



SDSU Computer Science

Ken Gamradt

Docker – Windows

08-31-23

Enabling Virtualization: Docker, Virtual Machines, ...

- Most computers these days come with this feature enabled
- Use the following link to enable virtualization
 - <https://support.microsoft.com/en-us/windows/enable-virtualization-on-windows-11-pcs-c5578302-6e43-4b4b-a449-8ced115f58e1>

Setting up Docker

The screenshot shows a web browser displaying the Docker Desktop documentation on docs.docker.com/desktop/. The page has a blue header with navigation links: Home, Guides, Manuals, Reference, FAQ, Samples, and Contribute. Below the header, the breadcrumb navigation shows: Home / Manuals / Docker Desktop / Overview.

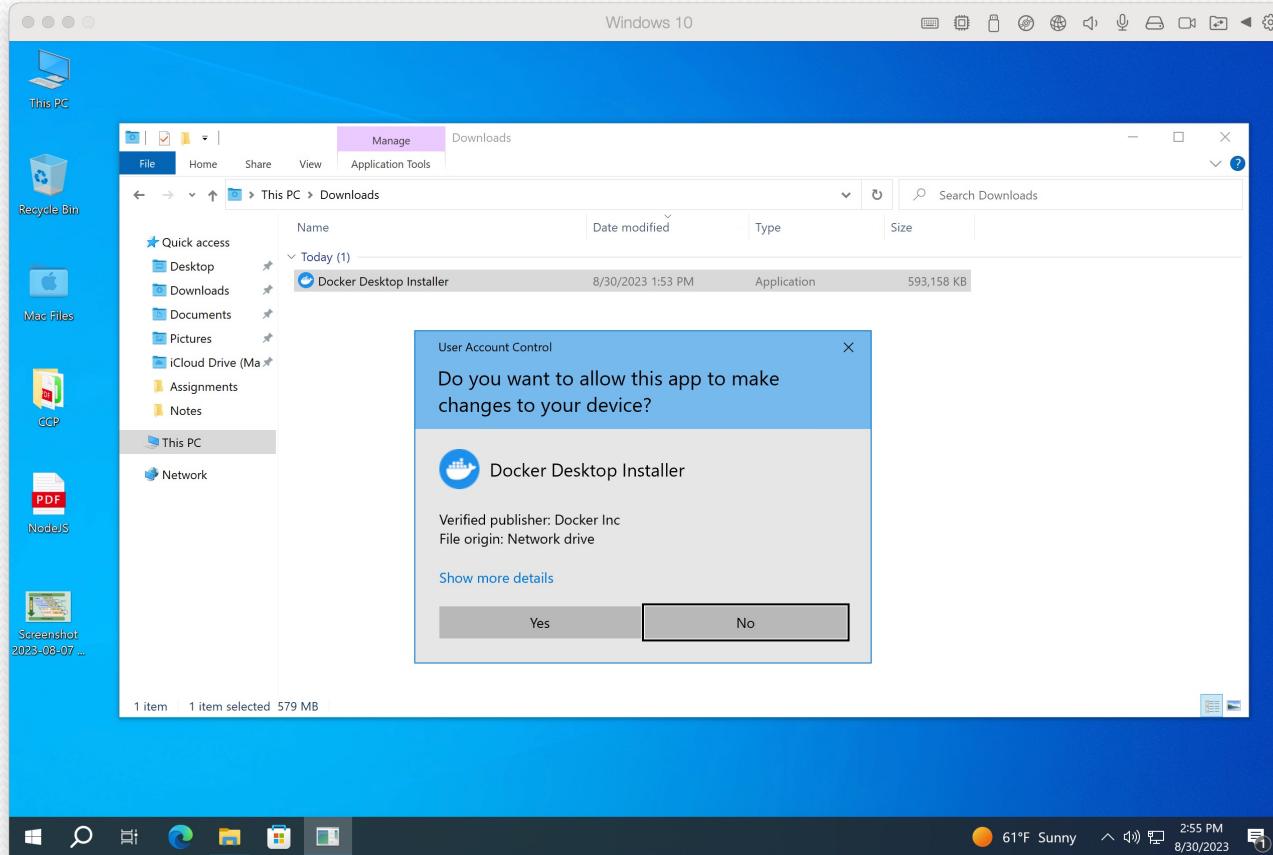
The main content area is titled "Docker Desktop". It features a sidebar with a "Overview" section containing links to "Install Docker Desktop", "Learning Center and sign in", "Explore Docker Desktop", "Hardened Docker Desktop", "Dev Environments (Beta)", "containerd image store (Beta)", "Wasm workloads (Beta)", "WSL", "Additional resources", "Change settings", "Troubleshoot and diagnose", "Uninstall Docker Desktop", "Give feedback", "Release notes", and "Previous versions" (with a "Extensions" icon).

The main content area contains several sections:

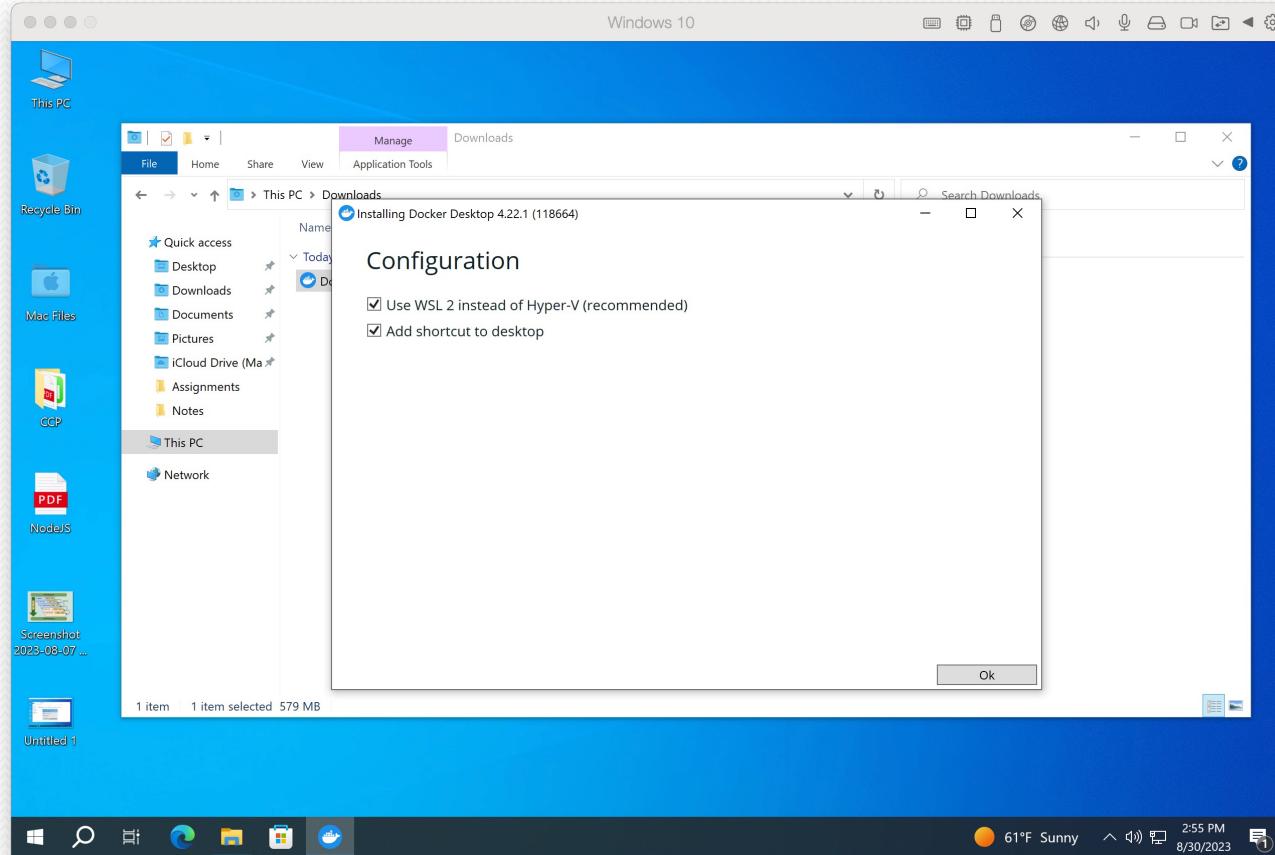
- Install Docker Desktop**: A section with a download icon and text: "Docker Desktop works with your choice of development tools and languages and gives you access to a vast library of certified images and templates in Docker Hub. This enables development teams to extend their environment to rapidly auto-build, continuously integrate, and collaborate using a secure repository." It includes links for "On Mac", "Windows or Linux".
- Explore Docker Desktop**: A section with a compass icon and text: "Navigate Docker Desktop and learn about its key features."
- View the release notes**: A section with a plus icon and text: "Find out about new features, improvements, and bug fixes."
- Browse common FAQs**: A section with a question mark icon and text: "Explore general FAQs or FAQs for specific platforms."
- Find additional resources**: A section with a computer monitor icon and text: "Find information on networking features, deploying on Kubernetes and more."
- Give feedback**: A section with a speech bubble icon and text: "Provide feedback on Docker Desktop or Docker Desktop features."

On the right side of the page, there are "Contents", "Page details" (with a "3 minute read" link), "Request changes", "Tags" (including "how to use docker desktop", "what is docker desktop used for", "what does docker desktop do", and "using docker desktop"), and a "Give feedback" button.

