CS451

Cloud Computing

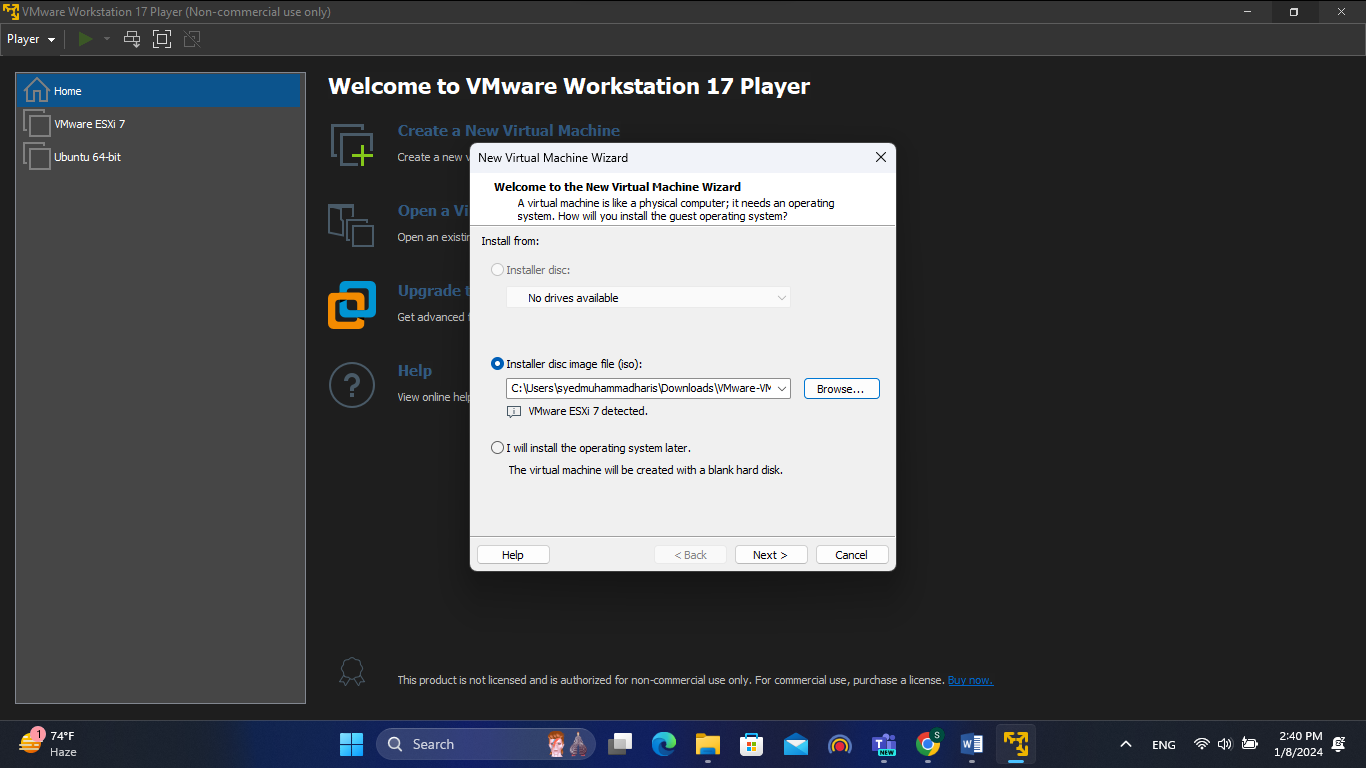
FALL 2023

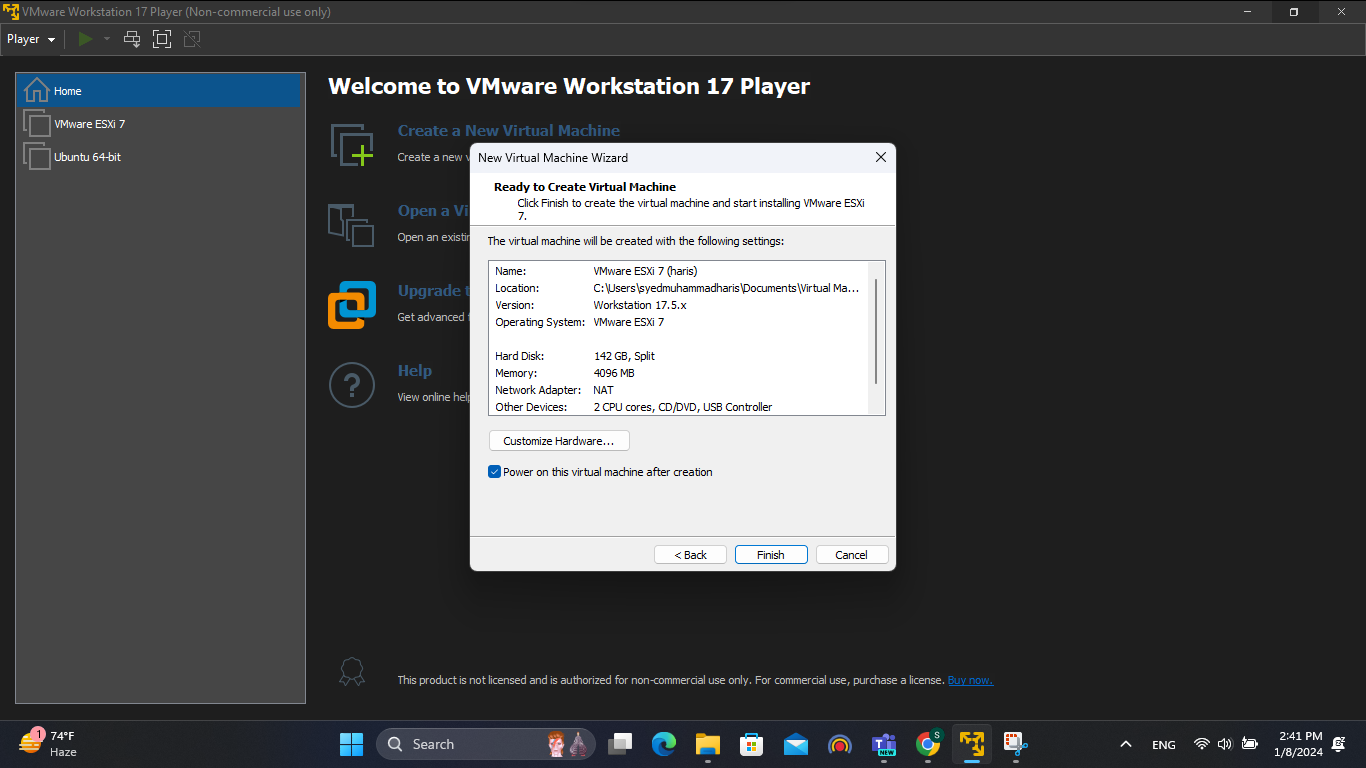
Assignment

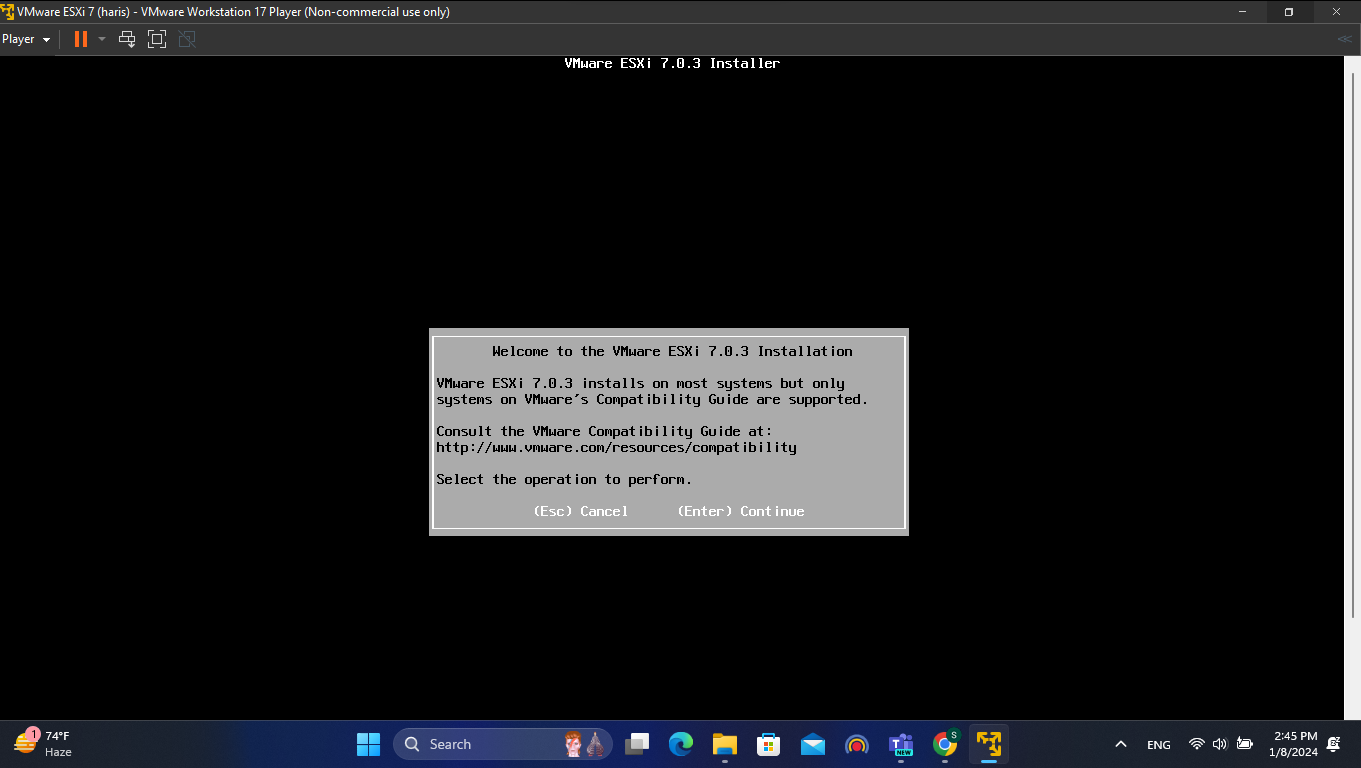
20B-100-SE

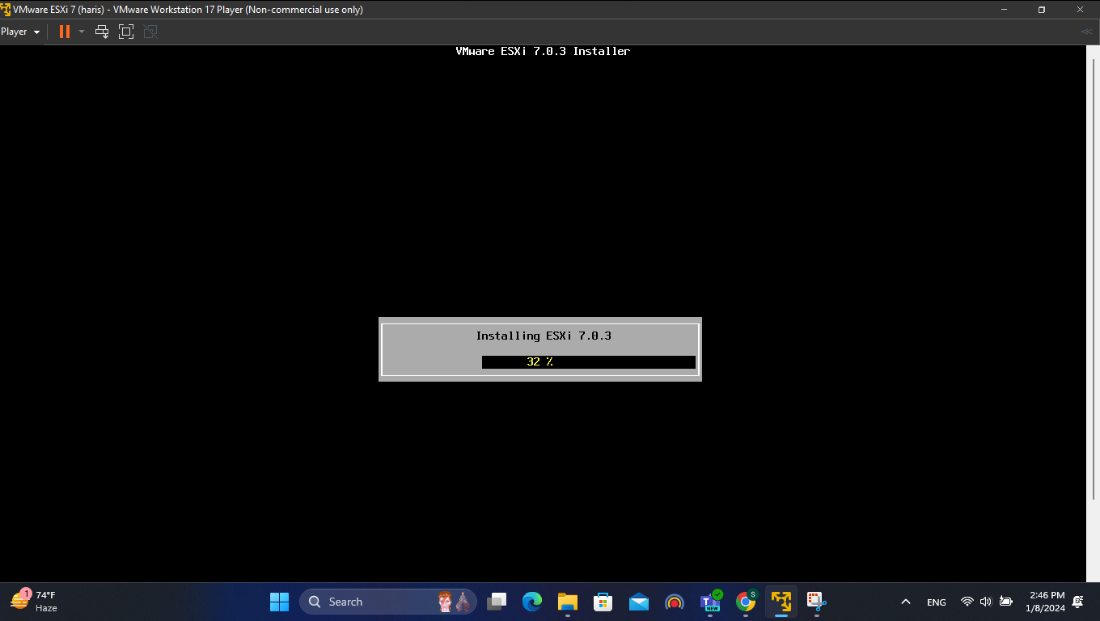
TASK

**1 – Create a bare metal virtual machine environment.**

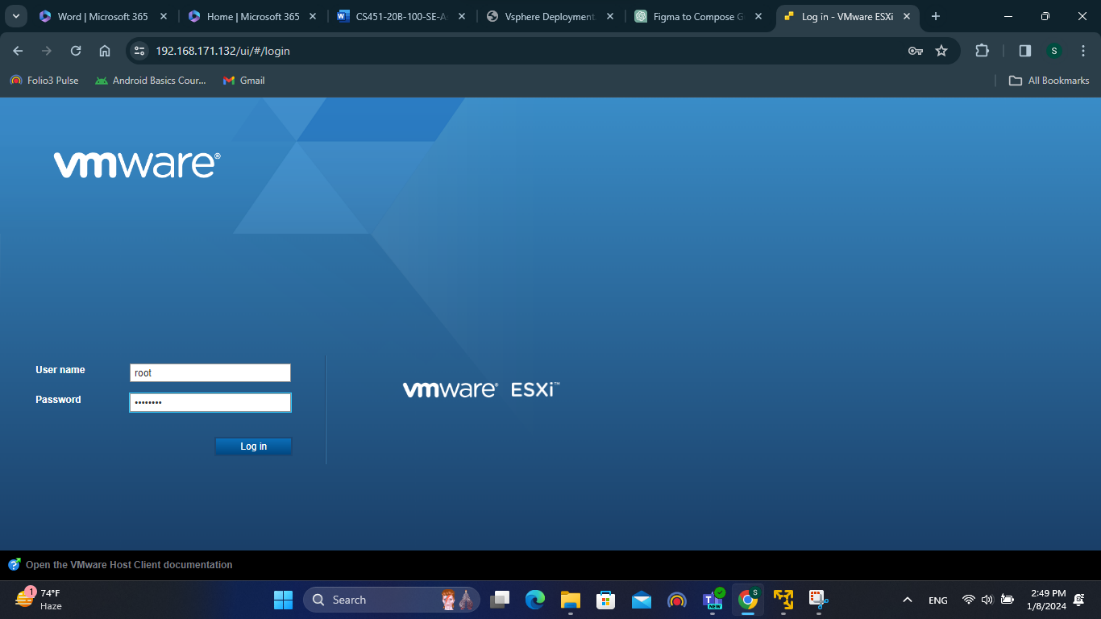


