



## RHEL 9 Installation

### Virtual Box Installation

- Download & install the Virtual Box

The screenshot shows a Google search for 'virtual box download for windows'. The top result is from VirtualBox.org, titled 'Downloads — Oracle VM VirtualBox', dated 10-Oct-2022. Below it is another result from VirtualBox.org titled 'Oracle VM VirtualBox', dated 10-Oct-2022. The third result is from Oracle.com titled 'Oracle VM VirtualBox - Downloads'. Below the search results is a screenshot of the VirtualBox website. The website has a blue header with the VirtualBox logo and the text 'VirtualBox'. On the left is a sidebar with links: 'VirtualBox', 'Downloads', 'Documentation', 'Help', 'Contact Us', 'Partners', 'Sponsors', 'Press', 'Security', 'FAQ', 'Feedback', 'Privacy Policy', 'Terms of Service', 'License', 'Disclaimer', 'Trademarks', 'Copyright', 'Legal', 'Security', 'FAQ', 'Feedback', 'Privacy Policy', 'Terms of Service', 'License', 'Disclaimer', 'Trademarks', 'Copyright', 'Legal'. The main content area is titled 'Download VirtualBox' and contains the following text: 'Here you will find links to VirtualBox binaries and its source code.' followed by 'VirtualBox binaries'. Below this is a paragraph: 'By downloading, you agree to the terms and conditions of the respective license. If you're looking for the latest VirtualBox 6.1 packages, see VirtualBox 6.1 builds. Version 6.1 will remain supported until December 2023.' followed by 'VirtualBox 7.0.12 platform packages'. Below this is a list of links: 'Windows hosts', 'macOS / Intel hosts', 'Linux distributions', 'Solaris hosts', 'Solaris 11 IPS hosts'. Below the list is a paragraph: 'The binaries are released under the terms of the GPL version 3. See the changelog for what has changed. You might want to compare the checksums to verify the integrity of downloaded packages. The SHA256 checksums should be favored as the MD5 algorithm must be treated as insecure!'. Below this is a list of links: 'SHA256 checksums, MD5 checksums'. Below the list is a paragraph: 'Note: After upgrading VirtualBox it is recommended to upgrade the guest additions as well.' followed by 'VirtualBox 7.0.12 Oracle VM VirtualBox Extension Pack'. Below this is a list of links: 'All supported platforms'.

Google search results for 'virtual box download for windows'.

VirtualBox

Downloads — Oracle VM VirtualBox

10-Oct-2022 — Download VirtualBox ¶. Here you will find links to VirtualBox binaries and its source code. VirtualBox binaries ¶. By downloading, you agree ...

Download\_Old\_Builds - 6.1.26 - Linux\_Downloads - Changelog

VirtualBox

https://www.virtualbox.org ;

Oracle VM VirtualBox

VirtualBox 7.0.0 released! Oracle today released a significant new version of Oracle VM VirtualBox, its high performance, cross-platform virtualization software ...

Oracle

https://www.oracle.com ; virtualization ; technologies ;

Oracle VM VirtualBox - Downloads

Oracle VM VirtualBox Base Packages - 7.0.10. Freely available for Windows, Mac OS X, Linux and Solaris x86 platforms under GPLv3: Platform, 64- ...

VirtualBox

Download VirtualBox

Here you will find links to VirtualBox binaries and its source code.

VirtualBox binaries

By downloading, you agree to the terms and conditions of the respective license.

If you're looking for the latest VirtualBox 6.1 packages, see VirtualBox 6.1 builds. Version 6.1 will remain supported until December 2023.

VirtualBox 7.0.12 platform packages

- Windows hosts
- macOS / Intel hosts
- Linux distributions
- Solaris hosts
- Solaris 11 IPS hosts

The binaries are released under the terms of the GPL version 3.

See the changelog for what has changed.

You might want to compare the checksums to verify the integrity of downloaded packages. The SHA256 checksums should be favored as the MD5 algorithm must be treated as insecure!

- SHA256 checksums, MD5 checksums

Note: After upgrading VirtualBox it is recommended to upgrade the guest additions as well.