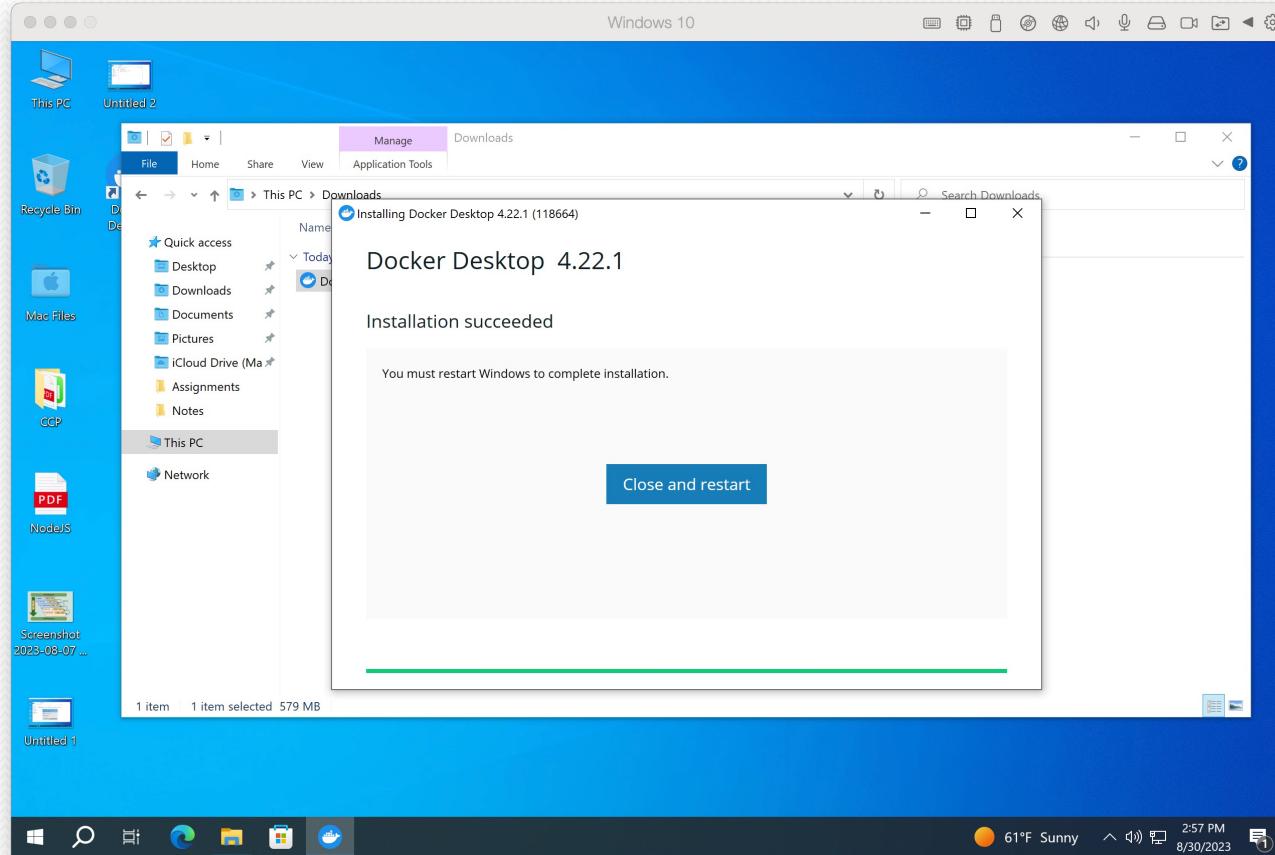
Setting up Docker



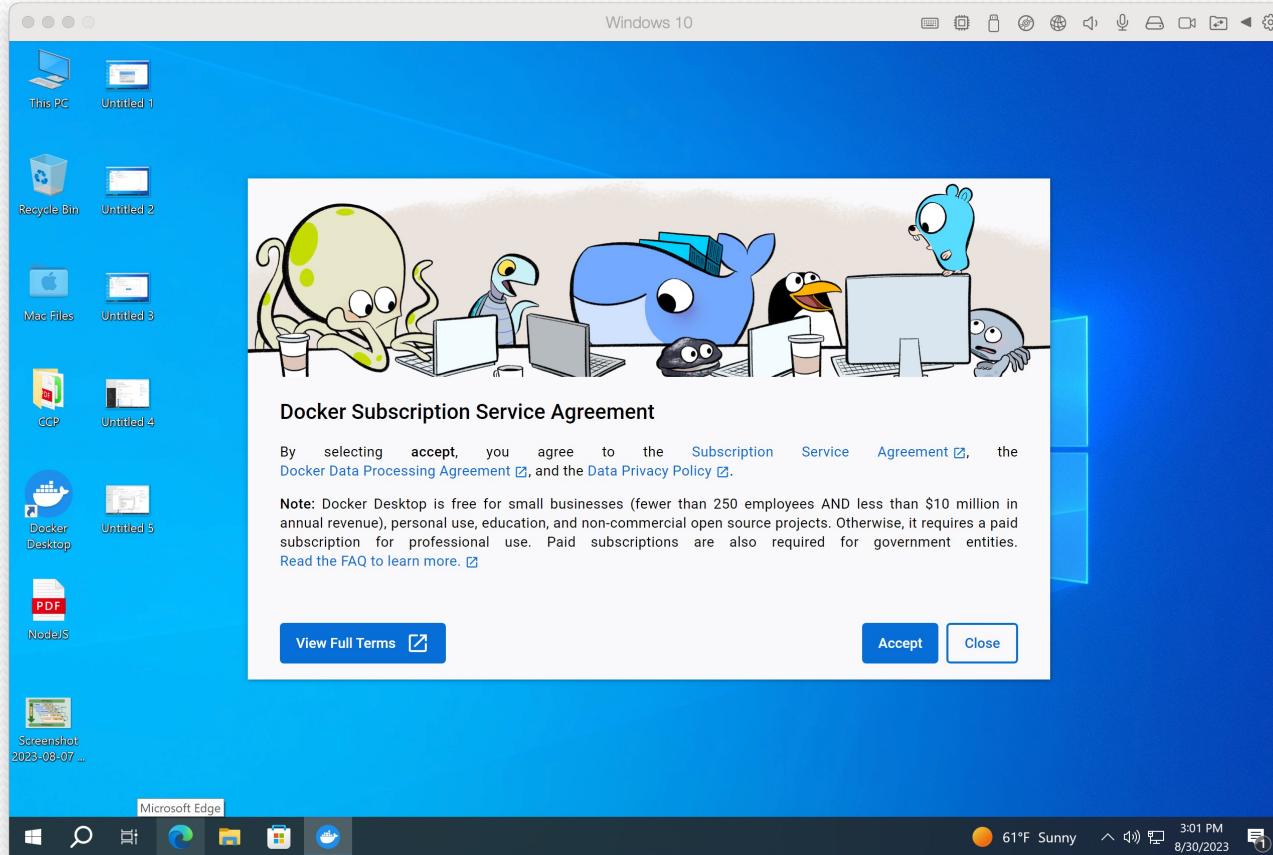
Setting up Docker



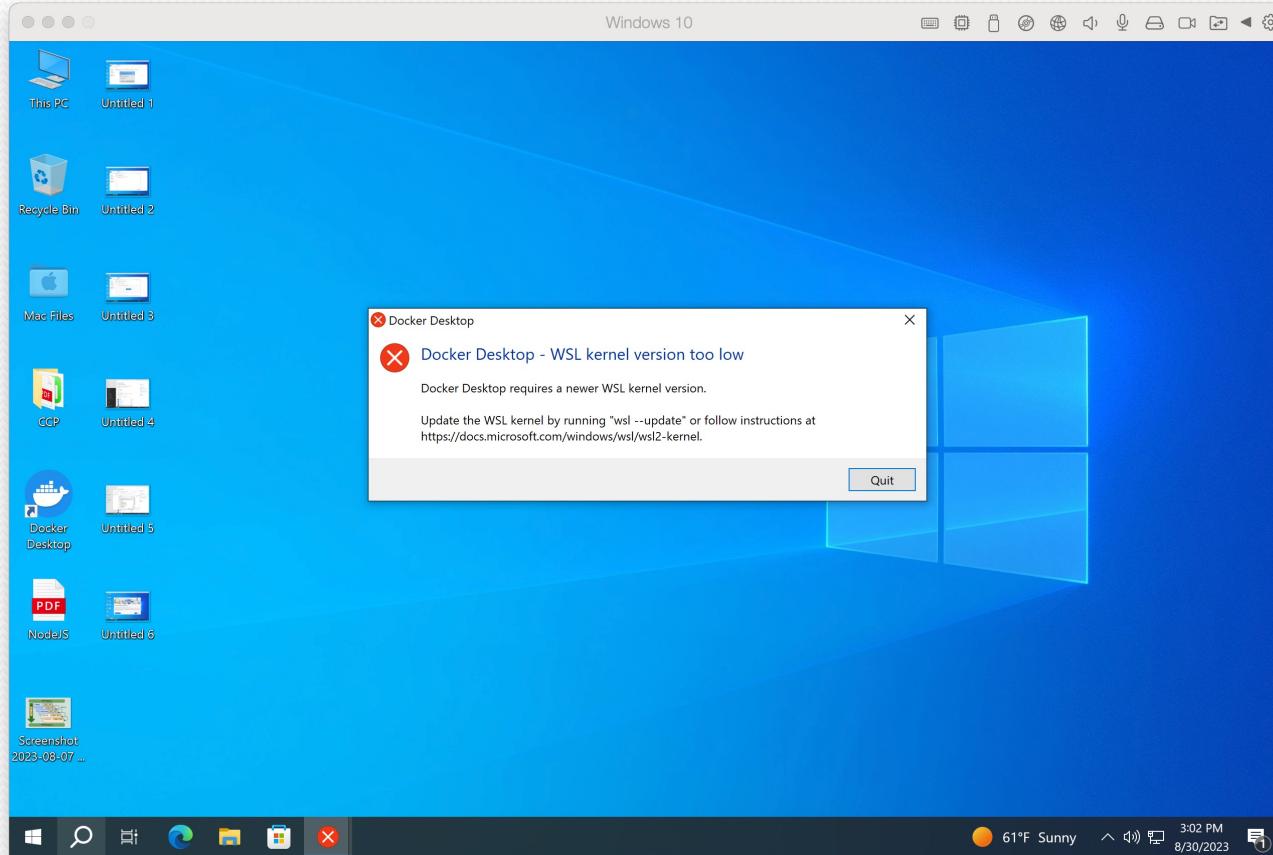
Setting up Docker



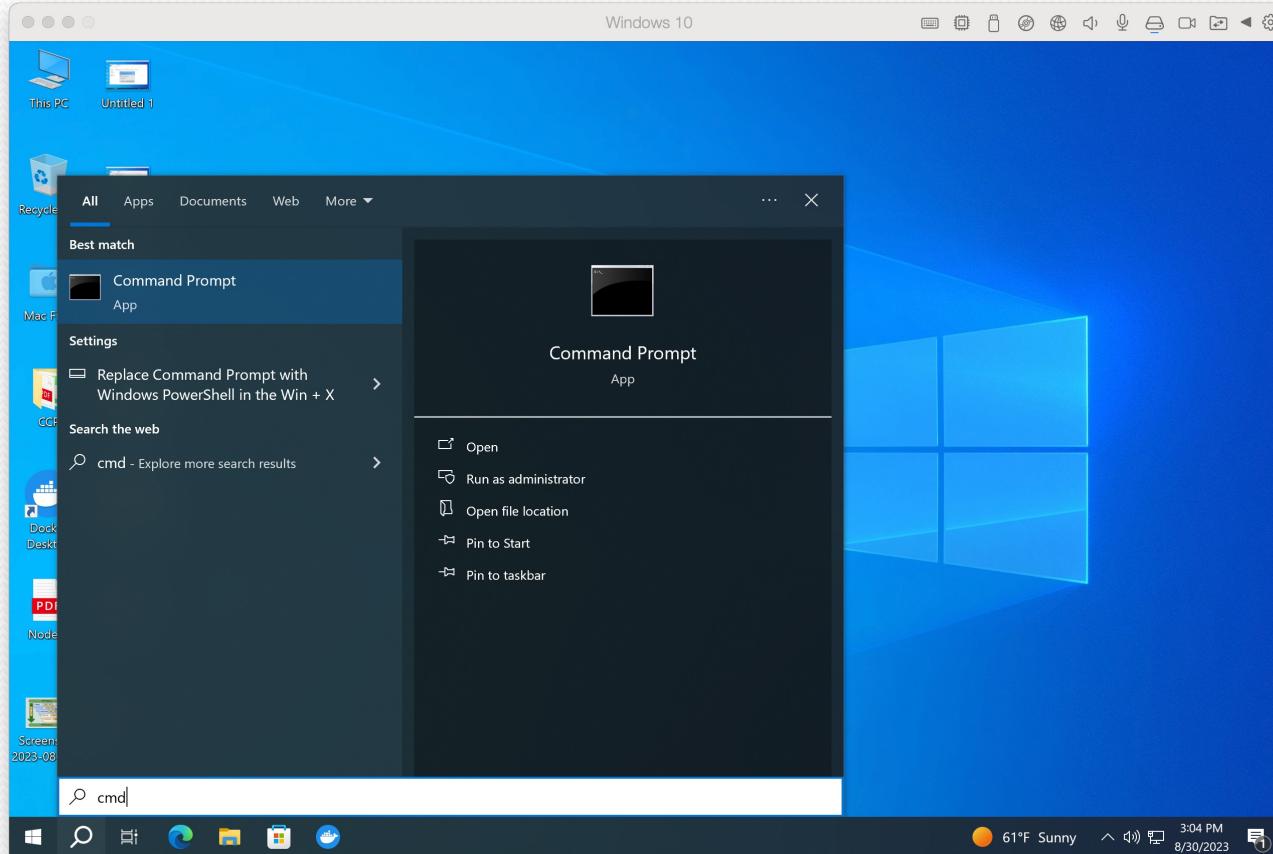
Setting up Docker



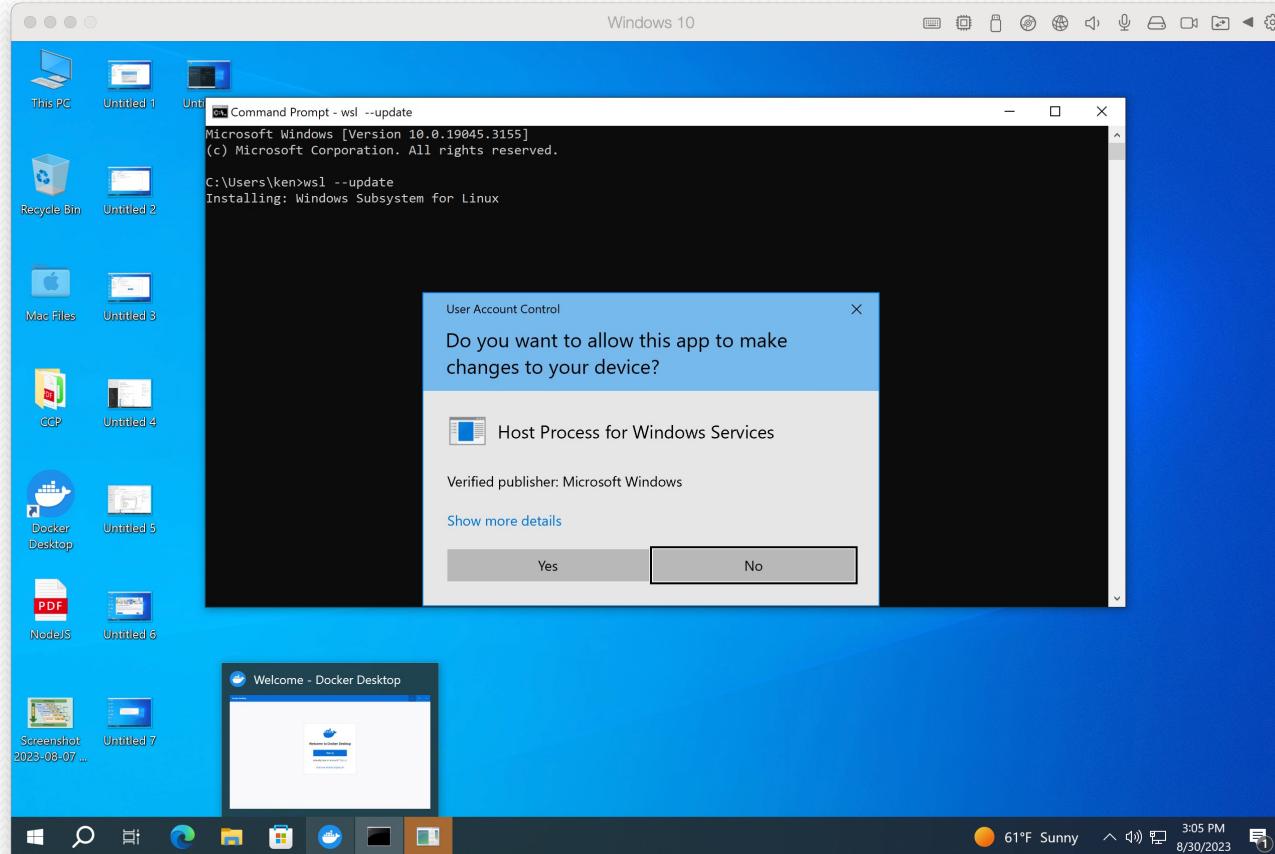
Setting up Docker



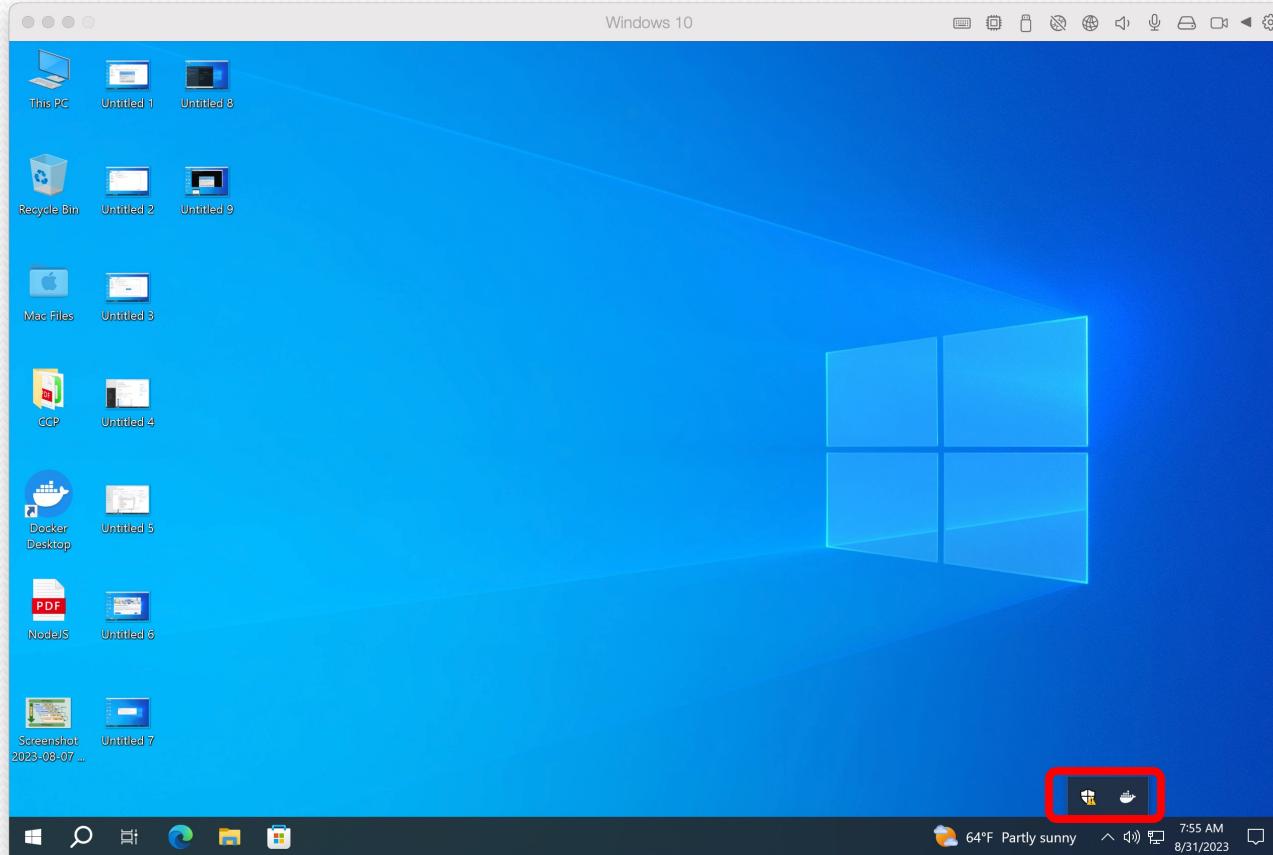
Setting up Docker



