

Getting Started with Docker (Mac)

November 16, 2021

1 Prerequisites

1. At least 10 GB of free hard drive space (for help see [here](#)).

2 Setup

1. Install and run [Docker Desktop](#).
2. Navigate to **Preferences -> Resources** (open Preferences by clicking on the gear icon in the top-left), set the **Memory** slider to 4 GB, and click **Apply & Restart**. See Figure 1.
3. (Video 5) Open a Terminal, and pull the **stat-471** Docker image onto your computer via

```
docker pull ekatsevi/stat-471
```

This will start a download that may take a few minutes. You'll only need to carry out this step once.

4. (Video 6) In the Terminal, navigate into your **stat-471-fall-2021** directory and type

```
git pull
```

as usual to get the latest version of the Github repository. You should see the file **docker-compose.yml** in the root of the directory. Initialize your Docker container by typing

```
docker-compose up --no-start
```

If this step succeeded, you should see a container labeled **stat-471-fall-2021** under **Containers/Apps** within Docker Desktop (Figure 2).

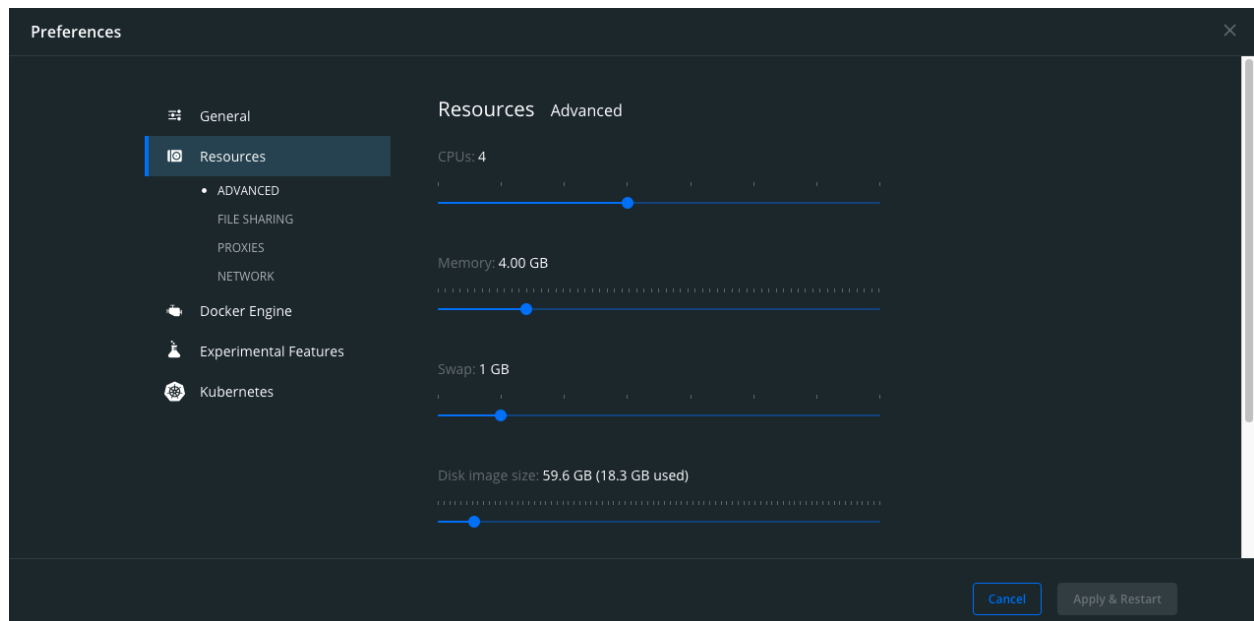


Figure 1: Docker resources settings.

