

FI-WARE Catalogue REST API



fi-ware

Topics addressed: Catalogue, Manual, Drupal, API, REST

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Changes History

Release	Major changes description	Date	Editor
0.1	First Public Version	24/03/2014	PRP
0.2	Added Environment Field	25/04/2014	PRP
0.3	Added Environment Filter	25/06/2014	PRP

Table of Contents

1	INTRODUCTION.....	1
2	INFORMATION AVAILABLE	2
3	THE API	3
4	REFERENCES.....	9

1 Introduction

The FI-WARE Catalogue provides publicly available information about the Generic Enablers, Generic Enabler Instances and Tools developed within the FI-WARE project. This document describes the API for accessing the contents of the FI-WARE Catalogue.

2 Information Available

The API provided by the Catalogue allows access to the following structured information:

- Generic Enablers and Tools.
 - General Description.
 - Short Description – Description that appears in the Enablers/Tools List.
 - Long Description – Information that appears in the GE/Tool Page.
 - Contact Person – Name of the Contact Person.
 - Contact Details – E-mail or additional contact information.
 - Icon – Link to the image describing the Enabler/tool.
 - Rating – HTML code containing the rating system.
 - Open Specification Reference – Link to the Open Specification Reference.
 - Creating Instances – Information on how to create new instances if possible.
 - Documentation – Additional documentation and information about the GEI.
 - Downloads.
 - Files – Each of the Files added to the Downloads.
 - Instances.
 - Generic Enabler Instances – Available instance of a Generic Enabler Implementation.
 - Description – General information about the instance.
 - Service End-point URL – URL to access the Instance when applicable.
 - Instance Environment – The environment where the instance is deployed, currently there are three options:
 - FI-PPP Testbed
 - FI-LAB (Open Innovation Lab)
 - Other Environments
 - Terms and Conditions – Terms and conditions for using the Generic Enabler Implementation and/or the instances.

3 The API

3.1 Resources

The API has only one resource:

/enabler_list

Adding the Catalogue URL:

http://CATALOGUE_URL/rest_node_api/enabler_list

An HTTP call to that URL dumps all the information available in the Catalogue in XML format. Additionally, “.json” can be added to obtain the information in JSON format:

http://CATALOGUE_URL/rest_node_api/enabler_list.json

From now on we will use XML examples for readability purposes but the names of the fields and the structure are the same in JSON format.

The skeleton of a response is this:

```
<result is_array="true">
  <item>
    <node_type/>
    <node_title/>
    <nid/>
    <Chapter/>
    <Body/>
    <Short_Description/>
    <Description/>
    <Contact_Person/>
    <Contact_Details/>
    <Icon/>
    <Rating/>
    <File/>
    <Open_Specification_reference/>
    <Service_Endpoint__URL_/>
  </Instance_Environment>
  <og_node_gid/>
  <og_membership_node_gid/>
</item>
...
</result>
```

Where:

Field	Description
node_type	The type of content piece.
node_title	The title.
nid	Unique identification number. Can also be used to access the original

	Catalogue entry with http://CATALOGUE/node/nid
Chapter	The FI-WARE chapter
Body	Main content of the entry.
Short_Description	Brief Description of the content
Description	Full description
Contact_Person	Name of the contact person for this GE
Contact_Details	Details for the contact person (email, phone, etc.)
Icon	A link to the Icon image for this GE
Rating	HTML code for the rating system
File	Link to the File
Open_Specification_reference	Link to the Open Specification Reference
Service_Endpoint__URL	The Endpoint URL for a Generic Enabler Instance when applicable
Instance_Environment	The environment where the Generic Enabler Instance is running
og_node_gid	Group id for the node (applies to enablers)
og_membership_node_gid	Group id of the group that owns the node (applies to all but enablers)

All content is classified by the node_type:

