
MuG - Process Test Pipelines Documentation

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Requirements and Installation

1.1 Requirements

1.1.1 Software

- Python 2.7.10+

1.1.2 Python Modules

- mg-tool-api
- pylint
- pytest

1.2 Installation

Directly from GitHub:

```
1 git clone https://github.com/Multiscale-Genomics/mg-process-test.git
```

Using pip:

```
1 pip install git+https://github.com/Multiscale-Genomics/mg-process-test.git
```


2.1 Test Tool

This is a demonstration pipeline using the testTool.

2.1.1 Running from the command line

Parameters

config [file] Location of the config file for the workflow

in_metadata [file] Location of the input list of files required by the process

out_metadata [file] Location of the output results.json file for returned files

Returns

output [file] Text file with a single entry

Example

When using a local version of the [COMPS virtual machine](<http://www.bsc.es/computer-sciences/grid-computing/comp-superscalar/downloads-and-documentation>):

```
1 cd /home/compss/code/mg-process-test
2 runcompss --lang=python mg_process_test/process_test.py --config /home/compss/code/mg-
  ↳ process-test/tool_config/process_test.json --in_metadata /home/compss/code/mg-
  ↳ process-test/tests/json/input_test.json --out_metadata /home/compss/code/mg-process-
  ↳ test/tests/results.json
```


3.1 Test Tool

class `mg_process_test.tool.testTool.testTool` (*configuration=None*)

Tool for writing to a file

run (*input_files, input_metadata, output_files*)

The main function to run the test_writer tool

Parameters

- **input_files** (*dict*) – List of input files - In this case there are no input files required
- **input_metadata** (*dict*) – Matching metadata for each of the files, plus any additional data
- **output_files** (*dict*) – List of the output files that are to be generated

Returns

- **output_files** (*dict*) – List of files with a single entry.
- **output_metadata** (*dict*) – List of matching metadata for the returned files

test_writer (***kwargs*)

Count the number of characters in a file and return a file with the count

Parameters

- **file_in_loc** (*str*) – Location of the input file
- **file_out_loc** (*str*) – Location of an output file

Returns Writes to the file, which is returned by pyCOMPSs to the defined location

Return type bool

4.1 Test Tool

class `mg_process_test.workflow.test_workflow.process_test` (*configuration=None*)

Functions for demonstrating the pipeline set up.

run (*input_files, metadata, output_files*)

Main run function for processing a test file.

Parameters

- **input_files** (*dict*) – Dictionary of file locations
- **metadata** (*list*) – Required meta data
- **output_files** (*dict*) – Locations of the output files to be returned by the pipeline

Returns

- **output_files** (*dict*) – Locations for the output txt
- **output_metadata** (*dict*) – Matching metadata for each of the files

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CHAPTER 6

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