

CatalogConnector Open Source v.0.2 alpha Complete Manual

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By developers

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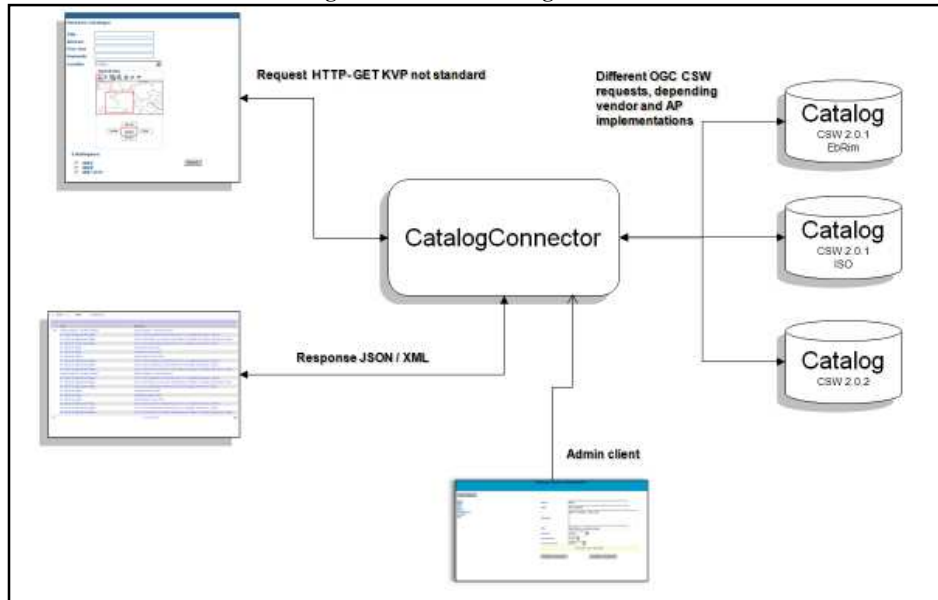
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* CatalogConnector - OpenSource CSW client
* <http://www.geoportal-idec.cat>
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1. What's CatalogConnector

CatalogConnector (CC) is a Java Servlet[7] application that sends requests to several OGC CSW catalogues, processes the responses and shows them in a single web page.

Figure 1. Schema CatalogConnector



CC implement two interfaces: *GetCapabilities* and *GetRecords*

1.1 GetCapabilities

It gives back a document describing the service and the configured connections.
 The document is “/WEB-INF/catalogues.xml”.

Parameter	Value	Description
Request	GetCapaibilities	Return service information and the catalogues connections available
outputFormat	JSON (by default) XML	Response format
project	Project's name. If not specified by default is “catalogues”	Return catalog connections project

Request sample:

<http://yourdomain/CatalogConnector/Connector?Request=GetCapabilities&Outputformat=XML>

There is an administration page where it is possible to create the connections and the capabilities document (see **2.1. Administrator and catalogues connections**)

1.2 GetRecords

Allows send requests to the catalogues.

Figure 5. Parameters supported

Parameter	Value	Description
Catalogs	Catalog's name, separated by coma	Define which catalogues will be requested
Project	Project's name. If not specified by default is "catalogues"	Return catalog connections project
Title	String	Search by title
Subject	String	Search by subject
Description	String	Search by description
Organization	Organization's name	Search by organization
AnyText	String	Search by title, subject and description
Bbox	XMIN,YMIN,XMAX,YMAX	Search by bounding box
startPosition	integer	Search position for pagination
maxRecords	integer	Number hits per page
outputFormat	JSON XML	Response format

For instance, a request by description against two catalogues will be;

<http://yourdomain/CatalogConnector/Connector?Request=GetRecords&Catalogs=idec,fao&description=Barcelona&outputFormat=JSON>

2. Installation guide

- Undeploy **catalogConnector.war** under your web server.
- Open /WEB-INF/web.xml

Edit the path to the log folder (line 7)

```
<init-param>
  <param-name>log-directory</param-name>
  <param-value>
    /opt/tomcat/webapps/catalogConnector/WEB-INF/logs/
  </param-value>
</init-param>
```

Edit user name and password for administrator web page (line 58)

```
<init-param>
  <param-name>user_name</param-name>
  <param-value>admin</param-value>
</init-param>
<init-param>
  <param-name>password</param-name>
  <param-value>connector</param-value>
</init-param>
```

→To test catalogConnector go to <http://yourdomain/CatalogConnector/index.html>

Figure 2. CatalogConnector sample client



2.1. Administrator and catalogues connections

By default CC have some samples connections to different catalogs. If you want to add your own connections, go to.

→ <http://yourdomain/CatalogConnector/AdminConnector>

→Entry the new password and User name

The administrator allows managing connections to CSW catalogues

Figure 3. CatalogConnector admin client

CatalogConnector Administrator

[New Catalog](#)

[IDEC](#)
[IDEE](#)
[BCN](#)
[AISCV](#)
[IDEAndorra](#)
[eWater](#)
[FAQ](#)

Name:

Title:

Abstract:

URL:

product:

csw-version:

xml-encoding:

All fields must be filled

[Create Connection](#)

Name: Catalog's name (i.e. My SDI)

Title: Catalog's title

Abstract: short description

Url: Catalog CSW URL

Product: vendors name, from a list of products supported by default. To extend that list see section 3.
How to add new products

Csw-version: CSW version

Xml-encoding: Used for the XML requests.

Also, is possible to edit connections by hand, all information is stored in **WEB-INF/catalogues.xml** .

