

S6VT Data Access Instructions

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EUMETSAT
Eumetsat-Allee 1, D-64295 Darmstadt, Germany
Tel: +49 6151 807-7
Fax: +49 6151 807 555
<http://www.eumetsat.int>

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1 INTRODUCTION

This document explains how members of the Sentinel-6 Validation Team (S6VT) can sign up to receive data from the Sentinel-6 Michael Frehlich (S6MF) satellite during commissioning, and how the users will be able to receive those data thereafter.

Those who have already done so can ignore this document or use it just for further reference.

1.1 Data flows

Two data flows are set up in order to better facilitate the S6VT users:

- Through EUMETSAT (See Section 2)
- Through PO.DAAC (See Section 3)

Both data flows are expected to started end March 2021.

1.2 Other documentation

In addition, a separate FTP site is set up to retrieve documentation, presentations, and alike (See Section 4).

Documentation relevant to this data release include:

- The latest processor documentation:
 - PGS (Product Generation Specification)
 - PFS (Product Format Specification)
 - ADS (Auxiliary Data Specification)
- The latest product release note
- S6VT meeting presentations

1.3 Questions

For questions concerning the provision of S6MF data to the S6VT users, please e-mail the EUMETSAT Help Desk (ops@eumetsat.int).

2 S6MF COMMISSIONING DATA THROUGH EUMETSAT

The S6VT members who reside outside of the United States and have not yet sent it SSH keys but would like to request access are requested to apply to EUMETSAT by e-mail to the EUMETSAT User Help Desk by 23 April 2021.

The next Sections will explain how to request access, how to generate the necessary SSH keys, and how to use the SSH key pair to download the data.

2.1 Requesting access from EUMETSAT

Please request access to the S6MF commissioning data by following the next steps:

- Generate an SSH key pair to be used with this service. How to do this is explained in the next Section.
- Send the public SSH key attached to a short e-mail to the EUMETSAT User Help Desk (ops@eumetsat.int). Please put “S6VT” as part of the subject line.

The due date for submission is 23 April 2021. Access should then become available on 27 April 2021.

2.2 Generating SSH keys

The use of SSH key pairs is a secure way to connect to servers without the need for passwords. It avoids that you need to remember, write down, or store another username and password combination. In addition, we do not have to (insecurely) send this through the internet. Sending a public SSH key through the internet is safe, as you remain to hold the private key. Without the match between the two, nobody can do anything with the public key.

To generate the key pair, go to the command line of the machine where you want to download the data, and type the following command:

```
$ ssh-keygen -t rsa -b 3072 -f <filename>
```

where <filename> is of your own choosing. You can add comments to the generated key, using the “-C” option during generation of the key.

This will create two files:

- A private key (~/.ssh/<filename>) that you will keep to yourself.
- A public key (~/.ssh/<filename>.pub) that you will have to attach to your e-mail to the [EUMETSAT User Help Desk](#).

Please send your e-mail by 23 April 2021 to get access from the start of the data flow. Requests received later, will be added to the service at later injection points.

2.3 How to access the data through EUMETSAT

The keys that the S6VT users send will be installed for user s6vt on two different FTP servers:

- s6vt@ofids.eumetsat.int (for data from the operational platform)
- s6vt@vfids.eumetsat.int (for data from the validation platform)

Once installed, users will have access to both servers. Those who submit their request late, will be added at a later stage.

2.3.1 Access from the command line (Linux)

On your side, you can use the following command to access one of the servers, e.g.:

```
$ sftp -i ~/.ssh/<filename> s6vt@ofids.eumetsat.int
```

where <filename> is the name of the private part of the public key that you supplied. Once logged in, you can see the directory in/jcspdp which has subdirectories alt-nrt, alt-stc, alt-ntc. Note that AMR products are made available along-side the altimeter products.

