Mini-Course: k8s 101

Table of Contents

Flow tìm hiểu

1. **Tìm hiểu về Kubernetes cơ bản**. Thử nghiệm Kubernetes bằng minikube https://kubernetes.io/docs/setup/minikube/

Ở phần 2, có tutorial microservice với minikube.

2. Triển khai 1 hệ thống microservices trên Kubernetes (để demo, test việc autoscaling). Có thể dùng ngôn ngữ Java hoặc Python (recommend dùng Python, dễ code, thử nghiệm).

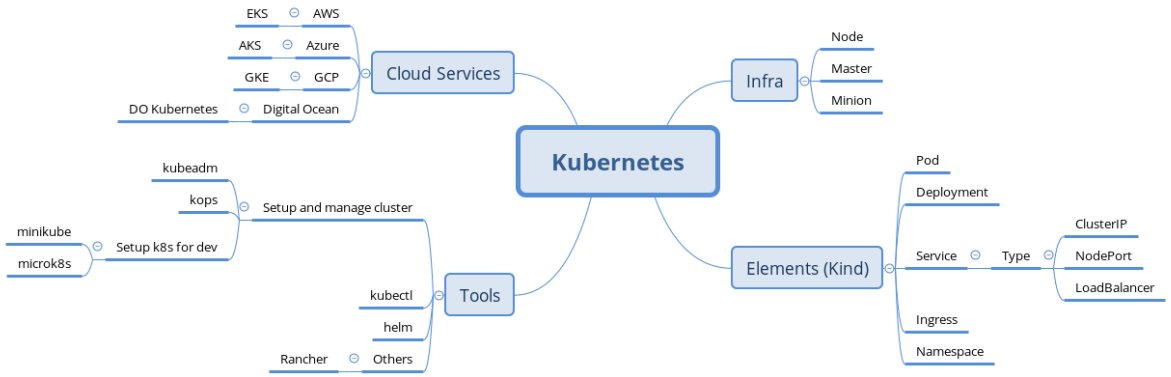
Tham khảo:
https://medium.freecodecamp.org/learn-kubernetes-in-under-3-hours-a-detailed-guide-to-orchestrating-containers-114ff420e882

https://blog.apcelent.com/scaling-python-microservices-kubernetes.html

https://dzone.com/articles/quick-guide-to-microservices-with-kubernetes-sprin

https://hackernoon.com/getting-started-with-microservices-and-kubernetes-76354312b556

Mindmap



K8s: What is this?

https://blog.newrelic.com/engineering/what-is-kubernetes/

K8s Tutorial for dev?

TODO:

K8s Deep Dive?

https://rancher.com/three-pillars-kubernetes-container-orchestration/

K8s Reference Architecture?

Basic concepts of k8s and Load Balancing deployment model with CloudFlare + Google Kubernetes Engine (GKE) + AWS

https://support.cloudflare.com/hc/en-us/articles/115003384591-Using-Kubernetes-on-GKE-and-AWS-with-Cloudflare-Load-Balancer

Kubernetes + CI

CI/CD with Gitlab + Kubernetes
https://medium.com/@brunose/gitlab-ci-cd-kubernetes-65eec29d0555

CI/CD with Gitlab + k8s + Helm
https://about.gitlab.com/2017/09/21/how-to-create-ci-cd-pipeline-with-autodeploy-to-kubernetes-using-gitlab-and-helm/

K8s Tools

CLI

Fast way to switch between clusters and namespaces in kubectl
https://github.com/ahmetb/kubectx

Kubernetes prompt info for bash and zsh
https://github.com/jonmosco/kube-ps1

Kops: https://github.com/kubernetes/kops
Helm: https://github.com/kubernetes/helm

Kubectl: https://kubernetes.io/docs/user-guide/kubectl-overview/

References

1. Kubernetes. **Kubernetes Tutorial**. https://kubernetes.io/docs/tutorials/kubernetes-basics/
2. Kubernetes. **Kubernetes Cheatsheet**. https://kubernetes.io/docs/user-guide/kubectl-cheatsheet/
3. The new Stack. **Use Cases for Kubernetes**. https://goo.gl/XJ8JkH
4. Peng Xiao. **Kubernetes Lab**. http://docker-k8s-lab.readthedocs.io/en/latest/index.html

K8s Master

K8s Master Flow

1. Create GKE: Google Cloud Engine
2. Deploy Ingress & Cert Manager
3. Deploy Services on k8s
4. Add k8s cluster to Rancher

Core:

Kubernetes
Rancher

Kubectl
Helm

Gitlab CI

Contributors

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