Guide to using PintOS

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1 Making a docker container for PintOS

1. Pull the docker image from Docker Hub

2. Create a volume to have data be persistant e.x. *sudo docker volume create my_volume PATH*

3. Create the Dockerfile *(Use the template Dockerfile included to guide you)*

   - Install dependencies
   - Set enviromental variables

4. Build the container e.x. *sudo docker built -t pintos .*

5. Run the container e.x. *sudo docker run -it –volume my_volume:/app –name pint-sim pintos*

2 Seting up and compiling PintOS

1. Make sure all the dependencies were installed correctly

2. Compile the following submodules

- *userprog*

- *vm*

- *filesys*

3. Edit **src/utils/Makefile** to replace *LDFLAGS= -lm* to *LDLIBS = -lm* then compile **src/utils**

4. Edit **src/thread/Make.vars** and change $SIMULATOR =$ to $SIMULATOR = -qemu$ then compile **src/threads**

5. Change **src/utils/pintos** $\$sim = bochos$ to $\$sim = qemu$

6. Change **src/utils/pintos** $\$name = find\_file('kernel.bin')$ to point to **threads/build/kernel.bin**

7. Change **src/utils/pintos** $my(@cmd) = ('qemu')$ to $my(@cmd) = qemu - system - x86\_64$

8. Edit **src/utils/Pintos.pm** $\$name = find\_file('loader.bin')$ and point it to **threads/build/loader.bin**