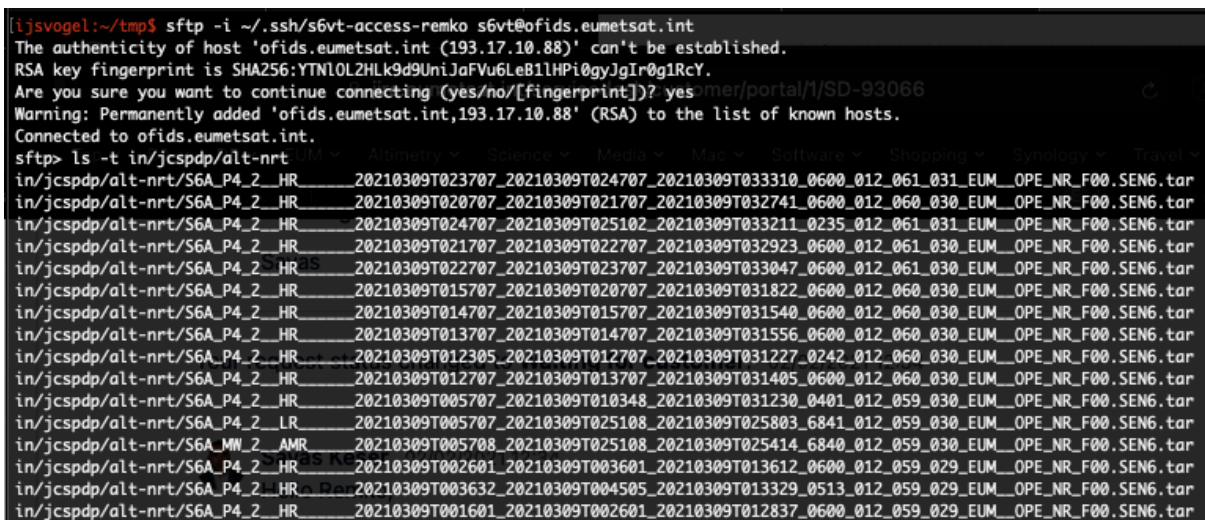
To simplify this process, you can write this in ~/.ssh/config:

```
Host ofids vfid
    User s6vt
    HostName %h.eumetsat.int
    IdentityFile ~/.ssh/<filename>
```

where <filename> is the name of the private part of the public key that you supplied.

Subsequently, your command line can simply be:

```
$ sftp ofids
```



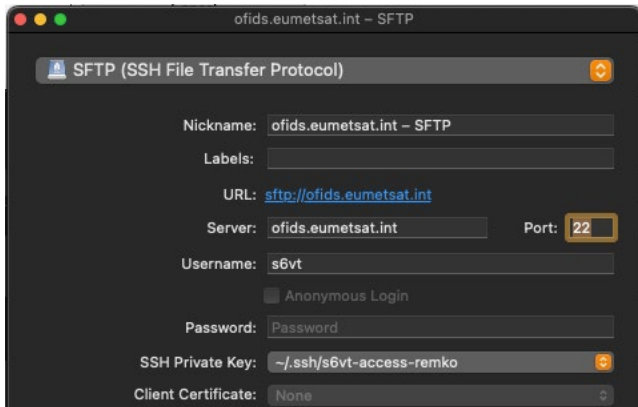
```
i@jsvogel:~/tmp$ sftp -i ~/.ssh/s6vt-access-remko s6vt@ofids.eumetsat.int
The authenticity of host 'ofids.eumetsat.int (193.17.10.88)' can't be established.
RSA key fingerprint is SHA256:YTN10L2HLk9d9UniJaFVu6LeB1lHPi0gyJgIr0g1RcY.
Are you sure you want to continue connecting (yes/no/[fingerprint])? yes
Warning: Permanently added 'ofids.eumetsat.int,193.17.10.88' (RSA) to the list of known hosts.
Connected to ofids.eumetsat.int.
sftp> ls -t in/jcspdp/alt-nrt
in/jcspdp/alt-nrt/S6A_P4_2_HR_20210309T023707_20210309T024707_20210309T033310_0600_012_061_031_EUM_OPE_NR_F00_SEN6.tar
in/jcspdp/alt-nrt/S6A_P4_2_HR_20210309T020707_20210309T021707_20210309T032741_0600_012_060_030_EUM_OPE_NR_F00_SEN6.tar
in/jcspdp/alt-nrt/S6A_P4_2_HR_20210309T024707_20210309T025102_20210309T033211_0235_012_061_031_EUM_OPE_NR_F00_SEN6.tar
in/jcspdp/alt-nrt/S6A_P4_2_HR_20210309T021707_20210309T022707_20210309T032923_0600_012_061_030_EUM_OPE_NR_F00_SEN6.tar
in/jcspdp/alt-nrt/S6A_P4_2_HR_20210309T022707_20210309T023707_20210309T033047_0600_012_061_030_EUM_OPE_NR_F00_SEN6.tar
in/jcspdp/alt-nrt/S6A_P4_2_HR_20210309T015707_20210309T020707_20210309T031822_0600_012_060_030_EUM_OPE_NR_F00_SEN6.tar
in/jcspdp/alt-nrt/S6A_P4_2_HR_20210309T014707_20210309T015707_20210309T031540_0600_012_060_030_EUM_OPE_NR_F00_SEN6.tar
in/jcspdp/alt-nrt/S6A_P4_2_HR_20210309T013707_20210309T014707_20210309T031556_0600_012_060_030_EUM_OPE_NR_F00_SEN6.tar
in/jcspdp/alt-nrt/S6A_P4_2_HR_20210309T012305_20210309T012707_20210309T031227_0242_012_060_030_EUM_OPE_NR_F00_SEN6.tar
in/jcspdp/alt-nrt/S6A_P4_2_HR_20210309T012707_20210309T013707_20210309T031405_0600_012_060_030_EUM_OPE_NR_F00_SEN6.tar
in/jcspdp/alt-nrt/S6A_P4_2_HR_20210309T005707_20210309T010348_20210309T031230_0401_012_059_030_EUM_OPE_NR_F00_SEN6.tar
in/jcspdp/alt-nrt/S6A_P4_2_LR_20210309T005707_20210309T025108_20210309T025803_6841_012_059_030_EUM_OPE_NR_F00_SEN6.tar
in/jcspdp/alt-nrt/S6A_MW_2_AMR_20210309T005708_20210309T025108_20210309T025414_6840_012_059_030_EUM_OPE_NR_F00_SEN6.tar
in/jcspdp/alt-nrt/S6A_P4_2_HR_20210309T002601_20210309T003601_20210309T013612_0600_012_059_029_EUM_OPE_NR_F00_SEN6.tar
in/jcspdp/alt-nrt/S6A_P4_2_HR_20210309T003632_20210309T004505_20210309T013329_0513_012_059_029_EUM_OPE_NR_F00_SEN6.tar
in/jcspdp/alt-nrt/S6A_P4_2_HR_20210309T001601_20210309T002601_20210309T012837_0600_012_059_029_EUM_OPE_NR_F00_SEN6.tar
```

