

## DEMONSTRATION:

```

[cloud-user@dockerhkm simplismart]$ ll
total 16940
-rw-rw-r--. 1 cloud-user cloud-user 17344287 Dec 17 00:12 helm-v3.16.4-linux-amd64.tar.gz
drwxrwxr-x. 2 cloud-user cloud-user    65 Dec 28 10:49 kubernetes-files
drwxr-xr-x. 2 cloud-user cloud-user    50 Dec 17 00:11 linux-amd64
drwxrwxr-x. 2 cloud-user cloud-user    62 Dec 28 12:42 scripts
[cloud-user@dockerhkm simplismart]$ rm helm-v3.16.4-linux-amd64.tar.gz
[cloud-user@dockerhkm simplismart]$ rm linux-amd64
rm: cannot remove 'linux-amd64': Is a directory
[cloud-user@dockerhkm simplismart]$ rm -rf linux-amd64
[cloud-user@dockerhkm simplismart]$ sudo rm -rf /usr/local/bin/helm
[cloud-user@dockerhkm simplismart]$ #./scripts/k8s_automation.sh
[cloud-user@dockerhkm simplismart]$ rm ./scripts/k8s_automation
k8s_automation_local.sh k8s_automation.sh
[cloud-user@dockerhkm simplismart]$ rm ./scripts/k8s_automation_local.sh
[cloud-user@dockerhkm simplismart]$ #/scripts/k8s_automation.sh

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k8s_automation_local.sh k8s_automation.sh
[cloud-user@dockerhkm simplismart]$ rm ./scripts/k8s_automation_local.sh
[cloud-user@dockerhkm simplismart]$ ./scripts/k8s_automation.sh
Checking local dependencies...
Checking K8s dependencies...
Authorized users only
Helm is not installed. Installing Helm...
--2024-12-28 12:46:10-- https://get.helm.sh/helm-v3.16.4-linux-amd64.tar.gz
Connecting to 10.157.240.254:8080... connected.
Proxy request sent, awaiting response... 200 OK
Length: 17344287 (17M) [application/x-tar]
Saving to: 'helm-v3.16.4-linux-amd64.tar.gz'

helm-v3.16.4-linux-amd64.tar.gz          100%[=====] 16.54M  59.1MB/s   in 0.3s

2024-12-28 12:46:12 (59.1 MB/s) - 'helm-v3.16.4-linux-amd64.tar.gz' saved [17344287/17344287]

linux-amd64/
linux-amd64/LICENSE
linux-amd64/helm
linux-amd64/README.md
Authorized users only
Helm
Authorized users only
Authorized users only
Helm installed successfully.
All local dependencies are installed.
Enter the deployment name:

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```

Helm installed successfully.
All local dependencies are installed.
Enter the deployment name: simplismart
Enter the namespace (default): default
Enter the Docker image name (e.g., nginx): devopsartifact.jio.com/jdp-internal_project_process_dev_dcr/nginx
Enter the Docker image tag (e.g., latest): stable3.19
Enter the container port to expose: 80
Enter CPU requests (e.g., 500m): 500m
Enter memory requests (e.g., 512Mi): 512Mi
Enter CPU limits (e.g., 1): 1
Enter memory limits (e.g., 1Gi): 1Gi
Enter the service type (ClusterIP/NodePort/LoadBalancer): NodePort
Enter the service port: 8080
Enter the minimum number of replicas: 1
Enter the maximum number of replicas: 3
Enter the target CPU utilization (e.g., 50): 20
Setting up Kubernetes files on remote server...
Authorized users only
deployment.yaml          100% 573  671.2KB/s   00:00
service.yaml             100% 212  294.7KB/s   00:00
hpa.yaml                 100% 369  507.1KB/s   00:00
Kubernetes files transferred successfully.
Deploying Kubernetes resources...
Authorized users only
deployment.apps/simplismart unchanged
Authorized users only
service/simplismart-service unchanged
Authorized users only
horizontalpodautoscaler.autoscaling/simplismart-hpa configured
Resources deployed successfully.

```

FOR KEDA I HAVE SOME RESTRICTIONS IN MY CURREENT ENVIRONMENT NEED TO WHITELIST THE URL THAT’LL take some time.

```
service/simplismart-service unchanged
Authorized users only
horizontalpodautoscaler.autoscaling/simplismart-hpa configured
Resources deployed successfully.
Adding KEDA Helm repository...
Authorized users only
Error: looks like "https://kedacore.github.io/charts" is not a valid chart repository or cannot be reached: Get "https://kedacore.github.io/charts/index.yaml": context deadline exceeded (Client.Timeout exceeded while awaiting headers)
[cloud-user@dockerhkm simplismart]$
```

FINAL DEPLOYMENT

```
[cloud-user@dockerhkm ~]$ kubectl get pods
NAME                                READY   STATUS             RESTARTS   AGE
acs-7d5b9dbff7-8zqcqb              0/1     ImagePullBackOff    0           9m38s
debug                               0/1     ImagePullBackOff    0           44h
kdm-5fd8689b89-zs7sg               0/1     ImagePullBackOff    0           11m
nginx-64f799fbc7-8zl74             1/1     Running             0           2d21h
simplismart-54dd886f6d-jqqxb       1/1     Running             0           107m
[cloud-user@dockerhkm ~]$
```