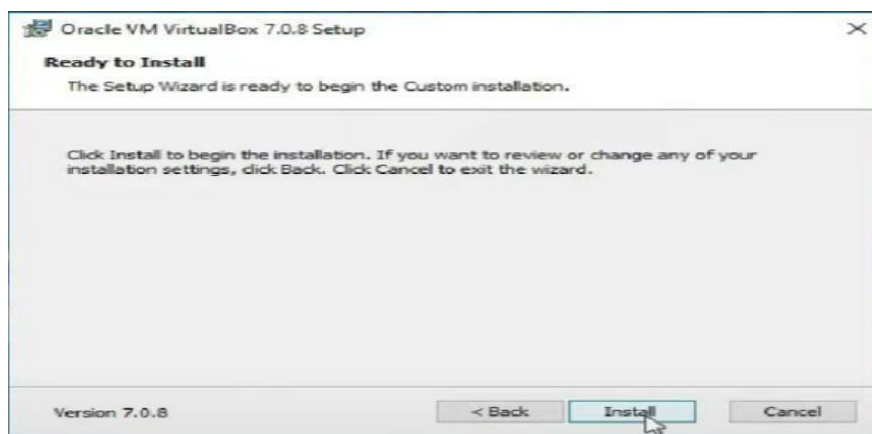
VirtualBox 7.0.12 Oracle VM VirtualBox Extension Pack

- All supported platforms

- Once the virtual box is downloaded double click to install it & click on next



- Click on Install & then finish



# MINIKUBE Installation

**Step 1** - Download the minikube from the following Link

<https://minikube.sigs.k8s.io/docs/start/>

**1** Installation

Click on the buttons that describe your target platform. For other architectures, see [the release page](#) for a complete list of minikube binaries.

Operating system:

Architecture:

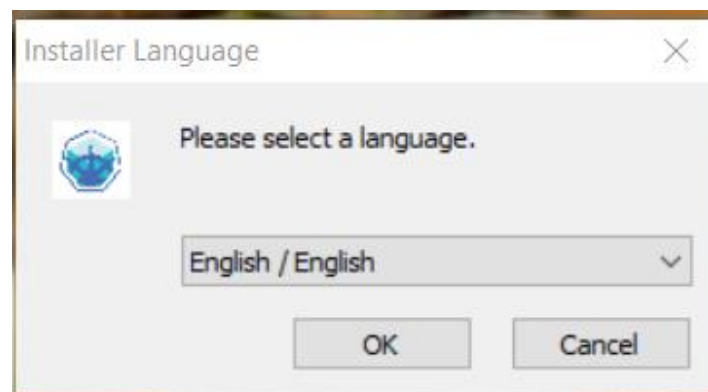
Release type:

Installer type:

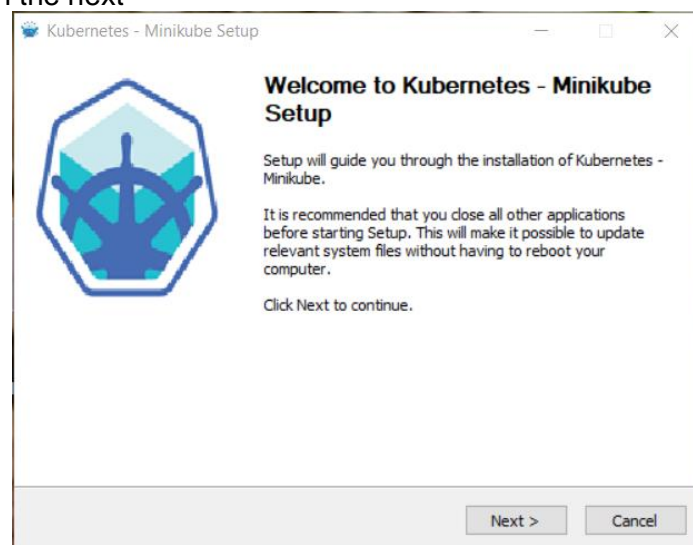
To install the latest minikube **stable** release on **x86-64 Windows** using **.exe download**:

