

Planeta calibration and validation portal. REST API for access to Meteor-M and Electro-L basic instrument measurements files on test polygons - user guide.

Interface goals

REST API for Planeta cal/val portal was designed to provide automated access to instrument measurements files on test polygons for programs and web applications.

Functionality

REST API functions:

1. Get list of test polygons and their basic descriptive information;
2. Get list of remote sensing platforms. Remote sensing platform is a combination of satellite platform and sensing instrument on it;
3. Search instrument measurements archives by specified criteria;
4. Download files from instrument measurements archives.

REST API description

REST format

Server support 3 formats for REST requests answers: HTML, XML and JSON.

1. HTML - <http://planet.rssi.ru/calval/REST/v2/en/html>
2. XML - <http://planet.rssi.ru/calval/REST/v2/en/xml>
3. JSON - <http://planet.rssi.ru/calval/REST/v2/en/json>

Authorization

Planeta cal/val portal users must be members of ADownloaders or AAdmins usergroups to get access to REST API.

REST API uses unique identifiers (REST IDs) to check user access permission. Portal users can generate REST ID in their user profile on Planeta cal/val portal (Fig. 1)

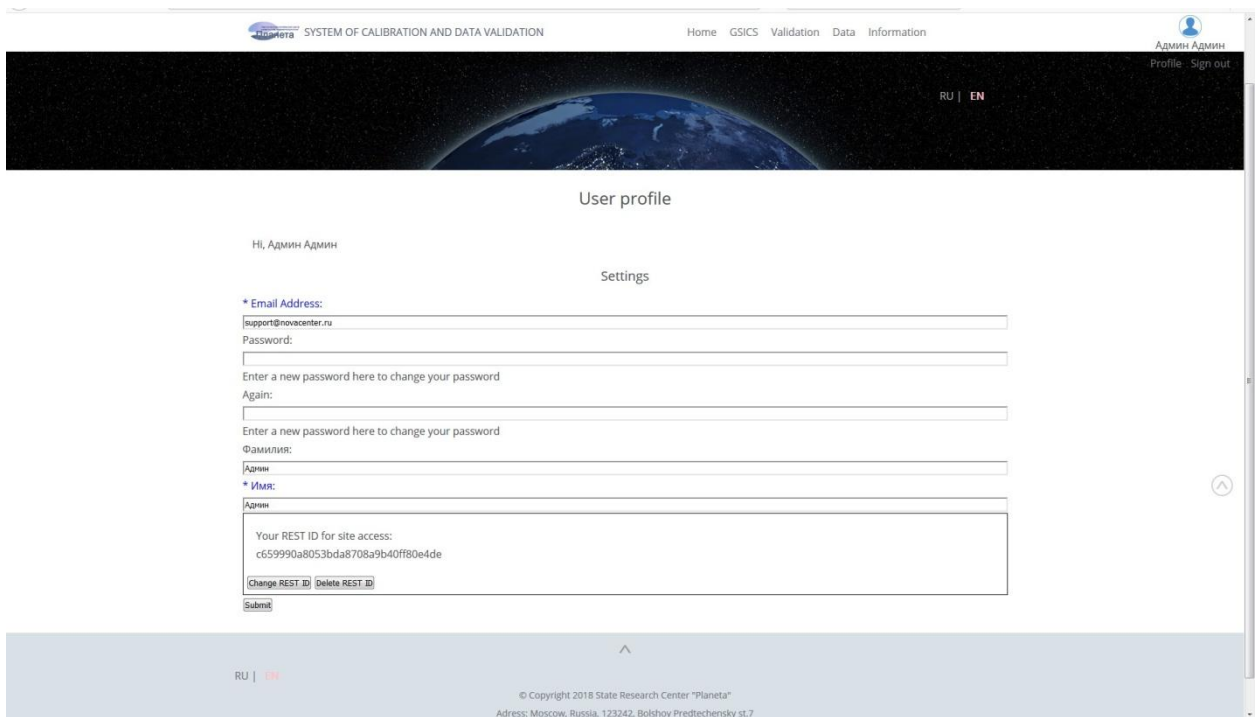


Fig. 1 REST ID management interface

“Change REST ID” button will create new REST identifier. Users need to create REST ID after registration.

