Chapman University
Computer Science and Software Engineering
Atom + Docker Quick Start
Revision G

Installation

Docker

a) You will need to create a Docker account to download the software. Create your account using your Chapman email address. Make sure to remember your user name and password. https://hub.docker.com/signup
b) Once signed into your account, click "Get started with Docker Desktop"
    a. Click "Download Docker Desktop for XXX" (where XXX is your operating system, e.g. – OSX or Windows).
c) Once the software has downloaded, run the installation process.
d) When the installation process has completed, start Docker by clicking on the appropriate (whale) icon.
e) Follow the instructions as Docker Desktop starts up, in particular, you will need to make sure you are signed into your Docker account once the application is running.
    a. OSX – there will be a whale icon in the tools menu at the top right of your screen when Docker is runnning
f) Detailed installation instructions can be found here (select your operating system in the left-hand frame): https://docs.docker.com/install/
g) Common issues and their solutions can be found here:
   https://docs.docker.com/docker-for-windows/troubleshoot/
   OR here:
   https://docs.docker.com/docker-for-mac/troubleshoot/
   If you do not find the solution to your problem at one of the above links, more troubleshooting instructions can be found at the end of this document.
h) Other troubleshooting tips below

Atom

a) Download and install the Atom text editor (https://atom.io/)
b) Once installed, launch Atom. A "Welcome Guide" should appear, within this window click on "Install a Package" and then the blue button "Open Installer"
c) Within the "Install Packages" search box, search for the following: platformio-ide-terminal
d) Install the plugin by clicking install underneath its search result
    a. **(If you are prompted to install dependencies, click yes)**
e) Once installed, a "+" sign should appear in the bottom left corner

Setting Up File Sharing

In this step we will create a folder that is shared between your computer and the running Docker container.

Mac

a) In your Documents folder, create a folder named CPSC_Courses. The path to this folder is /Users/*username*/Documents/CPSC_Courses, **where username is the name of the account you log into OSX with.**
b) This path is the hostpath you will use below

Windows

a) In your Documents folder, create a folder named CPSC_Courses. The path to this folder is /c/Users/*username*/Documents/CPSC_Courses, **where username is the name of the account you log into PC with.**
b) This path is the hostpath you will use below

Downloading and Starting a Container

a) Open the terminal or command prompt for your operating system. For Windows you should use command line or power shell.
b) Pull the docker image from online repository by executing the following command:
docker pull chapmanfse/computing-resources:cs_base
c) Create a container instance making sure to replace hostpath with the path for the folder you created for file sharing:
docker run -d -it --name compsci -v *hostpath*:/home chapmanfse/computing-resources:cs_base
d) An instance of the container, named **compsci**, is now running in the background
e) Attach to the container:
docker attach compsci
f) You are now interacting with a linux container!
g) When you are ready to quit, type "**exit**"
h) The next time you want to use the container, start it:
docker start compsci
i) And then attach to it:
docker attach compsci

AKA REPLACE WITH YOUR HOSTPATH FROM ABOVE, OR ELSE!!!!

The hostpath directory you created on your machine is now being shared in the /home directory in the container. Any files you place on your machine will be reflected in /home, and vice-versa.

Troubleshooting

Legacy O.S.s

If you have a Windows system running an O.S. older than Windows 10, or a Mac running an O.S. older than 10.11 (El Capitan), you need to download and install the Docker Toolbox, instead of the Docker Desktop.

a) Download Docker Toolbox instead of Docker Desktop https://docs.docker.com/toolbox/overview/ .Make sure to choose the version that corresponds to your operating system (eg. OSX or Windows).

b) You will need to create a docker account to download the software. Create the account using your Chapman email address. Make sure to remember your user name and password.
c) Once the software has downloaded, run the installation process.
d) When the installation process has completed, run docker by clicking on the appropriate (whale) icon.
e) Follow the instructions as Docker Desktop starts up. Detailed installation instructions can be found here: https://docs.docker.com/toolbox/toolbox_install_mac/ OR here https://docs.docker.com/toolbox/toolbox_install_windows/
f) Common issues and their solutions can be found at this page https://docs.docker.com/toolbox/faqs/troubleshoot/

Hyper-V Not Enabled/Issues with Virtualization not being enabled

If you are on a Windows O.S. and get a message during installation that virtualization or Hyper-V is not enabled on your machine, follow these steps to enable it.

a) Go to settings ->Recovery Options -> Advanced Restart
b) A group of options will pop up after the computer restarts
c) Select Advanced Options -> UEFI Firmware Settings
d) Click the reset option here, as well
e) The machine will now boot into a mode that allows for firmware changes. You will need to navigate via the numbered 'F' keys and the arrow keys based on your machine's menu options that match the options given there
f) Select BIOS setup -> System Configuration
g) Navigate to and enable Virtualization Technology in the System Configuration menu.
h) Save and exit.
i) Upon reboot, your machine should allow you to properly install Docker.