Bad Request

Content-type: application/xml; charset=utf-8

Date: Tue, 15 Nov 2010 08:12:31 GMT

<error>

<code>InvalidRealmName</code>

</error>

##### JSON Representation

HTTP/1.1 400 Bad Request

Content-type: application/json; charset=utf-8

Date: Tue, 15 Nov 2010 08:12:31 GMT

{

"code": "InvalidRealmName"

}

If the requested realm name matches the name of an existing realm.

##### XML Representation

HTTP/1.1 400 Bad Request

Content-type: application/xml; charset=utf-8

Date: Tue, 15 Nov 2010 08:12:31 GMT

<error>

<code>DuplicateRealmName</code>

</error>

##### JSON Representation

HTTP/1.1 400 Bad Request

Content-type: application/json; charset=utf-8

Date: Tue, 15 Nov 2010 08:12:31 GMT

{

"code": "DuplicateRealmName"

}

## Get Realm

**Purpose**

Returns the details of an individual realm, identified by its unique id.

### Request

#### XML Representation

GET /service/user/realm/{id} HTTP/1.1

Accept: application/xml

#### JSON Representation

GET /service/user/realm/{id} HTTP/1.1

Accept: application/json

### Response

#### Success

##### XML Representation

HTTP/1.1 200 OK

Content-Type: application/xml; charset=utf-8

Date: Tue, 15 Nov 2010 08:12:31 GMT

<realm id="1234" name="realmName">

<description>realmDescription</description>

<key>realmKey</key>

</realm>

##### JSON Representation

HTTP/1.1 200 OK

Content-Type: application/json; charset=utf-8

Date: Tue, 15 Nov 2010 08:12:31 GMT

{

"id": 1234,

"name": "realmName",

"description": "realmDescription",

"key": "realmKey"}

#### Errors

If the requested realm id is not an integer value -

##### XML Representation

HTTP/1.1 400 Bad Request

Content-type: application/xml; charset=utf-8

Date: Tue, 15 Nov 2010 08:12:31 GMT

<error>

<code>InvalidArgument</code>

</error>

##### JSON Representation

HTTP/1.1 400 Bad Request

Content-type: application/json; charset=utf-8

Date: Tue, 15 Nov 2010 08:12:31 GMT

{

"code": "InvalidArgument"

}

If the requested realm id does not identify an existing realm.

##### XML Representation

HTTP/1.1 404 Not Found

Content-type: application/xml; charset=utf-8

Date: Tue, 15 Nov 2010 08:12:31 GMT

<error>

<code>RealmNotFound</code>

</error>

##### JSON Representation

HTTP/1.1 404 Not Found

Content-type: application/json; charset=utf-8

Date: Tue, 15 Nov 2010 08:12:31 GMT

{

"code": "RealmNotFound"

}

## Realm Entity

|  |  |
| --- | --- |
| **Field** | **Description and Constraints** |
| id | Unique ID. Primary key. System-generated. |
| name | Realm name (alias for ID). Must be unique. |
| description | Realm description. Up to 255 chars. |
| key | Realm encryption key. Fixed length 32 chars. |