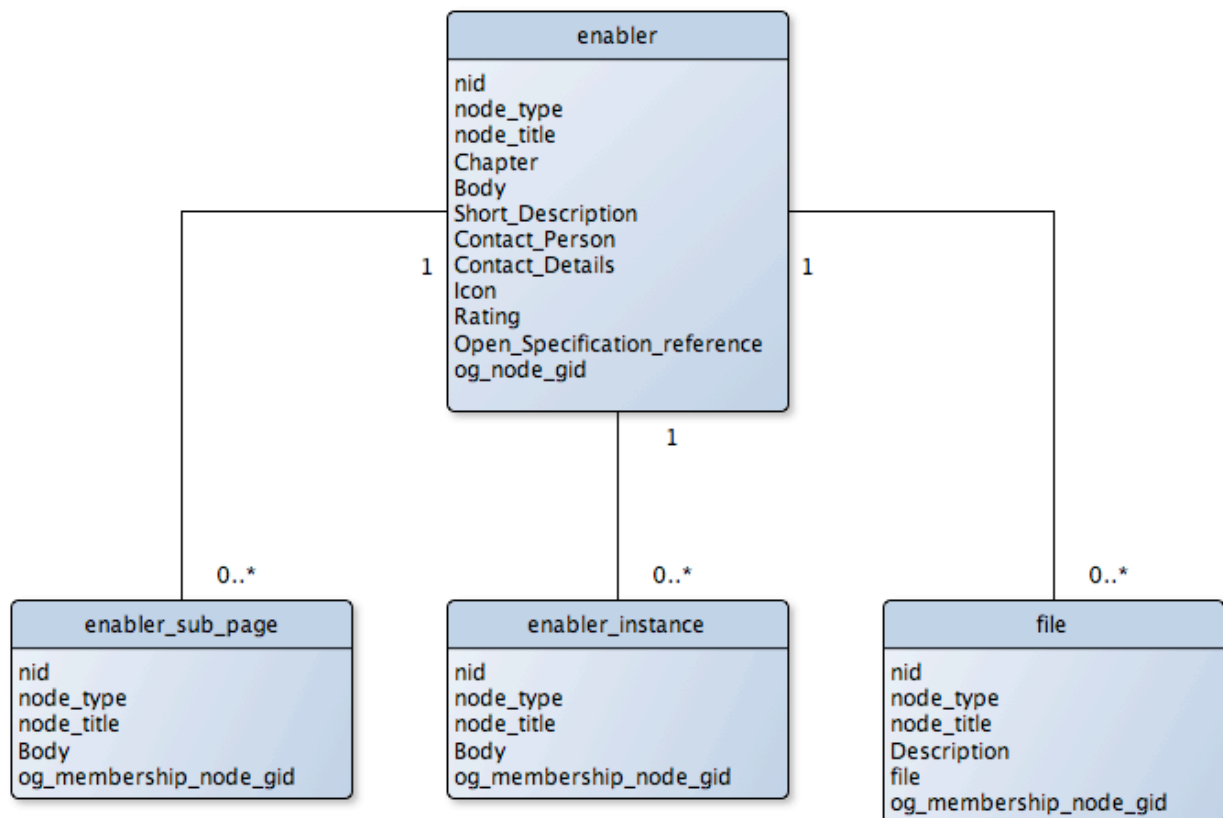
node_type	Description
enabler	Generic Enabler Implementations
enabler_instance	Generic Enabler Implementation Instances
enabler_sub_page	Additional contents tied to a GEI: <ul style="list-style-type: none"> • Creating Instances • Terms and Conditions • Documentation
file	Files related to a GEI

In the following table we can see what fields are relevant for each node_type, green means it is applicable to that type, with notes when needed. Red means that field does not contain information for that type.

Field / node_type	enabler	enabler_instance	enabler_sub_page	file
node_type				
node_title	Name of the enabler	Name of the instance	Type of enabler sub-page	Number of the file
nid				
Chapter				
Body	General GEI information	Description of the Instance	Main Content of the sub-page	
Short_Description				
Description				File Description

Contact_Person				
Contact_Details				
Icon				
Rating				
File				
Open_Specification_reference				
Service_Endpoint__URL				
Instance_Environment				
og_node_gid				
og_membership_node_gid				

The fields *og_node_gid* and *og_membership_node_gid* are not important outside of the Catalogue, they are used to tie together *enablers* with the *enabler_sub_pages*, *instances* and *files*. This relationship is explained in the figure below.



Each enabler has a *og_node_gid*. All the content related to that GE will have the *og_membership_node_gid* equal to that *og_node_gid*. **Note, the *og_node_gid* is not related to the *nid*.**

3.2 Filters

Filters can be used to refine the requests to the API. The syntax for using filters is:

http://CATALOGUE_URL/rest_node_api/enabler_list?filter1=value1&filter2=value2

As in the example, filters can be combined to get more accurate results.

There are four filters in the FI-WARE Catalogue API: Nid, Chapter, Type and Group.

