

# Rest Api Documentation

## Cytomine API interactive documentation

All the interactions with the Cytomine core are performed through a RESTful API. It makes the link between the server side and a Cytomine client, such as the web interface, the Java or the Python client. All the available services provided by the API are summarized in a user-friendly way on a website automatically installed with Cytomine core. On this interface, you can browse the documentation and directly test API responses in a playground area.

### Retrieve the documentation

#### 1) For demo.cytomine.be

For our demo server:

[https://research.cytomine.be/restApiDoc/?doc\\_url=https://research.cytomine.be/restApiDoc/api](https://research.cytomine.be/restApiDoc/?doc_url=https://research.cytomine.be/restApiDoc/api)

For IMS developers, a similar documentation is also available at [http://demo-ims.cytomine.be/restApiDoc/?doc\\_url=http://demo-ims.cytomine.be/restApiDoc/api](http://demo-ims.cytomine.be/restApiDoc/?doc_url=http://demo-ims.cytomine.be/restApiDoc/api).

#### 2) For your own instance

The documentation is automatically installed and directly available on your own instance of Cytomine. According to your configuration.sh during the bootstrap procedure, the documentation is available at

- For core: [http://\\_\\_CORE\\_URL\\_\\_/restApiDoc/?doc\\_url=\\_\\_CORE\\_URL\\_\\_](http://__CORE_URL__/restApiDoc/?doc_url=__CORE_URL__)
- For IMS: [http://\\_\\_IMS\\_URL\\_\\_/restApiDoc/?doc\\_url=\\_\\_IMS\\_URL\\_\\_](http://__IMS_URL__/restApiDoc/?doc_url=__IMS_URL__)

## Usage

The different services are grouped into several APIs. You can click on a method to obtain its detailed description.

It is also possible to directly test the API response to a request with the playground area on the right. To do so, you have to be connected as a Cytomine user. To obtain a session, you have to connect using the web interface with the same browser.

JSONDoc

Get documentation

### API INFO

Base path: `http://localhost:8080`  
Version: 0.1

APIS

- [abstract image services](#)
- [acl services](#)
- [algo annotation services](#)
- [annotation filter services](#)
- [annotation index service](#)
- [annotation term service](#)
- [attached services](#)
- [description services](#)
- [discipline services](#)
- [generic annotation services](#)
- [group services](#)
- [image filter project services](#)
- [image filter services](#)
- [image group services](#)
- [image instance services](#)
- [image sequence services](#)
- [job parameter services](#)
- [job services](#)
- [job template annotation services](#)
- [job template services](#)
- [nested image services](#)

### USER SERVICES

Methods for managing a user role

[/api/user/{id}.json](#) GET

[/api/project/{id}/user.json](#) GET

[/api/project/{id}/admin.json](#) GET

<b>Path</b>	<code>/api/project/{id}/admin.json</code>
<b>Description</b>	Get all project admin
<b>Method</b>	<span style="background-color: #27ae60; color: white; padding: 2px 5px; border-radius: 3px;">GET</span>
<b>Produces</b>	<code>application/json</code>
<b>Path parameters</b>	
<code>id</code>	Required: true Type: long Description: The project id
<b>Query parameters</b>	
<code>max</code>	Required: false Type: int Description: Pagination: Number of record per page (default 0 = no pagination)
<code>offset</code>	Required: false Type: int

### PLAYGROUND

`/api/project/{id}/admin.json`

**Accept**

`application/json`

**Path parameters**

`id`

**Query parameters**

`max`   
`offset`

Submit

## API endpoint conventions

Basically, an object is created with a `POST /api/object.json` request.

To get an object, make a `GET /api/object/{id}.json` request where `{id}` is the identifier of the requested object.

To update an object, make a `PUT /api/object/{id}.json` request where `{id}` is the identifier of the requested object.

To delete an object, make a `DELETE /api/object/{id}.json` request where `{id}` is the identifier of the requested object.

To obtain a list of objects, use a `GET /api/object.json` request.

A list of objects can often be filtered. For example, to obtain the list of projects that are available for a specifier user (which you have rights for), make a `GET /api/user/{id}/project.json`.

## Cytomine API Simple examples

Here are examples of requests and description of typical results.

You have to be logged to the demo instance e.g. using the `jsnow/jsnow` account.

Please note most of these requests are already implemented in Python and Java functions in our clients so you don't have to reimplement communication mechanisms.

