

## **KUBERNETES**

## Skill Tree: Color in the Boxes

Color in the boxes of anything you've already completed, visualize your skills and identify your skill gaps. Get inspired to try new things and tailor the skill tree to suit your own journey by swapping in your own goals.



(set your own goal) (set your own goal) (set your own goal) (set your own goal) Create a canary Create your own deployment custom admission controller Implement Create a Optimize costs 1 cloud-native blue-green deployment within Kubernetes observability practices Use external Implement Contribute to B storage solutions Advanced Network Kubernetes community with Kubernetes **Policies** Develop your Create your Implement custom own Operator own Helm chart admission controllers HELM Use Use Kubernetes Set up Cluster-wide Persistent on Bare Metal Logging, Monitoring, Volume Provisioners and Alerting Implement Configure High Implement GitOps Kubernetes Availability (HA) clusters practices logging and tracing 园 Use Cluster API Perform cluster Optimize resource performance tuning usage ţţţ ţţţ **Use Kubernetes** Apply Pod Security Configure storage API directly Admission class Deploy a Service Configure Pod Set up a multi-node mesh solution, e.g., affinity and anti-affinity cluster with kubeadm Istio, Linkerd Install and Set up a cluster Upgrade the configure a using kubeadm cluster using kubeadm networking solution e.g. Calico, Flannel Use advanced Implement Implement networking solutions storage solutions with Kustomize like Istio or Calico CSI drivers Implement K **Use Service** B Use Helm for Mesh for advanced **Custom Resource** package management Definitions (CRDs) and networking and security Operators HELM Use DaemonSets Configure Jobs to Configure CronJobs to run Pods on all ~ run batch tasks for scheduled tasks nodes Create Configure Apply network StatefulSets for Role-Based Access Policies to control stateful applications Control (RBAC) traffic between Pods Set resource Set resource زن Set up Persistent Volumes limits for Pods requests for Pods and Claims Scale Pods Control Pod Perform rolling scheduling tolerations within a deployment



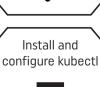


Create a basic Pod 

Name: .

github.com/sjpiper145/MakerSkillTree

Apply Labels to organize resources



Check pod logs 

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updates and rollbacks

**START** 

using a Service

Secure sensitive data with Secrets

6

Set up a container runtime e.g. Containerd, CRI-0 Ш

**HERE** 

for external access e.g. NGINX, Traefik



Use kubectl to manage resources





Deploy a local Kubernetes cluster e.g. Minikube, Kind

Manage

configuration data with ConfigMaps

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(set your own goal)

Set up a CI/CD pipeline that deploys

in the cluster

Implement **Advanced Ingress** Configurations

Monitor node health

+

Use OPA for policies



Create your

own Custom Resource Definition (CRD)

Set up monitoring

for Pods

Configure

horizontal Pod

autoscaling

using a Service



Create and





1 tile = 1 point

**Total Score** 