Figure 4. XML catalogues.xml

```
<catalog>
<name>IDEC</name>
<title>SDI Catalonia</title>
<abstract>IDEC metadata catalogue</abstract>
<urlcatalog>http://delta.icc.cat/indicio/query</urlcatalog>
<product>indicio</product>
<csw-version>2.0.1</csw-version>
<xml-encoding>UTF-8</xml-encoding>
</catalog>

<catalog>
<name>FAO</name>
<title>FAO Catalogue</title>
<abstract>GeoNetwork catalog service conform to the HTTP protocol binding
of the OpenGIS Catalogue Service specification version 2.0.2</abstract>
<urlcatalog>http://www.fao.org/geonetwork/srv/en/csw</urlcatalog>
<product>geonetwork</product>
<csw-version>2.0.2</csw-version>
<xml-encoding>UTF-8</xml-encoding>
</catalog>
```

3 How to add new products

The main part of the CC is the place where the administrator may add, delete or edit the entire CSW request and catalogue vendor implementations supported.

By default CC support 4 products, but probably using this implementation is possible connect with other catalog without changing anything.

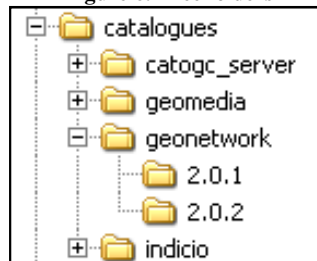
Before adding a new product it is advisable to test an existing one.

Figure 5. Catalogues supported by CatalogConnector

product	CSW versions	AP	Vendor
Indicio	2.0.1	ebRim	Galdos
GeoNetwork	2.0.1, 2.0.2	ISO	GeoNetwork
CatOgc_Server	2.0.2	ISO	Unizar
Geomedia	2.0.0	ISO	Intergaph

To add a new product; inside the folder “WEB-INF/catalogues” it’s possible to add new subfolders containing the vendors name’s, such as “geonetwork”. Inside “geonetwork” folder is possible to add other subfolders with the CSW version supported (see fig 6).

Figure 6. Tree folders



The names of these folders must be the same as the values “**product**” and “**csw-version**” described into de configuration file.

Finally inside the version folder we may find all the files containing the needed information to send CSW requests and parser responses.

Figure 9. Files inside versión folders

files	description
Body.xml	Request header
Subject.xml	Clause “filter” by keyword
Title.xml	Clause “filter” by title
Abstract.xml	Clause “filter” by description
Bbox.xml	Clause “filter” by bounding box
Organization	Clause “filter” by organization
Any.xml	Clause “filter” by title, description and keyword
Response.xsl	Response XML template. Transform response in a common XML format. There’s not XSD or DTD to validate and build the XML. Please see figure 8 sample XML

CC build CSW query “on the fly” following the parameters sent and transforms the responses in a common XML with the possibility of displaying in a same file the response from different catalogs in a XML or JSON file.

Inside each xml there is a variable (identified by \$) used by CC to replace by the new values from get requests

Figure 7. bbox.xml sample

```
<ogc:BBOX>
<ogc:PropertyName>ows:BoundingBox</ogc:PropertyName>
<gml:Envelope srsName="http://www.opengis.net/gml/srs/epsg.xml#63266405">
<gml:lowerCorner>$XMIN $YMIN</gml:lowerCorner>
<gml:upperCorner>$XMAX $YMAX</gml:upperCorner>
</gml:Envelope>
</ogc:BBOX>
```

Figure 8. Common xml response ample

```
<Catalogue>
<Id>FAO</Id>
<QueryString>%26ANY%3DRiv%26MAXRECORDS%3D10</QueryString>
<Position>11</Position>
<GetRecordsResponse xmlns:dc="http://purl.org/dc/elements/1.1/"
xmlns:dct="http://purl.org/dc/terms/"
xmlns:csw="http://www.opengis.net/cat/csw/2.0.2">
<numberOfRecordsMatched>2852</numberOfRecordsMatched>
<numberOfRecordsReturned>10</numberOfRecordsReturned>
<nextRecord>11</nextRecord>
<Record>
<title>Burundi - Rivers and Lakes</title>
<description>This Dataset contains Burundi Rivers and Lakes</description>
<identifier>e0727fb0-f49b-11db-9311-000d939bc5d8</identifier>
</Record>
<Record>
<title>Ethiopia Major Rivers</title>
<description>Ethiopian major rivers. The rivers shape file was made from DEM (90m resolution) by using arc hydro.</description>
<identifier>112514e0-b1c8-11db-b480-000d939bc5d8</identifier>
</Record>
<Record>
<title>Liberia - Hydrology</title>
<description>These dataset represents Liberia's Hydrology (Rivers and lakes).</description>
<identifier>71312c60-cb28-11db-93c5-000d939bc5d8</identifier>
</Record>
<Record>
<title>Indonesia, Aceh Province - Rivers</title>
<description>Rivers for Aceh Province, Indonesia.</description>
<identifier>7ae21440-b6c9-11db-ae84-000d939bc5d8</identifier>
</Record>
<Record>
<title>Rivers of Africa</title>
<description>This digital data layer is a 1 : 5 000 000 shapefile with the rivers of Africa that has been digitized in 1994 for the UNEP/FAO Desertification Assessment and Mapping Project.</description>
<identifier>bd93bb90-88fd-11da-a88f-000d939bc5d8</identifier>
</Record>
</GetRecordsResponse>
```

</Catalogue>

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