

|  |
| --- |
| Lab 5 |

|  |  |  |
| --- | --- | --- |
| Portable Technologies in Cloud |  |  |
| **Professor: Irina Geiman**  Name: Niluxsi Puvanenthiran  CODE: CLO835 Student Number: 119163228 |  |  |

Contents

[WEEK 6 – Lab 5 4](#_Toc139140287)

[Workshop 1 – Deployment, Rollouts, Revisions and Rollbacks 4](#_Toc139140288)

[Workshop 2 – Using Labels to Organize K8s Pods 7](#_Toc139140289)

[Workshop 3 – Using K8s Services 8](#_Toc139140290)

[Workshop 4 – DNS in K8s 15](#_Toc139140291)

[References 18](#_Toc139140292)

[Screenshot 1 Copied deployment file to the machine runnign kind K8s cluster 4](#_Toc139140226)

[Screenshot 2 Logged to instance 4](#_Toc139140227)

[Screenshot 3 working with deployment 5](#_Toc139140228)

[Screenshot 4 Creating revisions 5](#_Toc139140229)

[Screenshot 5 edit deployment 6](#_Toc139140230)

[Screenshot 6 nginx successfully rolled out 6](#_Toc139140231)

[Screenshot 7 edit deployment 6](#_Toc139140232)

[Screenshot 8 updated deployment manifest from point to non-exixtent 6](#_Toc139140233)

[Screenshot 9 pods replaced with new version 7](#_Toc139140234)

[Screenshot 10 pods didnt terminated 7](#_Toc139140235)

[Screenshot 11 Assigning labels to pods 7](#_Toc139140236)

[Screenshot 12 using labels 7](#_Toc139140237)

[Screenshot 13 Copied all deployment files to EC2 with kind cluster 8](#_Toc139140238)

[Screenshot 14 logged in to ec2 8](#_Toc139140239)

[Screenshot 15 name space created 8](#_Toc139140240)

[Screenshot 16 deployed Mongo DB and verified the deployment 9](#_Toc139140241)

[Screenshot 17 created service to expose mongo DB to internal clusters 9](#_Toc139140242)

[Screenshot 18 examined service end points 10](#_Toc139140243)

[Screenshot 19service to expose is created 10](#_Toc139140244)

[Screenshot 20 created service is verified 11](#_Toc139140245)

[Screenshot 21 forwarded local port 8080 to service port 80 with port-forward 11](#_Toc139140246)

[Screenshot 22 verified the access to service 11](#_Toc139140247)

[Screenshot 23 Access to port 12](#_Toc139140248)

[Screenshot 24 Service type updated to nodeport 13](#_Toc139140249)

[Screenshot 25 sg inbound rule modified 13](#_Toc139140250)

[Screenshot 26 connected guestbook application with NodePort 13](#_Toc139140251)

[Screenshot 27 still able to connect after changing nodeport 14](#_Toc139140252)

[Screenshot 28 Changed the sg rule 14](#_Toc139140253)

[Screenshot 29 not successful 14](#_Toc139140254)

[Screenshot 30 Deleted Mongo Service 15](#_Toc139140255)

[Screenshot 31 renamed the mongo service 15](#_Toc139140256)

[Screenshot 32 Was not able to connect with ClusterIP after rename 15](#_Toc139140257)

[Screenshot 33 Creating deployment for out http server 15](#_Toc139140258)

[Screenshot 34 Deployment is exposed 16](#_Toc139140259)

[Screenshot 35Access to the application tested successfully 16](#_Toc139140260)

[Screenshot 36 Services and Endpoints 16](#_Toc139140261)

[Screenshot 37 name server not found 17](#_Toc139140262)

# WEEK 6 – Lab 5

## Workshop 1 – Deployment, Rollouts, Revisions and Rollbacks

A screenshot of a computer

Description automatically generated

Screenshot Copied deployment file to the machine runnign kind K8s cluster

A picture containing text, screenshot, software, multimedia software

Description automatically generated

Screenshot Logged to instance

A screenshot of a computer

Description automatically generated

Screenshot working with deployment

There is only one roll out. As we deployed the deployment.apps/deployment-nginx for the first time, there is only one rollout history entry, representing the initial deployment.