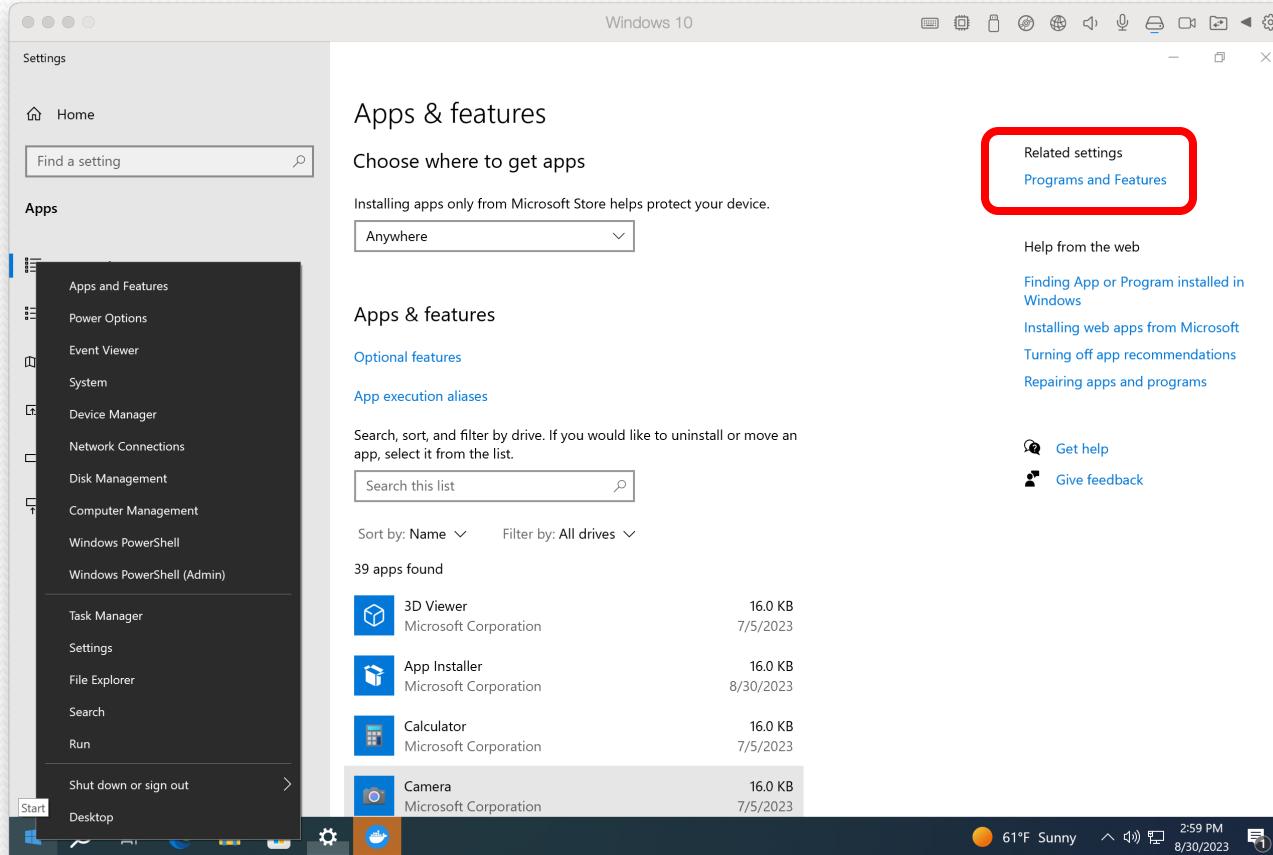
Setting up Docker



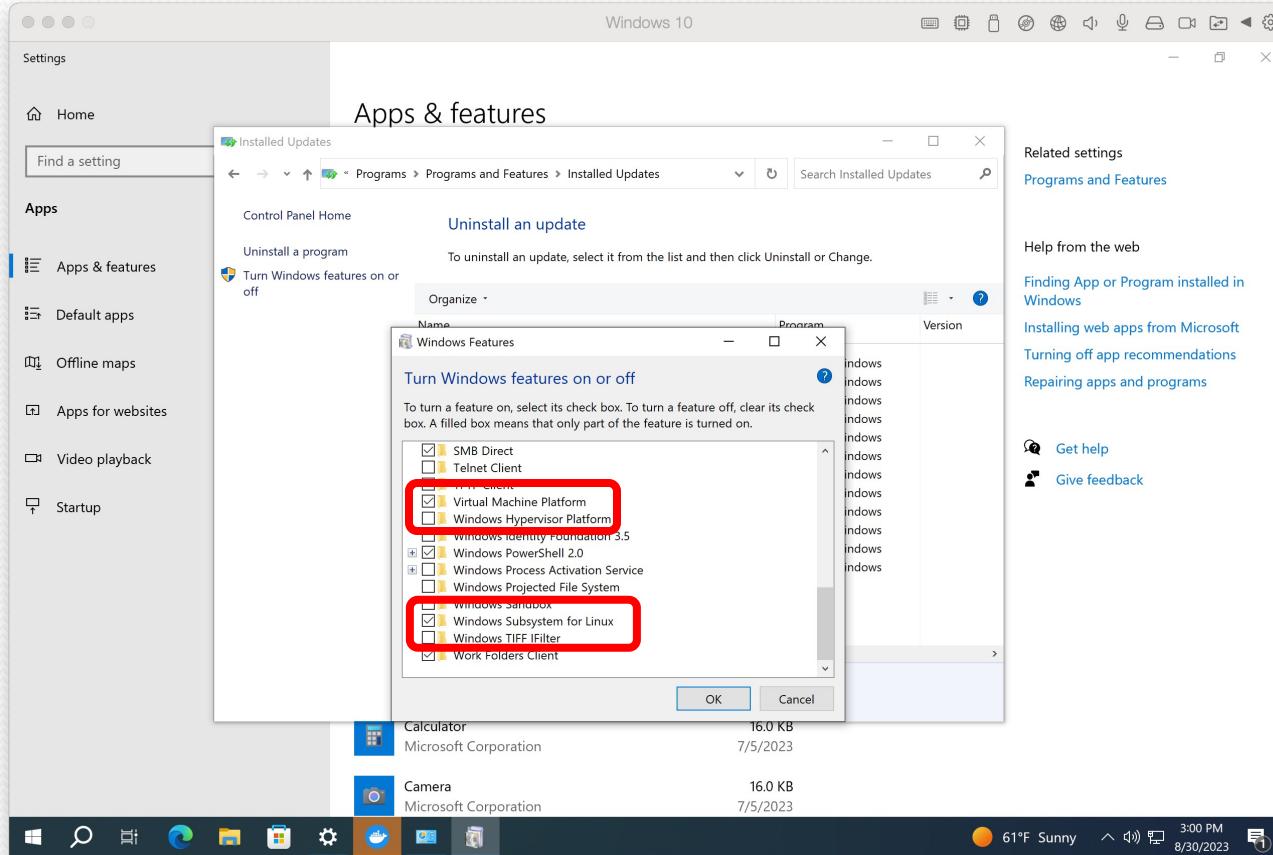
Setting up Docker



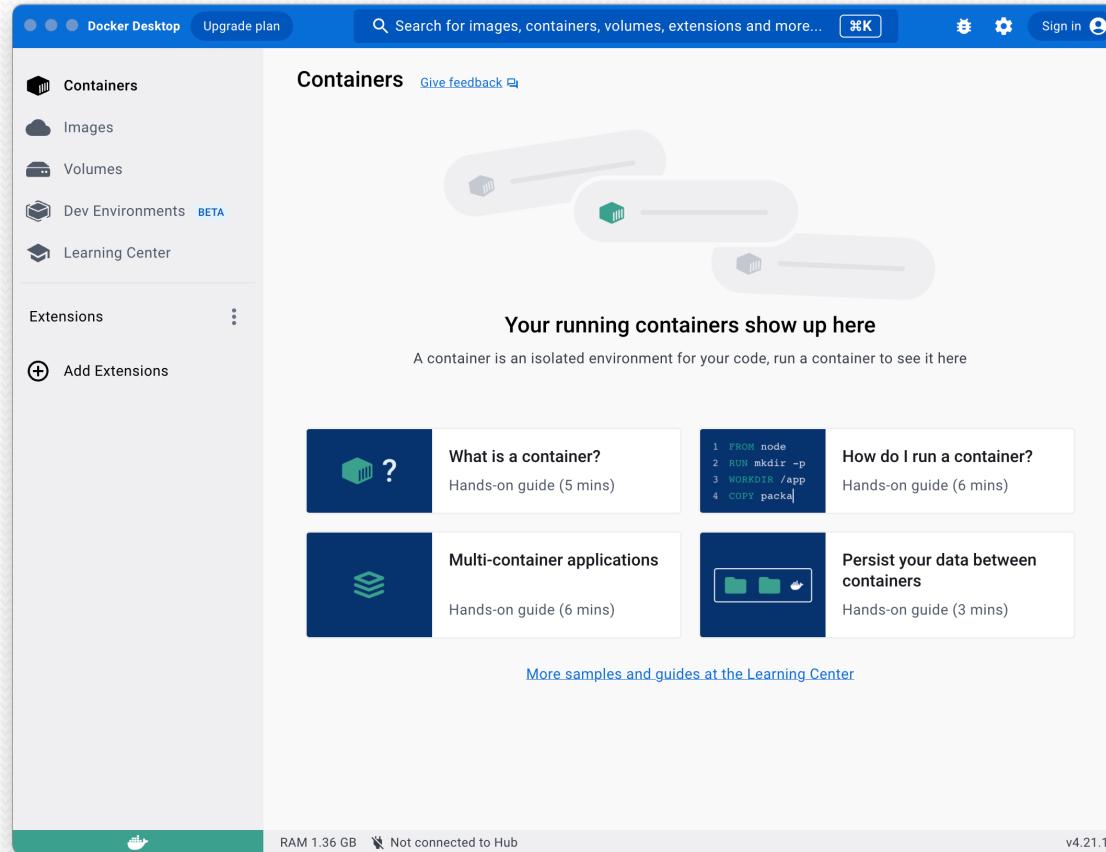
Setting up Docker



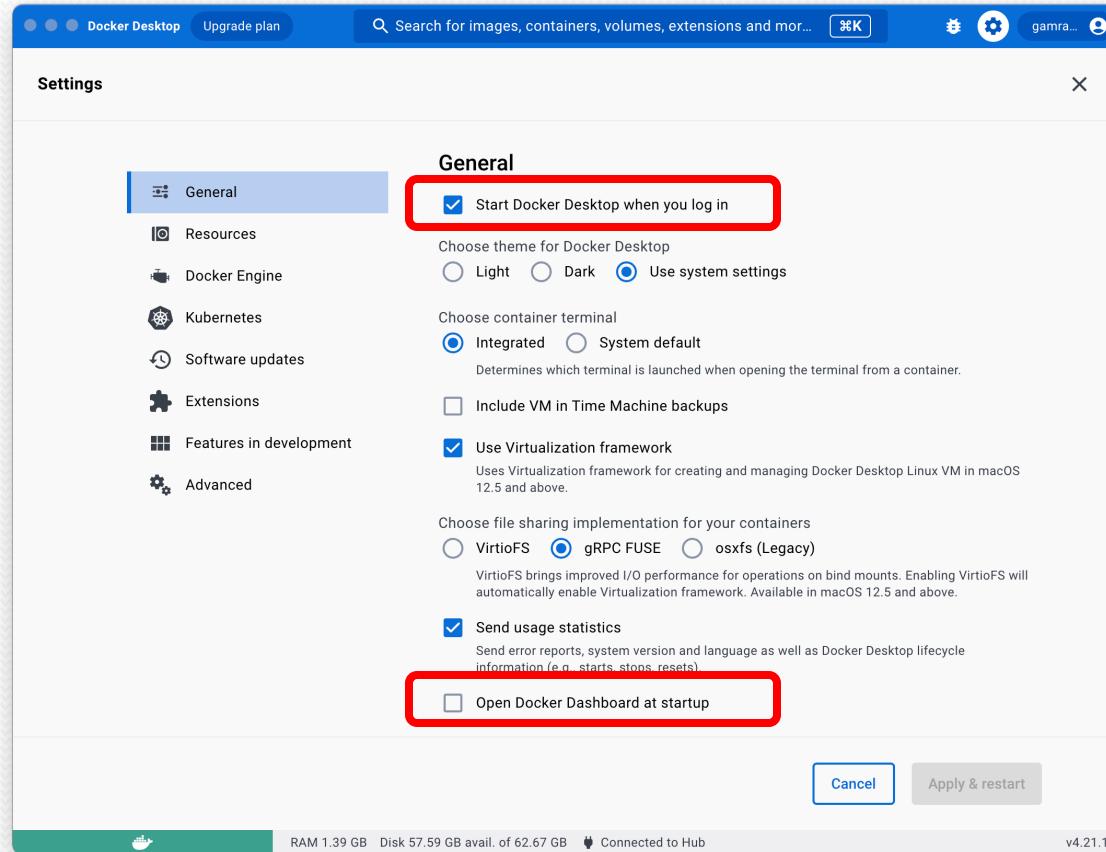
Setting up Docker



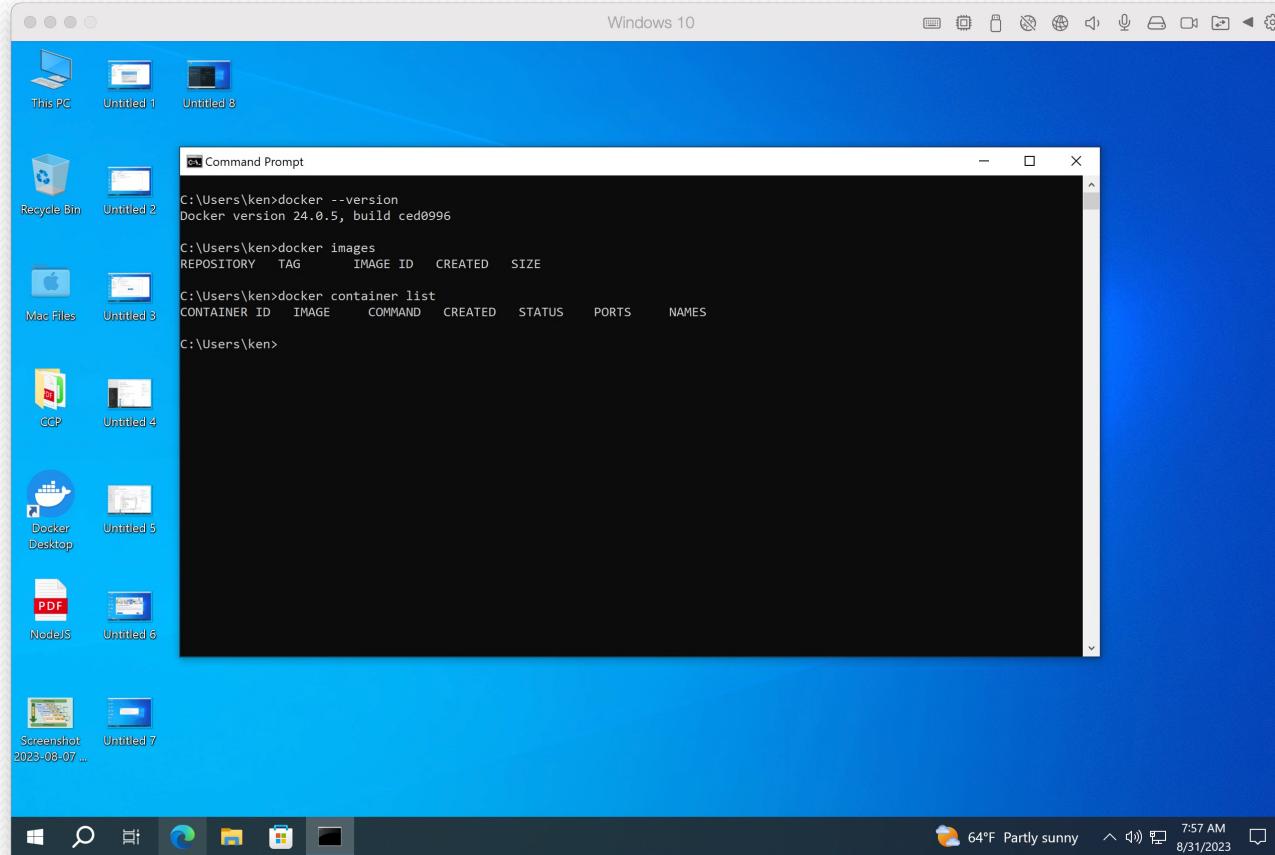
Setting up Docker



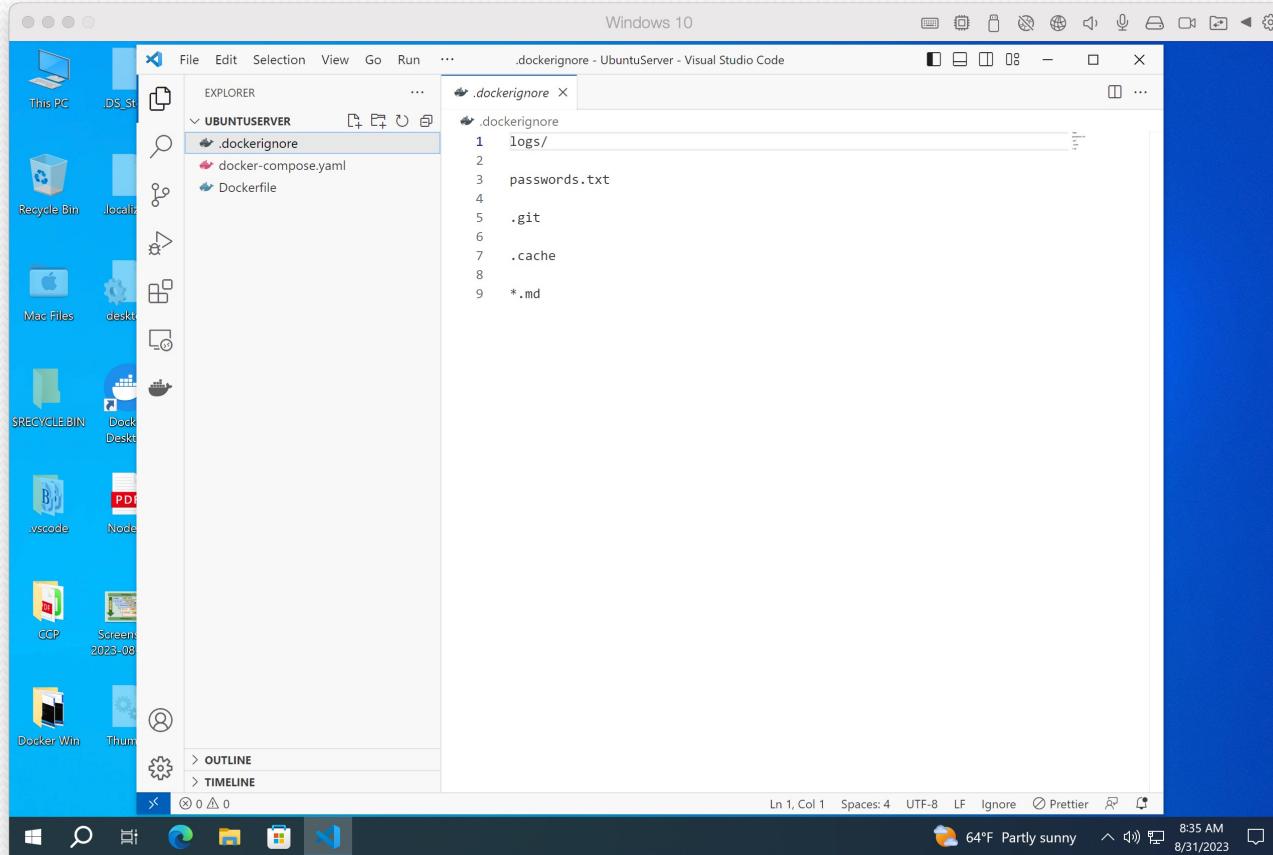
Setting up Docker