HEALTHCHECK

```
[cloud-user@dockerhkm simplismart]$ vim health_check.sh
[cloud-user@dockerhkm simplismart]$ ./health_check.sh
Enter the deployment name: simplismart
Enter the namespace (default):
Do you want to check the health status of the deployment? (yes/no): yes
Retrieving health status for deployment: simplismart in namespace: default
Checking deployment status...
Authorized users only
NAME      READY   UP-TO-DATE   AVAILABLE   AGE   CONTAINERS   IMAGES   SELECTOR
simplismart 1/1     1            1          123m  simplismart  devopsartifact.jio.com/jdp-internal_project_process_dev_dcr/nginx:stable3.19  app=simplismart
Checking pod status...
Authorized users only
NAME                                READY   STATUS             RESTARTS   AGE
simplismart-54dd886f6d-jqqxb       1/1     Running             0           123m
Retrieving CPU and memory metrics...
Authorized users only
Error: Metrics API not available
Checking for any issues or failures in the deployment...
Authorized users only
Name: simplismart
Namespace: default
CreationTimestamp: Sat, 28 Dec 2024 11:01:51 +0530
Labels: <none>
Annotations: deployment.kubernetes.io/revision: 1
Selector: app=simplismart
Replicas: 1 desired | 1 updated | 1 total | 1 available | 0 unavailable
StrategyType: RollingUpdate
MinReadySeconds: 0
RollingUpdateStrategy: 25% max unavailable, 25% max surge
Pod Template:
Labels: app=simplismart
Containers:
  simplismart:
    Image: devopsartifact.jio.com/jdp-internal_project_process_dev_dcr/nginx:stable3.19
    Port: 80/TCP
    Host Port: 0/TCP
    Limits:
      cpu: 1
      memory: 1Gi
    Requests:
      cpu: 500m
      memory: 512Mi
    Environment: <none>
    Mounts: <none>
    Volumes: <none>
```

```
RollingUpdateStrategy: 25% max unavailable, 25% max surge
Pod Template:
  Labels: app=simplismart
  Containers:
    simplismart:
      Image: devopsartifact.jio.com/jdp-internal_project_process_dev_dcr/nginx:stable3.19
      Port: 80/TCP
      Host Port: 0/TCP
      Limits:
        cpu: 1
        memory: 1Gi
      Requests:
        cpu: 500m
        memory: 512Mi
      Environment: <none>
      Mounts: <none>
      Volumes: <none>
      Node-Selectors: <none>
      Tolerations: <none>
  Conditions:
    Type             Status Reason
    ----             -
    Available         True  MinimumReplicasAvailable
    Progressing       True  NewReplicaSetAvailable
  OldReplicaSets: <none>
  NewReplicaSet: simplismart-54dd886f6d (1/1 replicas created)
  Events: <none>
  Authorized users only
  Name: simplismart-54dd886f6d-jqxxb
  Namespace: default
  Priority: 0
  Service Account: default
  Node: minikube/192.168.49.2
  Start Time: Sat, 28 Dec 2024 11:01:51 +0530
  Labels: app=simplismart
           pod-template-hash=54dd886f6d
  Annotations: <none>
  Status: Running
  IP: 10.244.0.12
  IPs:
    IP: 10.244.0.12
```

```
Service Account: default
Node: minikube/192.168.49.2
Start Time: Sat, 28 Dec 2024 11:01:51 +0530
Labels: app=simplismart
        pod-template-hash=54dd886f6d
Annotations: <none>
Status: Running
IP: 10.244.0.12
IPs:
  IP: 10.244.0.12
Controlled By: ReplicaSet/simplismart-54dd886f6d
Containers:
  simplismart:
    Container ID: docker://c32b04aa6cf4f4441f31acabac7c72d4223631966e50f0322fca61e1e124a
    Image: devopsartifact.jio.com/jdp-internal_project_process_dev_dcr/nginx:stable3.19
    Image ID: docker-pullable://devopsartifact.jio.com/jdp-internal_project_process_dev_dcr/nginx@sha256:a035efeaacd1ae176115764524a7d2061d38a6fb8881ba3e6edf8c61f5136157
    Port: 80/TCP
    Host Port: 0/TCP
    State: Running
      Started: Sat, 28 Dec 2024 11:01:52 +0530
    Ready: True
    Restart Count: 0
    Limits:
      cpu: 1
      memory: 1Gi
    Requests:
      cpu: 500m
      memory: 512Mi
    Environment: <none>
    Mounts:
      /var/run/secrets/kubernetes.io/serviceaccount from kube-api-access-2dg2w (ro)
  Conditions:
    Type             Status
    ----             -
    PodReadyToStartContainers True
    Initialized       True
    Ready             True
    ContainersReady   True
    PodScheduled      True
  Volumes:
    kube-api-access-2dg2w:
      Type: Projected (a volume that contains injected data from multiple sources)
      TokenExpirationSeconds: 3607
      ConfigMapName: kube-root-ca.crt
      ConfigMapOptional: <nil>
      DownwardAPI: true
    QoS Class: Burstable
```

```
Environment: <none>
Mounts:
  /var/run/secrets/kubernetes.io/serviceaccount from kube-api-access-2dg2w (ro)
Conditions:
  Type              Status
  PodReadyToStartContainers  True
  Initialized         True
  Ready              True
  ContainersReady      True
  PodScheduled        True
Volumes:
  kube-api-access-2dg2w:
    Type: Projected (a volume that contains injected data from multiple sources)
    TokenExpirationSeconds: 3607
    ConfigMapName: kube-root-ca.crt
    ConfigMapOptional: <nil>
    DownwardAPI: true
QoS Class: Burstable
Node-Selectors: <none>
Tolerations: node.kubernetes.io/not-ready:NoExecute op=Exists for 300s
              node.kubernetes.io/unreachable:NoExecute op=Exists for 300s
Events:
  Health status retrieval complete.
[cloud-user@dockerhkm simplismart]$
```