

Additional features

Executing a BIAFLOWS workflow without BIAFLOWS server

It is possible to run a workflow image independently of any BIAFLOWS server. This can for instance be useful to process a local folder of images. For this, first install [Docker](#) on the target workstation, then:

- Get the docker image of the workflow from Dockerhub:
`docker pull {remote_image}`
- Or, alternatively, build workflow Docker image from source (GitHub repository)
Inside repository folder: `docker build -t {local_image} .`
- Prepare an empty folder {DATA_PATH} with a subfolder **/data** and subfolders:
 - **{DATA_PATH}/data/in**: add input images to this folder*
 - **{DATA_PATH}/data/out**: workflow results are exported to this folder
 - **{DATA_PATH}/data/gt**: leave empty

* Images should be 8/16-bit TIFF (2D) or 8/16-bit single file OME-TIFF (C,Z,T).
The string **_lbl** is forbidden in image name since it is used to identify ground truth annotation images.

- Run the workflow with the local flag:

```
docker run -v {DATA_PATH}/data:/data -it {image_name}
{WORKFLOW_PARAMETERS} --infolder /data/in --gtfolder /data/gt --
outfolder /data/out --local
```

This whole procedure is illustrated in the following Python Jupyter notebook:

https://github.com/Neubias-WG5/biaflows_jupyter_local

Notes:

`--local (-l)`: do not download nor upload any content from / to BIAFLOWS. The images (input and ground truth) are read from specified folders. Metrics are optionally displayed to standard output.

For a more fine-grained control over BIAFLOWS interactions:

`--no_download (-nd)`: images and ground truth are not downloaded from BIAFLOWS

`--no_annotations_upload (-nau)`: annotations are not uploaded to BIAFLOWS

`--no_metrics_computation (-nmc)`: metrics are not computed

`--no_metrics_upload (-nmu)`: metrics are not uploaded to BIAFLOWS.