Kubernetes (Minikube)

Steps to setup Minikube in windows:

1. Minikube runs on a virtual machine, so we can use VirtualBox or Hyper-V. In our case we will use VirtualBox, which we will install using the installer.

* ***https://www.virtualbox.org/wiki/Downloads***

1. Kubectl is a command-line tool that enables us to manage the cluster. We download the latest version of Kubectl from the official Kubernetes documentation website.

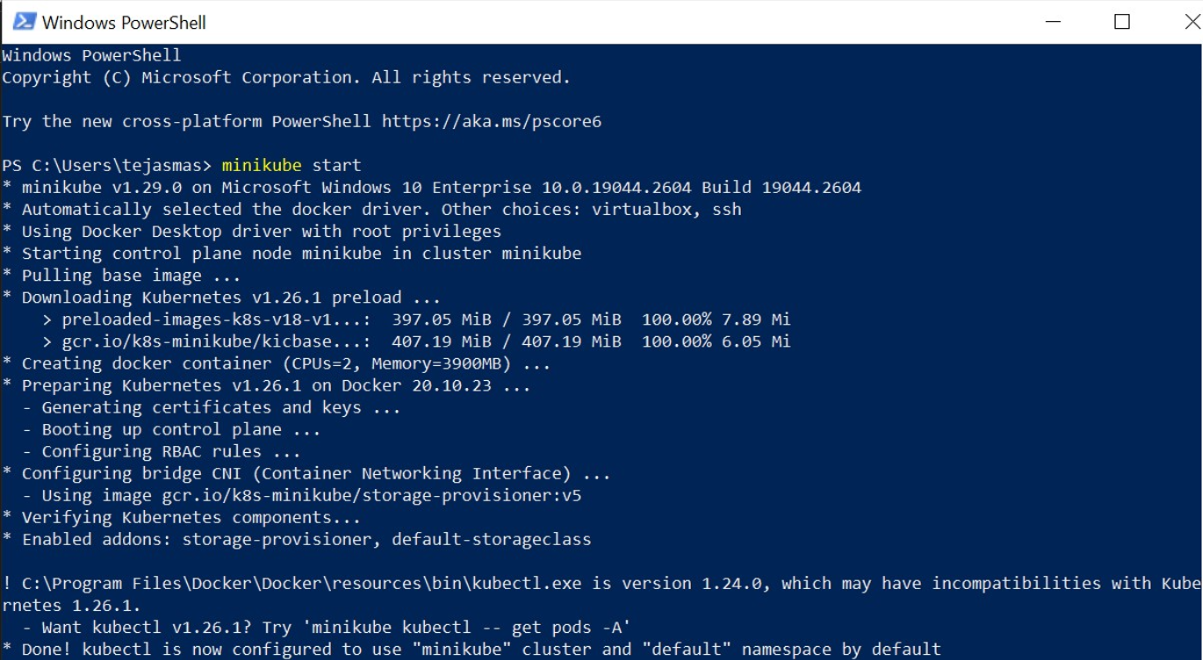
* ***https://kubernetes.io/docs/tasks/tools/install-kubectl-windows/***

1. We then download and install the latest version of Minikube from release pages on GitHub.

* ***https://minikube.sigs.k8s.io/docs/start/***

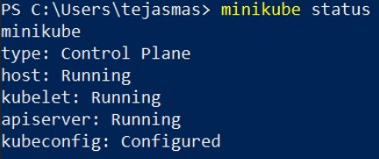
1. We run the following command on command prompt or PowerShell window to start Minikube.

* ***minikube start***



1. We verify the installation using the following command:

* ***minikube status***

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Steps to deploy a sample application on Minikube cluster

1. Create a deployment by defining a YAML file that describes the desired state of the deployment. Here's an example YAML file for a simple web application:

Text

Description automatically generated

Save this file as **myapp-deployment.yaml**.

1. Apply the deployment: You can apply the deployment by running the following command:

* ***kubectl apply -f myapp-deployment.yaml***

1. To make the deployment accessible from outside the cluster, you need to create a Kubernetes service that maps to the deployment. You can create a service by defining another YAML file:

Text

Description automatically generated

Save this file as **myapp-service.yaml**.

1. Apply the service: You can apply the service by running the following command:

* ***minikube service myapp-service –url***

This will display the URL you can use to access the application in your web browser.

Graphical user interface, text

Description automatically generated

Graphical user interface, text, email

Description automatically generated