Figure 1. Example screen dump of sftp command.

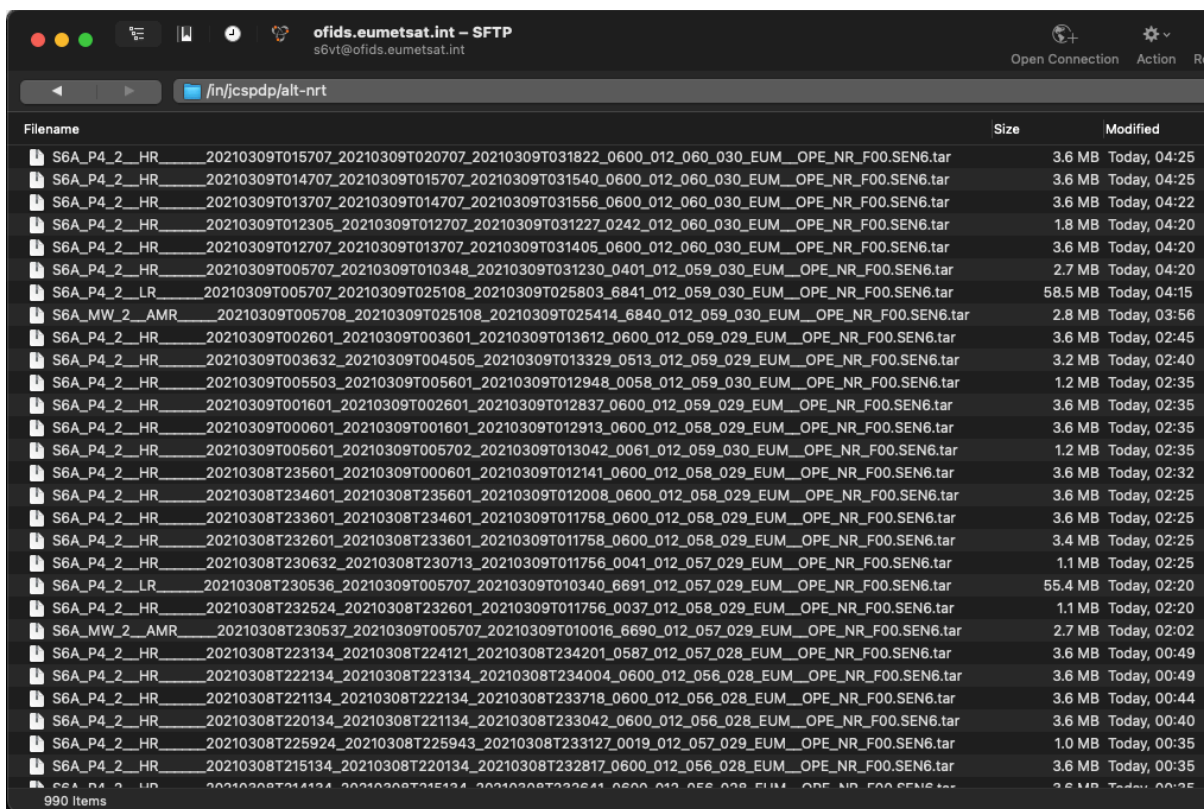
2.3.2 Access from Cyberduck (Mac)

If you are using an application like Cyberduck on a Mac, setting up an SFTP account with SSH keys is simple.

