# Docker Usage Guide for DBSeer

**WARNING**: If you intend to use run DBSeer from a Docker container in the **cloud** (e.g. Amazon EC2, Microsoft Azure), you may experience delays when interacting with the DBSeer's GUI due to cloud-related network latencies.

**NOTES**

1. You still need to set up our middleware to collect and process log data from your database. Please visit https://github.com/dongyoungy/dbseer_middleware for instructions.
2. We recommend building and running DBSeer natively instead of using Docker for a better GUI performance and user experience.
3. We tested our DBSeer Docker image with Docker 1.12.3, XQuartz 2.7.11 (for Mac OS), Mac OS 10.12 and Ubuntu 14.04.

## 4. Docker Installation

Please install Docker by following the instructions listed here (This web page contains instructions for Mac OS X, but it also contains links to instructions for Windows and Linux).

## 5. Pulling DBSeer Image

DBSeer is available as a Docker image at the Docker Hub under *dongyoungy/dbseer* repository. You can pull this image by running the following command in terminal while your Docker VM is running:

*$ docker pull dongyoungy/dbseer*

## 6. Running DBSeer from the Docker Image

Since DBSeer is a GUI application developed with Java Swing, it is a bit tricky to run DBSeer as a Docker container, which is basically a lightweight VM. You will need to use things like X Window System or VNC Server to bring the GUI from the Docker container to your host machine. Here, we will explain how to run DBSeer by running X on the host machine for Linux and Mac OS.

### 6.1. Mac OS X

Use the following steps to run DBSeer as a Docker container in Mac OS:

1. Install HomeBrew.
2. Install XQuartz by running the following commands:
   *$ brew update* **(updates homebrew)**
   *$ brew cask install xquartz*
3. Install socat by running the command: *$ brew install socat*

4. Open XQuartz.
5. In the XQuartz preferences, go to the *Security* tab and make sure that "Allow connections from network clients" is checked.
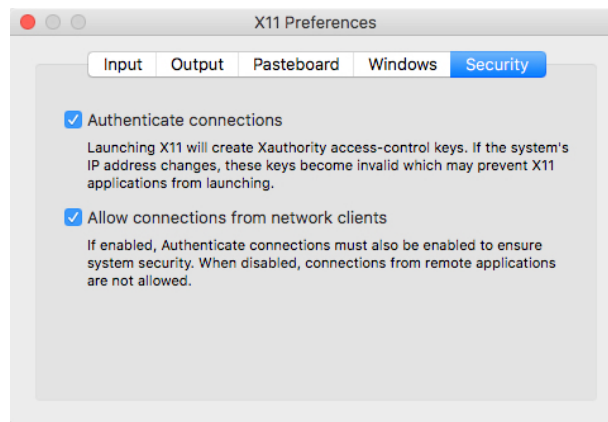


6. In the XQuartz terminal, run the following commands:

   *$ xhost +*

7. Now you are ready to run DBSeer.
8. Open terminal.
9. Run the following command to run DBSeer:

   *$ docker run --rm -v <path_to_dataset_folder_in_host_machine>:/dbseer/dataset -e DISPLAY=<your_local_ip_address >:0 dongyoungy/dbseer /run_dbseer*

   a. <path_to_dataset_folder_in_host_machine>: You need to specify the folder in your host machine where the DBSeer configuration file and collected monitoring data will be saved. In the DBSeer Docker container, the directory will be mapped to **/dbseer/dataset**.

   b. <your_local_ip_address>: The local IP address of your host machine. You can usually get the IP address of your machine by looking at the *inet* value from the command '*ifconfig en0*' (e.g., 192.168.0.101).

## 6.2. Linux

Use the following steps to run DBSeer as a Docker container in Linux:

1. Allow accesses to the X Server of the host machine by running: *$ xhost +*
2. Run the following command to run DBSeer:

   *$ docker run -e DISPLAY -v <path_to_dataset_folder_in_host_machine>:/dbseer/dataset -v /tmp/.X11-unix:/tmp/.X11-unix -v $HOME/.Xauthority:/home/developer/.Xauthority --net=host --rm dongyoungy/dbseer /run_dbseer*

## 4. Setting the root path for DBSeer

If this is the first time you are running DBSeer from the Docker image, you will need to set its root path inside the Docker container. When you successfully launch DBSeer, you will see the following GUI interface:
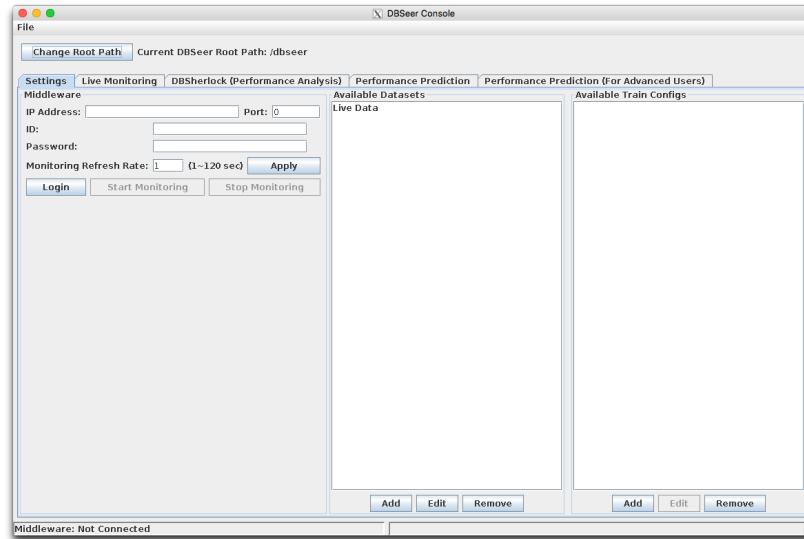
Click on **'Change Root Path'** and browse to /dbseer directory. This only needs to be done the first time unless you change your dataset directory. Once you set the root path correctly, you are now free to enjoy the rich features that DBSeer provides for happy database administration!

## 5. Contact Us

If you have any problems running DBSeer from the Docker image, please feel free to contact us at **dyoon at umich dot edu.**