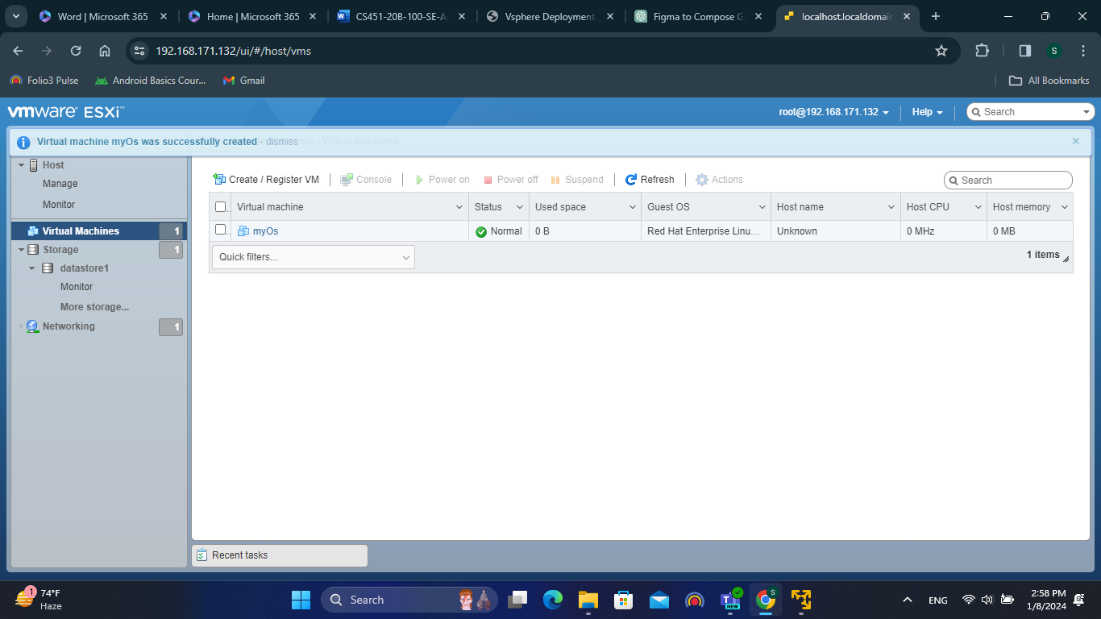




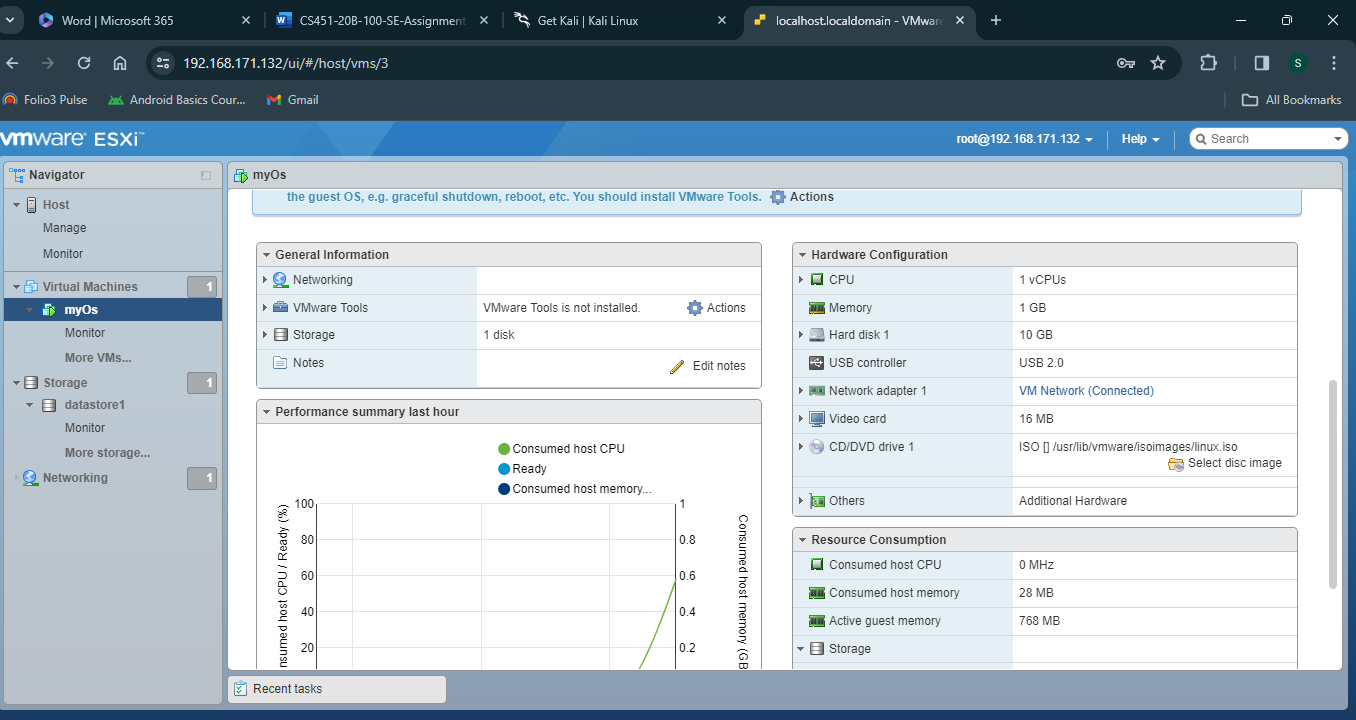


**2 – Deploy the ESXI vsphere.**

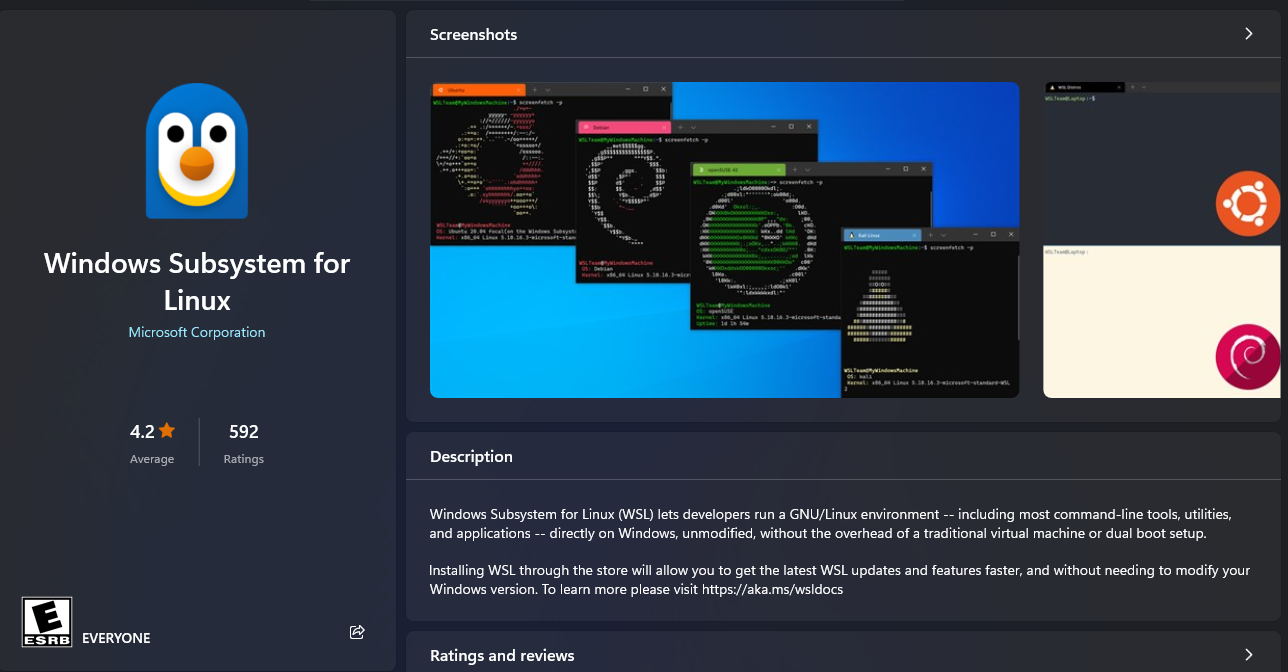


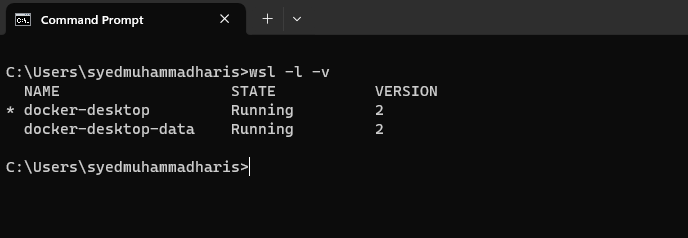


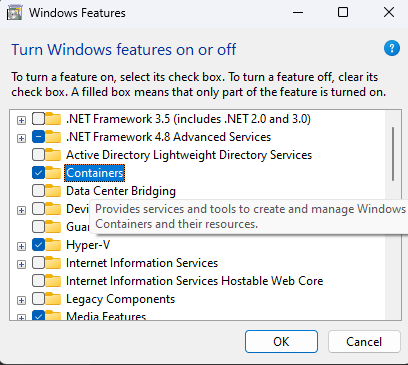
**3 – Deploy the webserver in ESXI virtual machine. Access the web services from the host.**

