Objective

The objective of this workshop is to

a. Deploy an instance of Code Server, a web-based IDE.
b. Create a volume and mount the volume to Code Server so that your work can be persisted across redeployment.
c. Expose the IDE through Ingress.

Setup

a. Assumed that you have a Docker Hub account. If not create one at https://hub.docker.com
b. Look at Code Server Github repository https://github.com/coder/code-server and the image at Docker hub https://hub.docker.com/r/linuxserver/code-server

Workshop

In this workshop you will be deploying Code Server, a browser-based version of Visual Studio Code.

The following creates a Code Server container

```
docker run -d \
  --name=code-server \
  -e TZ=Asia/Singapore \
  -e PASSWORD=password \
  -e SUDO_PASSWORD=password \
  -e DEFAULT_WORKSPACE=/config/workspace \
  -p 8443:8443 \
  -e PROXY_DOMAIN=code-<IP>.nip.io \
  -v workspace-vol:/config/workspace \
  linuxserver/code-server:amd64-<version tag>
```

where

- `TZ` is the timezone
- `PASSWORD` for logging into Code Server
- `SUDO_PASSWORD` is for sudo access in the Code Server's terminal

- `PROXY_DOMAIN` sets the domain for the Code Server instance
- `DEFAULT_WORKSPACE` sets the directory to use

See **Parameters** section in https://hub.docker.com/r/linuxserver/code-server for other parameter settings.

Deploy Code Server according to the following Kubernetes deployment architecture diagram.
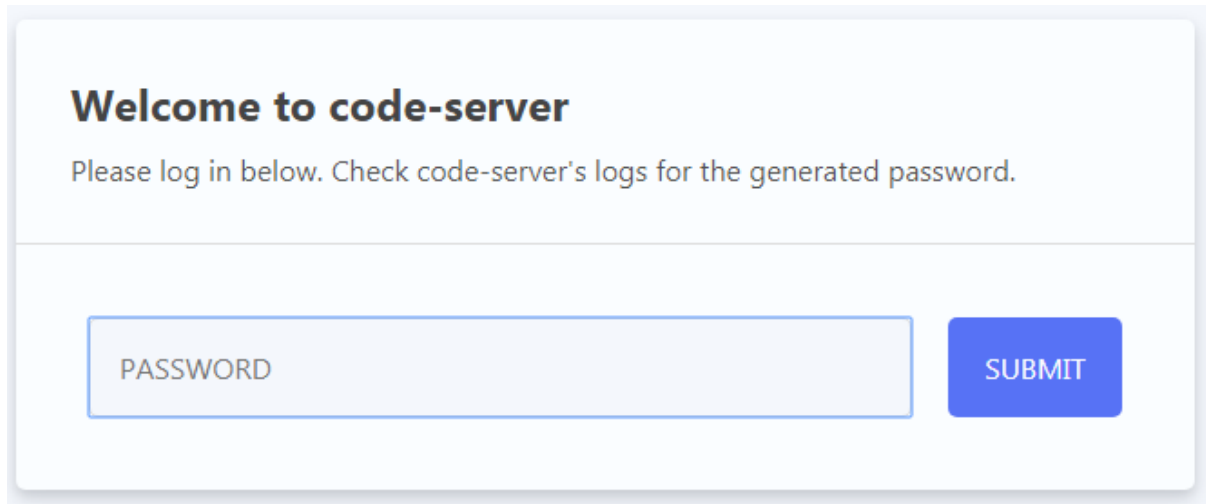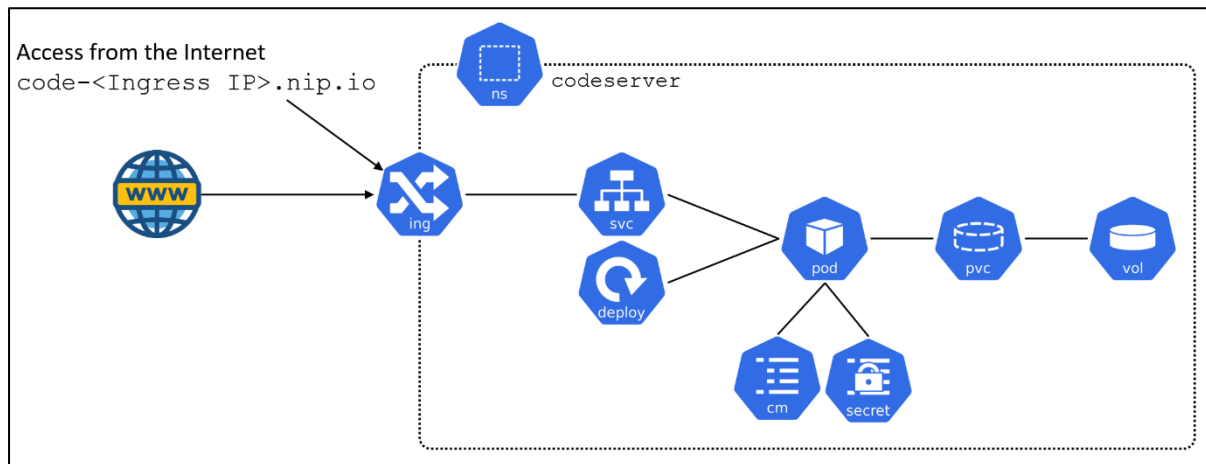

The following are some requirements of the deployment

- Each deployment of Code Server should be isolated from other instances
- There should be only a single instance of Code Server running consuming 256 MB of memory and 200 milli cores of CPU. This should be the upper and lower limit
- User's work should be safe and recoverable if the Code Server pod crashes or is rescheduled to another node
- The entire deployment should be flexible to accommodate configuration changes especially password
- Assign a domain name to each instance of Code Server. Use `nip.io` to simulate a domain name

Test your Deployment

Open the assigned domain name on your browser and you should see the following

Login with your configured password.

Submission

Create a Git repo for this course if you have not done so. Clone the Git repo. This repo will be used for all the assignment for this course. This should the same repos as you used for previous workshops.

Create a directory called `workshop03` inside your repo. Placed all the file for this workshop inside `workshop03` directory.