



Getting Started with Bacalhau

In this tutorial, you'll learn how to install and run a job with the Bacalhau client using the Bacalhau CLI or Docker.

The Bacalhau Client

The Bacalhau client is a command-line interface (CLI) that allows you to submit jobs to the Bacalhau. The Bacalhau client is available for Linux, macOS, and Windows. You can also run the Bacalhau client in a Docker container.

TIP

By default, you will submit to the Bacalhau public network, but the same CLI can be configured to submit to a private Bacalhau network. For more information, please read [Running Bacalhau on a Private Network](#).

Install the Bacalhau CLI

You can install or update the Bacalhau CLI or pull a Docker image by running the commands in a terminal. You may need sudo mode or root password to install the local Bacalhau binary to

```
/usr/local/bin:
```

TIP

Using the **CLI**: Windows users can download the [latest release tarball from Github](#) and extract `bacalhau.exe` to anywhere on the PATH.

INFO

To run a specific version of Bacalhau using Docker, use the command `docker run -it ghcr.io/bacalhau-project/bacalhau:v1.0.3`, where "v1.0.3" is the version you want to run; note that the "latest" tag will not re-download the image if you have an older version. For more information on running the Docker image, check out the [Bacalhau docker image example](#).

CLI Docker

```
curl -sL https://get.bacalhau.org/install.sh | bash
```

Verify the Installation

To run and Bacalhau client command with Docker, prefix it with `docker run ghcr.io/bacalhau-project/bacalhau:latest`.

To verify installation and check the version of the client and server, use the `version` command, you can run the command:

CLI **Docker**

```
bacalhau version
```

If you're wondering which server is being used, the Bacalhau Project has a [public Bacalhau server network](#) that's shared with the community. This server allows you to launch your jobs from your computer without maintaining a compute cluster on your own.

Let's submit a Hello World job

To submit a job in Bacalhau, we will use the `bacalhau docker run` command. Let's take a quick look at its syntax:

```
bacalhau docker run [FLAGS] IMAGE[:TAG] [COMMAND]
```

The command below submits a Hello World job that runs an `echo` program within an [Ubuntu container](#):

CLI **Docker**

```
bacalhau docker run ubuntu echo Hello World
```

! INFO

While this command is designed to resemble Docker's `run` command which you may be familiar with, Bacalhau introduces a whole new set of [flags](#) (see [CLI Reference](#)) to support its computing model.

After the above command is run, the job is submitted to the public network, which processes the job and Bacalhau prints out the related job id:

```
Job successfully submitted. Job ID: 3b39baee-5714-4f17-aa71-1f5824665ad6
Checking job status...
```

The `job_id` above is shown in its full form. For convenience, you can use the shortened version, in this case: `3b39baee`.

Checking the State of your Jobs

- **Job status:** You can check the status of the job using `bacalhau list`.

```
bacalhau list --id-filter 3b39baee
```

When it says `Completed`, that means the job is done, and we can get the results.

```
CREATED    ID          JOB          STATE      VERIFIED    COMPLETED
07:20:32   3b39baee   Docker ubuntu echo H... Published
/ipfs/bafybeidu4zm6w...
```

! INFO

For a comprehensive list of flags you can pass to the list command check out [the related CLI Reference page](#).

- **Job information:** You can find out more information about your job by using `bacalhau describe`.

```
bacalhau describe 3b39baee
```

This outputs all information about the job, including stdout, stderr, where the job was scheduled, and so on.

- **Job download:** You can download your job results directly by using `bacalhau get`. In the command below, we created a directory called `myfolder` and download our job output to be stored in that directory.

```
bacalhau get 3b39baee
```

After the download has finished you should see the following contents in the results directory.

```
$ tree job-3b39baee
job-3b39baee
├── exitCode
├── outputs
├── stderr
└── stdout
```

Viewing your Job Output

```
$ cat job-3b39baee/stdout
```

That should print out the string `Hello World`.

With that, you have just successfully run a job on the Bacalhau network! 🐟

Where to go next?

Here are a few resources that provide a deeper dive into running jobs with Bacalhau:

- [How to run an existing workload on Bacalhau](#)
- [Walk through a more data intensive demo](#)
- [Check out the Bacalhau CLI Reference page](#)

Need Support?

If have questions or need support or guidance, please reach out to the [Bacalhau team via Slack](#) ([#bacalhau channel](#))

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