1. Download and run the installer for the **latest release**.  
Or if using `PowerShell`, use this command:

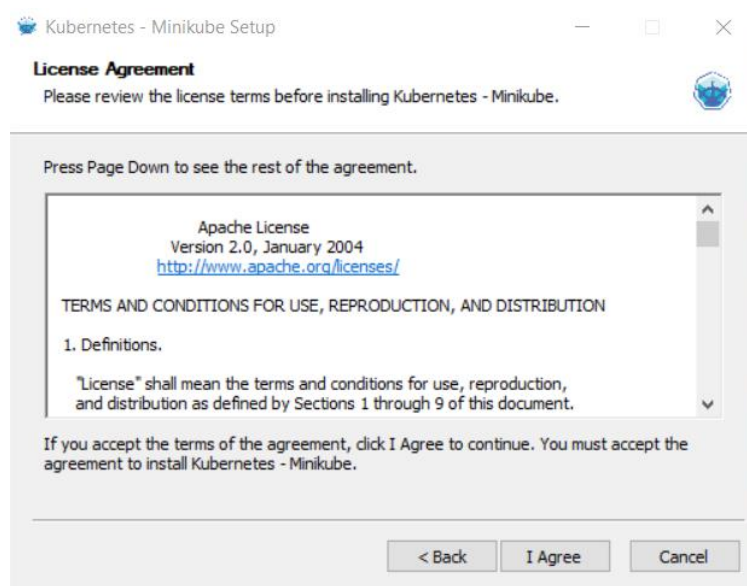
**Step 2** - Select a language



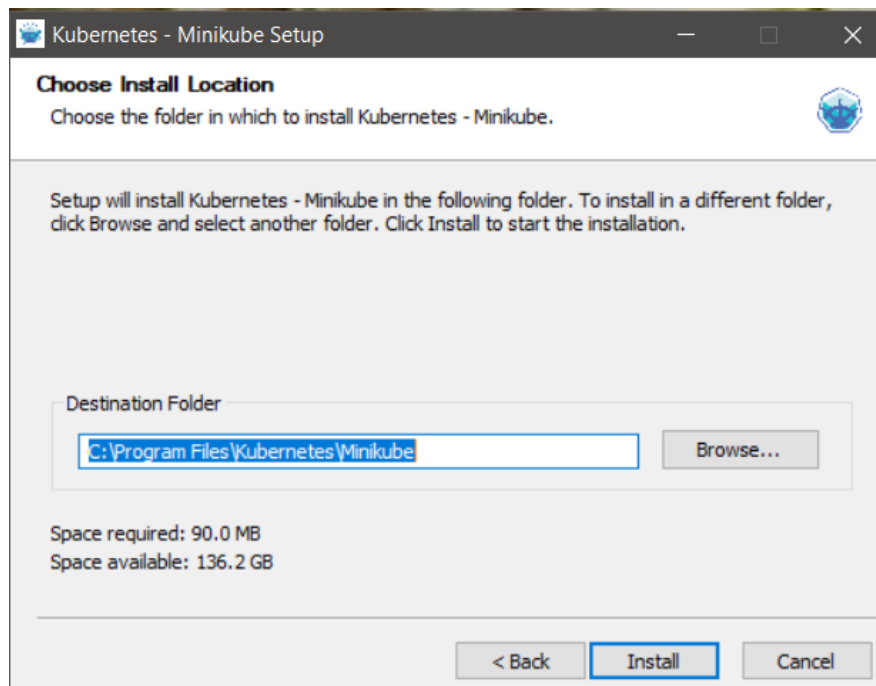
**Step 3** - Just click on the next

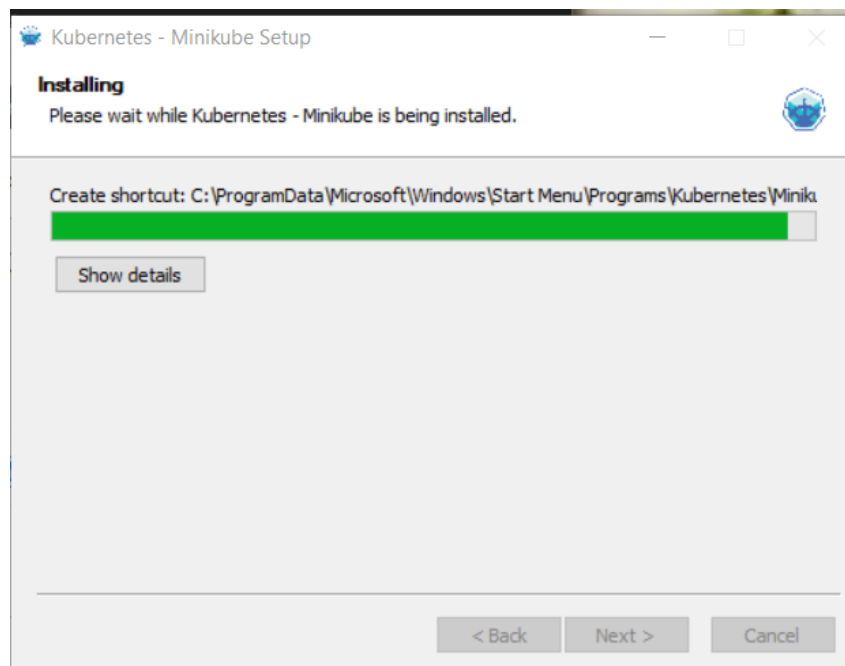


#### Step 4 - Accept the license agreement

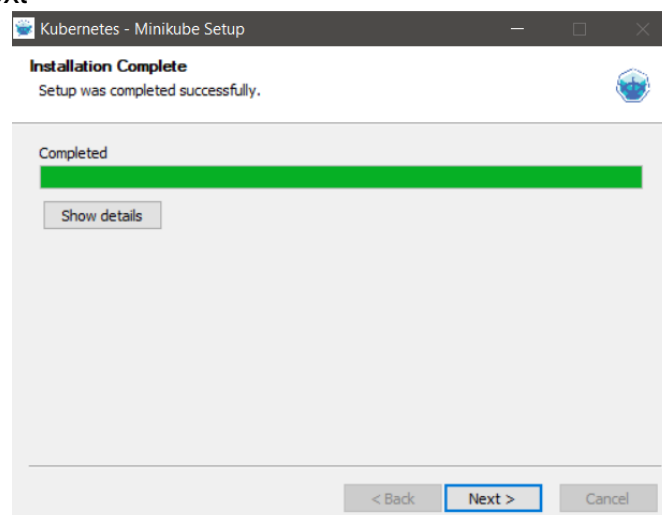


#### Step 5 - Click on Install to begin the installation

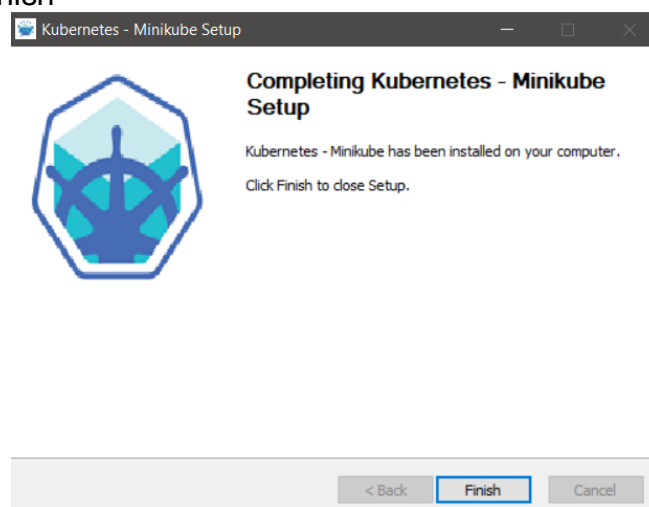




### Step 6 - Click on next



### Step 7 - Click on Finish

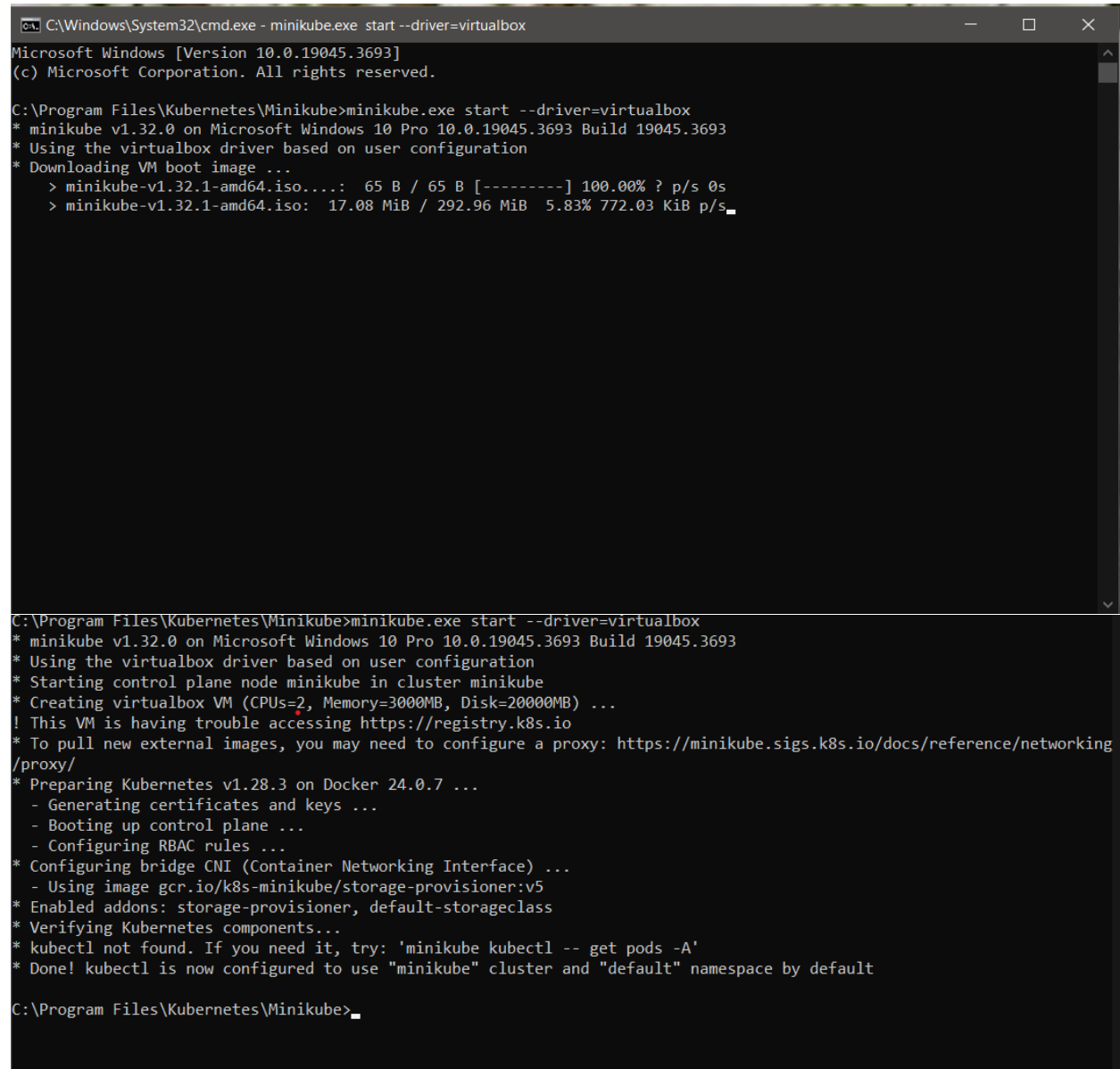


**Step 8 - Go to the same directory** in which minikube is installed & run the following command

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**Command :-** `minikube.exe start --driver=virtualbox`

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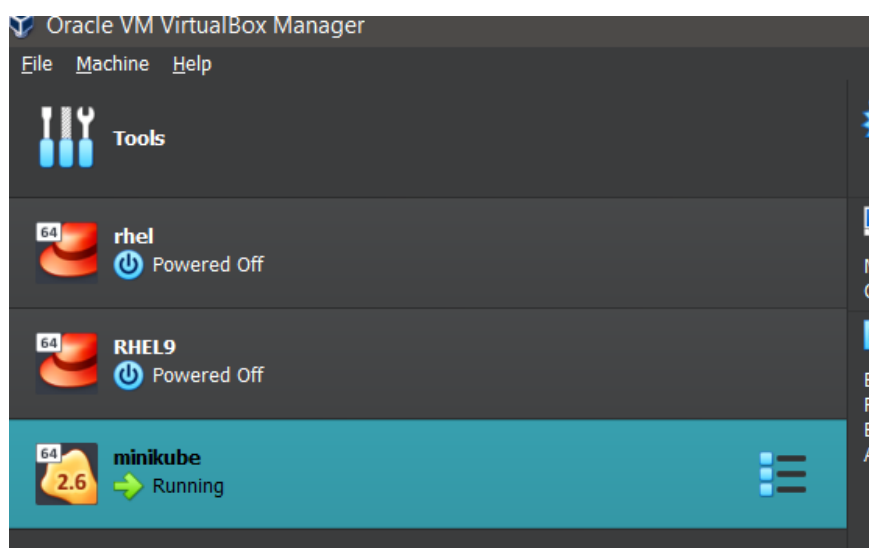
