DEVOPS TASK 4

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**PROCEDURE:**

Running Minikube

* Minikube is a lightweight tool that sets up a local Kubernetes environment.
* It is started using the Docker driver, which enables Kubernetes to run inside Docker containers.

Deploying the Application

* A Kubernetes deployment is created to manage an Nginx-based application.
* This ensures that the application maintains the required number of running replicas.

Exposing the Application via NodePort

* Kubernetes pods are not accessible externally by default.
* A NodePort service assigns a specific port, allowing external access to the application.

Checking the Running Pods

* After deploying the application, verifying the pod status ensures successful deployment.
* If the pods are in the Running state, the application is correctly deployed.

Retrieving Service Details

* Kubernetes assigns a NodePort, which is needed to access the application externally.
* Checking service details helps identify the correct port number.

Accessing the Application

* The application can be reached using Minikube’s service URL or via a curl command in the terminal.
* This step confirms that the deployment is functioning as expected.

Monitoring Pod Activity

* Continuously observing pod status helps ensure system stability.
* If a pod crashes or frequently restarts, further debugging is required.

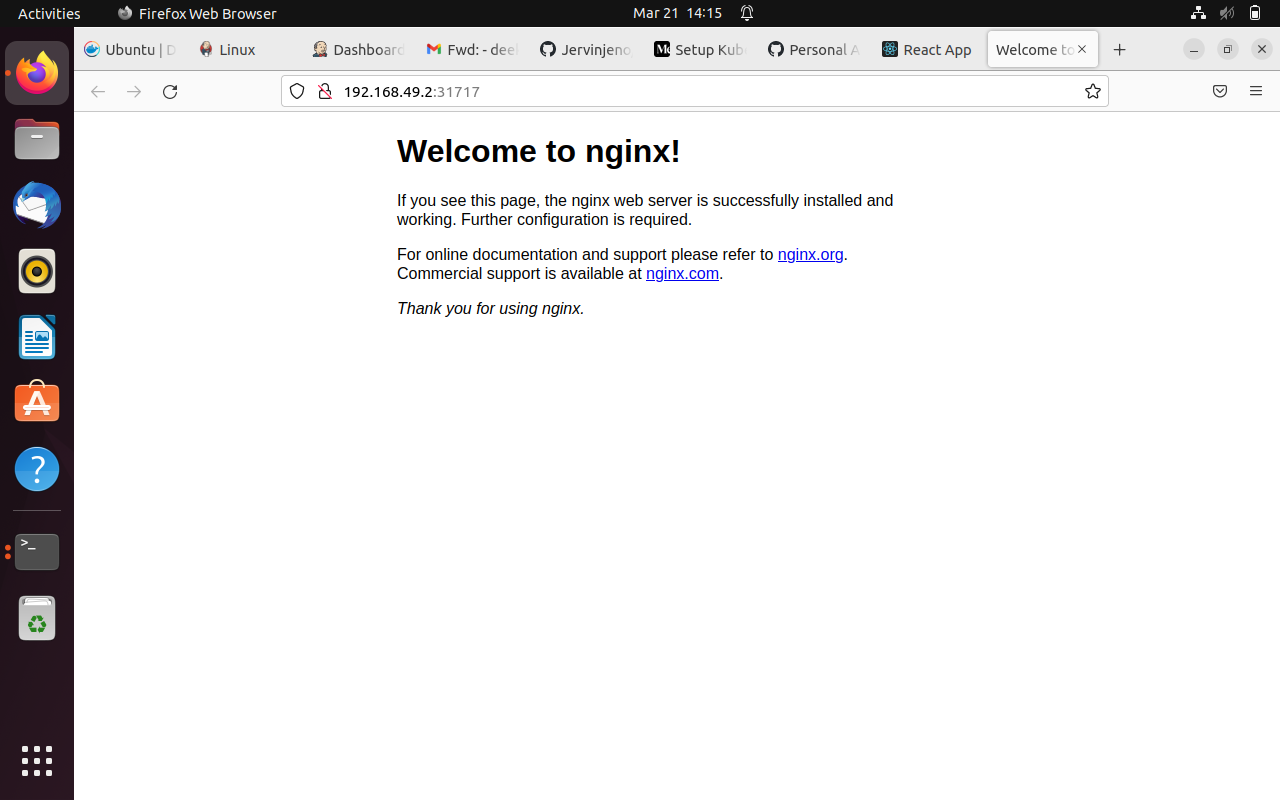
Viewing Logs

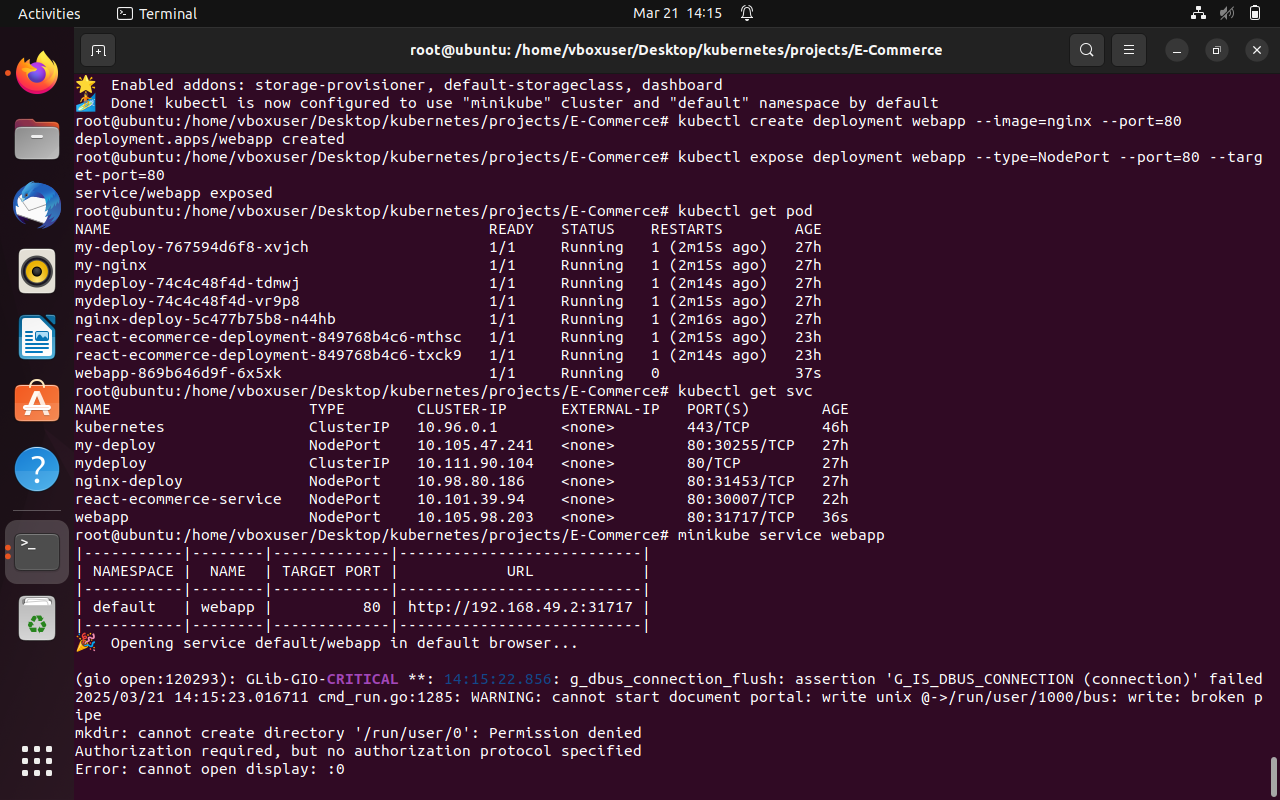
* Application logs provide insights into errors or issues.
* Checking logs is useful for identifying and troubleshooting failures.

Reviewing Commands

* Keeping track of executed commands simplifies debugging and troubleshooting.

**SCREENSHOTS:**



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