# **Instruction for Running a Sample Video in Docker**

1. Download Docker Desktop from its [official website](https://www.docker.com/products/docker-desktop).
2. Run Docker Desktop. Right click on the icon and choose **Switch to Linux containers…**.
3. Open a command window. Type in the following commands to run the selected sample video continuously:

**$ docker run -it whipcarte/ssm:latest**

**$ for (( ; ; )); do ros2 bag play ~/SSM/demos/demos/<name of selected sample video>; done**

1. To request tracking information from the sample video,
   1. Open another command window and follow [Instruction for Running MATLAB in Docker](#_Instruction_for_Running).
   2. Run MATLAB in Linux environment and follow [Instruction for Obtaining Information from ROS2 Message using MATLAB](#_Instruction_for_Obtaining).

Note that 4.a. can be skipped if the user is able to have run MATLAB 2020a or higher in Ubuntu.

# Instruction for Running MATLAB in Docker

1. Download Docker Desktop from its [official website](https://www.docker.com/products/docker-desktop).
2. Run Docker Desktop. Right click on the icon and choose **Switch to Linux containers…**.
3. Open a command window. Type in the following commands to start MATLAB in a Linux environment:

**$ docker run -it --env="DISPLAY" --env="QT\_X11\_NO\_MITSHM=1" --volume="/tmp/.X11-unix:/tmp/.X11-unix:rw" --entrypoint "bash" whipcarte/matlab:r2020a\_conda**

**$ /opt/startscript/startmatlab.sh**

1. Follow [Instruction for Obtaining Information from ROS2 Message using MATLAB](#_Instruction_for_Obtaining).

# Instruction for Obtaining Information from ROS2 Message using MATLAB

1. Download Docker Desktop from its [official website](https://www.docker.com/products/docker-desktop).

# Instruction for Starting the Server

1. Download Node.js from its [official website](https://nodejs.org/en/download/).
2. Open a command window and type in the following command:

**$ node app.js**

**Note that app.js can be replaced by**

**<path to app.js>/app.js**

1. **Open a browser and type in the following address:**

[**http://127.0.0.1:3000/**](http://127.0.0.1:3000/)

**The result, separation distance, can be requested by refreshing the webpage in json.**