```
C:\Windows\System32\cmd.exe - minikube.exe start --driver=virtualbox
Microsoft Windows [Version 10.0.19045.3693]
(c) Microsoft Corporation. All rights reserved.

C:\Program Files\Kubernetes\Minikube>minikube.exe start --driver=virtualbox
* minikube v1.32.0 on Microsoft Windows 10 Pro 10.0.19045.3693 Build 19045.3693
* Using the virtualbox driver based on user configuration
* Downloading VM boot image ...
  > minikube-v1.32.1-amd64.iso....: 65 B / 65 B [-----] 100.00% ? p/s 0s
  > minikube-v1.32.1-amd64.iso: 17.08 MiB / 292.96 MiB 5.83% 772.03 KiB p/s_

C:\Program Files\Kubernetes\Minikube>minikube.exe start --driver=virtualbox
* minikube v1.32.0 on Microsoft Windows 10 Pro 10.0.19045.3693 Build 19045.3693
* Using the virtualbox driver based on user configuration
* Starting control plane node minikube in cluster minikube
* Creating virtualbox VM (CPUs=2, Memory=3000MB, Disk=20000MB) ...
! This VM is having trouble accessing https://registry.k8s.io
* To pull new external images, you may need to configure a proxy: https://minikube.sigs.k8s.io/docs/reference/networking/proxy/
* Preparing Kubernetes v1.28.3 on Docker 24.0.7 ...
  - Generating certificates and keys ...
  - Booting up control plane ...
  - Configuring RBAC rules ...
* Configuring bridge CNI (Container Networking Interface) ...
  - Using image gcr.io/k8s-minikube/storage-provisioner:v5
* Enabled addons: storage-provisioner, default-storageclass
* Verifying Kubernetes components...
* kubectl not found. If you need it, try: 'minikube kubectl -- get pods -A'
* Done! kubectl is now configured to use "minikube" cluster and "default" namespace by default

C:\Program Files\Kubernetes\Minikube>
```

