Step 1 Validate Virtualizacion Support

To check if virtualization is supported on **macOS**, run the following command on your terminal.

```
sysctl -a | grep -E --color 'machdep.cpu.features|VMX'
```

If you see `VMX` in the output (should be colored), the VT-x feature is enabled in your machine.

To check if virtualization is supported on **Windows 8 and above**, run the following command on your Windows terminal or command prompt.
`systeminfo`

If you see the following output, virtualization is supported on Windows.

```
Hyper-V Requirements:      VM Monitor Mode Extensions: Yes
                           Virtualization Enabled In Firmware: Yes
                           Second Level Address Translation: Yes
                           Data Execution Prevention Available: Yes
```

If you see the following output, your system already has a Hypervisor installed and you can skip the next step.

```
Hyper-V Requirements:      A hypervisor has been detected. Features
required for Hype
```

Step 2 Install Kubectl

Install kubectl binary with curl on macOS

1. Download the latest release:
   `curl -LO "https://storage.googleapis.com/kubernetes-release/release/$(curl -s https://storage.googleapis.com/kubernetes-release/release/stable.txt)/bin/darwin/amd64/kubectl"`
2. Make the kubectl binary executable.
   `chmod +x ./kubectl`
3. Move the binary in to your PATH.
   `sudo mv ./kubectl /usr/local/bin/kubectl`
4. Test to ensure the version you installed is up-to-date:
   `kubectl version --client`

Install with Homebrew on macOS

If using Homebrew package manager, you can install kubectl with Homebrew.

1. Run the installation command:
   `brew install kubectl`
   or
   brew install kubernetes-cli
2. Test to ensure the version you installed is up-to-date:
   `kubectl version --client`

Step 3 Install Minikube

The easiest way to install Minikube on macOS is using Homebrew:

```
brew install minikube
```

You can also install it on macOS by downloading a stand-alone binary:

```
curl -Lo minikube https://storage.googleapis.com/minikube/releases/
latest/minikube-darwin-amd64 \
  && chmod +x minikube
```

Here's an easy way to add the Minikube executable to your path:

```
sudo mv minikube /usr/local/bin
```

Step 4 Confirm Installation

To confirm successful installation of both a hypervisor and Minikube, you can run the following command to start up a local Kubernetes cluster:

Note: For setting the `--vm-driver` with `minikube start`, enter the name of the hypervisor you installed in lowercase letters where `<driver_name>` is mentioned below. A full list of `--vm-driver` values is available in specifying the VM driver documentation.

```
minikube start --vm-driver=<driver_name>
```

Once `minikube start` finishes, run the command below to check the status of the cluster:

```
minikube status
```

If your cluster is running, the output from `minikube status` should be similar to:

```
host: Running
kubelet: Running
apiserver: Running
kubeconfig: Configured
```

After you have confirmed whether Minikube is working with your chosen hypervisor, you can continue to use Minikube or you can stop your cluster. To stop your cluster, run:

```
minikube stop
```