Guidelines from data to imagery

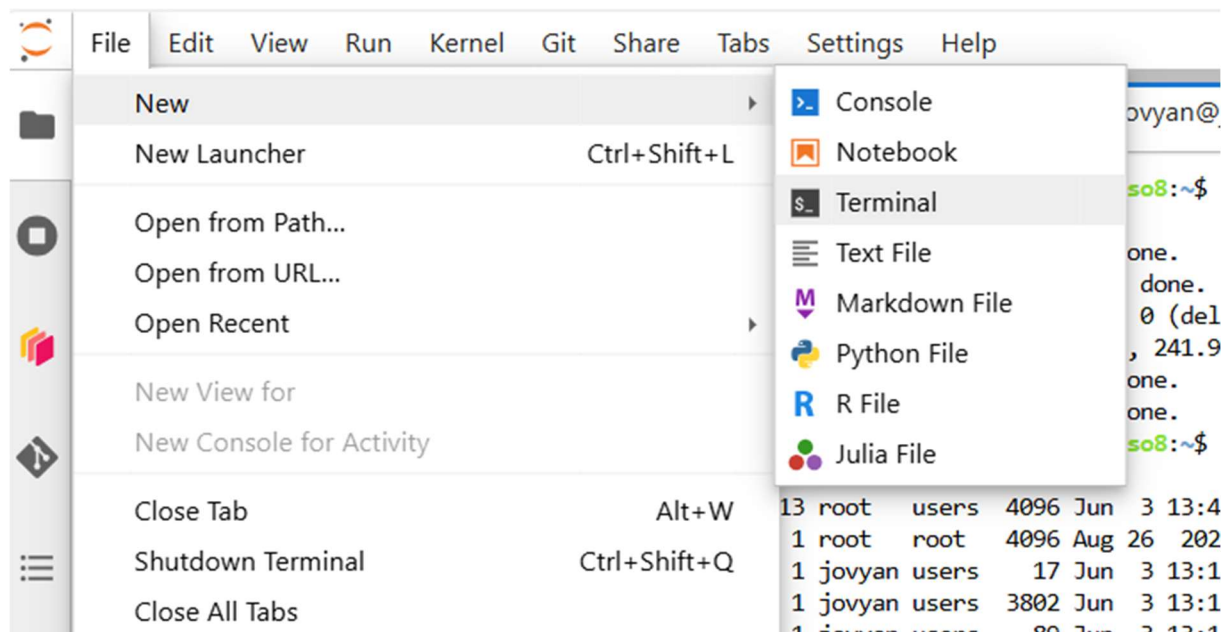Generating Images from data downloaded from EUMESAT Data Store

Introduction

This guide explains how to generate different RGB composites or single-channel imagery using data retrieved from the EUMETSAT Data Store.

Downloading satellite data

- Open your WEKEO account
- Navigate to **eumdac_data_store/**
- Double click on the **1_5_MTG_FCI_data_access.ipynb** notebook to open it. Follow the instructions to download data for a given time range and region of interest.

Generating Imagery

1. Open a terminal window, going to File->New->Terminal, like in the following image:

In the terminal window be sure you are positioned in your home directory:

```
cd $HOME/imagery/
```

Make sure you don't have any active environment:

```
conda deactivate
```

Activate MTG environment:

```
conda activate $HOME/imagery/MTG
```

You can now run the script **create_imagery.sh with the following arguments:**

- o location of the unzipped data (absolute path)
- o list of channels and composites separated by comma*
- o start timestamp, with the format YYYY-MM-DDThh:mm:00Z
- o end timestamp, with the format YYYY-MM-DDThh:mm:00Z
- o interval in minutes between consecutive images
- o bounding box, with the format : min_lon,max_lon,min_lat,max_lat
- o 2000 spatial resolution of the imagery in metres

Example:

```
./create_imagery.sh "/home/jovyan/eumdac_data_store/"
true_color,cloud_phase,cloud_type,colouredIR_Setvak,IR_105,VIS_06 2025-01-
12T15:00:00Z 2025-01-12T16:00:00Z 10 "10,56,24,32" 2000
```

*possible composites are:
**true_color,cloud_phase,cloud_type,convection,colouredIR_Setvak,night_microphy
sics,dust,natural_color,airmass,IR_105,VIS_06**