**Step 9** - Once the above command has run successfully a new Virtual machine with the name minikube will be added to the virtual box



**Step 10** - Installing the kubectl command URL  
( <https://kubernetes.io/docs/tasks/tools/install-kubectl-windows> )

**Command:** -

```
curl.exe -LO "https://dl.k8s.io/release/v1.28.4/bin/windows/amd64/kubectl.exe"
```

```
C:\Program Files\Kubernetes>curl.exe -LO "https://dl.k8s.io/release/v1.28.4/bin/windows/amd64/kubectl.exe"
% Total    % Received % Xferd  Average Speed   Time    Time     Time  Current
           Dload  Upload   Total   Spent    Left   Speed
100 138    100 138    0    0    294      0  --:--:-- --:--:-- --:--:--    297
100 48.2M  100 48.2M    0    0 3372k      0  0:00:14 0:00:14 --:--:-- 3565k

C:\Program Files\Kubernetes>kubectl get pods
No resources found in default namespace.

C:\Program Files\Kubernetes>kubectl cluster-info
Kubernetes control plane is running at https://192.168.59.101:8443
CoreDNS is running at https://192.168.59.101:8443/api/v1/namespaces/kube-system/services/kube-dns:dns/proxy

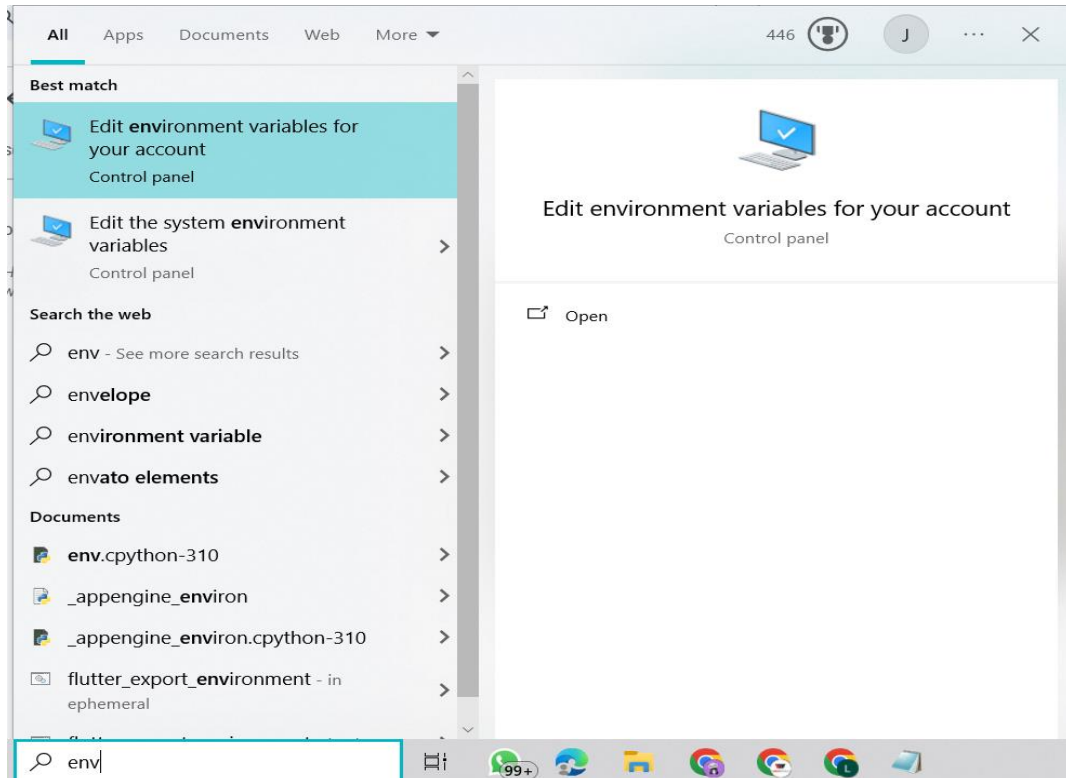
To further debug and diagnose cluster problems, use 'kubectl cluster-info dump'.

C:\Program Files\Kubernetes>kubectl cluster-info
Kubernetes control plane is running at https://192.168.59.101:8443
CoreDNS is running at https://192.168.59.101:8443/api/v1/namespaces/kube-system/services/kube-dns:dns/proxy

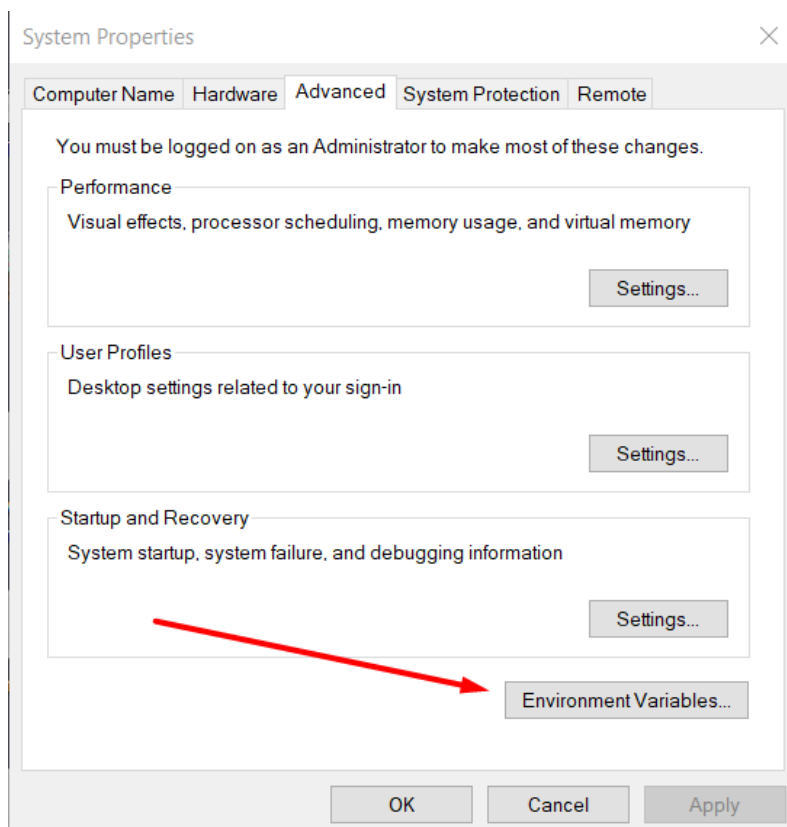
To further debug and diagnose cluster problems, use 'kubectl cluster-info dump'.
```

