

Wikiprint Book

Title: DownscalingPortal/RESTfulAPI/Climate4Impact

Subject: TracMeteo - DownscalingPortal/RESTfulAPI/Climate4Impact

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Table of Contents

Climate4Impact	3
Access the API	3
User Administration	3
1. Create a new user	3
2. List users	3
3.Remove user	3
Variables	4
Variables by VariableType?	4
Zones	4
Zone	4
Predictor	4
User Predictands	4
Zone Predictands	4
Filtered predictands	4
Domains	4
Datasets	4
Stations	4
Models	5
Models filtering	5
Model scenarios	5
Jobs	5
Downscalings	5
Downscaling methods	5
Delete job	5
Downscaling download CSV	5
Downscaling download NetCDF4	5
JOB LOG	6
DP ESGF-Search experimental end-point	6
Launch downscaling	6

Climate4Impact

The Downscaling Portal RESTful API is token based authentication. That means, the user has to include a token in every request.

Access the API

Climate4Impact has an existing account into the Downscaling Portal. With the credentials provided is very simple to authenticate and get the token.

```
curl -i -X POST -d username=your_username -d password=your_password http://meteo.unican.es/dp/rest/authenticate
```

Success

```
HTTP/1.1 201 Created
Date: Mon, 24 Mar 2014 08:59:04 GMT
token: your_token
Content-Length: 0
Content-Type: text/plain
```

User Administration

The API allows the manager to create users who have the same experiments as him and this users will be attached to the manager. Thus, users can be added, listed and removed from the DPRA Climate4Impact service.

In order to clarify how to use the API quickly, we are going to follow an example step by step.

1. Create a new user

```
curl -i -H "Accept: application/json" -H "Content-type: application/json" -H "token: your_token" -X POST -d "{\"username\"
```

Response

```
HTTP/1.1 201 Created
Date: Mon, 24 Mar 2014 09:08:17 GMT
Content-Length: 0
Content-Type: text/plain
```

If the request generates an exception or something is missing, an error will be shown. Note: In some cases, it is possible that the character " has not to be escaped.

2. List users

```
curl -i -H "token: your_token" http://meteo.unican.es/dp/rest/users
```

Success

```
HTTP/1.1 200 OK
Date: Mon, 24 Mar 2014 08:59:48 GMT
Content-Type: application/json; charset=UTF-8
Transfer-Encoding: chunked

{"responseCode":"success","message":"List of users retrieved","values":[{"username":"pcmdi9.llnl.gov.openid.vegasm","passw
```

3.Remove user

```
curl -i -H "Accept: application/json" -H "Content-type: application/json" -H "token: your_token" -X DELETE http://meteo.un
```

Success

```
HTTP/1.1 200 OK
Date: Mon, 24 Mar 2014 09:00:59 GMT
Content-Length: 0
Content-Type: text/plain
```

Variables

```
curl -i -H "token: your_token" https://meteo.unican.es/dp/rest/variables
```

Variables by [VariableType?](#)

```
curl -i -H "token: your_token" https://meteo.unican.es/dp/rest/variables?variableType=TEMPERATURE
```

Zones

```
curl -i -H "token: your_token" https://meteo.unican.es/dp/rest/zones
```

Zone

```
curl -i -H "token: your_token" https://meteo.unican.es/dp/rest/zones/{zoneId}
```

Example: ZONE_ID=2637

Predictor

```
curl -i -H "token: your_token" https://meteo.unican.es/dp/rest/zones/{zoneId}/predictor
```

User Predictands

```
curl -i -H "token: your_token" https://meteo.unican.es/dp/rest/predictands
```

Zone Predictands

```
https://meteo.unican.es/dp/rest/zones/{ZONE_ID}/predictands
```

Filtered predictands

```
curl -i -H "token: your_token" https://meteo.unican.es/dp/rest/predictands?dataset={DATASET_NAME}&variable={VARIABLE_NAME}
```

Optional parameter for clients: username. (Get predictands from the given user)

VARIABLE_NAME examples: TN TX, RR...

Domains

```
curl -i -H "token: your_token" https://meteo.unican.es/dp/rest/domains
```

Datasets

```
curl -i -H "token: your_token" https://meteo.unican.es/dp/rest/datasets
```

Stations

```
curl -i -H "token: your_token" https://meteo.unican.es/dp/rest/zones/{ZONE_ID}/predictands/{PREDICTAND_NAME}/stations
```

Models

```
curl -i -H "token: your_token" https://meteo.unican.es/dp/rest/models?zone={ZONE_ID}
```

Models filtering

```
curl -i -H "token: your_token" https://meteo.unican.es/dp/rest/models?zone={ZONE_ID}&project={PROJECT_NAME}&experiment={EXPERIMENT_NAME}
```

```
Example: https://meteo.unican.es/dp/rest/models?zone=2637&project=CMIP5&experiment=historical&ensemble=r1i1p1
```

Model scenarios

```
curl -i -H "token: your_token" https://meteo.unican.es/dp/rest/models/{MODEL_NAME}/scenarios
```

```
Example: https://meteo.unican.es/dp/rest/models/CANESM2/scenarios
```

Jobs

```
curl -i -H "token: your_token" https://meteo.unican.es/dp/rest/jobs
```

Downscalings

```
curl -i -H "token: your_token" http://meteo.unican.es/dp/rest/downscalings?zone={ZONE_ID}&predictand={PREDICTAND_NAME}&downscalingMethod={DOWNSCALING_METHOD}
```

```
Example: http://meteo.unican.es/dp/rest/downscalings?zone=2637&predictand=VALUE_Iberia_ECA_Tmax&downscalingMethod=Analogue
```

Downscaling methods

```
curl -i -H "token: your_token" https://meteo.unican.es/dp/rest/zones/{ZONE_ID}/predictands/{PREDICTAND_NAME}/downscalingMethods
```

Delete job

```
curl -X DELETE -i -H "token: your_token" localhost:8080/dp/rest/jobs/{JOB_ID}
```

WARNING: you can only delete non owner jobs if you are the client. For this purpose use "username" parameter.

Downscaling download CSV

```
curl -i -H "token: your_token" http://meteo.unican.es/dp/rest/downscalings/download4?jobId=33221&zone=2637&predictand=VALUE_Iberia_ECA_Tmax&downscalingMethod=Analogue
```

```
Example: http://meteo.unican.es/dp/rest/downscalings/download4?jobId=33221&zone=2637&predictand=VALUE_Iberia_ECA_Tmax&downscalingMethod=Analogue
```

Downscaling download NetCDF4

```
curl -i -H "token: your_token" http://meteo.unican.es/dp/rest/downscalings/download4?jobId={JOB_ID}&zone={ZONE_ID}&predictand={PREDICTAND_NAME}&downscalingMethod=NetCDF4
```

Optional: "username" parameter for clients.

```
Example: http://meteo.unican.es/dp/rest/downscalings/download4?jobId=33221&zone=2637&predictand=VALUE_Iberia_ECA_Tmax&downscalingMethod=NetCDF4
```

JOB LOG

```
curl -i -H "token: your_token" https://meteo.unican.es/dp/rest/jobs/{JOB_ID}/log
```

WARNING: only for downscaling jobs from DP 2.1 update. "username" parameter available for clients.

DP ESGF-Search experimental end-point

```
curl -i -H "token: your_token" https://meteo.unican.es/dp/rest/ESGF/gcm
```

Launch downscaling

```
curl -i -H "token: your_token" --data="zone={ZONE_ID}&predictand={PREDICTAND_NAME}&downscalingMethod={DOWNSCALING_METHOD}&
```

WARNING: "username" parameter available for clients.