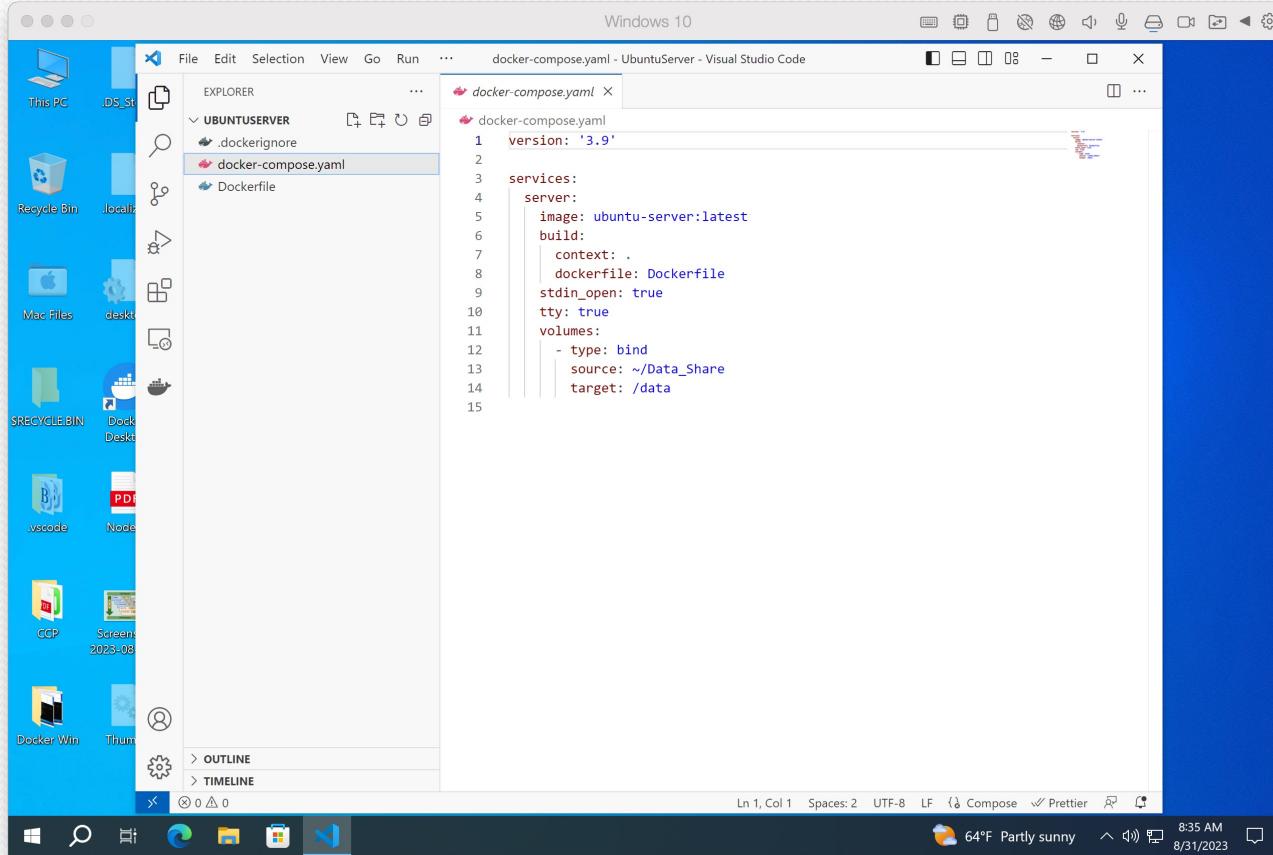
Setting up Docker



Setting up Docker



Setting up Docker



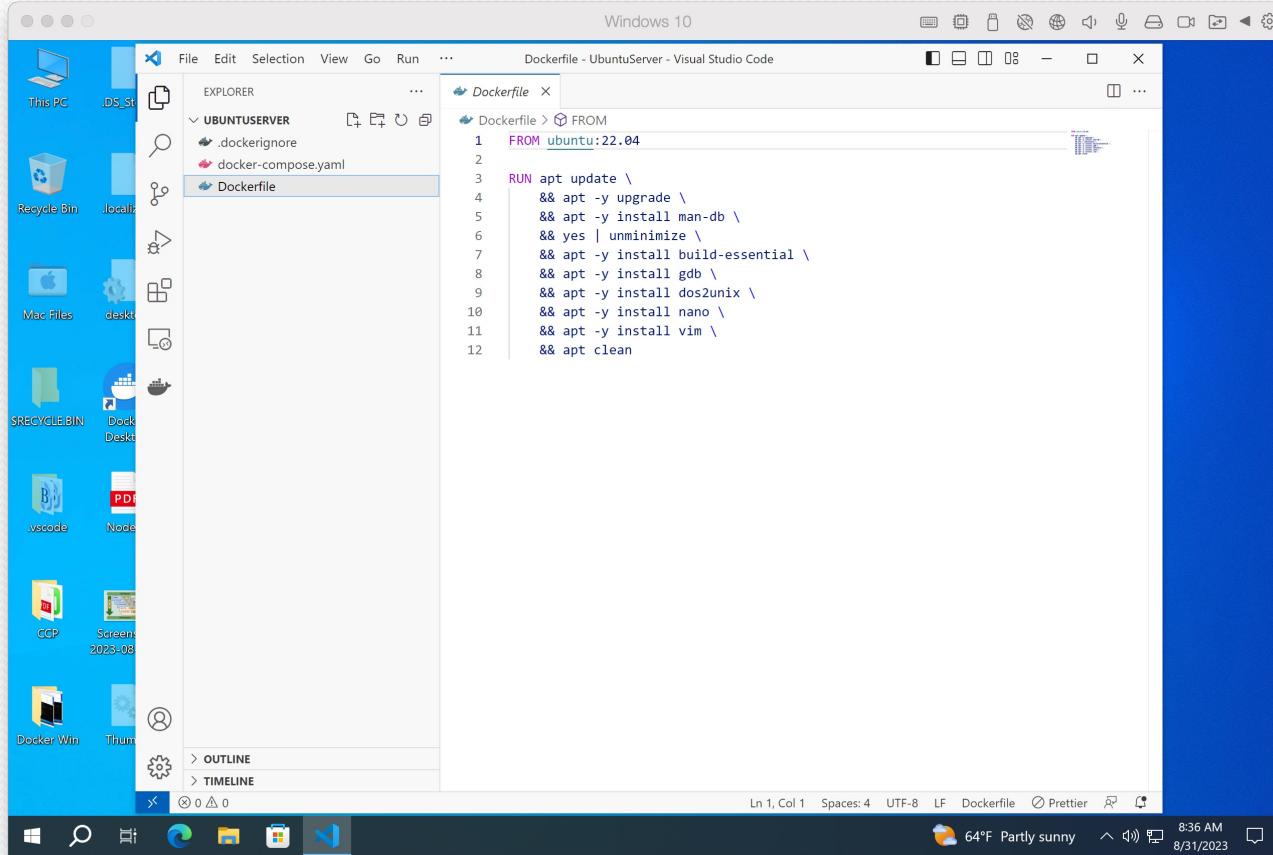
A screenshot of a Windows 10 desktop showing Visual Studio Code (VS Code) running. The title bar indicates it's a "Windows 10" environment. The VS Code interface shows an "EXPLORER" sidebar on the left with icons for "This PC", "DS_Store", "Recycle Bin", "Mac Files", "SRECYCLEBIN", "vscode", "Node.js", "CCP", "Screens 2023-08", "Docker Win", and "Thumbnails". The main editor area displays a "docker-compose.yaml" file with the following content:

```
version: '3.9'

services:
  server:
    image: ubuntu-server:latest
    build:
      context: .
      dockerfile: Dockerfile
    stdin_open: true
    tty: true
    volumes:
      - type: bind
        source: ~/Data_Share
        target: /data
```

The status bar at the bottom of the VS Code window shows "Ln 1, Col 1" and other file-related information. The taskbar at the very bottom of the screen includes icons for the Start button, File Explorer, Edge browser, File Explorer, Task View, and VS Code.

