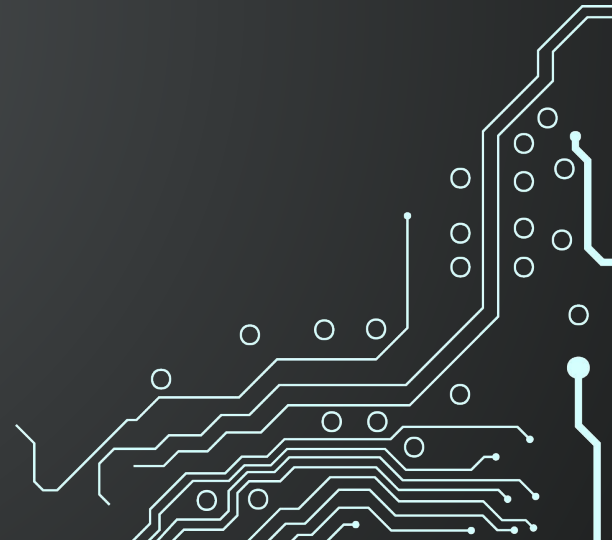
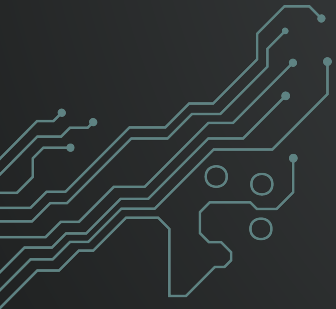
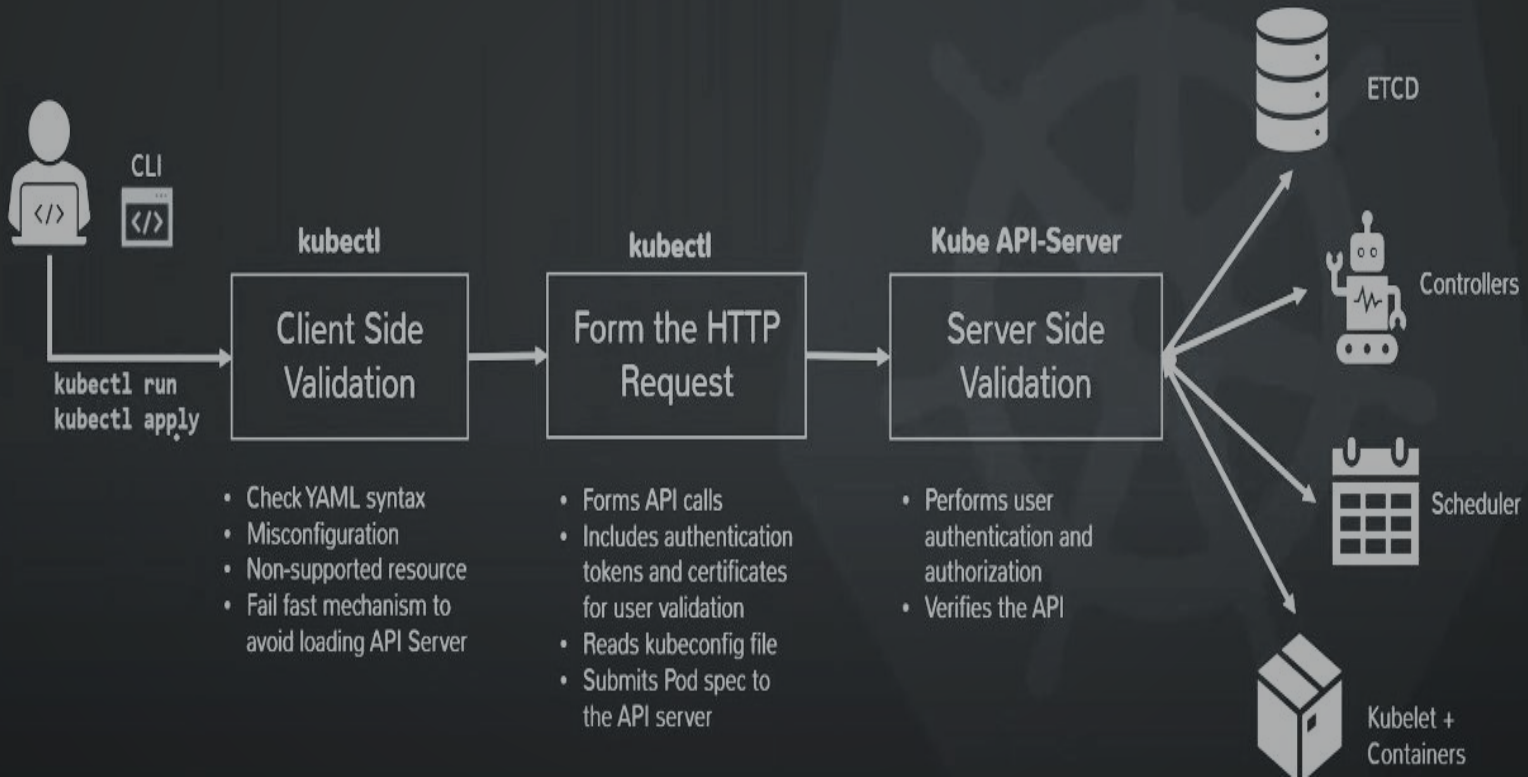


