Kubernetes on Utho Cloud

1. **Introduction to Kubernetes on Utho Cloud Platfrom**

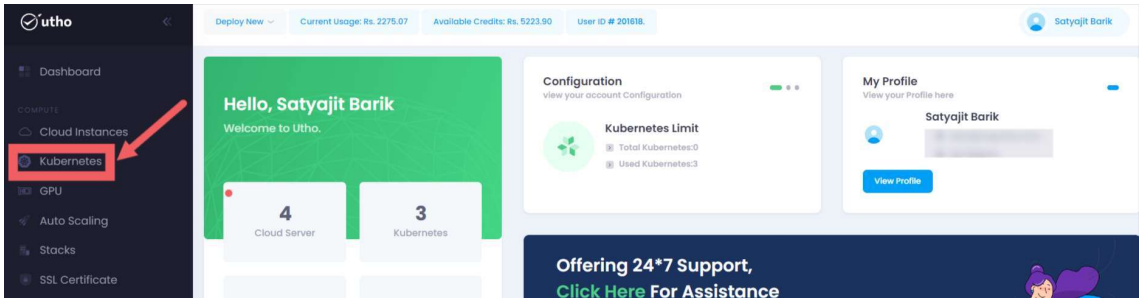
   Kubernetes is a powerful, open-source platform designed to automate deploying, scaling, and managing containerized applications. Utho Cloud provides managed Kubernetes services, making it easy to set up, manage, and scale Kubernetes clusters on the cloud

2. Creating and Managing a Kubernetes Cluster on Utho Cloud Platfrom

2.1 Creating a Kubernetes Cluster

To get started with Kubernetes on Utho Cloud, you first need to create a Kubernetes cluster.

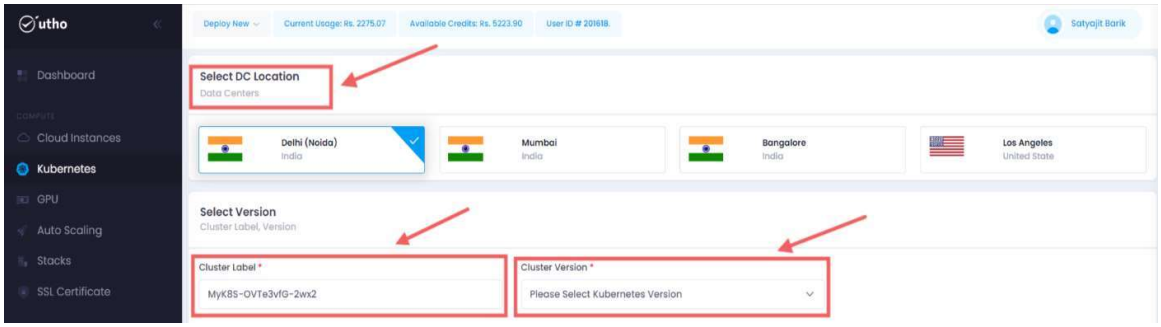
1. **Log in to Utho Cloud**:
   - Navigate to the Utho Cloud Platfrom dashboard and log in with your credentials.
2. **Navigate to Kubernetes Service**:



   - Go to **Cloud Services** → **Kubernetes**→ Click on Kubernetes.

3. **Create a New Kubernetes Cluster**:

- Click **Create Cluster** and follow the on-screen prompts to configure the cluster. You will need to define:
  - **Data Centre**: Choose a region where you want to deploy your cluster.
  - **Select Version**: Fill Cluster Label.
  - **Kubernetes Cluster Version**: Choose the Kubernetes version you want to use.