- Step 1: Create a bookmark. Select SFTP, fill in server ofids.eumetsat.int, fill in username s6vt, and select the appropriate SSH private key.



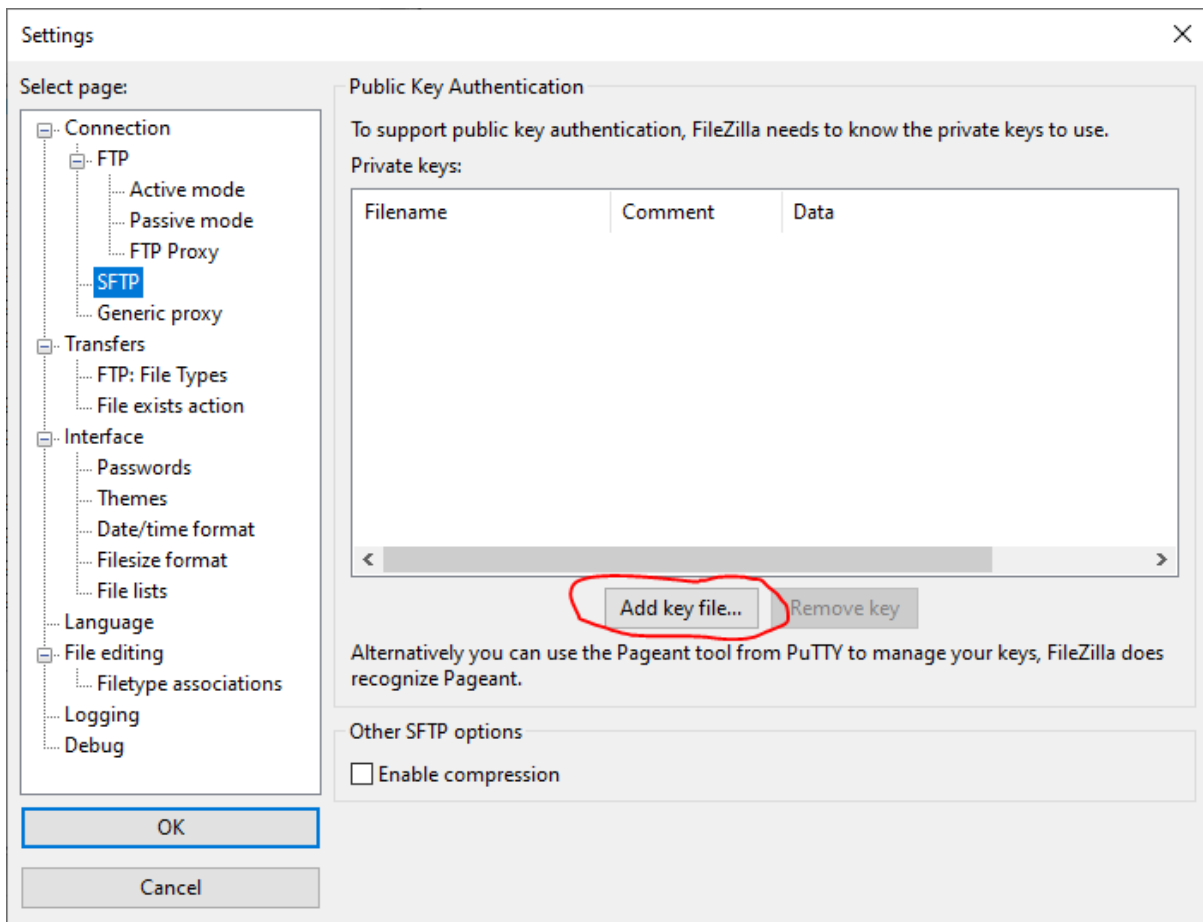
- Step 2: Use the bookmark to open the connection and navigate the file system.