Installing minikube on windows



Kubectl

- kubectl is a command line utility used to communicate with Kubernetes API servers to create, read, update, delete(**CRUD**) workloads within Kubernetes



Kubernetes

Minikube

- **minikube** is local Kubernetes, focusing on making it easy to learn and develop for Kubernetes
 - It creates a single node cluster
 - Available for **Linux, macOS, and Windows**
 - Inbuilt support for **Metallb**, dashboard, storage provisioners etc
 - Master node is untainted
-
- **Prerequisites**
 1. 2 CPUs or more
 2. 2GB of free memory
 3. 20GB of free disk space
 4. Internet connection
 5. Container or virtual machine manager, such as:
Docker, Hyperkit, Hyper-V, KVM, Podman, VirtualBox, or VMWare



Minikube

- Start Minikube Cluster – **minikube start --driver=virtualbox --memory=4096 --cpus=4 --kubernetes-version=v1.20.2**
- Get Minikube IP – **minikube ip**
- Get Minikube Addons – **minikube addons list**
- Enable MetalLB Addon – **minikube addons enable metallb**
(installs some objects under metallb-system namespace)
- Configure MetalLB – **minikube addons configure metallb**
(configure the range of **LoadBalancer** IPs depending on Minikube IP)

```
$ minikube addons configure metallb
-- Enter Load Balancer Start IP: 192.168.99.105
-- Enter Load Balancer End IP: 192.168.99.120
✓ metallb was successfully configured
```

● ● ●

\$ minikube addons list

ADDON NAME	PROFILE	STATUS
ambassador	minikube	disabled
auto-pause	minikube	disabled
csi-hostpath-driver	minikube	disabled
dashboard	minikube	disabled
default-storageclass	minikube	enabled
helm-tiller	minikube	disabled
ingress	minikube	disabled
ingress-dns	minikube	disabled
istio	minikube	disabled
istio-provisioner	minikube	disabled
kubevirt	minikube	disabled
logviewer	minikube	disabled
metallb	minikube	enabled
metrics-server	minikube	disabled
pod-security-policy	minikube	disabled
registry	minikube	disabled
registry-aliases	minikube	disabled
registry-creds	minikube	disabled
storage-provisioner	minikube	enabled

Minikube

- Turn off Windows features Hyper-V, Virtual Machine Platform, and Windows Hypervisor Platform to be able to use VirtualBox
- Unfortunately, removing Virtual Machine Platform means you won't be able to use WSL.

Turn Windows features on or off

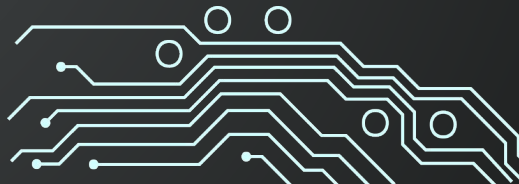
To turn a feature on, select its check box. To turn a feature off, clear its check box. A filled box means that only part of the feature is turned on.