Setting up Docker

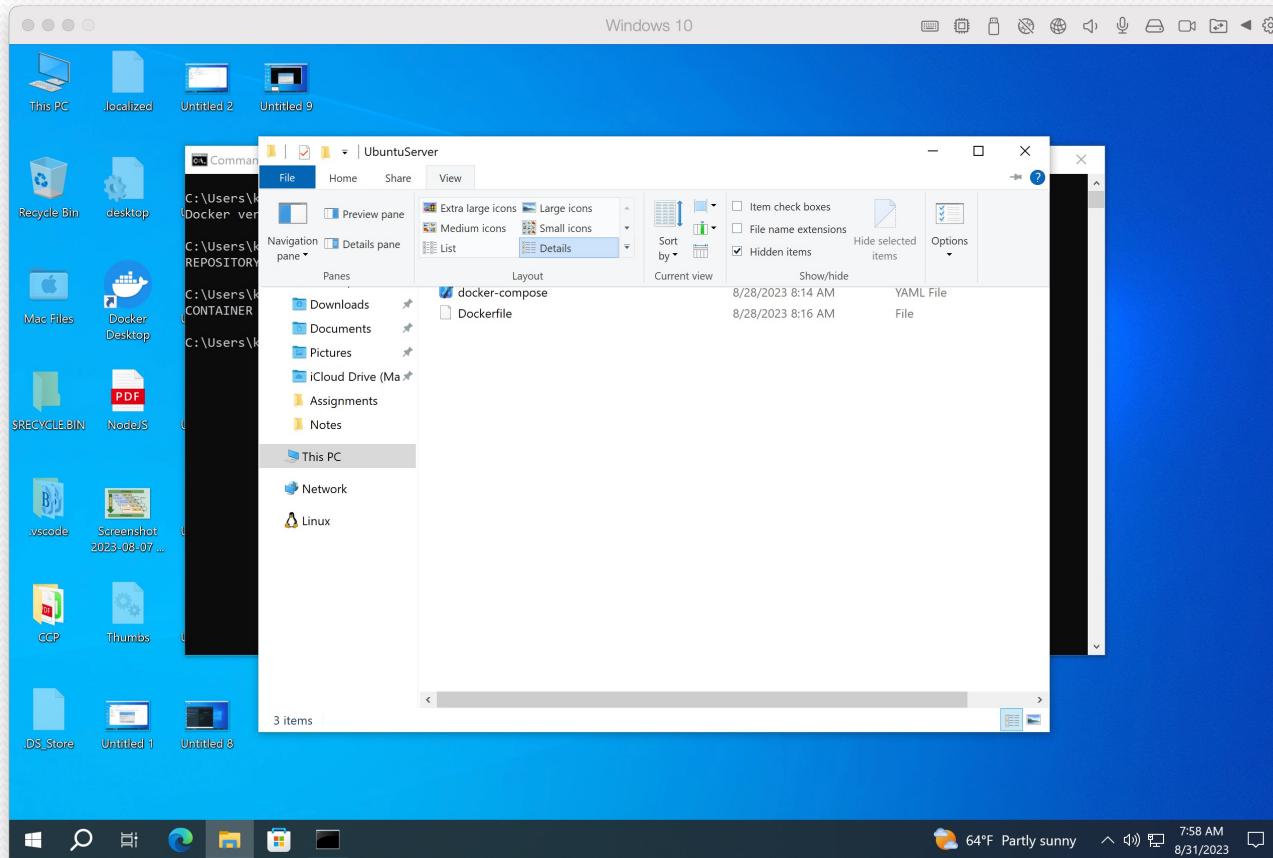


The screenshot shows a Windows 10 desktop environment with a Visual Studio Code window open. The code editor displays a Dockerfile for an Ubuntu server. The Dockerfile content is as follows:

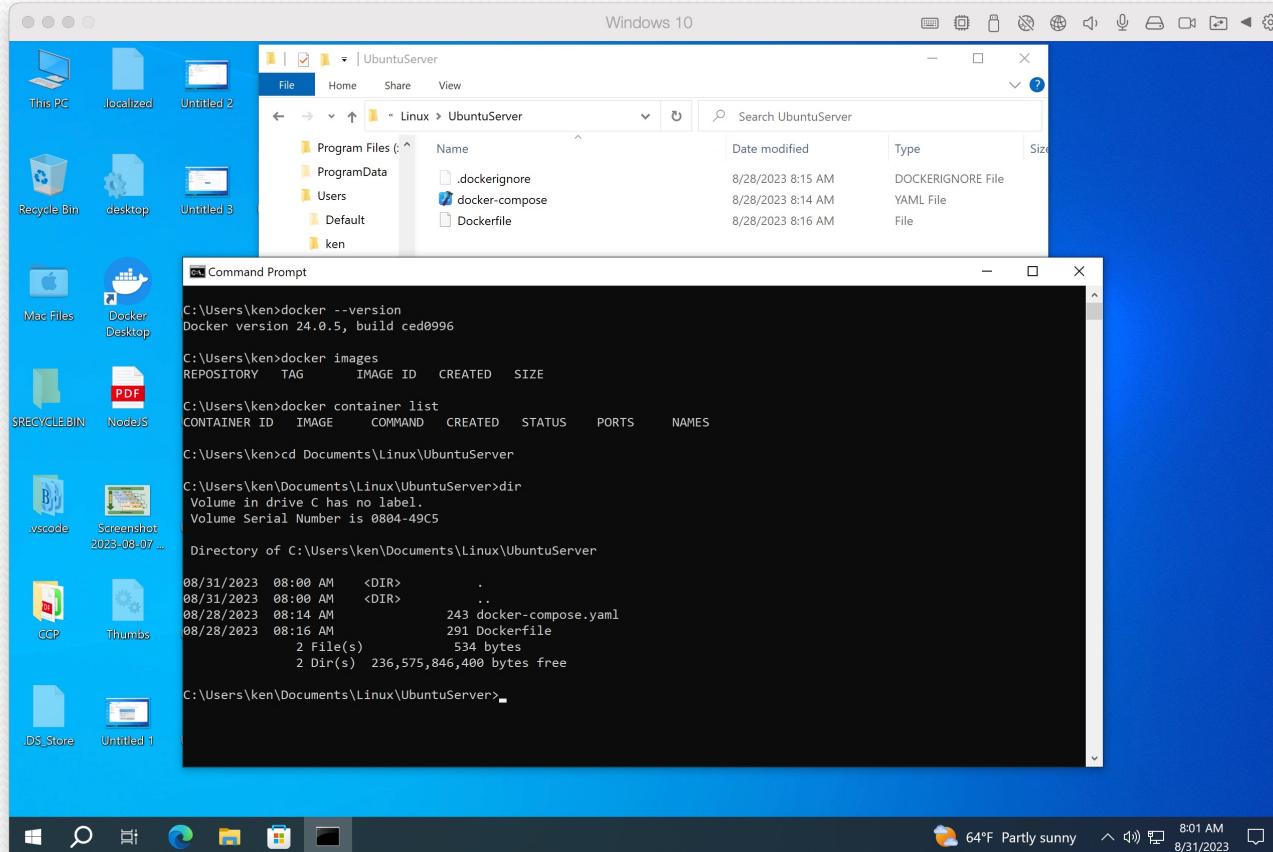
```
FROM ubuntu:22.04
RUN apt update \
    && apt -y upgrade \
    && apt -y install man-db \
    && yes | unminimize \
    && apt -y install build-essential \
    && apt -y install gdb \
    && apt -y install dos2unix \
    && apt -y install nano \
    && apt -y install vim \
    && apt clean
```

The Visual Studio Code interface includes a sidebar with file navigation, a bottom status bar showing file statistics and system information, and a taskbar at the bottom.

