

SIT323/SIT737 – Cloud Native Application Development

7.1P: Creating a Kubernetes Cluster for a containerised Application

By David Wang

<https://github.com/gnawd/sit323-737-2023-t1-prac7p.git>

Images [Give feedback](#)

An image is a read-only template with instructions for creating a Docker container. [Learn more](#)

Local Hub Artifactory [Early Access](#)

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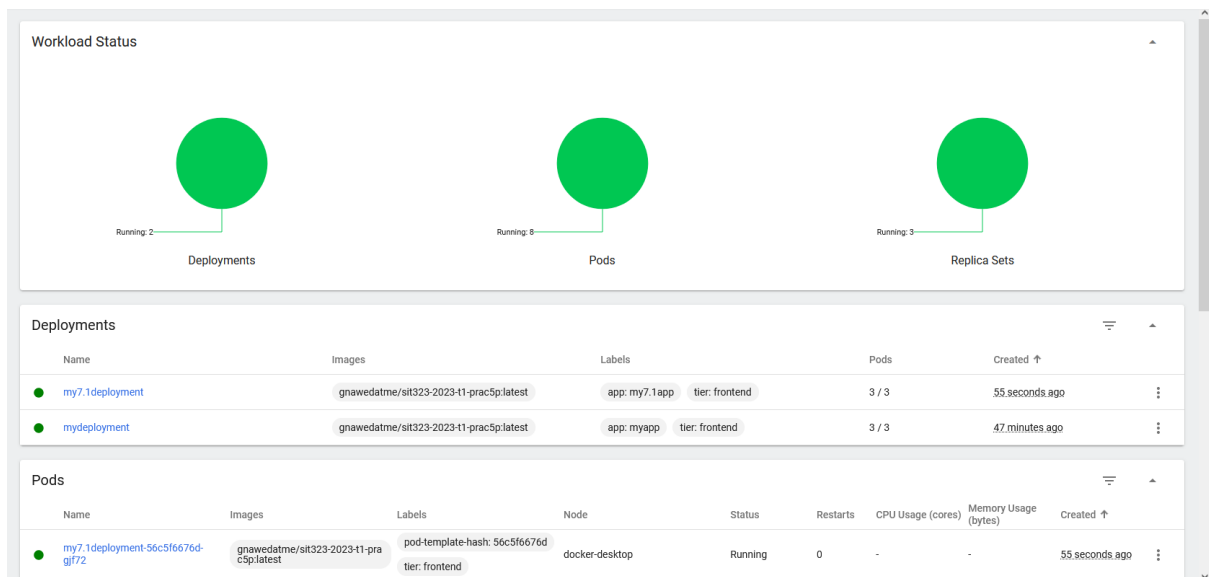
Search

<input type="checkbox"/>	Name	Tag	Status	Created	Size	Actions
<input type="checkbox"/>	gnawedatme/sit323-2023-t1-prac5p a3bc54cf0487	latest	In use	23 days ago	914.66 MB	▶ ⋮ 🗑
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<input type="checkbox"/>	registry.k8s.io/kube-scheduler e2d17ec744c1	v1.25.4	Unused	6 months ago	50.58 MB	▶ ⋮ 🗑
<input type="checkbox"/>	registry.k8s.io/kube-proxy 2c2bc1864279	v1.25.4	Unused	6 months ago	61.69 MB	▶ ⋮ 🗑
<input type="checkbox"/>	kubernetesui/dashboard 07655dd72eeb	v2.7.0	In use	8 months ago	245.71 MB	▶ ⋮ 🗑
<input type="checkbox"/>	registry.k8s.io/etcd 469402f9e61	3.5.5-0	Unused	8 months ago	300.16 MB	▶ ⋮ 🗑