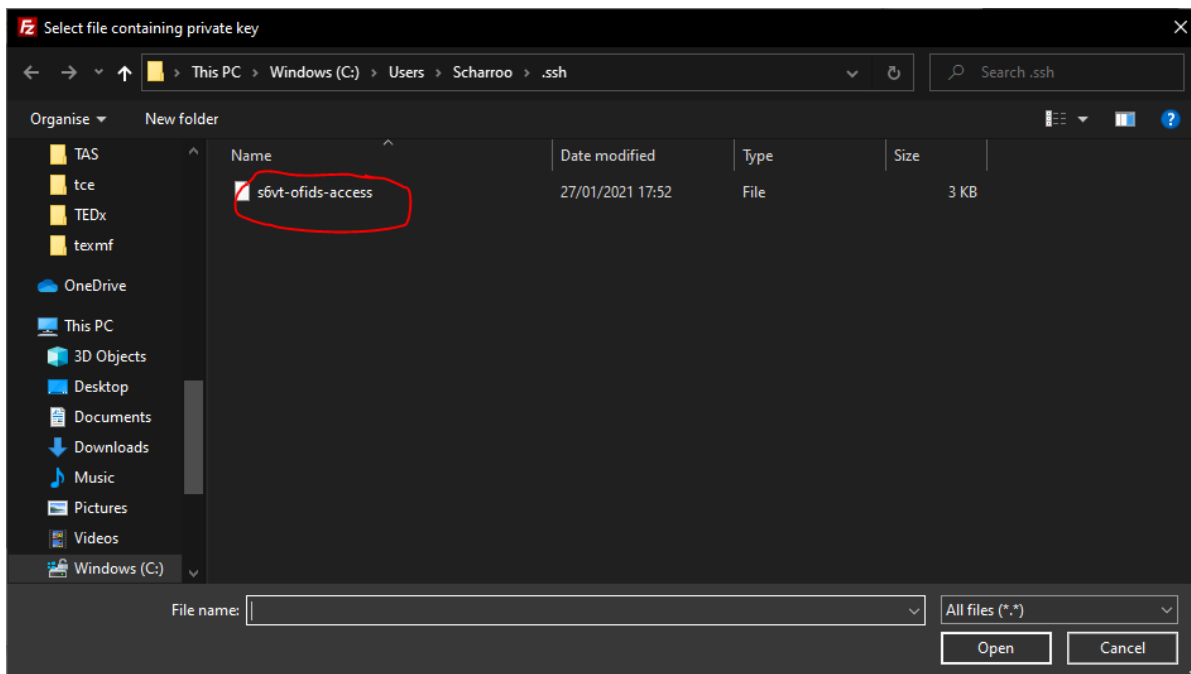
2.3.3 Access from FileZilla (Windows)

If you are using an application like FileZilla on Windows, here are the 5 steps through which you can access the S6VT commissioning data.

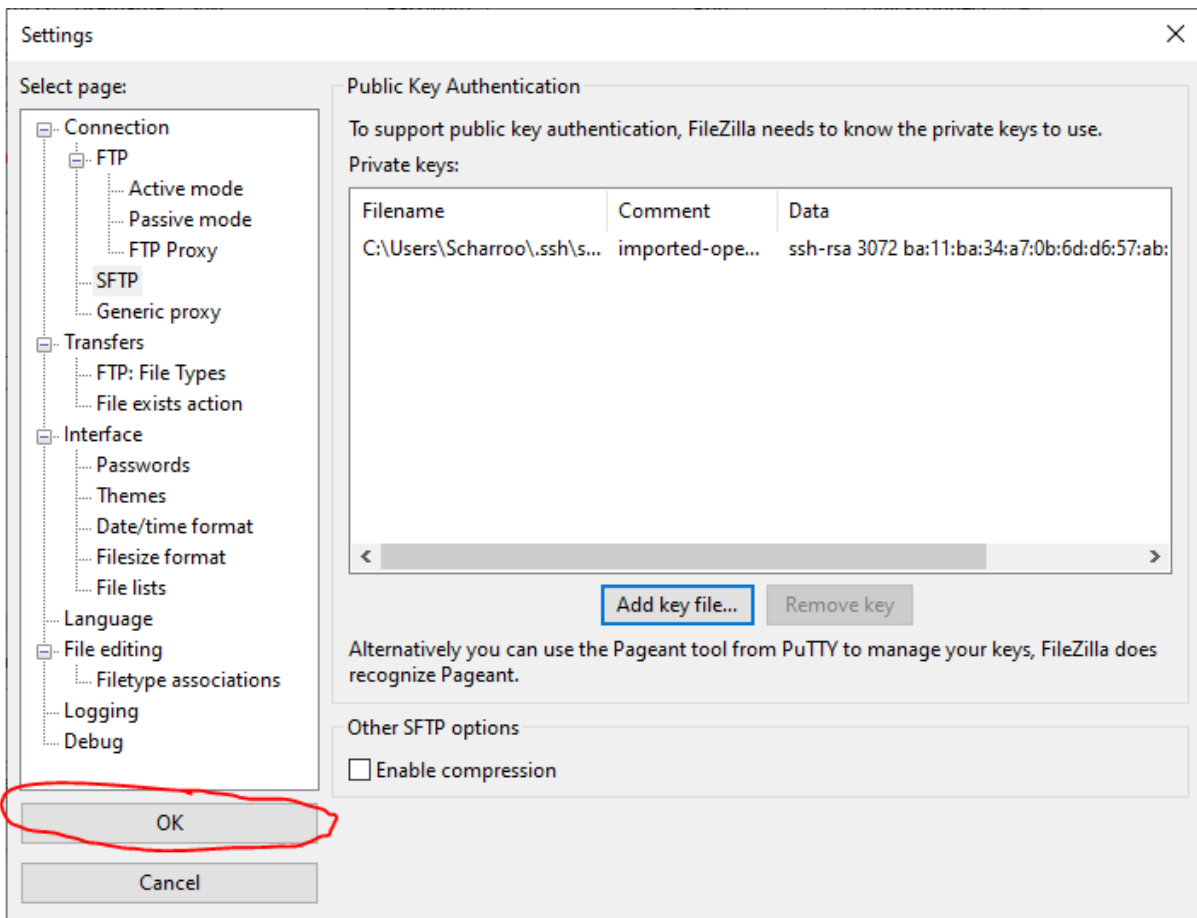
- Step 1: Open FileZilla and click Settings from the menu. Then select Connection – SFTP in the left column.