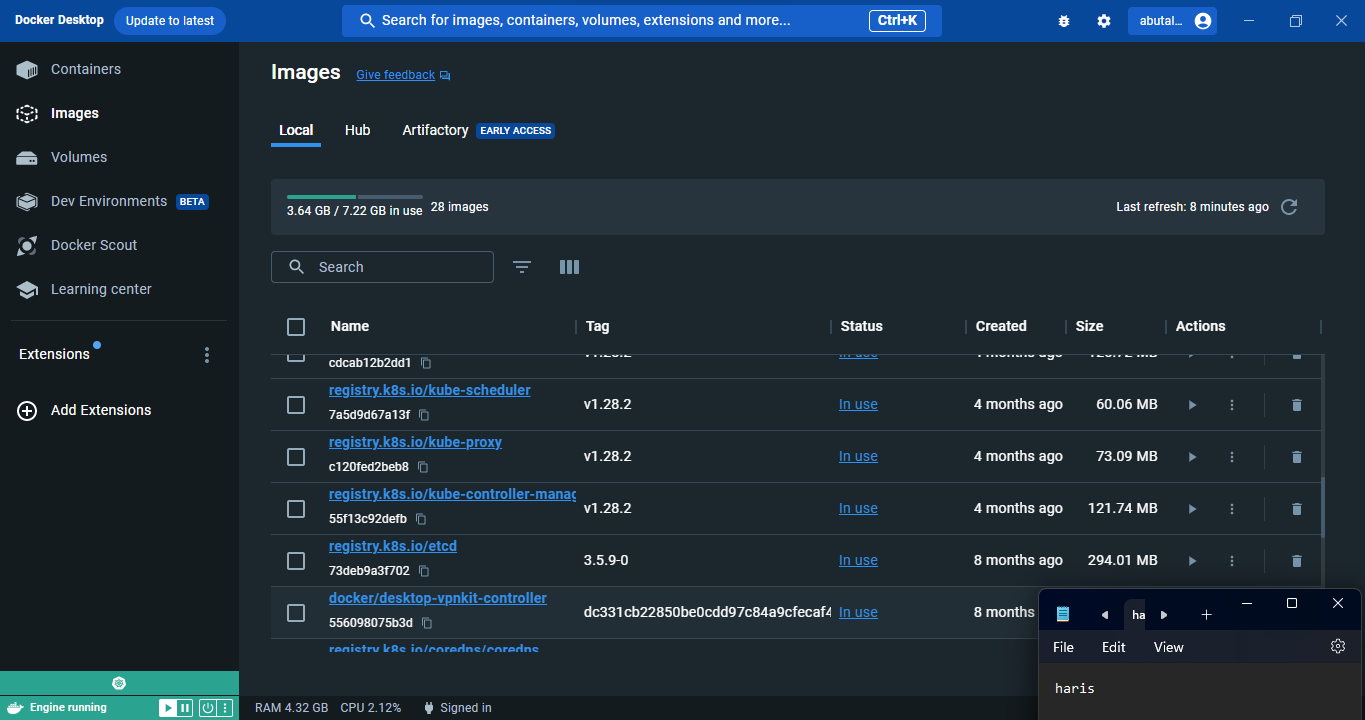


**4 – Create docker environment.**

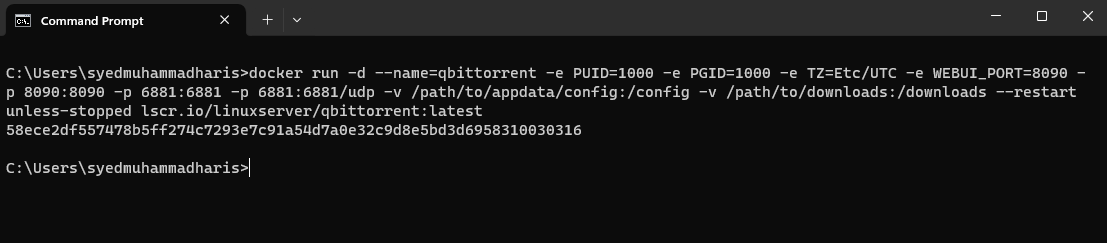
****

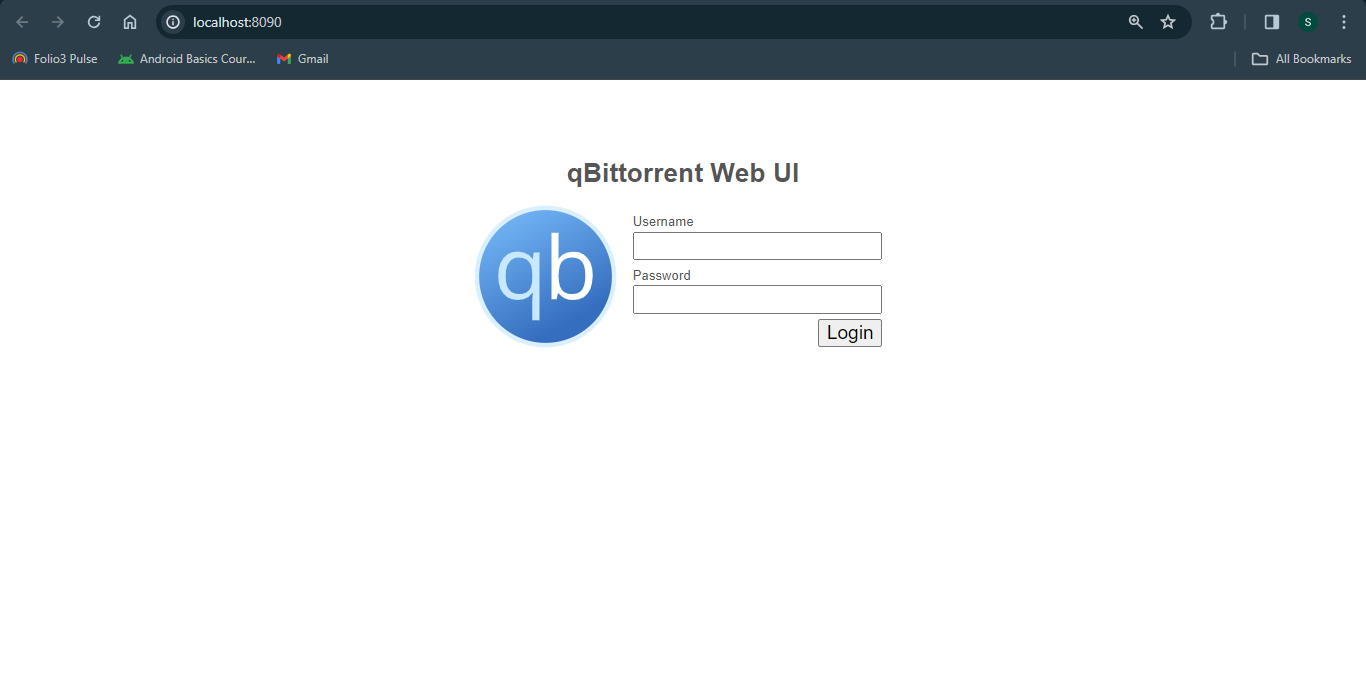
****

****

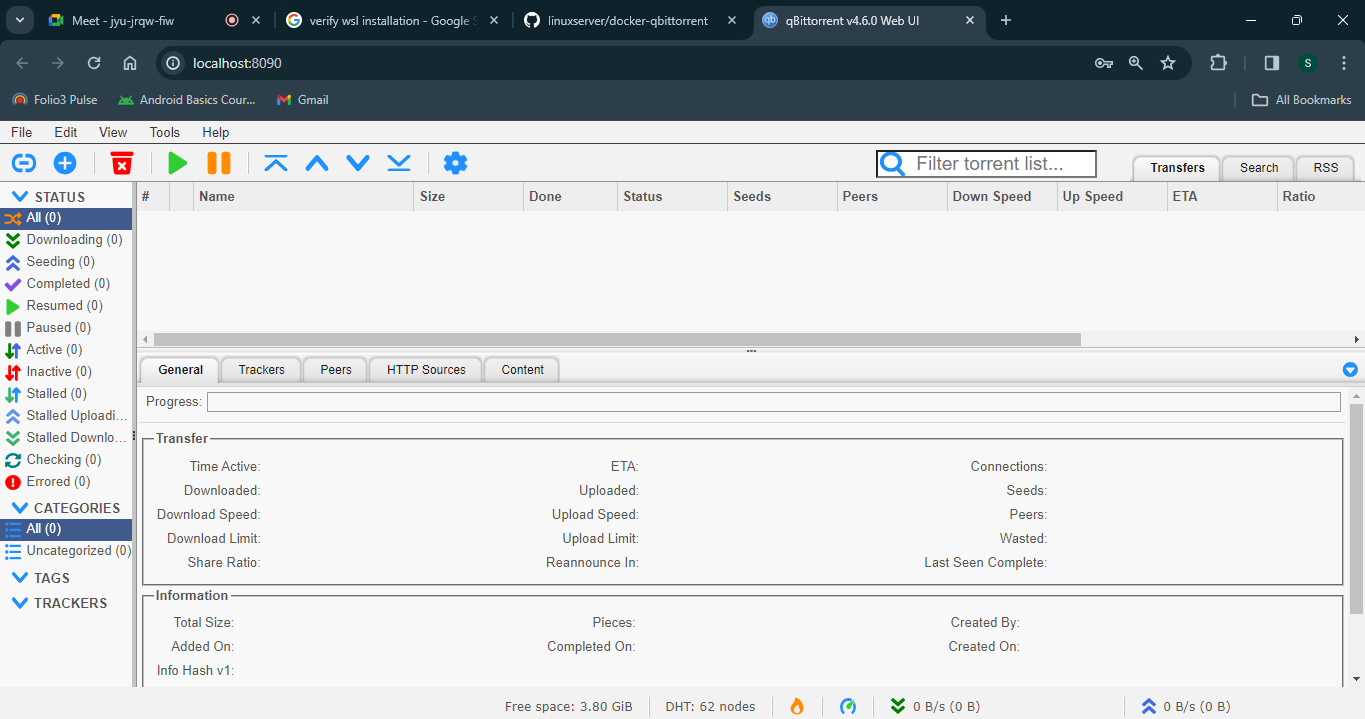
****

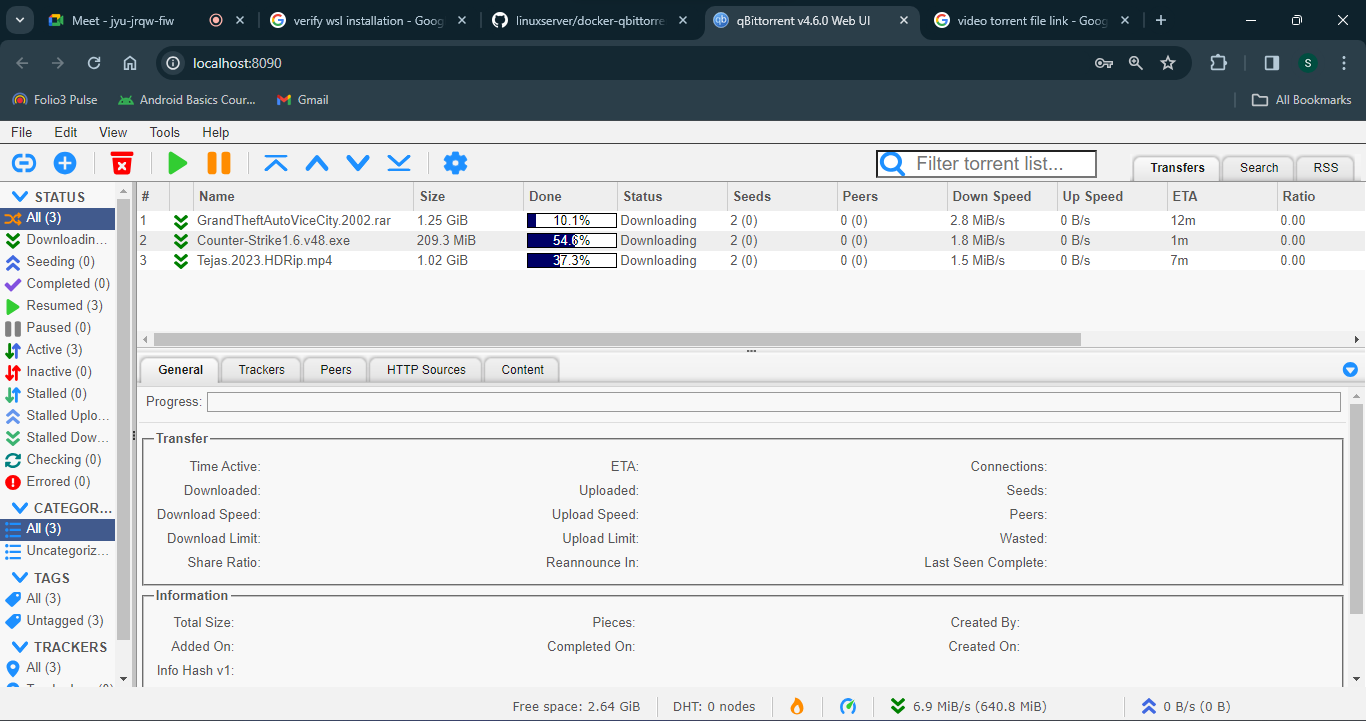
**5 – Deploy torrent in containerize environment.**

