

# udocker Usage Example

## Install by your own:

See [IBERGRID 2019 Tutorial](#), check also [the general udocker tutorials page](#)

## Use the already available installation:

```
[user@pauli02 ~]$ module avail

[----- /cvmfs/sw.el7/modules/soft -----]

gcc-5.5      matlab/R2018a  trimmomatic-0.33
gcc63/mpich-3.2  matlab/R2018b  udocker/1.1.3

[user@pauli02 ~]$ module load udocker

[user@pauli02 ~]$ module list
Currently Loaded Modulefiles:
  1) udocker/1.1.3
```

The **udocker** works the same way as the command **docker**, the big difference is that it runs on *user space* and doesn't require special privileges to run, **works everywhere!**. The docker hub repository is available and the user is able pull images from the docker hub repository and also his own images.

For example, search for a **Centos** image:

```
[martinsj@pauli02 ~]$ udocker search centos

NAME                                OFFICIAL DESCRIPTION
```

```

❏centos                [OK] The official build of CentOS.
❏pivotaldata/centos-gpdb-dev    ---- CentOS image for GPDB development. Tag...
❏pivotaldata/centos-mingw      ---- Using the mingw toolchain to cross...

```

Pull an image and list it:

```
[martinsj@pauli02 ~]$ udocker pull centos
Downloading layer: sha256:729ec3a6ada3a6d26faca9b4779a037231f1762f759ef34c08bdd61bf52cd704
Downloading layer: sha256:a3ed95caeb02ffe68cdd9fd84406680ae93d633cb16422d00e8a7c22955b46d4
Downloading layer: sha256:a3ed95caeb02ffe68cdd9fd84406680ae93d633cb16422d00e8a7c22955b46d4

[martinsj@pauli02 ~]$ udocker images
REPOSITORY
centos:latest
```

Create and start a container:

```
[martinsj@pauli02 ~]$ udocker create --name=MY_CENTOS centos
abfe7e30-d25d-3d47-bfc3-ff11401bb430

[martinsj@pauli02 ~]$ udocker run --volume=$HOME --workdir=$HOME --user=$USER MY_CENTOS bash -li
*****
*
*
* STARTING abfe7e30-d25d-3d47-bfc3-ff11401bb430 *
*
*
*****
executing: bash

abfe7e30$ ls -l
total 183852
drwxr-xr-x 2 martinsj csys      6 Mar 21 2018 Desktop
drwxr-xr-x 8 martinsj csys     88 Apr 17 2018 Template
-rwxr--r-- 1 martinsj csys     6 Nov 1 2018 VERSION
...
```

Inline general help is available

```
[martinsj@pauli02 ~]$ udocker help
□ Syntax:
□ udocker <command> [command_options] <command_args>
□
□ Commands:
□ search <repo/image:tag> :Search dockerhub for container images
□ pull <repo/image:tag> :Pull container image from dockerhub
□ images :List container images
□ create <repo/image:tag> :Create container from a pulled image
□ ps :List created containers
□ ...
```

as long as a subcommand specialized help

```
[martinsj@pauli02 ~]$ udocker run --help
□
□ run: execute a container
□ run [options] <container-id-or-name>
□ run [options] <repo/image:tag>
□ --rm :delete container upon exit
□ --workdir=/home/userXX :working directory set to /home/userXX
□ --user=userXX :run as userXX
□ --user=root :run as root
□ --volume=/data:/mnt :mount host directory /data in /mnt
□ ...
```

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