- Step 2: Select your private key and click [Open]

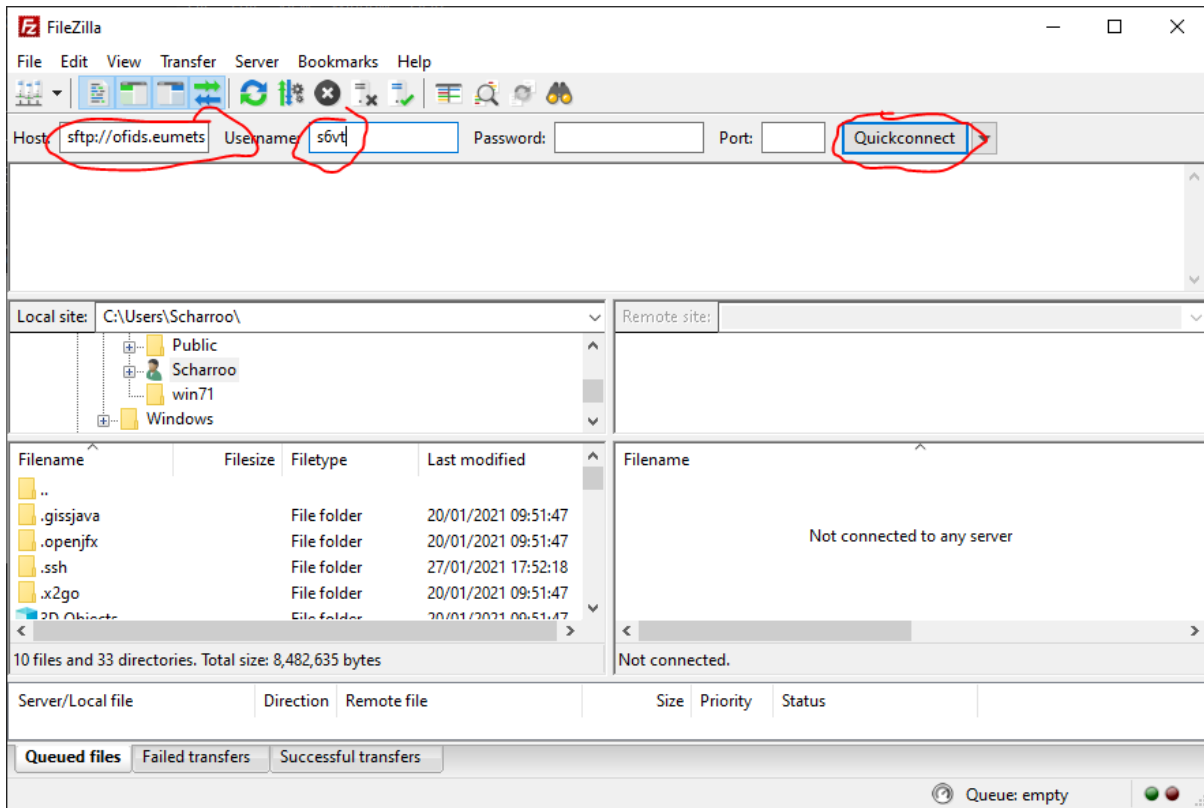


- Step 3: Close the Settings menu by clicking [OK].