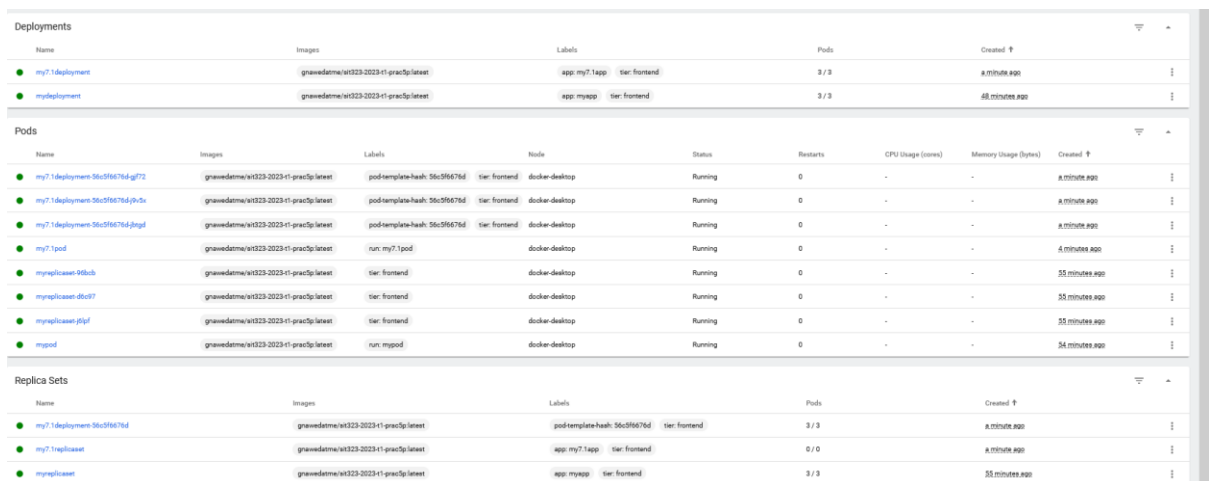
Docker-Desktop

```
PS C:\Users\Valorant only PC\Documents\7.1> kubectl apply -f createReplicaSet.yaml
The ReplicaSet "replicaset" is invalid: spec.template.spec.containers[0].name: Invalid value: "my7.1node": a lowercase RFC 1123 label must consist of lower case alphanumeric characters or '-', and must start and end with an alphanumeric character (e.g. 'my-name', or '123-abc', regex used for validation is '[a-z0-9]([-a-z0-9]*[a-z0-9])?')
PS C:\Users\Valorant only PC\Documents\7.1> kubectl apply -f .\createDeployment.yaml
The Deployment "my7.1deployment" is invalid: spec.template.spec.containers[0].name: Invalid value: "my7.1node": a lowercase RFC 1123 label must consist of lower case alphanumeric characters or '-', and must start and end with an alphanumeric character (e.g. 'my-name', or '123-abc', regex used for validation is '[a-z0-9]([-a-z0-9]*[a-z0-9])?')
PS C:\Users\Valorant only PC\Documents\7.1> kubectl apply -f createReplicaSet.yaml
replicaset.apps/my7.1replicaset created
PS C:\Users\Valorant only PC\Documents\7.1> kubectl apply -f .\createDeployment.yaml
deployment.apps/my7.1deployment created
PS C:\Users\Valorant only PC\Documents\7.1> kubectl apply -f createPod.yaml
pod/my7.1pod unchanged
PS C:\Users\Valorant only PC\Documents\7.1> []
```