## Step 11 - Setting env variable for kubectl & Minikube

- Search for ENV in the taskbar

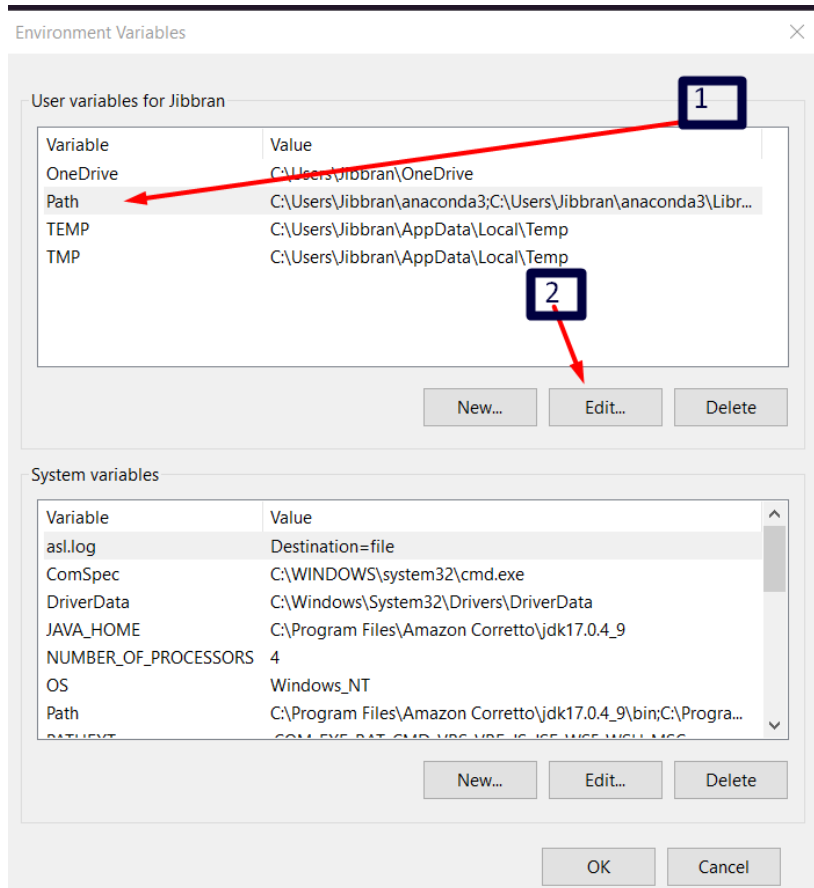


- Click on Environmental Variable

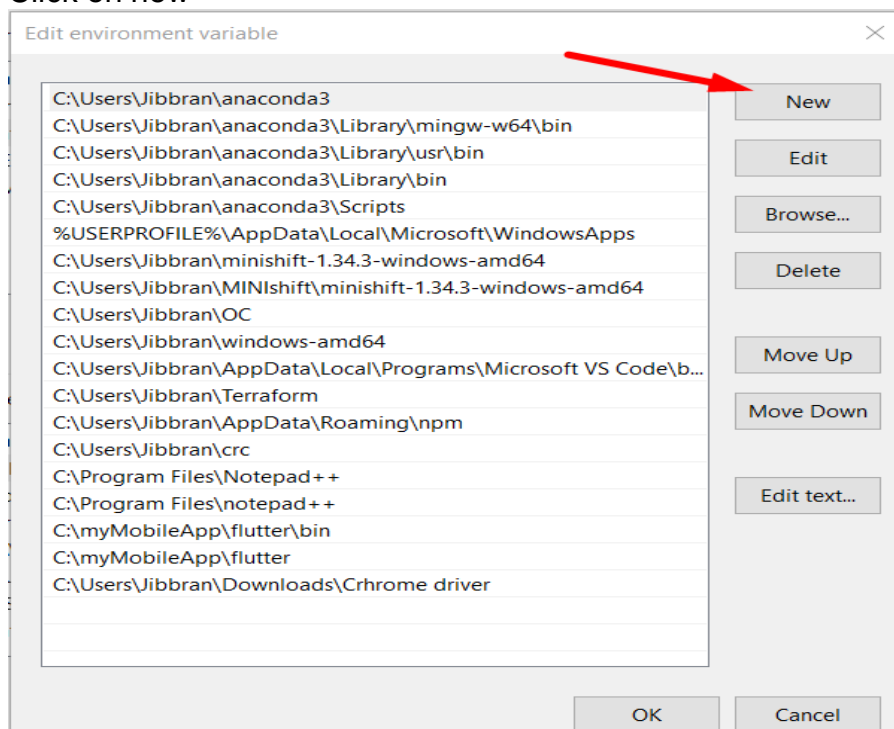