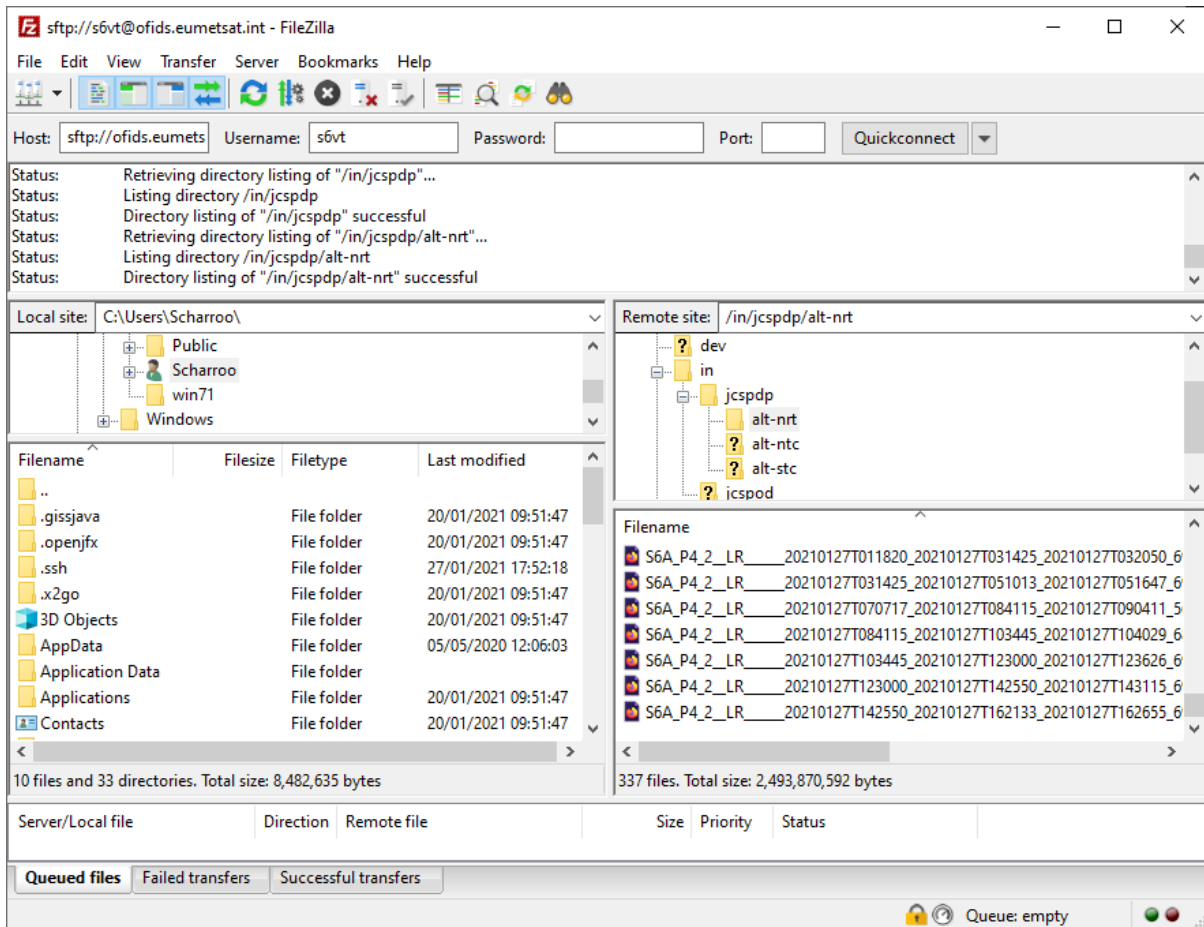
- (The above three steps have to be done only once). Step 4: Start a connection by entering the Host (ofids.eumetsat.int), User (s6vt), and click [Quickconnect].

S6VT Data Access Instructions



Step 5: You now have established the connection, and you can navigate the FTP site as illustrated in the right column below.