URL example	Description
<a href="http://research.cytomine.be/api/user.json">http://research.cytomine.be/api/user.json</a>	List of users (JSON)

<a href="http://research.cytomine.be/api/user/263676.json">http://research.cytomine.be/api/user/263676.json</a>	Description of a specific user (JSON)
<a href="http://research.cytomine.be/api/project.json">http://research.cytomine.be/api/project.json</a>	List of projects (JSON)
<a href="http://research.cytomine.be/api/project/528050.json">http://research.cytomine.be/api/project/528050.json</a>	Description of a specific project (JSON)
<a href="http://research.cytomine.be/api/project/528050/imageinstance.json">http://research.cytomine.be/api/project/528050/imageinstance.json</a>	List of images in a specific project (JSON)
<a href="http://research.cytomine.be/api/imageinstance/528460.json">http://research.cytomine.be/api/imageinstance/528460.json</a>	Description of a specific image (JSON)
<a href="http://research.cytomine.be/api/abstractimage/528120/thumb.png?maxSize=1024">http://research.cytomine.be/api/abstractimage/528120/thumb.png?maxSize=1024</a>	Thumbnail of a specific image (PNG)
<a href="http://research.cytomine.be/api/annotation.json?&amp;project=528050">http://research.cytomine.be/api/annotation.json?&amp;project=528050</a>	List of annotations in a specific project (JSON)
<a href="http://research.cytomine.be/api/annotation.json?&amp;project=528050&amp;term=528044&amp;users=263676&amp;images=528132">http://research.cytomine.be/api/annotation.json?&amp;project=528050&amp;term=528044&amp;users=263676&amp;images=528132</a>	List of annotations of a specific ontology term, in a specific project, for a specific user (human or userjob), in a specific image (JSON)
<a href="http://research.cytomine.be/api/annotation/528401.json">http://research.cytomine.be/api/annotation/528401.json</a>	Description of a specific annotation (JSON)
<a href="http://research.cytomine.be/api/userannotation/528401/crop.png">http://research.cytomine.be/api/userannotation/528401/crop.png</a>	Crop image of a specific annotation (PNG)
<a href="http://research.cytomine.be/api/userannotation/528401/crop.png?increaseArea=2">http://research.cytomine.be/api/userannotation/528401/crop.png?increaseArea=2</a>	Crop image of a specific annotation (PNG) with context
<a href="http://research.cytomine.be/api/userannotation/528401/crop.png?zoom=2">http://research.cytomine.be/api/userannotation/528401/crop.png?zoom=2</a>	Crop image of a specific annotation at zoom level 2 (PNG)
<a href="http://research.cytomine.be/api/userannotation/528401/crop.png?zoom=2&amp;mask=true">http://research.cytomine.be/api/userannotation/528401/crop.png?zoom=2&amp;mask=true</a>	Crop binary mask of a specific annotation at zoom level 2 (PNG)
<a href="http://research.cytomine.be/api/userannotation/528401/crop.png?zoom=2&amp;alphaMask=true">http://research.cytomine.be/api/userannotation/528401/crop.png?zoom=2&amp;alphaMask=true</a>	Crop alpha mask of a specific annotation at zoom level 2 (PNG)
<a href="http://research.cytomine.be/api/imageinstance/528460/window-23181-14285-1000-1000.png">http://research.cytomine.be/api/imageinstance/528460/window-23181-14285-1000-1000.png</a>	Tile of size 1000x1000 at a specific location (23181,14285) in a specific image (PNG)
<a href="http://research.cytomine.be/api/imageinstance/528460/window-23181-14285-1000-1000.png?mask=true&amp;review=true&amp;terms=528044">http://research.cytomine.be/api/imageinstance/528460/window-23181-14285-1000-1000.png?mask=true&amp;review=true&amp;terms=528044</a>	Tile reviewed mask of size 1000x1000 at a specific location (23181,14285) for a specific ontology term in a specific image (PNG)
<a href="http://research.cytomine.be/api/job/1939560.json">http://research.cytomine.be/api/job/1939560.json</a>	Description of a specific job (JSON) including software parameter values

## Grails plugin

To document our Rest API, we have built a Grails plugin (public), Rest Api Doc, that can be reused to document other REST API.

Rest Api Doc source: <https://github.com/loic911/restapidoc>

Rest Api Doc Documentation: <http://loic911.github.io/restapidoc/>