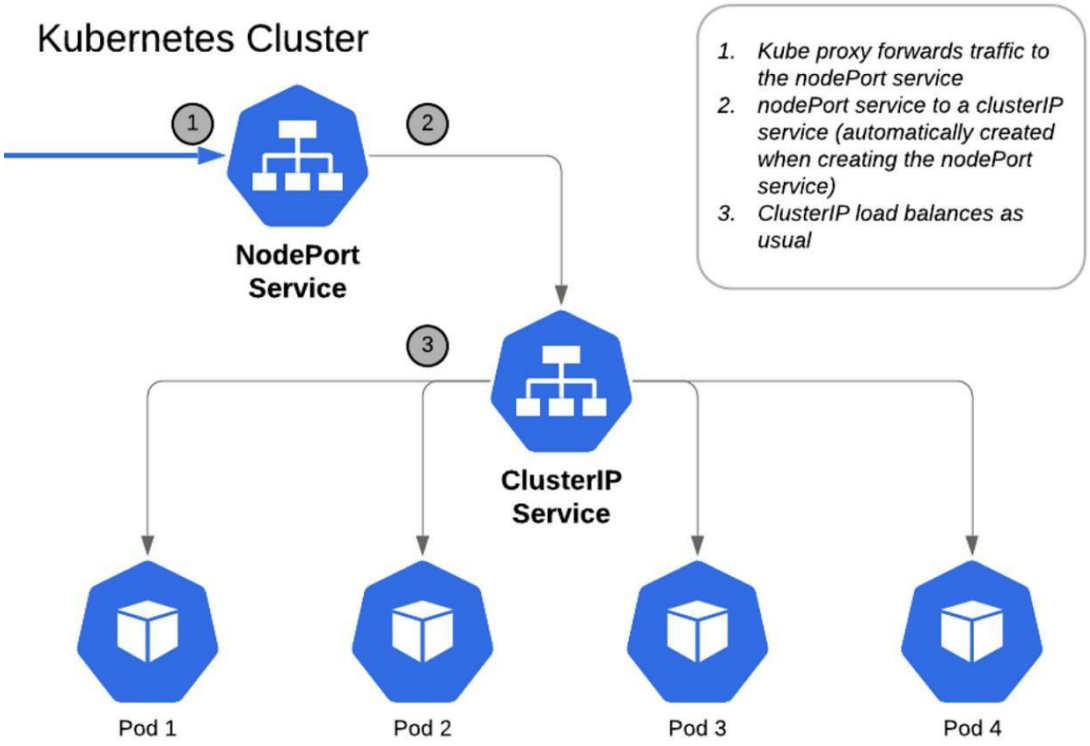
KUBERNETES PROJECT WITH NODEPORT SERVICE



Part 1: Minikube Cluster Creation and Setup

Step 1: Windows search bar se PowerShell ko 'Run as administrator' ke through open karo aur Minikube start karo.

1. Apne system pe PowerShell Run as administrator se open karein.
2. Minikube start karo
3. Check karein ki cluster sahi se start hua ya nahi
4. Verify node status karo

Step 2: Project Ki GitHub Repository Clone Karein

1. GitHub repository ko clone karein.
2. Code aur configurations ko local machine pe setup karein.

Part 2: Nginx Pods and Service Deployment

Step 1: nginx-deployment.yaml File Ka Kaam

1. nginx-deployment.yaml file ko configure karein taake pods create ho sakein.

2. Nginx application ki specifications set karein.

Step 2: nginx-nodeport-service.yaml File Ka Kaam

1. nginx-nodeport-service.yaml file ko configure karein jo Nginx pods ko expose kare.

2. NodePort ko configure karke service ko deploy karein.

Part 3: MySQL Secrets and ConfigMap Configuration

Step 1: mysql-secrets.yaml File Ka Kaam

1. mysql-secrets.yaml file ko configure karein jo database credentials store kare.

Step 2: mysql-configmap.yaml File Ka Kaam

1. mysql-configmap.yaml file ko configure karein jo MySQL configurations handle kare.

Step 3: service-account.yaml File Ka Kaam

1. MySQL ke liye service account configure karein.

Step 4: role.yaml File Ka Kaam

1. MySQL ke access permissions define karein.

Step 5: rolebinding.yaml File Ka Kaam

1. Role aur service account ko bind karein taake access control setup ho.

Part 4: MYSQL Database Pods and Services Deployment

Step 1: mysql-headless-service.yaml File Ka Kaam

1. mysql-headless-service.yaml file ko configure karein taake MySQL stateful ho.

Step 2: mysql-pv.yaml File Ka Kaam

2. Persistent Volume (PV) define karein jo MySQL ke data ko store kare.

Step 3: mysql-statefulset.yaml File Ka Kaam

2. MySQL StatefulSet deploy karein jo database ko manage kare.

Part 5: Accessing MySQL Database in Minikube Cluster

Step 1: MySQL Database Access Karo

1. MySQL database ko Kubernetes cluster se access karein.

Part 6: Monitoring Using Prometheus and Loki With Grafana

Step 1: prometheus-daemonset.yaml File Ka Kaam

1. Prometheus ko deploy karne ke liye daemonset.yaml file configure karein.

Step 2: prometheus-rbac.yaml File Ka Kaam

1. Prometheus ke liye RBAC roles configure karein.

Step 3: prometheus-nodeport-service.yaml File Ka Kaam

1. Prometheus ke liye service ko configure karein.

Step 4: promtail-daemonset.yaml File Ka Kaam

1. Logs ko collect karne ke liye promtail daemonset file ko configure karein.

Step 5: loki-daemonset.yaml File Ka Kaam

1. Loki daemonset file ko configure karein.

Step 6: loki-nodeport-service.yaml File Ka Kaam

1. Loki ke liye service ko configure karein.

Step 7: grafana-deployment.yaml File Ka Kaam

1. Grafana ko deploy karne ke liye grafana-deployment.yaml file configure karein.

Step 8: Grafana Mein Prometheus Data Source Add Karna, Queries Add Karna Aur Dashboard Create Karna

1. Grafana mein Prometheus data source add karein, queries configure karein aur dashboard create karein.

Step 9: Grafana Mein Loki Data Source Add Karna Aur Dashboard Create Karna

1. Grafana mein Loki data source add karein aur dashboard configure karein.