

You're reading the documentation for an older, but still supported, version of ROS 2. For information on the latest version, please have a look at [Jazzy](#).

Running ROS 2 nodes in Docker [community-contributed]

Run two nodes in a single docker container

Pull the ROS docker image with tag “humble-desktop”.

```
$ docker pull osrf/ros:humble-desktop
```

Run the image in a container in interactive mode.

```
$ docker run -it osrf/ros:humble-desktop
```

Your best friend is the `ros2` command line help now.

```
$ ros2 --help
```

E.g. list all installed packages.

```
$ ros2 pkg list  
(you will see a list of packages)
```

E.g. list all executables:

```
$ ros2 pkg executables  
(you will see a list of <package> <executable>)
```

Run a minimal example of 2 C++ nodes (1 topic subscriber `listener`, 1 topic publisher `talker`) from the package `demo_nodes_cpp` in this container:

```
$ ros2 run demo_nodes_cpp listener &  
$ ros2 run demo_nodes_cpp talker
```

Run two nodes in two separate docker containers

Open a terminal. Run the image in a container in interactive mode and launch a topic publisher (executable `talker` from the package `demo_nodes_cpp`) with `ros2 run`:

```
$ docker run -it --rm osrf/ros:humble-desktop ros2 run demo_nodes_cpp talker
```

Open a second terminal. Run the image in a container in interactive mode and launch a topic subscriber (executable `listener` from the package `demo_nodes_cpp`) with `ros2 run`:

```
$ docker run -it --rm osrf/ros:humble-desktop ros2 run demo_nodes_cpp listener
```

As an alternative to the command line invocation, you can create a `docker-compose.yml` file (here version 2) with the following (minimal) content:

```
version: '2'

services:
  talker:
    image: osrf/ros:humble-desktop
    command: ros2 run demo_nodes_cpp talker
  listener:
    image: osrf/ros:humble-desktop
    command: ros2 run demo_nodes_cpp listener
    depends_on:
      - talker
```

To run the containers call `docker compose up` in the same directory. You can close the containers with `Ctrl+C`.