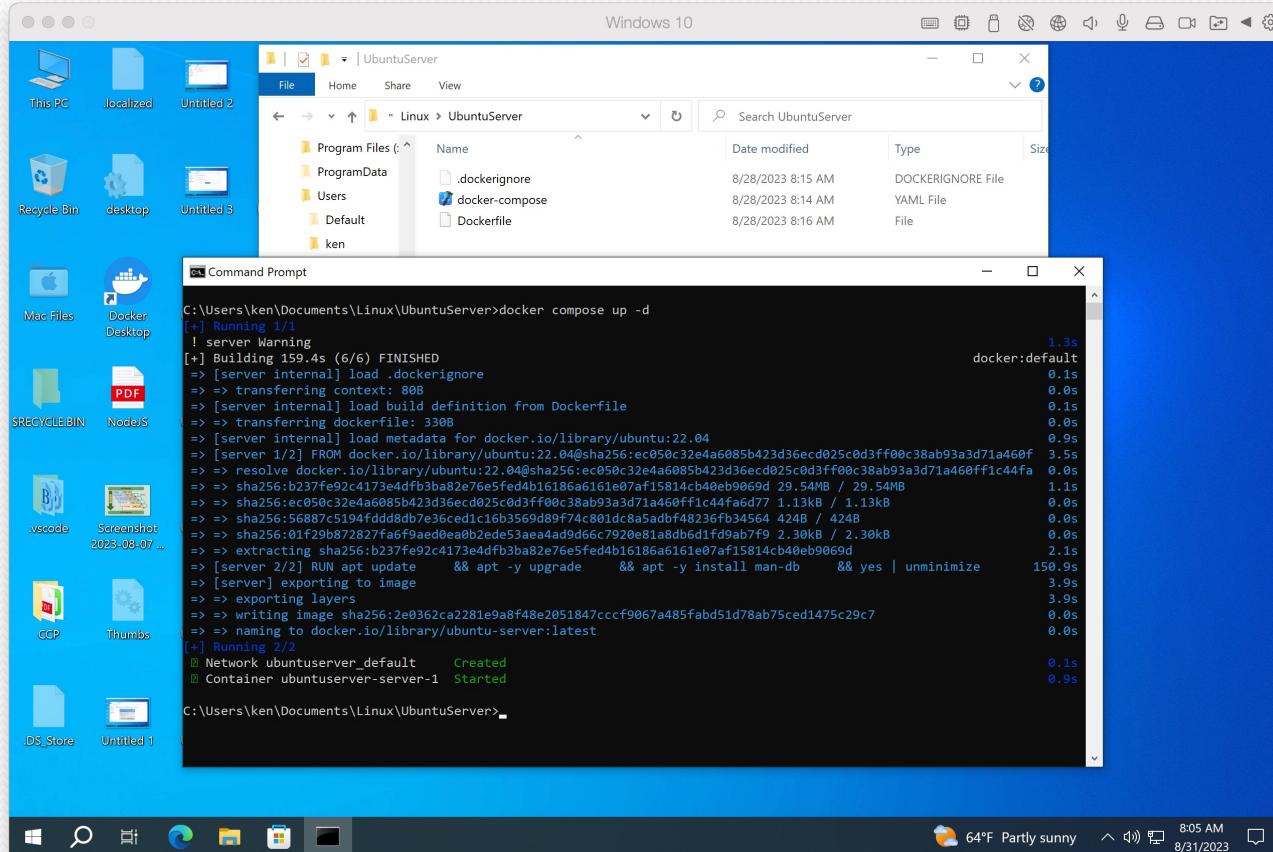
Setting up Docker



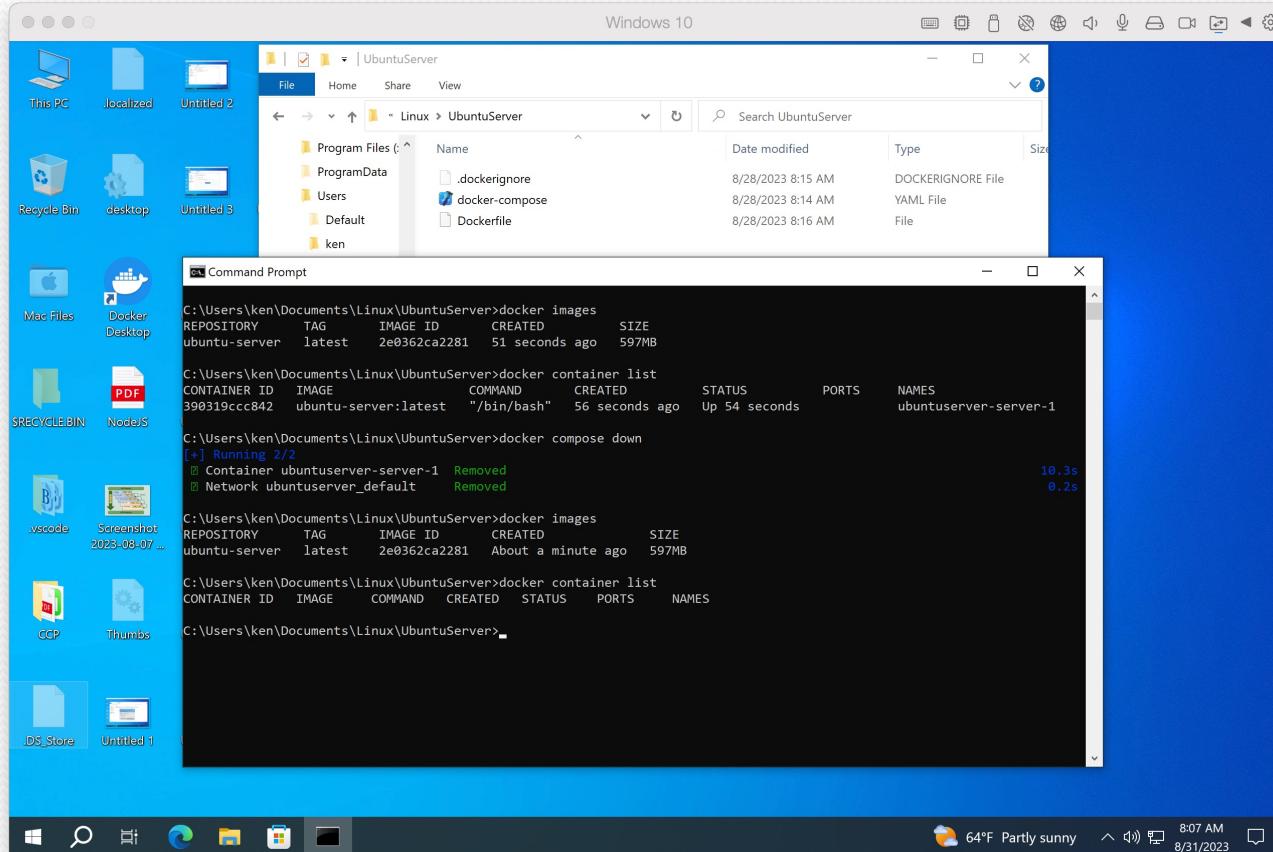
Setting up Docker



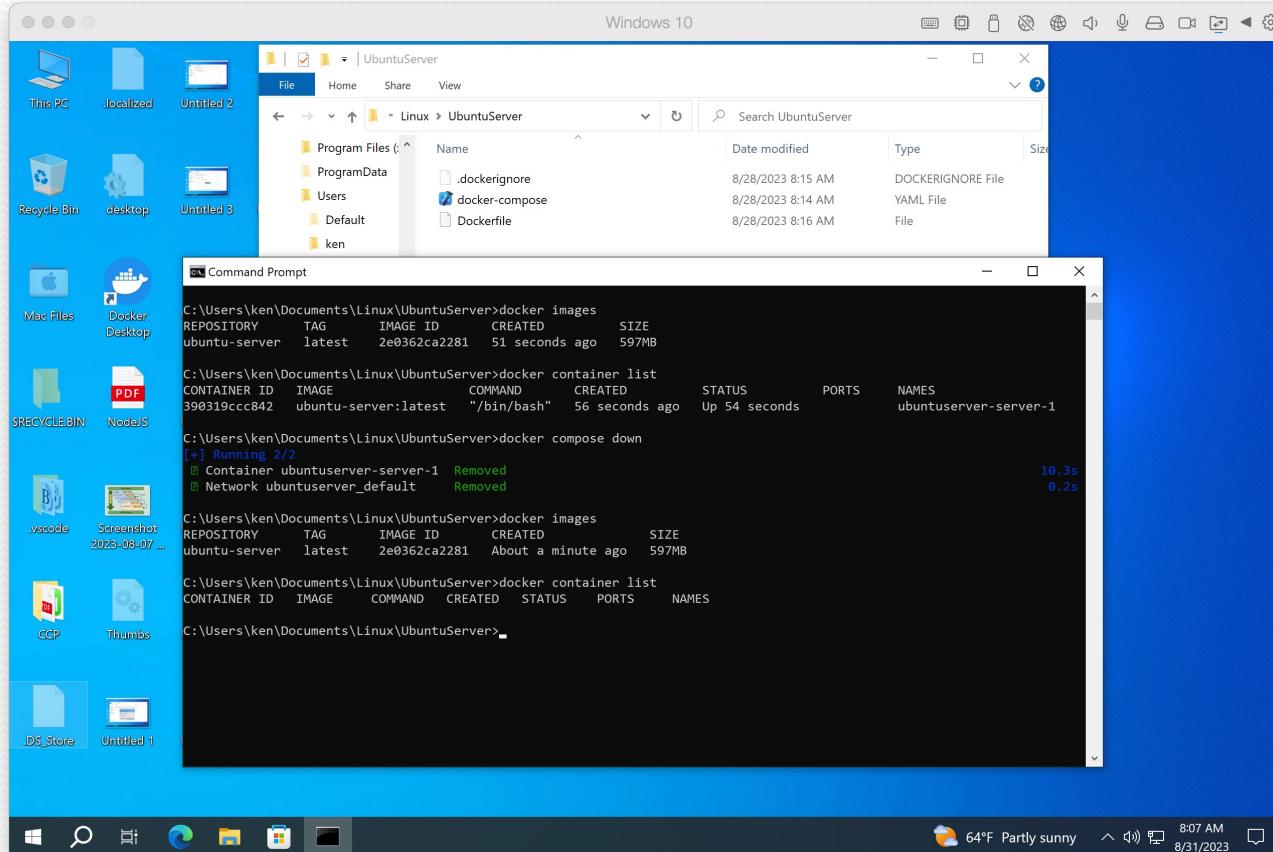
Setting up Docker



Setting up Docker



Setting up Docker



Acknowledgements

- Maximilian Schwarzmüller – Udemy
 - Docker & Kubernetes: The Practical Guide
- Bret Fischer – Udemy
 - Docker Mastery: with Kubernetes + Swarm
- Stephen Grider – Udemy
 - Docker and Kubernetes: The Complete Guide
- MAKE USE OF – How to Run Ubuntu as a Docker Container
 - <https://www.makeuseof.com/run-ubuntu-as-docker-container/>
- MAKE USE OF – How to Use Docker Compose
 - <https://www.makeuseof.com/docker-compose-how-use/>
- docker docs – Use the Docker command line
 - <https://docs.docker.com/engine/reference/commandline/cli/>