**Minikube with docker**

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**minikube start --driver=docker**

**Running Kubernetes Locally with Docker Desktop and Minikube**

Kubernetes is a powerful tool for managing containerized applications, but running a full cluster can be challenging for local development. Using Docker Desktop and Minikube simplifies this process, enabling you to run Kubernetes on your local machine.

**Prerequisites**

* Docker Desktop installed
* Minikube installed
* kubectl installed

**Step-by-Step Guide**

**1. Install Docker Desktop**

Download and install Docker Desktop from the [official website](https://www.docker.com/products/docker-desktop/). Follow the installation instructions for your operating system.

**2. Enable Kubernetes in Docker Desktop**

* Open Docker Desktop.
* Navigate to Settings > Kubernetes.
* Check the box Enable Kubernetes.
* Click Apply & Restart.

Docker Desktop will now configure and start a single-node Kubernetes cluster.

**3. Install Minikube**

Download and install Minikube from the [Minikube website](https://minikube.sigs.k8s.io/docs/start/" \t "_blank). Follow the installation instructions for your operating system.

**4. Start Minikube**

Open a terminal and start Minikube:

minikube start --driver=docker

Minikube will set up a single-node Kubernetes cluster using a virtual machine or a Docker container.

**5. Verify the Installation**

Check the status of your Minikube cluster:

minikube status

Verify the Kubernetes cluster is running:

kubectl get nodes

**6. Deploy an Application**

Deploying a simple application Create a deployment using kubectl:

kubectl create deployment hello-node --image=k8s.gcr.io/echoserver:1.4

Expose the deployment as a service:

kubectl expose deployment hello-node --type=LoadBalancer --port=8080

Get the URL of the service:

minikube service hello-node --url

**7. Access the Application**

Open the URL provided by the minikube service command in your web browser to see your running application.