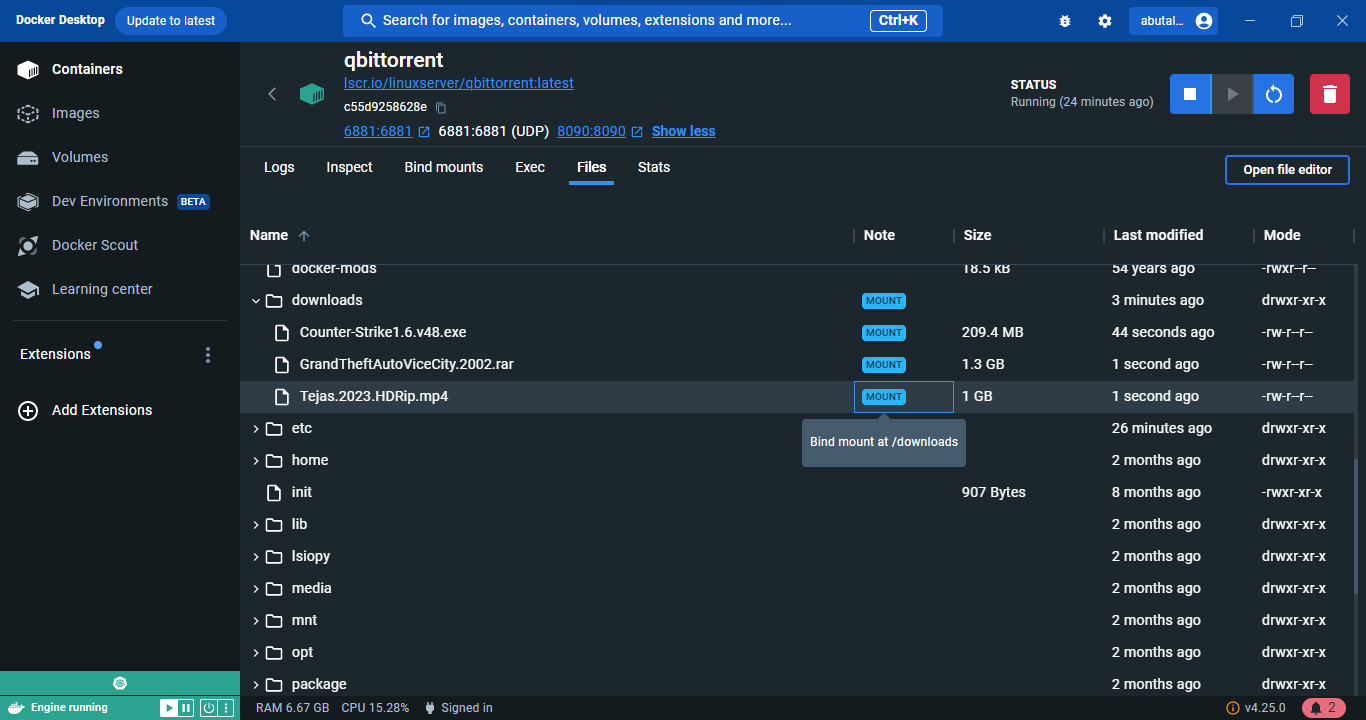
****

****

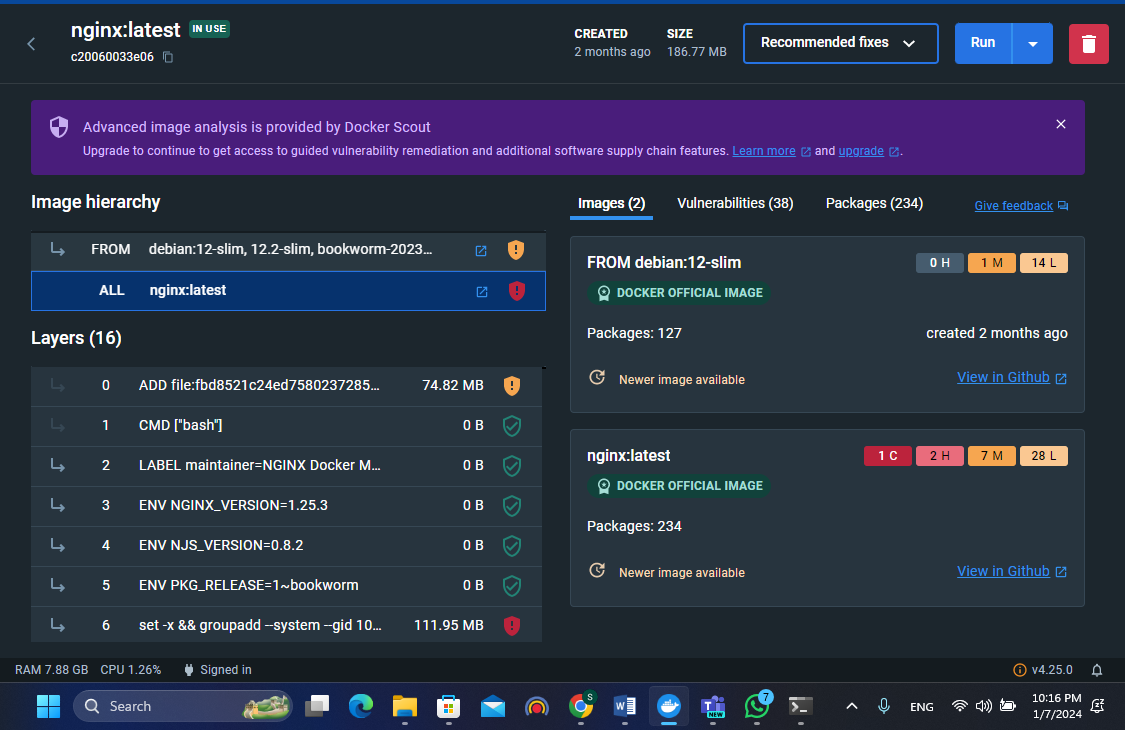
****

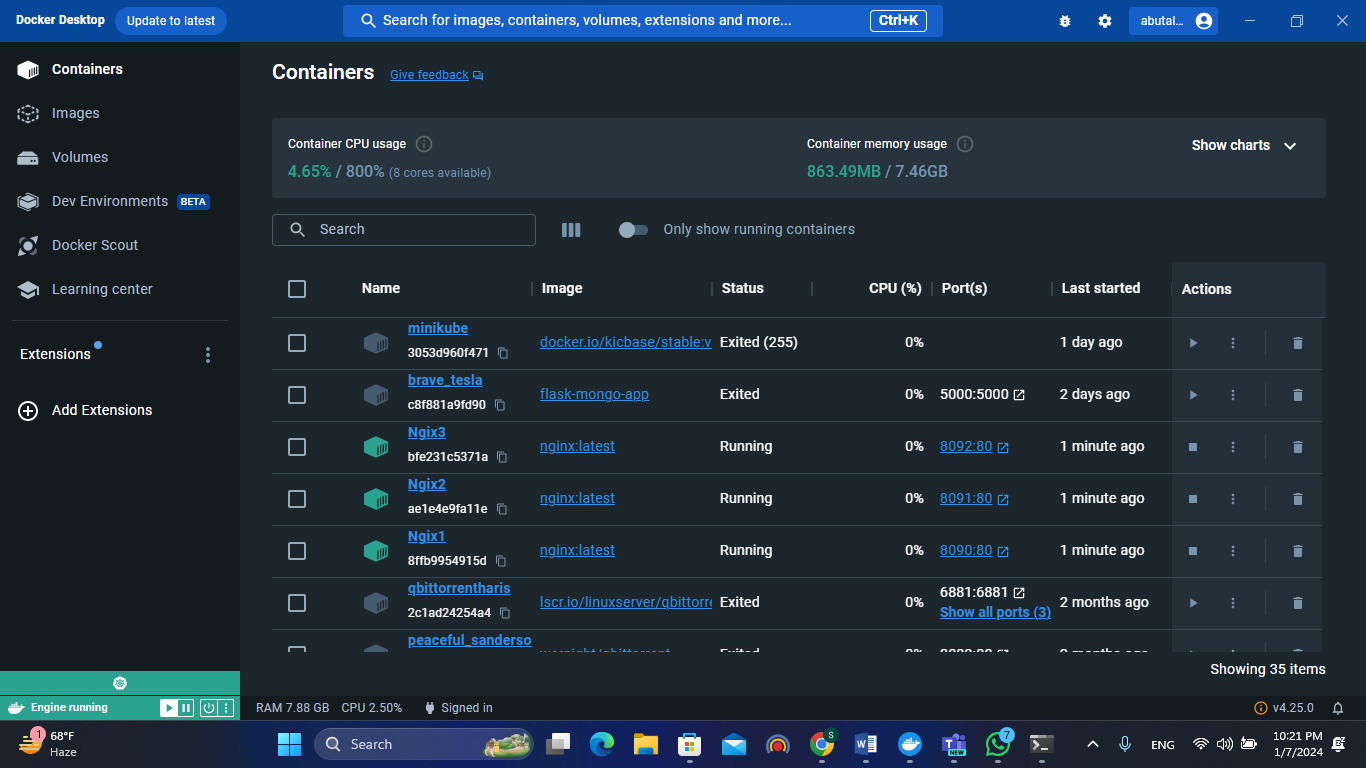
****

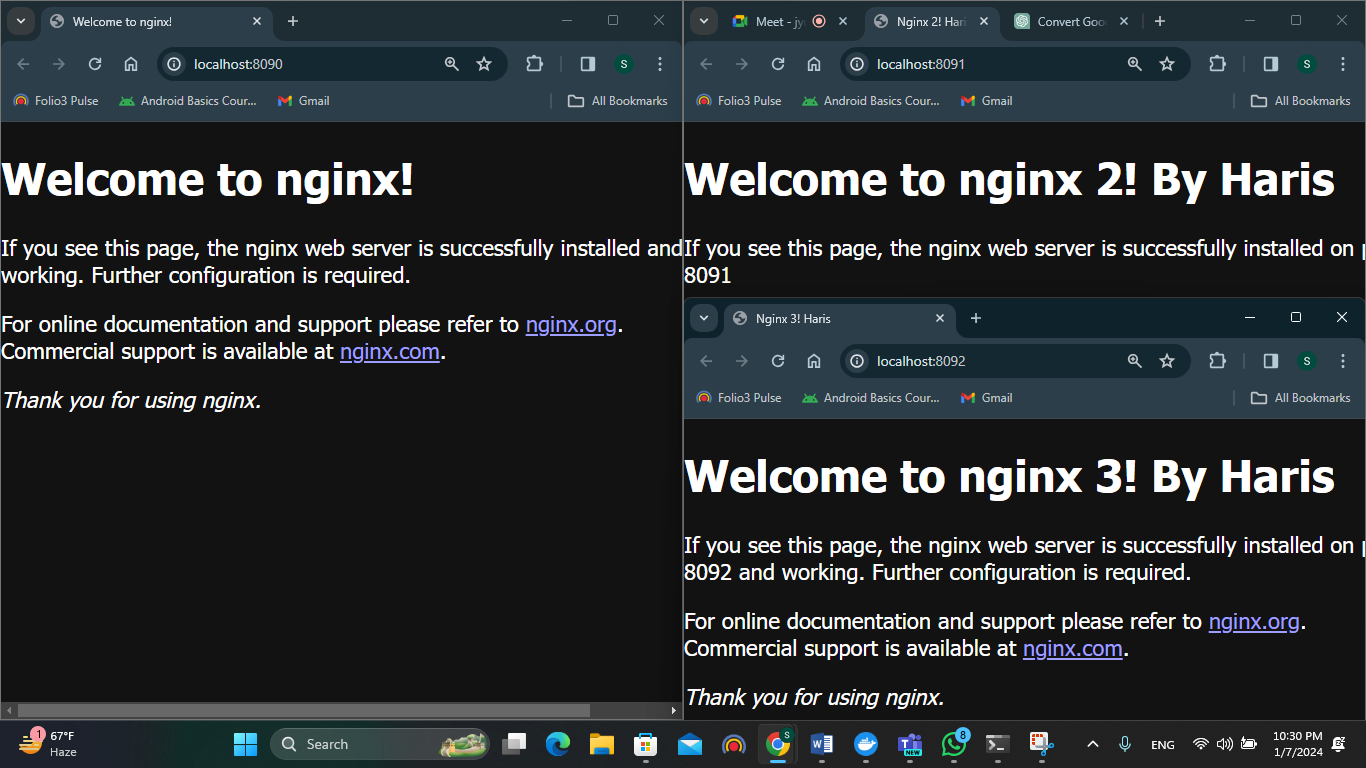