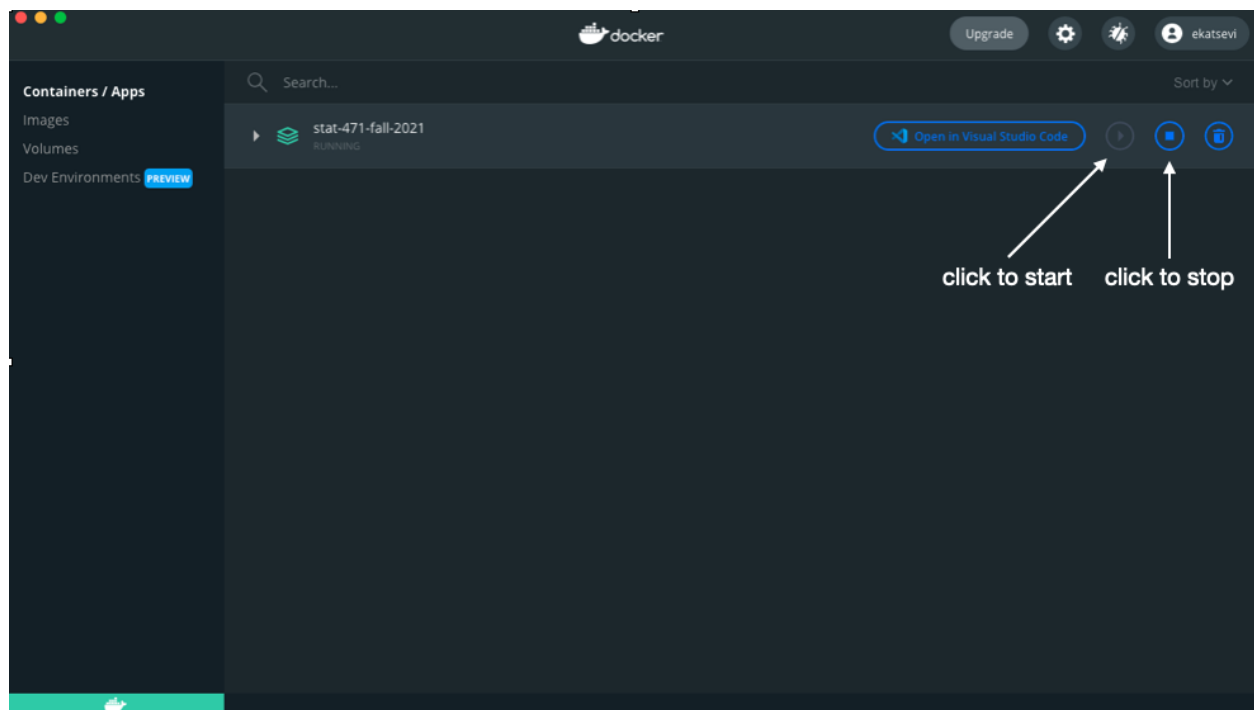


Figure 2: The Docker graphical user interface.

3 Usage (Video 7)

1. Open Docker Desktop. Start your Docker container by navigating to **Containers/Apps** within Docker Desktop, locate `stat-471-fall-2021`, and click the “Play” icon (see Figure 2). Open a web browser and navigate to `localhost:8787`. You should see an RStudio window in the browser. Note that there may be some red text displayed in the console; you can safely ignore it.
2. (Do this step only the first time you ever start the container.) To test the container, open `test-docker.Rmd` under `getting-started`, and compile this document to PDF as you would normally. If this works, you should see the compiled PDF pop up.
3. To use the container, use RStudio in the browser as you normally would.
4. For Git and GitHub, please pull, commit, and push using the Terminal that is not in your Docker container. I recommend using the regular Terminal, but for those who have been using the Terminal inside of RStudio, you can continue doing so in the *regular* RStudio as opposed to the *Docker* RStudio.
5. When you are done, close the RStudio browser window(s). Then, navigate to **Containers/Apps** within Docker Desktop, locate `stat-471-fall-2021`, and click the “Stop” icon (see Figure 2).

4 Acknowledgment

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