

## Kubernetes S1 Practice Exercise:

**Exercise 1:** Install and configure Docker

**Exercise 2:** Install Start and verify Docker daemon in CentOS

**Exercise 3:** Describe the process of templating an image

**Exercise 4:** Using run command to spawn a Docker container

**Exercise 5:** Run and interact with a Docker container

**Exercise 6:** List the steps to access, interact, and see results from a command executed on an image from a local or remote registry

**Exercise 7:** Daemonize a Docker container and access Docker daemon

**Exercise 8:** Pull and push Docker images

**Exercise 9:** Build a new own docker image using dockerfile

**Exercise 10:** Build and run an application in Docker Compose

**Exercise 11:** Creating pods imperatively

**Exercise 12:** Configure Multi-container Pods

**Exercise 13:** Deletion of pods

**Exercise 14:** Editing the configuration information of the deployment

**Exercise 15:** Scaling the Number of Pods using Deployments

**Exercise 16:** Persistent Volumes, Secrets, ConfigMaps and Other Volume Types

**Exercise 17:** Use of secrets pass information to pods

**Exercise 18:** Create secrets directly from files

**Exercise 19:** ConfigMaps

**Exercise 20:** kubectl apply

**Exercise 21:** Setting Environment Variables in Containers

**Exercise 22:** Downward API Passing information from pod to container

**Exercise 23:** Handling Container Lifecycle Events

**Exercise 24:** Associating Pods with Nodes using nodeSelector

**Exercise 25:** Taints

**Exercise 26:** kubectl taint

**Exercise 27:** Tolerations

**Exercise 28:** Init containers Setting up the state of the pods

**Exercise 29:** Use of Liveness and Readiness Probes

**Exercise 30:** Liveness probes Using HTTP and TCP

**Exercise 31:** ReplicaSet object

**Exercise 32:** Deleting a ReplicaSet and its associated pods

**Exercise 33:** Deleting a ReplicaSet but not the associated pods

**Exercise 34:** Loose coupling between ReplicaSet object and the pods

**Exercise 35:** Scaling a ReplicaSet object

**Exercise 36:** Replication controller

**Exercise 37:** Deleting a replication controller and the associated pods

**Exercise 38:** Deleting a replication controller but not its pods

**Exercise 39:** Loose coupling between replication controller and its pods

**Exercise 40:** kubectl run Create deployments imperatively

**Exercise 41:** YAML files for Deployment objects

- Exercise 42:** Scaling deployments by editing the YAML config
- Exercise 43:** Changing the image version associated with a deployment
- Exercise 44:** Rolling back a deployment
- Exercise 45:** kubectl scale Scaling deployments imperatively
- Exercise 46:** Rolling Deployments
- Exercise 47:** Statefulsets
- Exercise 48:** Batch Processing Job Objects
- Exercise 49:** kubectl expose Service objects
- Exercise 50:** AKS - the Azure Kubernetes Service
- Exercise 51:** Jumping through hoops - kops and AWS
- Exercise 52:** Play with Kubernetes (PWK)