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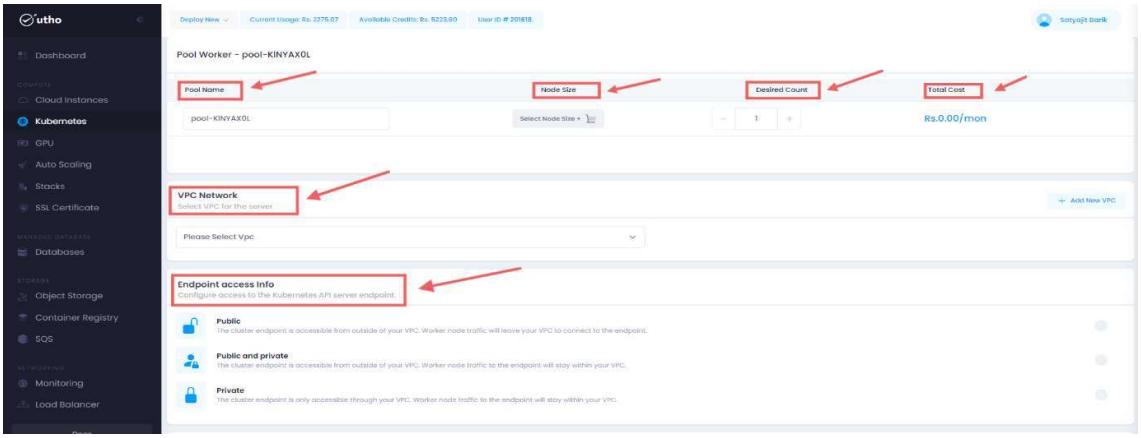
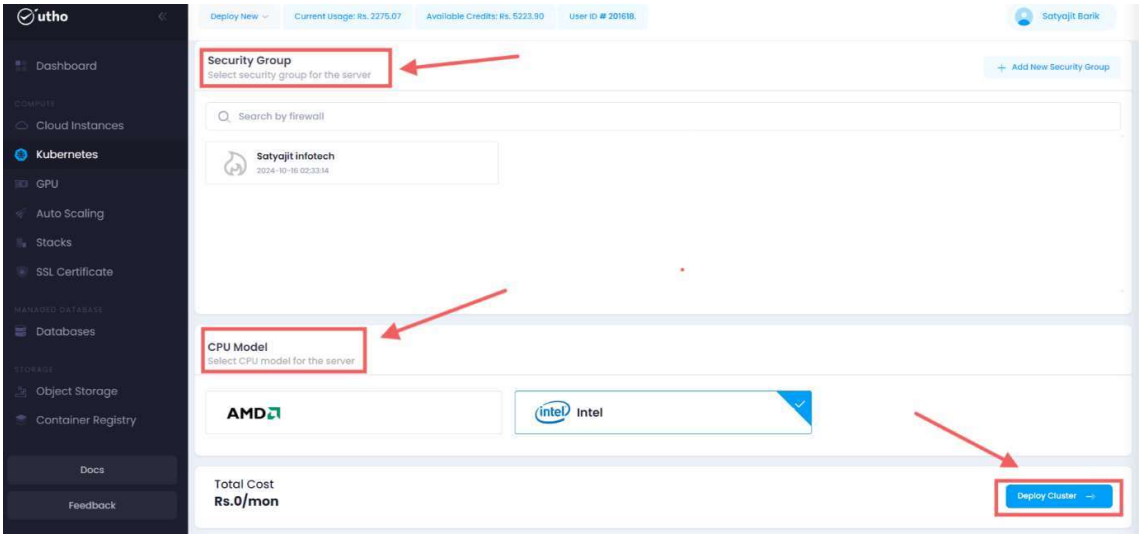
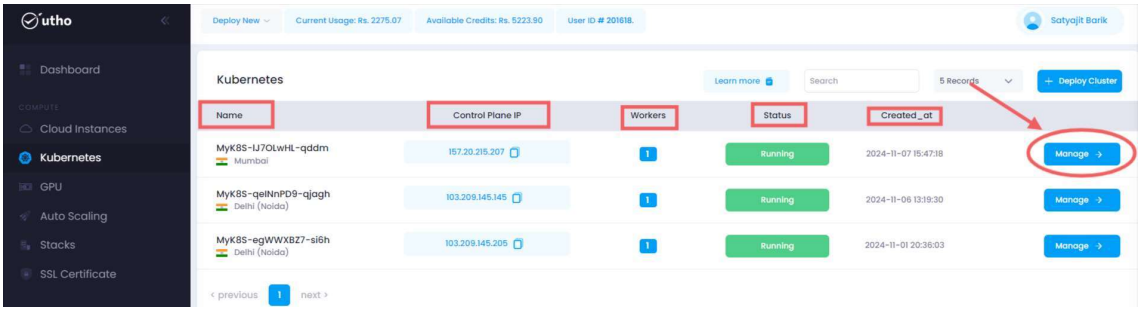


- **Manage Node Worker Pools:** Fill the Pool Name, Node Size, Desired Count & Total Cost accordingly.
- **VPC Network:** Choose VPC Network accordingly.
- **Endpoint access info:** Choose accordingly**.**



- **Security Group:** Select Firewall (Optional).
- **CPU Model**: Chose CPU Model accordingly.