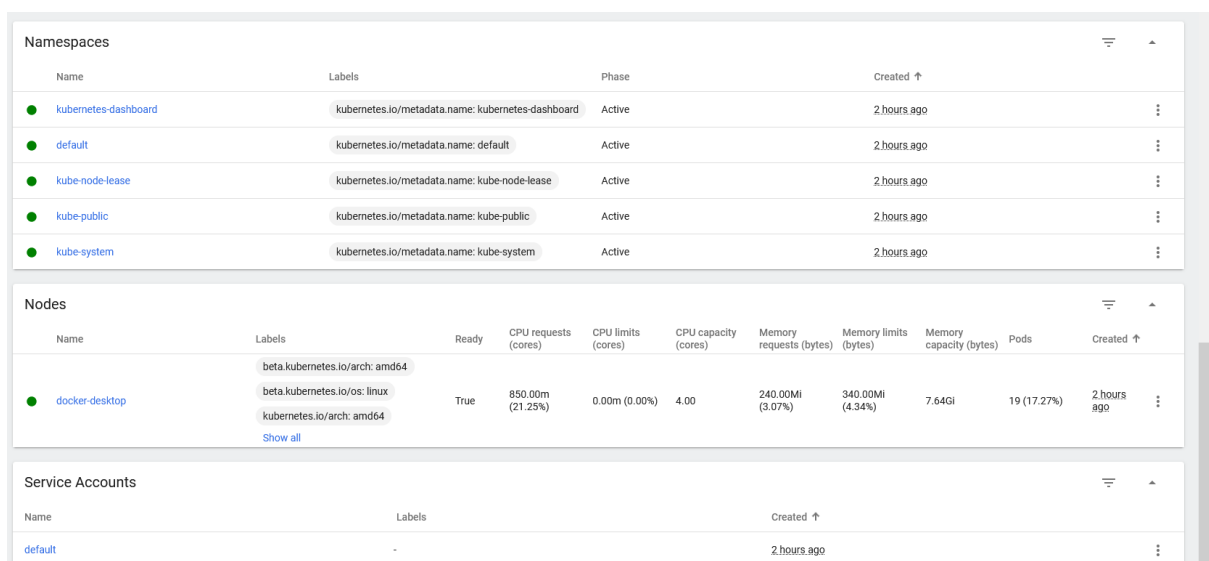
Terminal




Dashboard



Development + Pods + Replica Sets



Namespaces + Nodes

Services						
Name	Labels	Type	Cluster IP	Internal Endpoints	External Endpoints	Created ↑
 kubernetes	component: apiserver provider: kubernetes	ClusterIP	10.96.0.1	kubernetes:443 TCP kubernetes:0 TCP	-	2 hours ago

Services

```

Windows PowerShell
PS C:\Users\Valorant only PC\Documents\7.1> kubectl apply -f dashboard-adminuser.yaml
error: error when retrieving current configuration of:
Resource: "/v1, Resource=serviceaccounts", GroupVersionKind: "/v1, Kind=ServiceAccount"
Name: "", Namespace: "default"
from server for: "dashboard-adminuser.yaml": resource name may not be empty
PS C:\Users\Valorant only PC\Documents\7.1> kubectl apply -f dashboard-adminuser.yaml
error: error when retrieving current configuration of:
Resource: "/v1, Resource=serviceaccounts", GroupVersionKind: "/v1, Kind=ServiceAccount"
Name: "", Namespace: "default"
from server for: "dashboard-adminuser.yaml": resource name may not be empty
PS C:\Users\Valorant only PC\Documents\7.1> kubectl apply -f cluster_role_binding.yaml
error: error when retrieving current configuration of:
Resource: "rbac.authorization.k8s.io/v1, Resource=clusterroles", GroupVersionKind: "rbac.authorization.k8s.io/v1, Kind=ClusterRole"
Name: "", Namespace: ""
from server for: "cluster_role_binding.yaml": resource name may not be empty
PS C:\Users\Valorant only PC\Documents\7.1> kubectl apply -f dashboard-adminuser.yaml
error: error when retrieving current configuration of:
Resource: "/v1, Resource=serviceaccounts", GroupVersionKind: "/v1, Kind=ServiceAccount"
Name: "", Namespace: "default"
from server for: "dashboard-adminuser.yaml": resource name may not be empty
PS C:\Users\Valorant only PC\Documents\7.1> kubectl apply -f dashboard-adminuser.yaml
serviceaccount/admin-user created
PS C:\Users\Valorant only PC\Documents\7.1> kubectl apply -f cluster_role_binding.yaml
clusterrolebinding.rbac.authorization.k8s.io/admin-user created
PS C:\Users\Valorant only PC\Documents\7.1> kubectl proxy
Starting to serve on 127.0.0.1:8001
E0502 18:41:37.246562 16640 proxy_server.go:147] Error while proxying request: context canceled
E0502 18:41:37.249782 16640 proxy_server.go:147] Error while proxying request: context canceled
E0502 18:43:42.076420 16640 proxy_server.go:147] Error while proxying request: context canceled
E0502 18:43:42.098047 16640 proxy_server.go:147] Error while proxying request: context canceled
E0502 18:48:29.487251 16640 proxy_server.go:147] Error while proxying request: context canceled
E0502 18:48:29.487757 16640 proxy_server.go:147] Error while proxying request: context canceled
E0502 18:48:29.505130 16640 proxy_server.go:147] Error while proxying request: context canceled
E0502 19:09:11.967049 16640 proxy_server.go:147] Error while proxying request: context canceled
E0502 19:19:06.934754 16640 proxy_server.go:147] Error while proxying request: context canceled
E0502 19:19:06.937759 16640 proxy_server.go:147] Error while proxying request: context canceled
E0502 19:30:32.489207 16640 proxy_server.go:147] Error while proxying request: context canceled

```

PowerShell interface