A picture containing text, software, computer, multimedia software

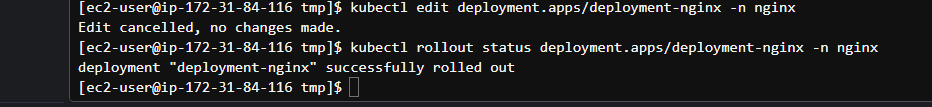
Description automatically generated

Screenshot Creating revisions

A screenshot of a computer

Description automatically generated

Screenshot edit deployment



Screenshot nginx successfully rolled out

A picture containing text, screenshot, software, multimedia software

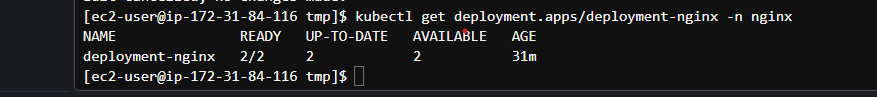
Description automatically generated

Screenshot 7 edit deployment

A black screen with white text

Description automatically generated with low confidence

Screenshot updated deployment manifest from point to non-exixtent



Screenshot pods replaced with new version

A screenshot of a computer program

Description automatically generated with medium confidence

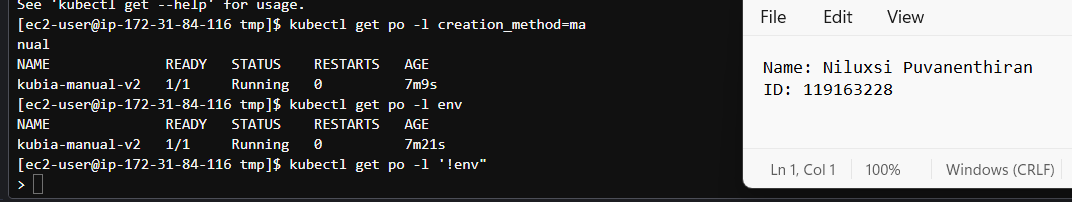
Screenshot pods didnt terminated

## Workshop 2 – Using Labels to Organize K8s Pods

A picture containing text, screenshot, software, multimedia software

Description automatically generated

Screenshot Assigning labels to pods



Screenshot using labels

## Workshop 3 – Using K8s Services

A picture containing text, software, multimedia software, screenshot

Description automatically generated

Screenshot Copied all deployment files to EC2 with kind cluster

A computer screen with white text

Description automatically generated with low confidence

Screenshot logged in to ec2

A screen shot of a computer

Description automatically generated with medium confidence

Screenshot name space created

A picture containing text, electronics, screenshot, software

Description automatically generated

Screenshot deployed Mongo DB and verified the deployment

A screenshot of a computer

Description automatically generated

Screenshot created service to expose mongo DB to internal clusters

**Explain**: what type of service did we create? Why is this the right type of service to use with Mongo DB?

ClusterIP Service was created. This type of service is ideal for load balancing

A screenshot of a computer

Description automatically generated

Screenshot examined service end points

A screenshot of a computer

Description automatically generated

Screenshot service to expose is created

A picture containing text, screenshot, font

Description automatically generated

Screenshot created service is verified

A screenshot of a computer program

Description automatically generated with medium confidence

Screenshot forwarded local port 8080 to service port 80 with port-forward

A screenshot of a computer

Description automatically generated

Screenshot verified the access to service

A screenshot of a computer

Description automatically generated

Screenshot Access to port

It was not successful because ClusterIP is designed for internal communication within the cluster and does not provide external access.

A screenshot of a computer

Description automatically generated with medium confidence

Screenshot Service type updated to nodeport

The port fort is running

A screenshot of a computer

Description automatically generated with medium confidence

Screenshot sg inbound rule modified

A screenshot of a computer

Description automatically generated with medium confidence

Screenshot connected guestbook application with NodePort

A screenshot of a computer program

Description automatically generated with low confidence

Screenshot still able to connect after changing nodeport

A screenshot of a computer

Description automatically generated with medium confidence

Screenshot Changed the sg rule

A screenshot of a computer

Description automatically generated

Screenshot not successful

* **Would our application work if we give our MongoDB service a *different* name?**

It may or may not work depending on how the application is configured to connect to the MongoDB service.

A screen shot of a computer

Description automatically generated with low confidence

Screenshot Deleted Mongo Service

A screen shot of a computer

Description automatically generated with low confidence

Screenshot renamed the mongo service

A picture containing text, screenshot, font

Description automatically generated

Screenshot Was not able to connect with ClusterIP after rename

## Workshop 4 – DNS in K8s

A screenshot of a computer

Description automatically generated with medium confidence

Screenshot Creating deployment for out http server

A screenshot of a computer

Description automatically generated

Screenshot Deployment is exposed

A picture containing text, font, screenshot, software

Description automatically generated

Screenshot Access to the application tested successfully

A screenshot of a computer

Description automatically generated

Screenshot Services and Endpoints

A picture containing text, software, screenshot, multimedia software

Description automatically generated

Screenshot name server not found

# References

Geiman, I. (2023, Summer). Lectures and Slides, CLO835\_Portable Technologies in cloud. Seneca Newham Campus, North York.

*Learner Lab*. (2023). Retrieved from https://awsacademy.instructure.com/.