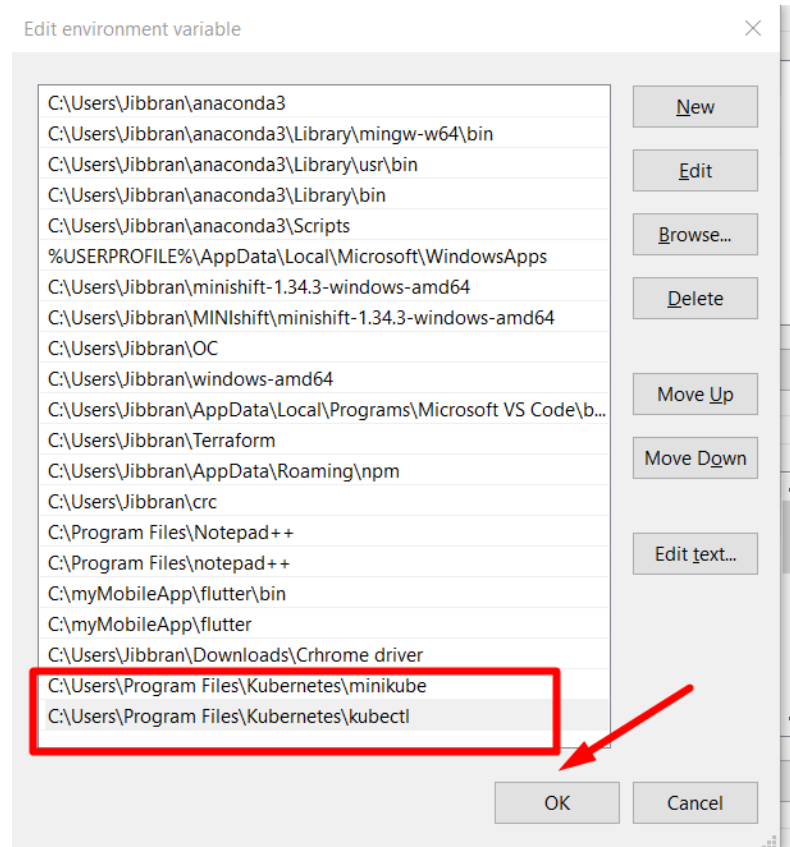
- **Select Path & click on edit**



- **Click on new**



- Enter the path of the folder in which the **minikube & kubectl** command is downloaded



Minikube is Successful Installed