“Delete REST ID” button will erase user identifier from database. User will be unable to access REST API until he creates new identifier.

Users need to save their profiles after changing REST ID by clicking “Submit” button.

After REST ID creation, user can access REST API, providing his identifier in “restids/<id>” format in all requests. For example,

“http://planet.rssi.ru/calval/REST/v2/en/json/restids/a5577f4773ba3a0f1c6175bd42f72d11”.

Getting items info

User can get polygon list with remote sensing platform information by specifying “<Server url>/<REST format>/restids/<id>/polygons” request. Each polygon ID is a combination of geographical place, satellite platform and remote sensing instrument. For example,

“http://planet.rssi.ru/calval/REST/v2/en/json/restids/a5577f4773ba3a0f1c6175bd42f72d11/polygons”.

User can get remote sensing platforms list by specifying “<Server url>/<REST format>/restids/<id>/platforms” request. For example,

“http://planet.rssi.ru/calval/REST/v2/en/json/restids/a5577f4773ba3a0f1c6175bd42f72d11/platforms”.

User can get instrument measurements files list by specifying “<Server url>/<REST format>/restids/<id>/archives” request. For example,

“http://planet.rssi.ru/calval/REST/v2/en/json/restids/a5577f4773ba3a0f1c6175bd42f72d11/archives”.

Server response to info requests is limited by 50 items. Request parameters “limit” and “offset” can be used to get additional items.

The “offset=<number>” parameter instruct server to skip first <number> elements in the list and start request response with <number+1> element.

The “limit=<number>” parameter instruct server to return only <number> items instead of 50 in request response.

For example,

“http://planet.rssi.ru/calval/REST/v2/en/json/restids/a5577f4773ba3a0f1c6175bd42f72d11/archives?ofset=400&limit=5”.

It is according to HTML standard, that request parameters are separated from request address by “?” sign, and multiple parameters are separated from each other by “&” sign.

There are other parameters for future archive list filtration, they are: polygonids, platformids, startdate, stopdate.

The “polygonids=<list>” and “platformids=<list>” parameters allow to specify comma separated lists of polygon and platform identifiers for filtering.

The “startdate” and “stopdate” parameters allow to filter archive information by date. Date format is “YYYY-MM-DD HH:MM:SS”.

Archive files downloading

User can get files list from archive by specifying comma separated archive ID list in server request.

Number of archive IDs in request is limited by 10. For example,

“http://planet.rssi.ru/calval/REST/v2/en/json/restids/a5577f4773ba3a0f1c6175bd42f72d11/archives/10,100,200”. The list of archive files in the server response is numbered continuously, which allows user to create a request for their further selective download.

The “files=<list>” parameter allow user to download single file with given number, or zip archive with multiple files with numbers from the list.

For example,

“http://planet.rssi.ru/calval/REST/v2/en/json/restids/a5577f4773ba3a0f1c6175bd42f72d11/archives/10,100,200?files=2” will download the second file from the file listing of the archives with IDs 10, 100 and 200.

And

“http://planet.rssi.ru/calval/REST/v2/en/json/restids/a5577f4773ba3a0f1c6175bd42f72d11/archives/10,100,200?files=2,6,7,8” will download archive with files 2,6,7,8 from the file listing of the archives with IDs 10, 100 and 200.

The “zip=1” parameter allow user to download all contents of specified archives as single zip file. For example,

“http://planet.rssi.ru/calval/REST/v2/ru/json/restids/a5577f4773ba3a0f1c6175bd42f72d11/archives/10,100,200?zip=1” will download archive with all contents of instrument measurements archives with IDs of 10, 100 and 200.