3.2.1 Nid Filter

The Nid filter retrieves the element of the Catalogue with a given nid field. The keyword for the filter is *nid*. For example, to retrieve the element with 19 as nid:

http://CATALOGUE_URL/rest_node_api/enabler_list?nid=19

3.2.2 Chapter Filter

The Chapter filter can be used to select a single Chapter to retrieve information of GEIs. Remember that the Chapter field is only present in GEIs. The keyword is *field_api_chapter_tid* and a number represents each chapter:

- 1: Applications
- 2: Cloud Hosting
- 3: Data/Context Mgmt
- 4: Interface to Network
- 5: Internet of Things
- 6: Security
- 7: Tools

Tools are a special Chapter here, it can be used to retrieve information about FI-WARE Tools even though those are not strictly GEIs.

To get all GEIs from the security Chapter, the request would be:

http://CATALOGUE_URL/rest_node_api/enabler_list?field_api_chapter_tid=6

3.2.3 Type Filter

This filter selects a single type of content from the ones explained above (*enabler*, *enabler_instance*, *enabler_sub_page* and *file*). The keyword is *type*.

For instance, to retrieve only GEIs from the Catalogue:

http://CATALOGUE_URL/rest_node_api/enabler_list?type=enabler

3.2.4 Environment Filter

This filter only applies to *enabler_instance* so, in order to be effective it has to be used with the previous filter (?type=enabler_instance) the keyword is *instance_environment*.

There are three possible values for the filter corresponding with the three environments available:

“FI-PPP Testbed”

“FI-LAB (Open Innovation Lab)”

“Other Environments”

Example:

```
http://CATALOGUE_URL/rest_node_api/enabler_list?type=enabler_instance&instance_environment="FI-PPP Testbed"
```

3.2.5 Group Filter

This filter allows to retrieve all the information (enabler page, sub-pages, instances and files) from a particular GEI. The keyword is *group*. Here we will use the *og_node_gid* of a enabler to retrieve the associated pages. For instance, lets say we have previously retrieve this enabler:

```
<item>
<node_title>A Test Enabler</node_title>
<nid>632</nid>
<node_type>enabler</node_type>
<og_node_gid>93</og_node_gid>
<Chapter>
<a href="/chapter/security" typeof="skos:Concept" property="rdfs:label skos:prefLabel"
datatype="">Security</a>
</Chapter>
<Contact_Details>
<p> Ipsum ha sido el texto de relleno estándar de las industrias desde el año 1500,
cuando un impresor (N. del T. persona que se dedica a la imprenta) desconocido usó una
galería de textos y los mezcló de tal manera que logró hacer un libro de textos
especimen. No sólo sobrevivió 500 años, sino que también ingresó como texto de relleno
en documentos electrónicos, quedando esencialmente igual al original. Fue popularizado
en los 60s con la creación de las hojas "Letraset", las cuales contenían pasajes de
Lorem Ipsum, y más recientemente con</p>
</Contact_Details>
<Contact_Person>me</Contact_Person>
<Icon>

</Icon>
<Short_Description>Testing</Short_Description>
<Body>
<p>em Ipsum ha sido el texto de relleno estándar de las industrias desde el año 1500,
cuando un impresor (N. del T. persona que se dedica a la imprenta) desconocido usó una
galería de textos y los mezcló de tal manera que logró hacer un libro de textos
especimen. No sólo sobrevivió 500 años, sino que también ingresó como texto de relleno
en documentos electrónicos, quedando esencialmente igual al original. Fue popularizado
en los 60s con la creación de las hojas "Letraset", las cuales contenían pasajes de
Lorem Ipsum, y más recientemente con</p>
</Body>
<Rating>
<div class="clearfix fivestar-average-stars fivestar-average-text"><div
class="fivestar-static-form-item"><div class="control-group form-type-item"> <div
class="controls"> <div class="fivestar-default"><div class="fivestar-widget-static
fivestar-widget-static-vote fivestar-widget-static-5 clearfix"><div class="star star-1
star-odd star-first"><span class="off">0</span></div><div class="star star-2 star-
even"><span class="off"></span></div><div class="star star-3 star-odd"><span
class="off"></span></div><div class="star star-4 star-even"><span
```

```
class="off"></span></div><div class="star star-5 star-odd star-last"><span
class="off"></span></div></div></div> <p class="help-block"><div class="fivestar-
summary fivestar-summary-average-count"><span class="empty">No votes
yet</span></div></p> </div></div> </div></div>
</Rating>
<File/>
<Open_specification_reference/>
<Service_Endpoint__URL_/_/>
<Description/>
</item>
```

Notice that the *og_node_gid* field equals 93. In order to retrieve all the associated sub-pages, instances, etc. We will use the following request:

```
http://CATALOGUE_URL/rest_node_api/enabler_list?group=93
```

4 **References**

[Drupal]	www.drupal.org
[Ubuntu]	www.ubuntu.com