****

****

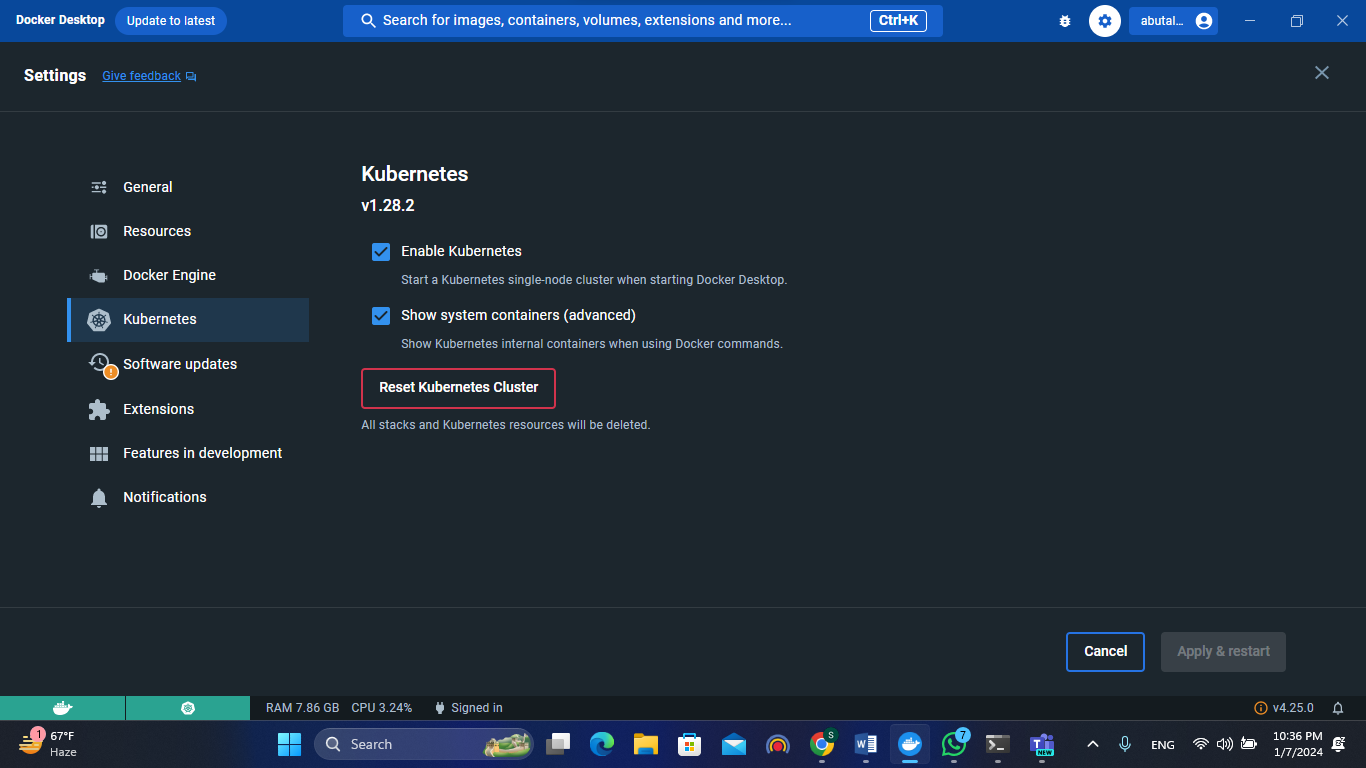
**6 – Deploy 3 webservers which executed in parallel. Access the web service from host through different ports.**

