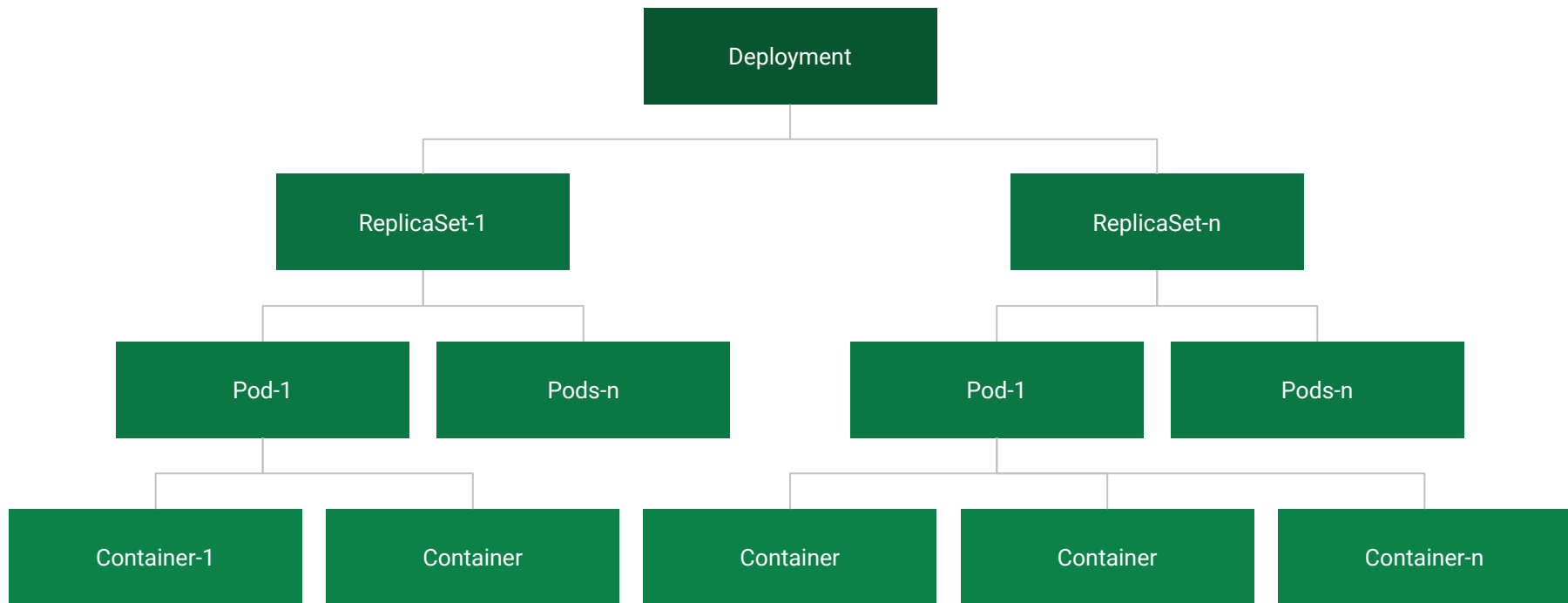# Deployments

➜ **What is Deployment**

➜ **Desired State**

➜ **Deployment Use Cases**

➜ **HandsOn Demonstration**

Deployments

➢ **Deployment** is one step higher than ReplicaSet.

➢ Deployment is desired State of ReplicaSet.

➢ Deployments control both ReplicaSets and Pods in a declarative manner.

➢ Smallest unit of Deployment, a Pod, runs containers. Each Pod has its own IP address and shares a PID namespace, network, and host name.
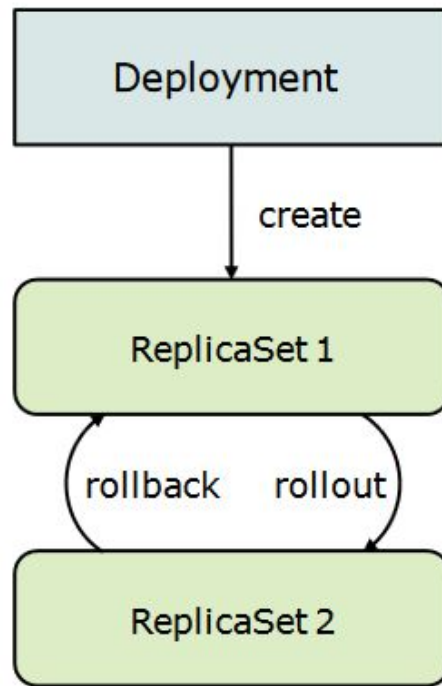
```
                          ┌─────────────────┐
                          │   Deployment    │
                          └─────────────────┘
                 ┌─────────────────┴─────────────────┐
        ┌─────────────────┐                  ┌─────────────────┐
        │   ReplicaSet-1  │                  │   ReplicaSet-n  │
        └─────────────────┘                  └─────────────────┘
          ┌──────┴──────┐                      ┌──────┴──────┐
    ┌──────────┐  ┌──────────┐            ┌──────────┐  ┌──────────┐
    │   Pod-1  │  │   Pods-n │            │   Pod-1  │  │   Pods-n │
    └──────────┘  └──────────┘            └──────────┘  └──────────┘
     ┌────┴────┐                     ┌────────┼────────┐
┌──────────┐┌──────────┐      ┌──────────┐┌──────────┐┌──────────┐
│Container-1││ Container │      │ Container ││ Container ││Container-n│
└──────────┘└──────────┘      └──────────┘└──────────┘└──────────┘
```

Use Case of Deployment

➢ **Create Deployment** : Deploy Application Pods.

➢ **Update Deployment** : Push new version of Application in Controlled Manner.

➢ **Rolling Upgrade** : Upgrade Application in Zero Downtime.

➢ **Rollback** : Rollback the Upgrade in case of unstable Upgrade. Revise the Deployment State.

Use Case of Deployment

➢ **Pause/Resume Deployment** :
   Rollout a certain percentage.

➢ Deployment RollOut Upgrade
   and Rollback Update.

Thank You...

Don't be the Same! Be Better!!!