Once you have configured the cluster, click **Deploy Cluster**. Utho Cloud will provision your Kubernetes cluster, which may take several minutes.



Congratulations your Kubernetes Cluster has been created Successfully. Click on Manage to View Details of Kubernetes Clusters

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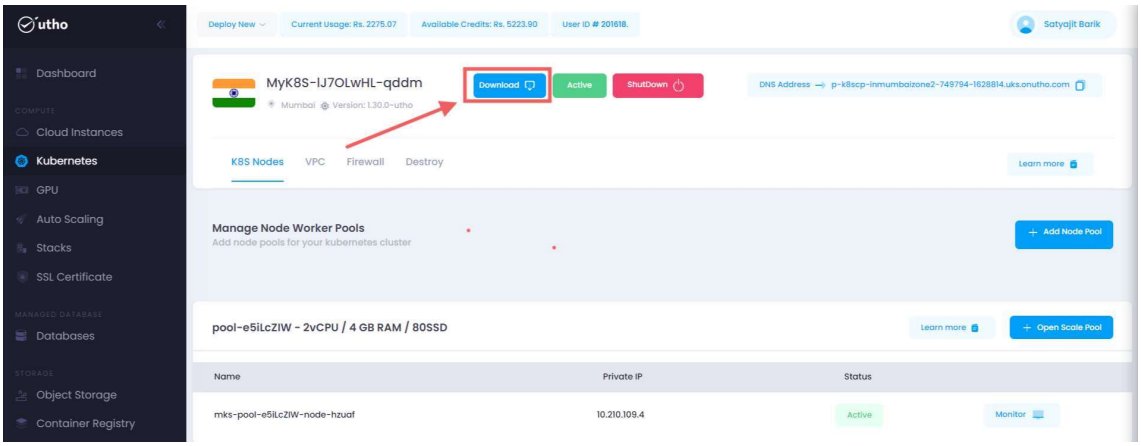
- After the cluster is ready, download the kubeconfig file from Utho Cloud to connect your local machine to the cluster



- After the cluster is ready, download the kubeconfig file from Utho Cloud to connect your local machine to the cluster.

2.2 Accessing the Kubernetes Cluster

1. **Install kubectl**:
   - If you haven't installed kubectl, install it by following the instructions from the Official Kubernetes documentation.
2. **Set up kubectl Configuration**:
   - After downloading the kubeconfig file, set up your kubectl configuration:

```
export KUBECONFIG=/path/to/kubeconfig
```

I.e

```
root@cloudserver-gNihdm4V:~# ls
helm-v3.12.0-linux-amd64.tar.gz  kubeconfig_mks.yaml  main.tf    satya.yaml  uthoctl                          utho.txt
Initialized                      LICENSE             README.md  snap        uthoctl_0.1.5_linux_amd64.tar.gz
root@cloudserver-gNihdm4V:~# export KUBECONFIG=/root/kubeconfig_mks.yaml
```

3. Verify Access:

   - Run the following command to verify that you can access the cluster:

```
kubectl get nodes
```

4. **List all the pod:**
   - TO list all the pods in all namespaces within your Kubernetes cluster.

```
kubectl get pods --all-namespaces
```

```
root@cloudserver-gNihdm4V:~# kubectl get pods --all-namespaces
NAMESPACE       NAME                                       READY   STATUS    RESTARTS   AGE
default         nginx-pod                                  1/1     Running   0          41h
default         utho-app-operator-fd64fc8d5-qf5jj          2/2     Running   0          42h
ingress-nginx   my-nginx-ingress-controller-665d858599-v8jqh   1/1     Running   0          41h
kube-system     coredns-85c69f454c-4c2sz                   1/1     Running   0          2d14h
kube-system     konnectivity-agent-8rmz2                   1/1     Running   0          2d14h
kube-system     kube-proxy-zf9r2                           1/1     Running   0          2d14h
kube-system     kube-router-2nk5q                          1/1     Running   0          2d14h
kube-system     metrics-server-5cd4986bbc-8d5sh            1/1     Running   0          2d14h
openebs         openebs-localpv-provisioner-bb8f85f5f-7h6b9   1/1     Running   0          2d14h
openebs         openebs-ndm-operator-5b8bd59566-l581v      1/1     Running   0          2d14h
openebs         openebs-ndm-qtqfv                          1/1     Running   0          2d14h
```

~Thank You~