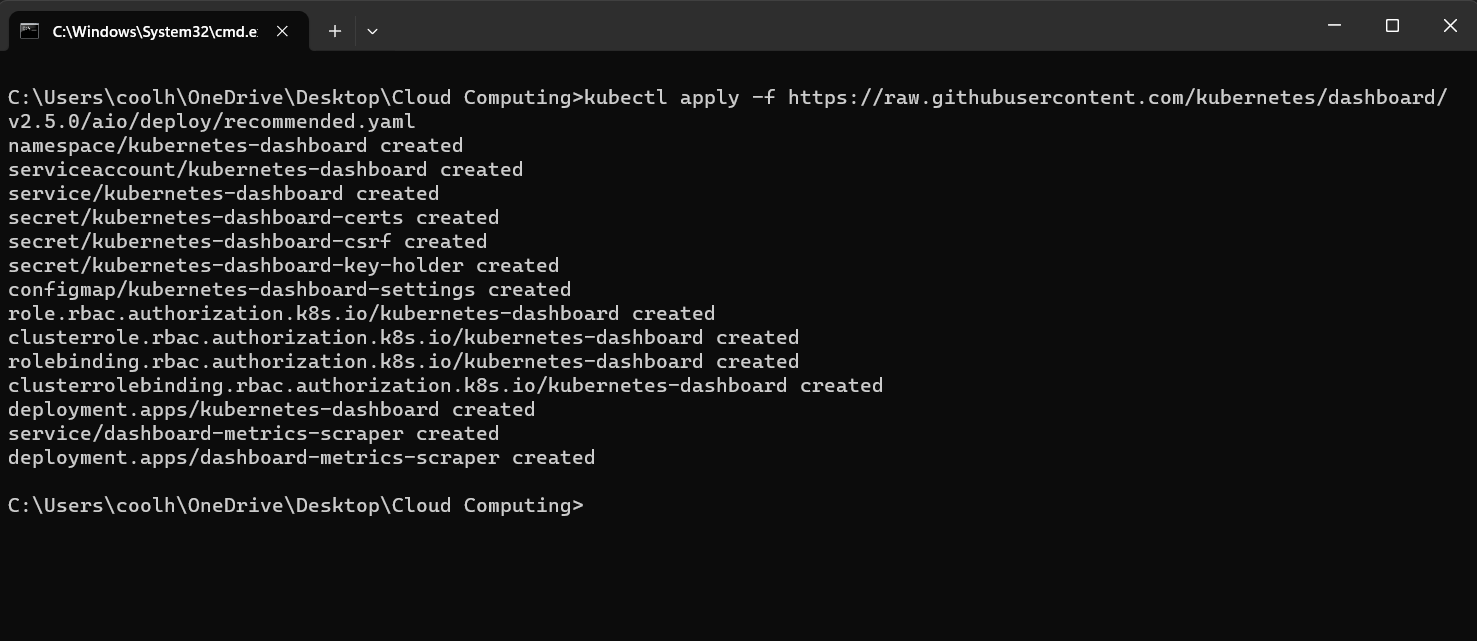
****

****

****

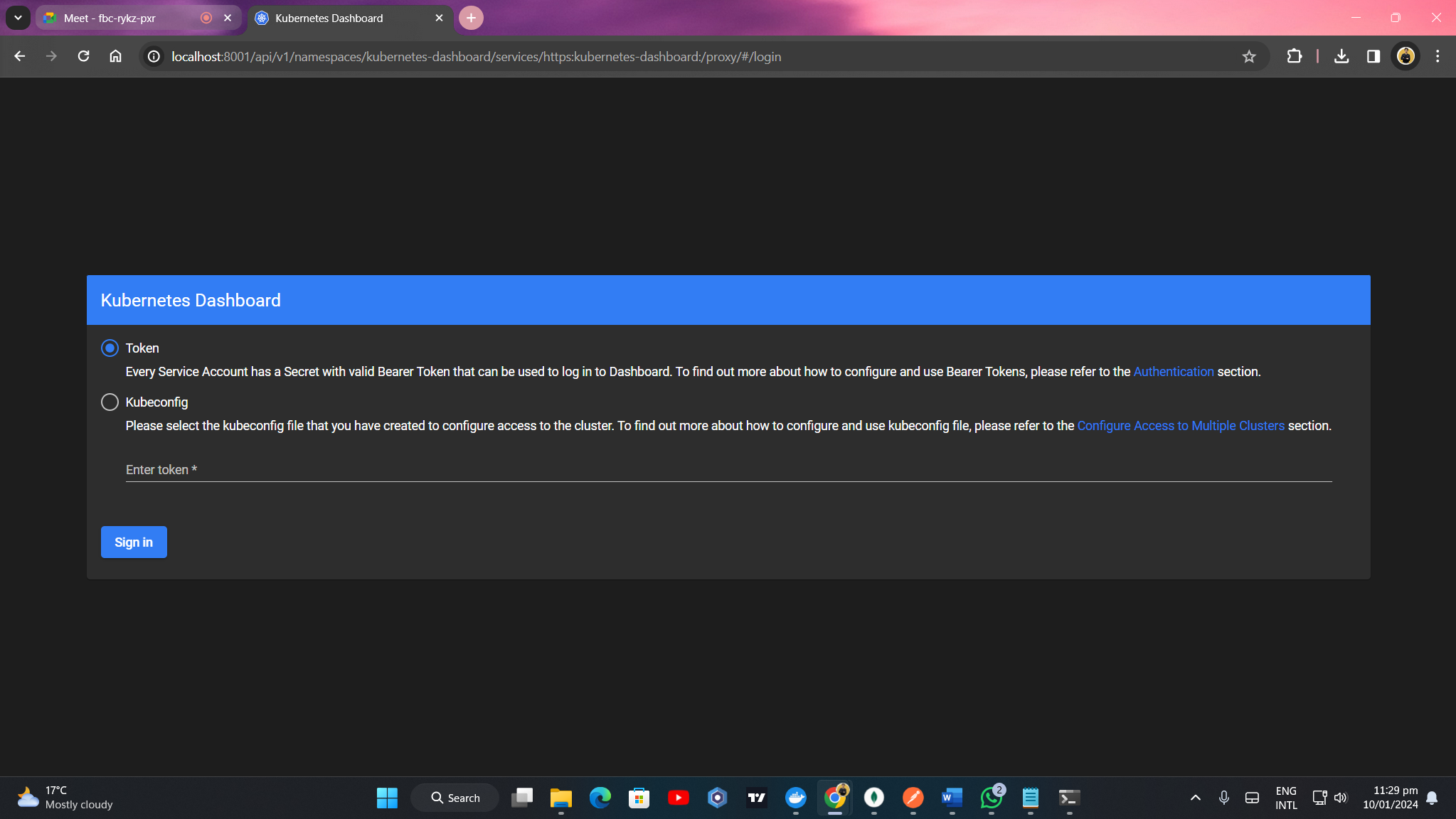
**7 – Create kubernetes environment.**

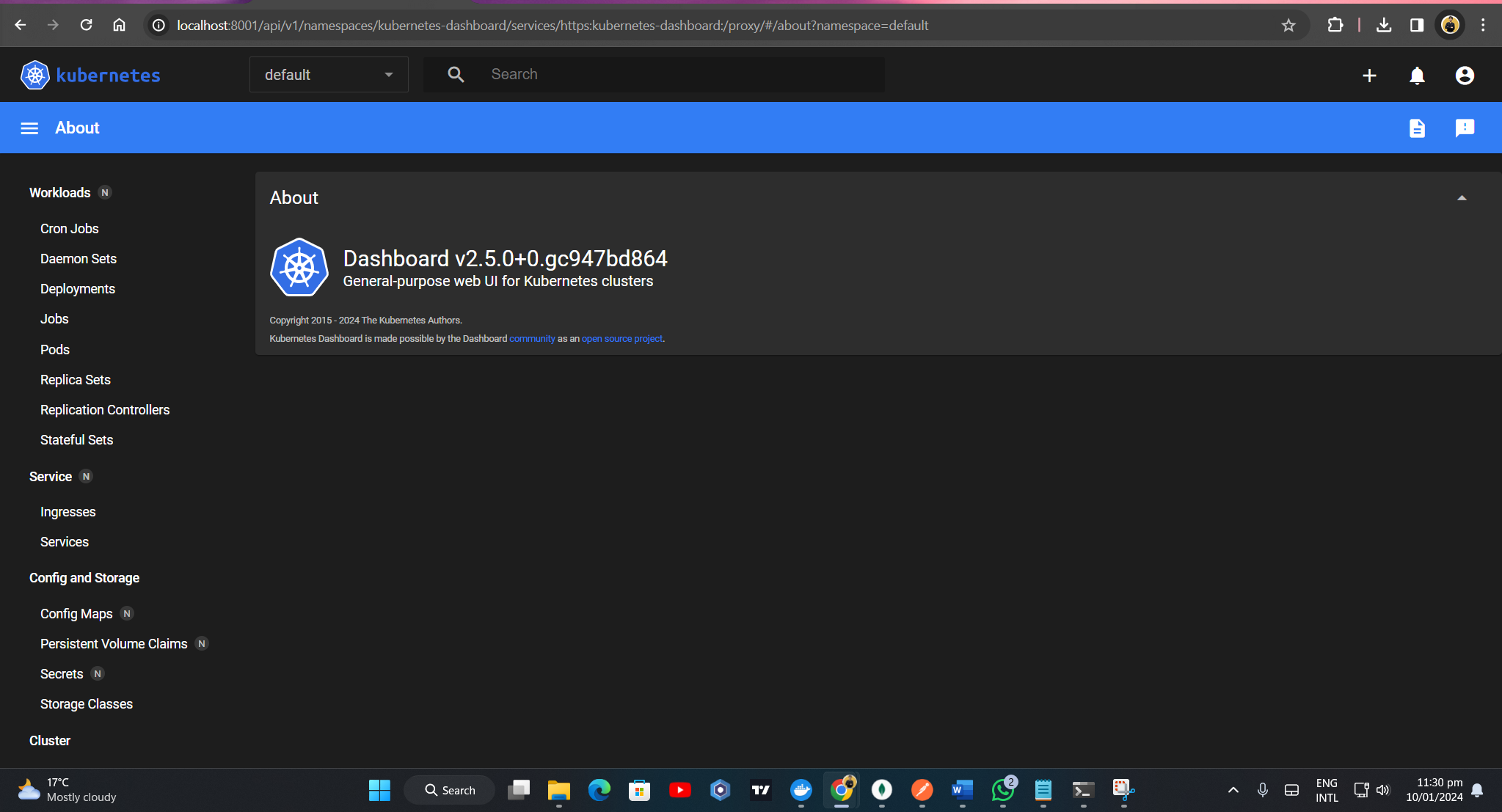
****

****

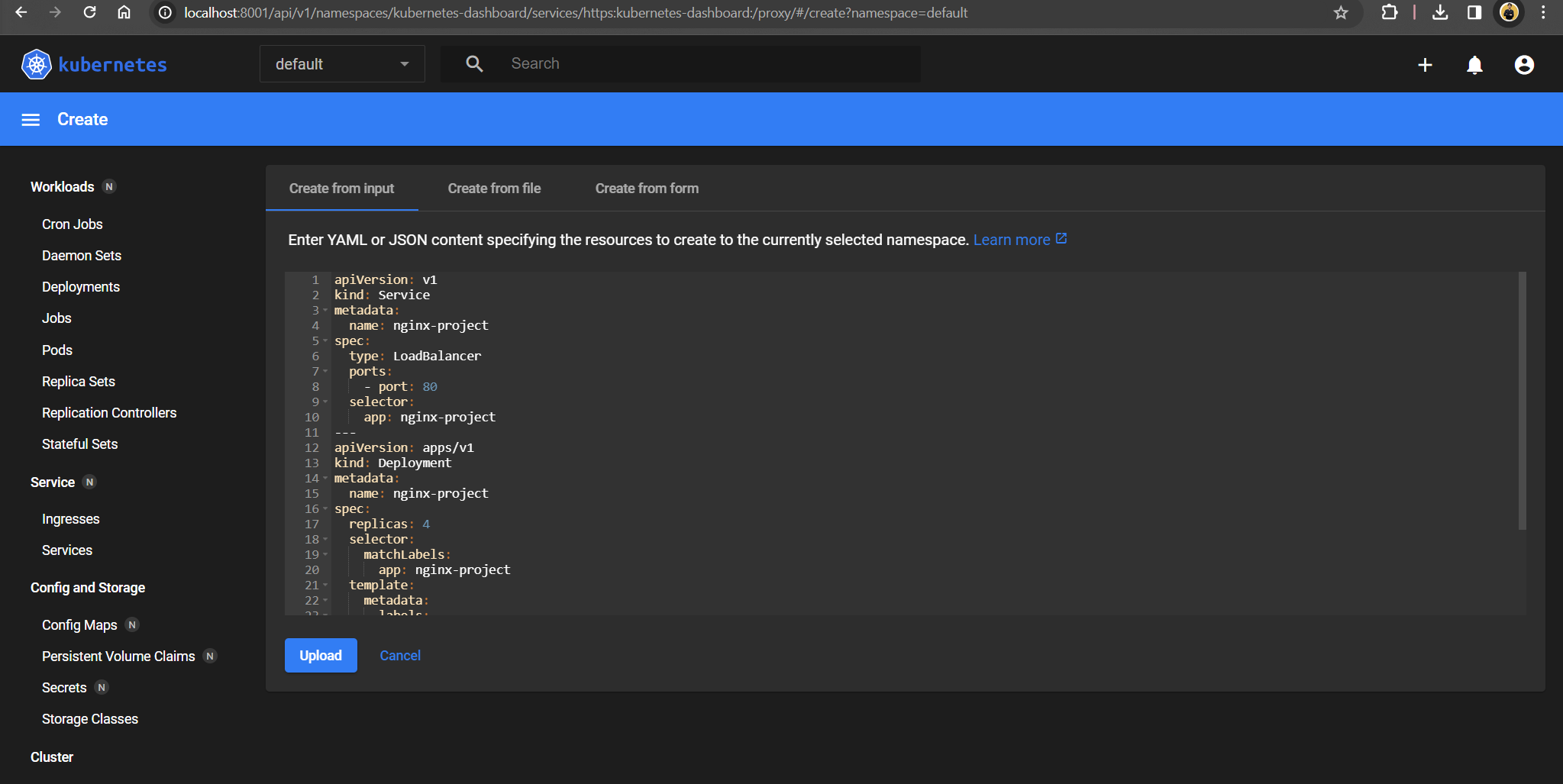
**A screenshot of a computer

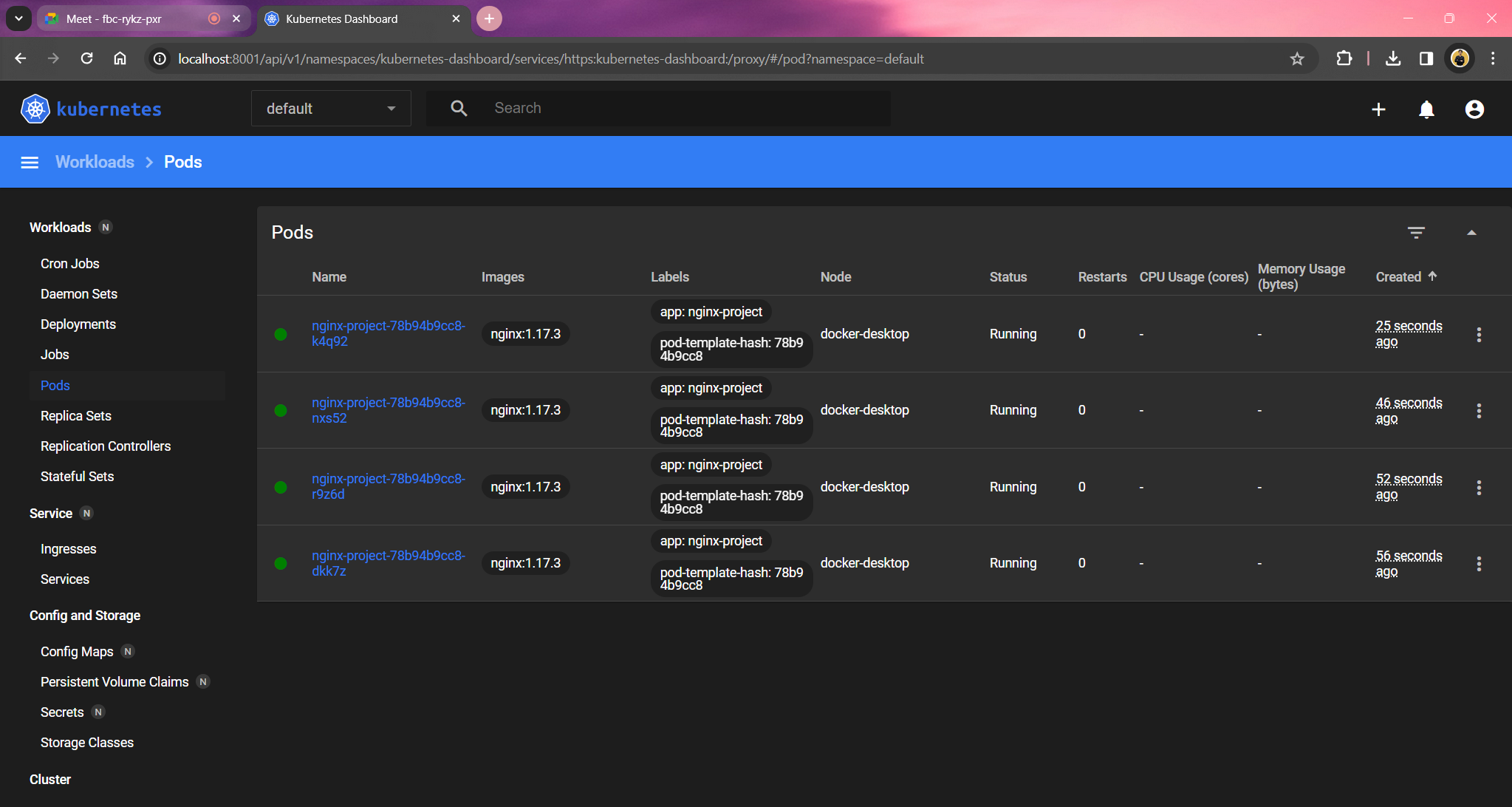
Description automatically generated**

****

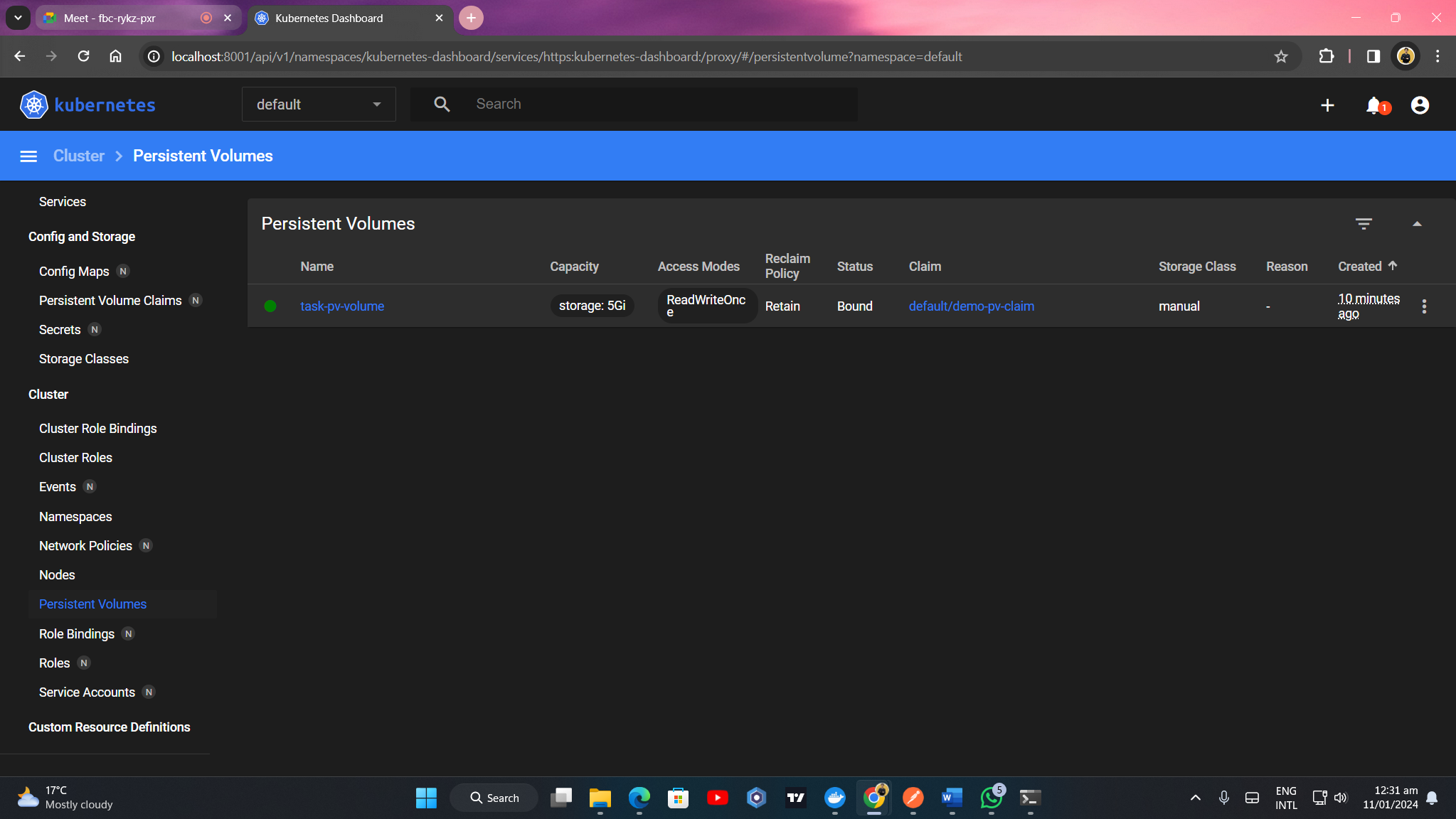
****

**8 – Deploy nginx PODs**

****

****

**9 - Deploy the nginx containers connecting with persistent storage.**

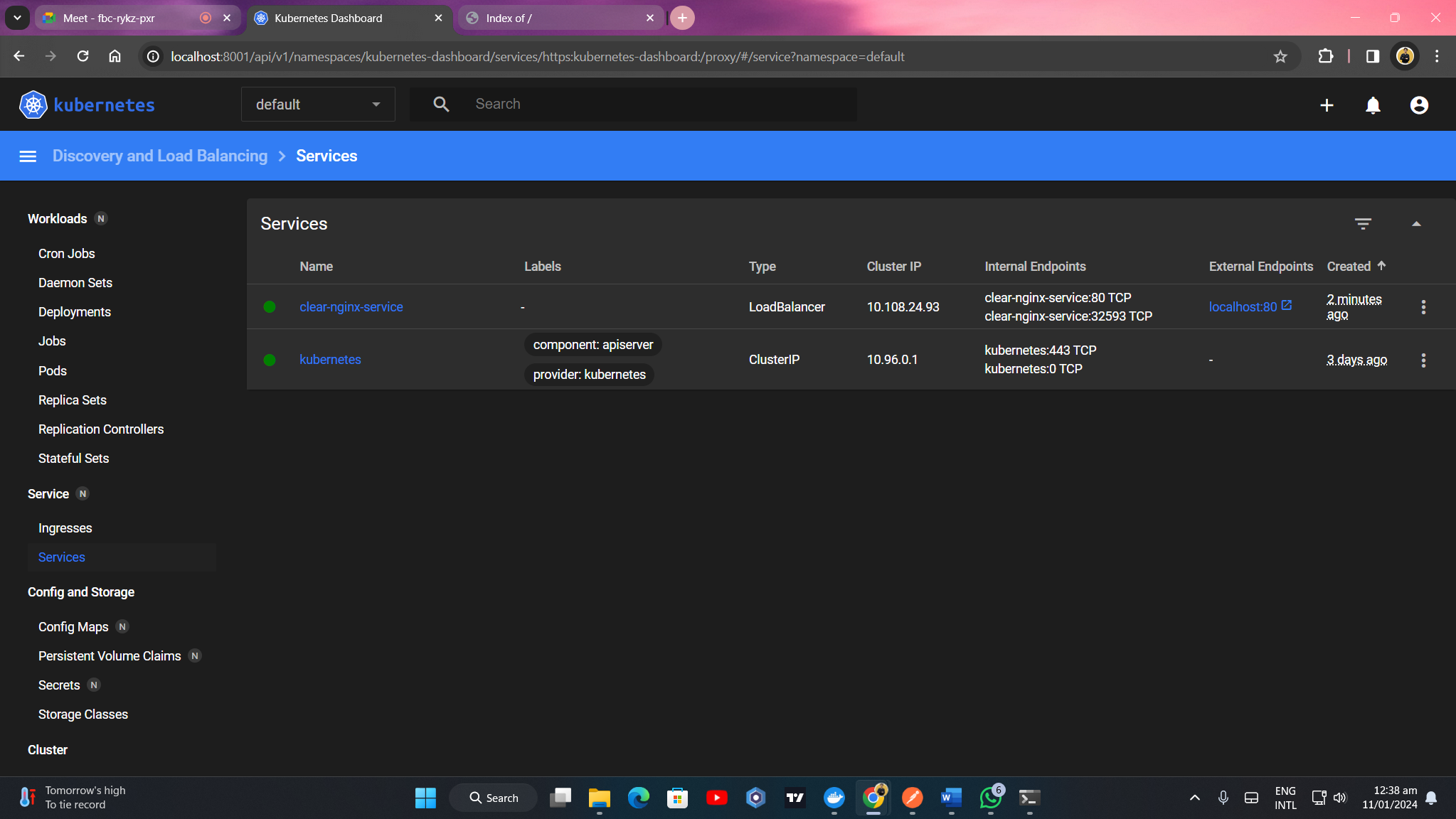
****

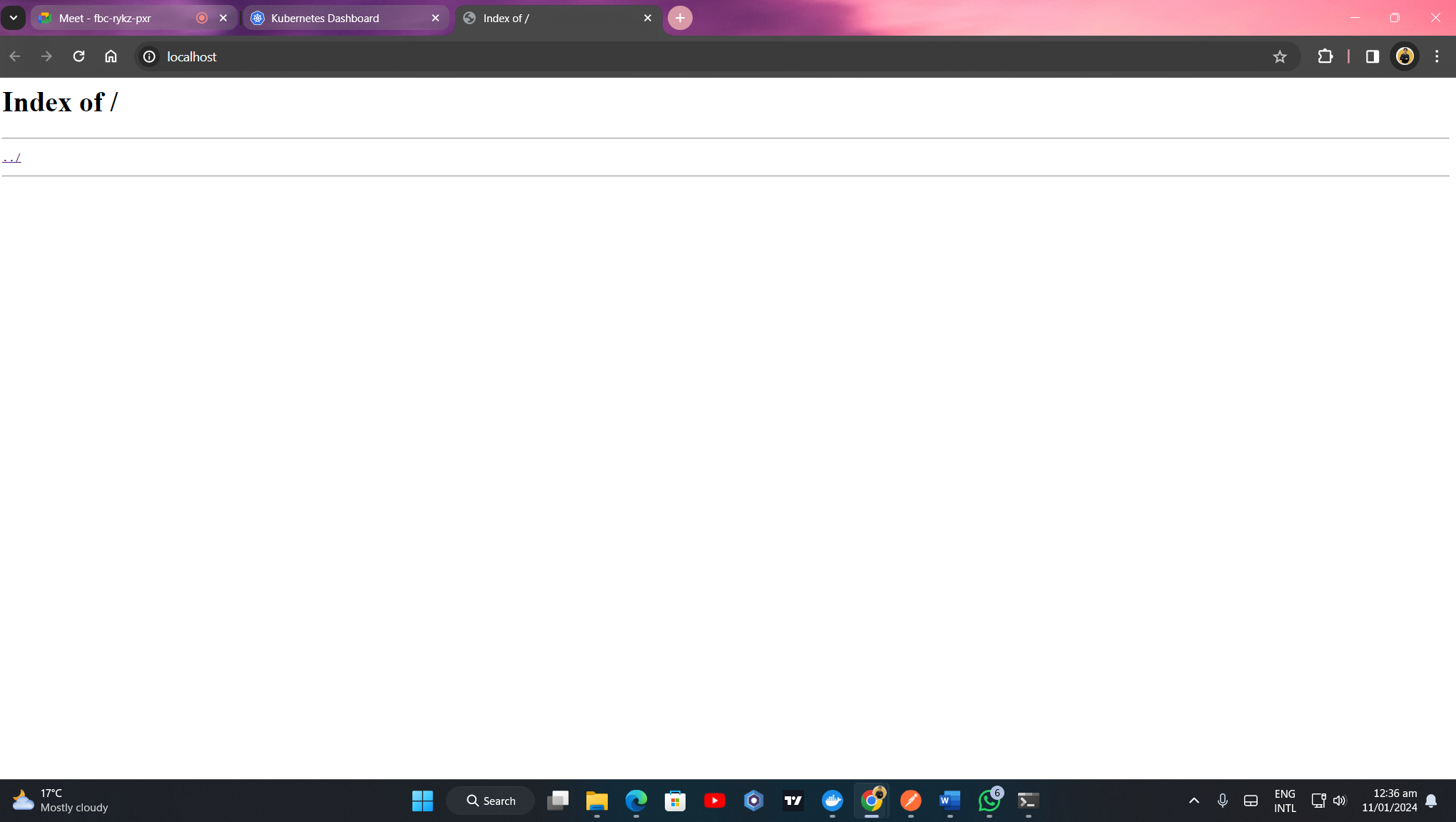
