

## README for Using the Singularity Container for cpgavas2

To use the singularity container for cpgavas2, you need to follow the six steps.

**Step 1. install conda;**

**Step 2: install singularity;**

**Step 3: download cpgavas2 container;**

**Step 4: download the test data;**

**Step 5: run the container;**

**Step 6: check the result**

### Detailed instructions are provided below:

“\$” indicates the command lines

### ####Step 1. install conda

The detailed instructions can be found from here:

[https://engineeringfordatascience.com/posts/install\\_miniconda\\_from\\_the\\_command\\_line/](https://engineeringfordatascience.com/posts/install_miniconda_from_the_command_line/)

The instruction is reproduced below.

```
$ mkdir -p ~/miniconda3
$ wget
https://repo.anaconda.com/miniconda/Miniconda3-latest-Linux-x86\_64.sh -O
~/miniconda3/miniconda.sh
$ bash ~/miniconda3/miniconda.sh -b -u -p ~/miniconda3
$ rm -rf ~/miniconda3/miniconda.sh
$ ~/miniconda3/bin/conda init bash
$ ~/miniconda3/bin/conda init zsh
```

### ####Step 2. install singularity with conda

The detailed instructions can be found from here:

<https://anaconda.org/conda-forge/singularity>

```
$ conda create -n singularity
$ conda activate singularity
$ conda install -c conda-forge singularity
```

### ####Step 3. find and download the cpgavas2 container

```
$ singularity search cpgavas2
```

Found 1 container images for amd64 matching “cpgavas2”:

library://cliu/default/cpgavas2:xxx

Please Note that “xxx” is the version number. And you should replace “xxx” with the actual version number you see on the screen.

```
$ singularity pull library://cliu/default/cpgavas2:xxx.
```

```
$ ls
```

```
cpgavas2xxx.sif (this is the output on your screen)
```

#### ####Step 4. Download and uncompress the test data

```
$ wget http://www.1kmpg.cn/cpgavas2/sample.fas
```

#### ####Step 5. Run the cpgavas2 pipeline through the container

To run the program, enter “singularity exec cpgavas2xxx.sif run-cpgavas2”.

The followings are two examples showing the typical analysis.

```
$ singularity exec cpgavas2xxx.sif run-cpgavas2 -pid 100 -in sample.fas -db 1
```

```
$ singularity exec cpgavas2xxx.sif run-cpgavas2 -pid 100 -in sample.fas -db 2
```

```
$ singularity exec cpgavas2xxx.sif run-cpgavas2 -pid 100 -in sample.fas -db 3  
-ref sample.gb
```

#### ####Step 6. Check the analysis results

At the end of the run, the path to the output files will be provided, it is usually in the /tmp/dir\_YOUR\_PID. Not here YOUR\_PID is the pid number you provided.

**Last updated: 2021/11/27**