After running the notebook you should be able to find images inside the folder
$HOME/imagery/script /plots

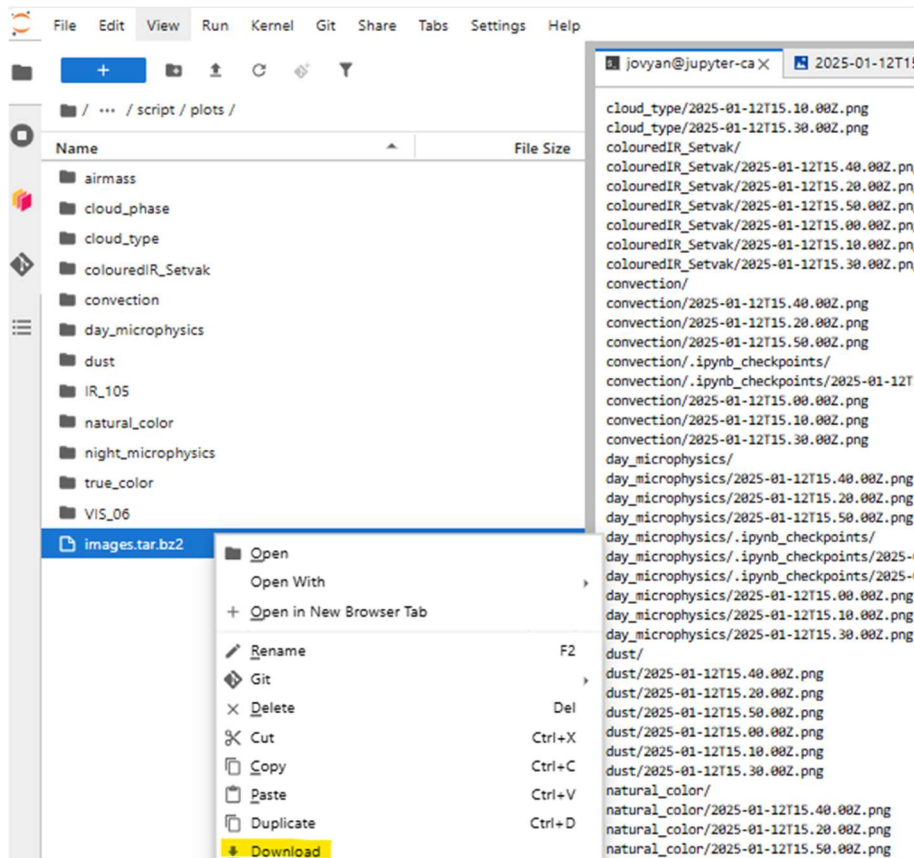To copy these files o your local PC you may wish to compressed them.

- Open a terminal window and copy & paste the following line commands:
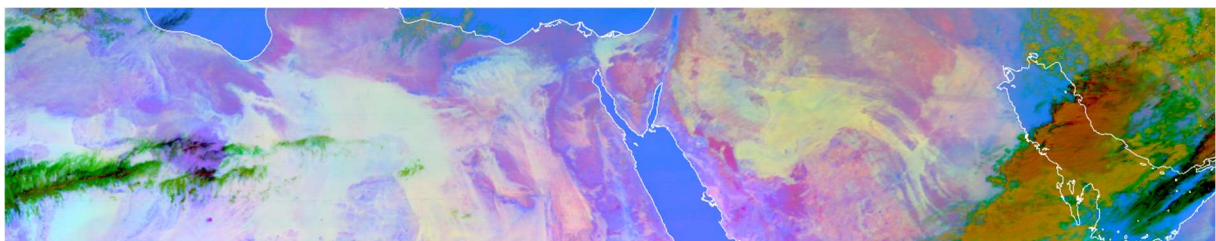
```
cd $HOME/imagery/script /plots
```

```
tar -cvf images.tar *
```

```
bzip2 images.tar
```

You should find the file with bz2 extension under the **$HOME/imagery/script /plots** folder:

Note: as reference, the script took approximately 19 minutes to generate 12 image composites for 6 slots, in the area corresponding to the following image

- On the navigation window click on the file and with the right-hand button of your mouse select download. The compressed file will be downloaded to your local computer