

SIT323/SIT737- Cloud Native Application Development

7.2C: Interacting with Kubernetes

Overview

In this task you will continue your 7.1P task in a way to interact more with your created cluster through the Kubernetes dashboard.

The required tools for doing this task are as follows:

- Git (<https://github.com>)
- Visual Studio (<https://code.visualstudio.com/>)
- Node.js (<https://nodejs.org/en/download/>)
- Docker
- Kubernetes // a computing platform to host your microservice
- Kubectl // the command-line tool for interacting with Kubernetes cluster

Instructions

Interact with the Deployed Application:

- Verify that the application is running by running `kubectl get pods` and `kubectl get services`
- Use the `kubectl port-forward` command to forward traffic from a local port to the Kubernetes service
- Access the application in a web browser by navigating to `localhost:<local port>`

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- Update the application: Updating the application involves modifying the code for the Node.js application, building a new Docker image with a new version tag, and updating the Kubernetes deployment configuration to use the new image tag.

Submission Details

You can share your deliverables for this task through a GitHub repository, which can include the Dockerfile, Kubernetes deployment and service configuration files, and any other necessary files (<https://github.com/username/sit323/737-2023-t1-prac7c>). You can also provide clear instructions on how to access and interact with the deployed application, as well as any screenshots or videos demonstrating the successful deployment and interaction.

Assessment:

Your submission will be assessed based on the following criteria:

- Accuracy and completeness of the Kubernetes deployment and service configuration files
- Successful deployment and interaction with the application on the Kubernetes cluster
- Quality of documentation and clarity of instructions in the submission.