**Kubernetes Tasks**

**Task 1:**

Deploy Pods in Kubernetes Cluster: -

The Nautilus DevOps team is diving into Kubernetes for application management. One team member has a task to create a pod according to the details below:

1. Create a pod named pod-nginx using the nginx image with the latest tag. Ensure to specify the tag as nginx:latest.
2. Set the app label to nginx\_app, and name the container as nginx-container.

Note: The kubectl utility on jump\_host is configured to operate with the Kubernetes cluster.

**Task 2:**

Deploy Applications with Kubernetes Deployments: -

The Nautilus DevOps team is delving into Kubernetes for app management. One team member needs to create a deployment following these details:

Create a deployment named nginx to deploy the application nginx using the image nginx:latest (ensure to specify the tag)

Note: The kubectl utility on jump\_host is set up to interact with the Kubernetes cluster.

**Task 3:**

Setup Kubernetes Namespaces and PODs: -

The Nautilus DevOps team is planning to deploy some micro services on Kubernetes platform. The team has already set up a Kubernetes cluster and now they want to set up some namespaces, deployments etc. Based on the current requirements, the team has shared some details as below:

Create a namespace named dev and deploy a POD within it. Name the pod dev-nginx-pod and use the nginx image with the latest tag. Ensure to specify the tag as nginx:latest.

Note: The kubectl utility on jump\_host is configured to operate with the Kubernetes cluster.

Task 4:

Set Resource Limits in Kubernetes Pods: -

An application currently running on the Kubernetes cluster employs the nginx web server. The Nautilus application development team has introduced some recent changes that need deployment. They've crafted an image nginx:1.17 with the latest updates.

Execute a rolling update for this application, integrating the nginx:1.17 image.

The deployment is named nginx-deployment. Ensure all pods are operational post-update.

Task 5:

Execute Rolling Updates in Kubernetes: -

An application currently running on the Kubernetes cluster employs the nginx web server. The Nautilus application development team has introduced some recent changes that need deployment. They've crafted an image nginx:1.17 with the latest updates. Execute a rolling update for this application, integrating the nginx:1.17 image. The deployment is named nginx-deployment. Ensure all pods are operational post-update.

Task 6:

Revert Deployment to Previous Version in Kubernetes

Earlier today, the Nautilus DevOps team deployed a new release for an application. However, a customer has reported a bug related to this recent release. Consequently, the team aims to revert to the previous version.

There exists a deployment named nginx-deployment; initiate a rollback to the previous revision.