S6VT Data Access Instructions



The screenshot shows the FileZilla interface with the following details:

- Host:** sftp://s6vt@ofids.eumetsat.int
- Username:** s6vt
- Local site:** C:\Users\Scharroo\
- Remote site:** /in/jcspdp/alt-nrt
- Status Log:**
 - Retrieving directory listing of "/in/jcspdp"...
 - Listing directory /in/jcspdp
 - Directory listing of "/in/jcspdp" successful
 - Retrieving directory listing of "/in/jcspdp/alt-nrt"...
 - Listing directory /in/jcspdp/alt-nrt
 - Directory listing of "/in/jcspdp/alt-nrt" successful
- Local Site File List:**

Filename	Filesize	Filetype	Last modified
..			
.gissjava		File folder	20/01/2021 09:51:47
.openjfx		File folder	20/01/2021 09:51:47
.ssh		File folder	27/01/2021 17:52:18
.x2go		File folder	20/01/2021 09:51:47
3D Objects		File folder	20/01/2021 09:51:47
AppData		File folder	05/05/2020 12:06:03
Application Data		File folder	
Applications		File folder	20/01/2021 09:51:47
Contacts		File folder	20/01/2021 09:51:47
- Remote Site File List:**
 - dev
 - in
 - jcspdp
 - alt-nrt
 - alt-ntc
 - alt-stc
 - icspod

- Remote Site File List (Detailed):**

Filename
S6A_P4_2_LR_____20210127T011820_20210127T031425_20210127T032050_6
S6A_P4_2_LR_____20210127T031425_20210127T051013_20210127T051647_6
S6A_P4_2_LR_____20210127T070717_20210127T084115_20210127T090411_5
S6A_P4_2_LR_____20210127T084115_20210127T103445_20210127T104029_6
S6A_P4_2_LR_____20210127T103445_20210127T123000_20210127T123626_6
S6A_P4_2_LR_____20210127T123000_20210127T142550_20210127T143115_6
S6A_P4_2_LR_____20210127T142550_20210127T162133_20210127T162655_6
- Summary:**
- Local: 10 files and 33 directories. Total size: 8,482,635 bytes
- Remote: 337 files. Total size: 2,493,870,592 bytes
- Transfer Queue:**

Server/Local file	Direction	Remote file	Size	Priority	Status
Queued files					
Failed transfers					
Successful transfers					

3 S6MF COMMISSIONING DATA THROUGH PO.DAAC

The S6VT members who reside in the United States are requested to apply to PO.DAAC by signing up for an EarthData login (if not already done so) and submit your login information through a google form by 23 April 2021.

The next Sections will describe the process for those who want to retrieve the S6MF Commissioning data through PO.DAAC.

3.1 Requesting access from PO.DAAC

For Sentinel-6 Validation Team Members, access to S6 MF data can be obtained from PO.DAAC through the following steps:

- If you do not already have one, create a NASA EarthData Login at: <https://urs.earthdata.nasa.gov/> .
- Send your EarthData Login to Josh Willis (joshua.k.willis@jpl.nasa.gov)..

Due date for submission is 23 April 2021.

3.2 How to access the data through PO.DAAC

Once data is released, and within 1-2 business days after the due date, you will be able to access S6MF data through PO.DAAC, when logged in using your EarthData login. An announcement will be sent once data is released. See instructions below for different ways of accessing data through PO.DAAC.

Once the above steps are complete you can:

3.2.1 Search for S-6 products

If logged in using the EarthData login given in the google form mentioned above, you can search for S-6 products at

- <https://search.earthdata.nasa.gov/search?fpj=SENTINEL-6> [Collections with files]
- <https://search.earthdata.nasa.gov/search?fpj=SENTINEL-6&ac=true> [All collections]

3.2.2 Scripted Access to S-6 Products

PO.DAAC has provided sample scripts to access the Sentinel-6 data. We have generalized the code and added it to <https://github.com/podaac/sentinel6/>

3.2.3 PO.DAAC User Services:

If you have any issues accessing the data, please contact PO.DAAC through the private forum we have setup at [PO.DAAC Sentinel-6 \(private\) forum](#). The forum has been pre-populated with some common questions and answers.

To view the Sentinel-6A forum, you will need to login using your Earthdata login credentials.

A centralized forum allows every user to be able to see the conversation on access and allows us to monitor and respond to queries in a centralized fashion. Allowing for better tracking and improved response time.

For any additional questions regarding the product content, formats, etc., please direct them to the [EUMETSAT User Help Desk](#).

4 S6VT DOCUMENTATION FTP SITE

In addition to the abovementioned resources, a dedicated S6VT documentation FTP has been set up to provide you with documentation, presentations, early results, etc.

Hostname: ftp.eumetsat.int

User: s6vt_user

Password: jcsusr248

This user has read-only access to the information posted here.

For convenience, the L2 LR NRT and L2 LR STC products available on ofids.eumetsat.int are uploaded here as well. As this is a rolling archive, only the last 7 days of these products will be available.