

JAXA G-Portal Bulk Search and Download of Products Using the G-Portal CSW Server

1. Environment Setup

1.1 Launch Windows PowerShell

Please refer to the following Microsoft page:

<https://learn.microsoft.com/en-us/powershell/scripting/windows-powershell/starting-windows-powershell?view=powershell-7.6>

1.2 Install WSL (Windows Subsystem for Linux)

About WSL:

<https://learn.microsoft.com/windows/wsl/about>

WSL Installation Guide:

<https://learn.microsoft.com/windows/wsl/install>

1.3 Install the curl Command in WSL

Instructions for installing “curl” are included in the following page:

<https://learn.microsoft.com/windows/dev-environment/javascript/nodejs-on-wsl>

2. Product Search Using the CSW Server

2.1 What You Can Do with the CSW Server

CSW (Catalogue Service for the Web) is an international standard defined by the Open Geospatial Consortium (OGC) for registering, searching, and retrieving metadata related to geospatial data and web services. Since the product catalog published by G-Portal conforms to this standard, executing the commands described below in WSL allows you to obtain search results equivalent to those available through the G-Portal web interface.

2.2 Search Procedure Using the CSW Server

[Preparation]

Place the following three files, provided as attachments to this manual, in any folder on your PC:

- ✓ csw_for_jaxa_g-portal.sh
- ✓ make_filelist.sh
- ✓ sftp_get.sh

[Search Steps]

Step 1

Open “csw_for_jaxa_g-portal.sh” in a text editor.

Step 2

Modify the search option settings on lines 6 through 10 according to your search requirements. For options not listed below, refer to Table 1. CSW Search Options.

If you add or remove options, you must:

- ✓ Add or remove the corresponding variables in “csw_for_jaxa_g-portal.sh”
- ✓ Modify the URL specified in the curl command (line 27)
- ✓ Search Parameters

- COUNT=3000

Number of search results returned per request.

Maximum value: 3000

No modification is normally required.

- START_TIME="2020-01-01T00:00:00"

Start date and time of the search period.

Format : yyyy-mm-ddThh:mm:ss

- END_TIME="2020-01-31T23:59:59"

End date and time of the search period.

Format : yyyy-mm-ddThh:mm:ss

- DATASET_ID="10001003"

Dataset ID assigned to each product.

For dataset IDs corresponding to satellite sensor products, refer to:

https://gportal.jaxa.jp/gpr/assets/mng_upload/COMMON/upload/G-Portal_datasetID_list.pdf

- BBOX="0,-90,360,90"

Area of interest (search area).

Format : min_longitude,min_latitude,max_longitude,max_latitude

Step 3

Save “csw_for_jaxa_g-portal.sh”.

When saving:

- ✓ Line ending: LF
- ✓ Character encoding: UTF-8

Step 4

Start WSL prepared in Section 1 and execute:

[Note (as of September 8, 2026)]

The CSW server domain will be made public when the new system goes live. Therefore, until then, you will not get the correct results by performing this process.

```
$ ./csw_for_jaxa_g-portal.sh
```

Note

Depending on the specified search options, the search process may time out. If this occurs, revise the option settings, for example by shortening the search period.

Step 5

After execution completes, confirm that a file named “results.xml” has been created in the same folder.

Note

If you open “results.xml” and find text such as “Time-out”, the search operation in Step 4 has timed out.

2.3 Downloading Products via the G-Portal SFTP Site

Step 1

Run the “make_filelist.sh” in WSL. This script uses the results.xml file generated in Section 2 and creates a list file required for the next step.

```
$ ./make_filelist.sh
```

Step 2

Confirm that a file named “files.lst” has been created in the same folder.

Step 3

Open “sftp_get.sh” in a text editor and replace USERNAME=“*YOUR_ACCOUNT*” with your own G-Portal account name.

Save the file using:

- ✓ Line ending: LF
- ✓ Character encoding: UTF-8

Step 4

Run the following script in WSL. This script uses “files.lst” generated in the previous step and downloads the corresponding data from G-Portal.

```
$ ./sftp_get.sh
```

Note

If you want the downloaded files to be stored in a different directory:

- ✓ Create the target directory.
- ✓ Move “sftp_get.sh” and “files.lst” into that directory.
- ✓ Execute “sftp_get.sh” there.

Step 5

Confirm that the product files have been downloaded successfully.

Step 6

Exit WSL by typing “exit”.

Table 1. CSW Search Options

(Items highlighted in yellow in the original script are configured by default in csw_for_jaxa_g-portal.sh.)

Search Item	Parameter	Type	Example
Dataset ID	datasetId	Integer	27004001
Identifier	id	String	ALOS2146782480-170209
Bounding Box	bbox	Coordinate	130,30,140,40
updateTime	updateTime	DateTime	2021-04-28T17:00:00
polar stereo	pseq	String	EQ
acquisitionType	aqtype	String	NOMINAL
imageQualityDegradation	deg	Float	0
processingDate	psdate	DateTime	2021-04-28T17:30:00
processingLevel	pslv	String	L1A
beginPosition	startTime	DateTime	2021-04-28T18:00:00
endPosition	endTime	DateTime	2021-04-28T18:30:00
satelliteName	sat	String	GCOM-C
sensorName	sen	String	SGLI
operationalMode	operationalMode	String	NOMINAL
wrsLongitudeGrid	pathno	Integer	240
wrsLatitudeGrid	rowno	Integer	253
orbitNumber	orbitno	Integer	3044
lastOrbitNumber	lastorbitno	Integer	679

acrossTrackIncidenceAngle	pointingAngle	Float	0
polarisationChannels	polarisation	String	HH
daynight	daynight	String	Night
version	prdver	String	05A
cloudCoverPercentage	cloud	Float	0
totalQualityCode	quality	String	Good
physicalQuantity	physicalQuantity	String	AGB
Resolution	resolution	String	1km
numberMissingData	numberMissingData	Integer	0
sceneNumber	sceneNumber	String	17
orbitDirection	orbitDirection	String	Descending
tileHNo	tileHNo	Integer	19
tileVNo	tileVNo	Integer	10
tiltSegmentNumber	tiltSegmentNumber	Integer	1
RSPPathNumber	RSPPathNumber	Integer	232
sensorNumber	sensorNumber	Integer	1
offNadirAngle	offNadir	Float	32.4
orbitStatus	orbitStatus	String	H
ProcessTimeUnit	ProcessTimeUnit	String	01D