**A screenshot of a computer

Description automatically generated**

**A screenshot of a computer

Description automatically generated**

****

****

**10 – Need to create a single feature application having front end and backend. Backend code connects the data base, the database is running over the container or host machine.   
Deploy the application over the kubernetes PODs.**

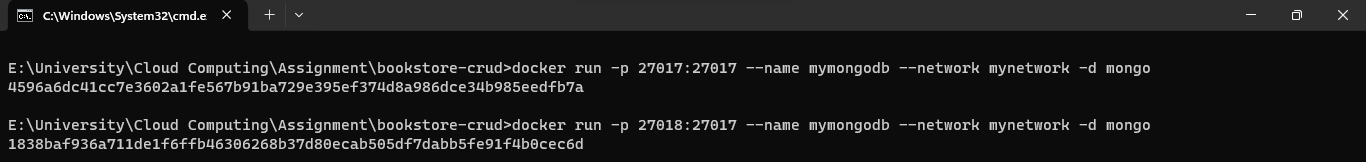
A simple Flask API and React APP that provides CRUD functionality to a bookstore. A custom image containing the project was created and deployed on Kubernetes. A host MongoDB server was deployed to store the data on local machine.

A screenshot of a computer

Description automatically generated

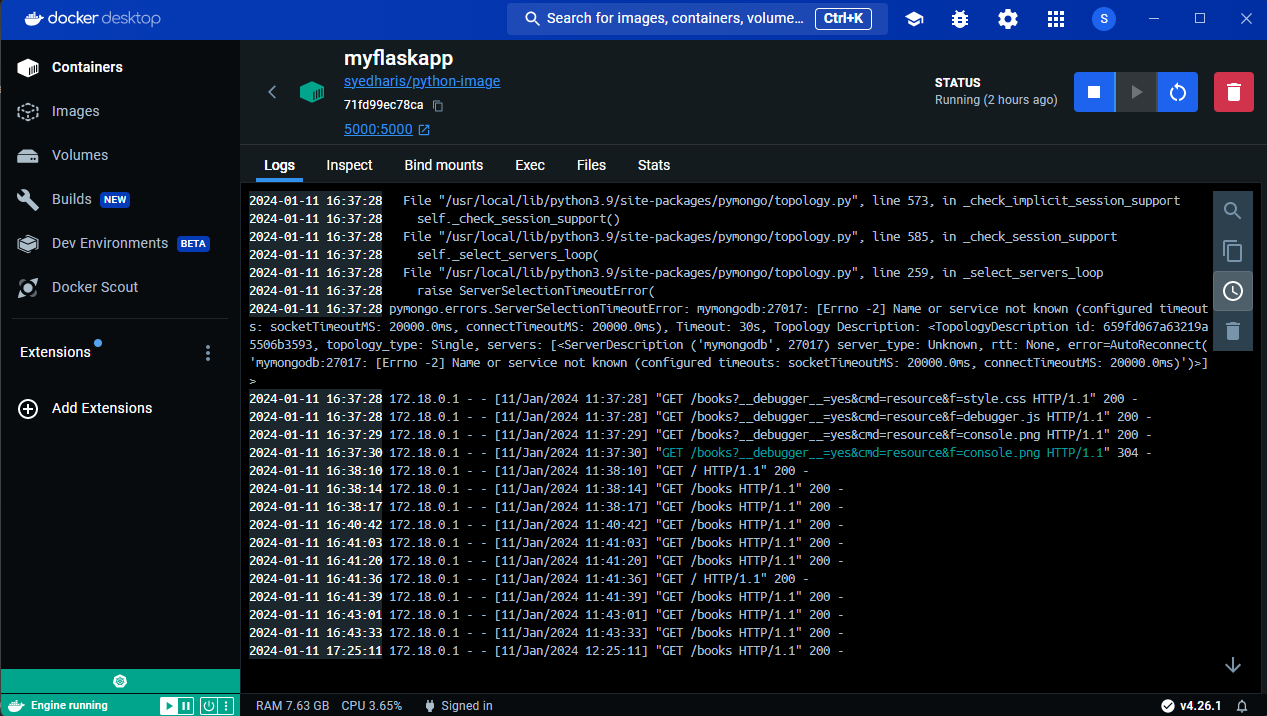
A screenshot of a computer

Description automatically generated



A screenshot of a computer

Description automatically generated



A black screen with a pink and white text

Description automatically generated with medium confidence

A screenshot of a computer

Description automatically generated

A screenshot of a computer

Description automatically generated