- ☒ .NET Framework 3.5 (includes .NET 2.0 and 3.0)
 - ☒ .NET Framework 4.8 Advanced Services
 - ☒ Internet Explorer 11
 - ☐ Internet Information Services
 - ☐ Internet Information Services Hostable Web Core
 - ☒ Legacy Components
 - ☒ Media Features
 - ☐ Microsoft Message Queue (MSMQ) Server
 - ☒ Microsoft Print to PDF
 - ☒ Microsoft XPS Document Writer
 - ☒ Print and Document Services
 - ☒ Remote Differential Compression API Support
 - ☐ Simple TCP/IP services (i.e. echo, daytime etc)
 - ☐ SMB 1.0/CIFS File Sharing Support
 - ☒ Telnet Client
 - ☐ TFTP Client
 - ☐ Virtual Machine Platform
 - ☐ Windows Hypervisor Platform
 - ☐ Windows Identity Foundation 3.5
 - ☒ Windows PowerShell 2.0
 - ☐ Windows Process Activation Service
 - ☐ Windows Projected File System
- Uncheck these options

Minikube



```
$ minikube start --no-vtx-check --driver=virtualbox
* minikube v1.22.2 on Microsoft Windows 10 Home Single Language 10.0.19043 Build 19043
* Using the virtualbox driver based on user configuration
* Starting control plane node minikube in cluster minikube
* Creating virtualbox VM (CPUs=2, Memory=4000MB, Disk=20000MB) ...
[init] Using Kubernetes version: v1.22.2
[preflight] Running pre-flight checks
[preflight] Pulling images required for setting up a Kubernetes cluster
[preflight] This might take a minute or two, depending on the speed of your internet connection
[preflight] You can also perform this action in beforehand using 'kubeadm config images pull'
* Verifying Kubernetes components...
* Enabled addons: storage-provisioner, default-storageclass
* Done! kubectl is now configured to use "minikube" cluster and "default" namespace by default
```



Minikube

- Multinode Minikube Cluster with a different CNI

```
minikube start -n=4 --cni='calico' --container-runtime='containerd'  
minikube start --driver=virtualbox --memory=4096 --cpus=4 \  
--kubernetes-version=v1.20.2
```

- Enable Dashboard addon

```
minikube addons enable dashboard  
minikube addons enable metrics-server  
minikube dashboard -url
```

- Stop Minikube

```
minikube stop
```

- Delete Minikube cluster

```
minikube delete
```

```
vikram@vikram-digital-twin MINGW64 ~  
$ minikube addons enable dashboard  
- Using image kubernetesui/metrics-scraper:v1.0.7  
- Using image kubernetesui/dashboard:v2.3.1  
* Some dashboard features require the metrics-server addon.  
To enable all features please run:  
  
minikube addons enable metrics-server  
  
* The 'dashboard' addon is enabled  
  
vikram@vikram-digital-twin MINGW64 ~  
$ minikube addons enable metrics-server  
- Using image k8s.gcr.io/metrics-server/metrics-server:v0.4.2  
* The 'metrics-server' addon is enabled
```

Minikube

```
vikram@vikram-digital-twin MINGW64 ~
$ minikube start --driver=virtualbox
* minikube v1.23.2 on Microsoft Windows 10 Home Single Language 10.0.19043 Build 19043
* Kubernetes 1.22.2 is now available. If you would like to upgrade, specify: --kubernetes-version=v1.22.2
* Using the virtualbox driver based on existing profile
* Starting control plane node minikube in cluster minikube
* Creating virtualbox VM (CPUs=2, Memory=6166MB, Disk=20000MB) ...
! StartHost failed, but will try again: creating host: create: precreate: This computer doesn't have VT-X/AMD-v enabled. Enabling it in the BIOS is mandatory
* Creating virtualbox VM (CPUs=2, Memory=6166MB, Disk=20000MB) ...
* Failed to start virtualbox VM. Running "minikube delete" may fix it: creating host: create: precreate: This computer doesn't have VT-X/AMD-v enabled. Enabling it in the BIOS is mandatory

X Exiting due to HOST_VIRT_UNAVAILABLE: Failed to start host: creating host: create: precreate: This computer doesn't have VT-X/AMD-v enabled. Enabling it in the BIOS is mandatory
* Suggestion: Virtualization support is disabled on your computer. If you are running minikube within a VM, try '--driver=docker'. Otherwise, consult your operating system's BIOS manual for how to enable virtualization.
* Related issues:
  - https://github.com/kubernetes/minikube/issues/3900
  - https://github.com/kubernetes/minikube/issues/4730
```

- Enable VT-X/AMD-V
- Disable vtx check – `minikube start --no-vtx-check`

- Install on Windows using Chocolatey, Scoop, or winget

Search this site

► Documentation

► Getting started

► Concepts

▼ Tasks

▼ Install Tools

Install and Set
Up kubectl on
Linux

Install and Set
Up kubectl on
macOS

**Install and Set
Up kubectl on
Windows**

Install kubectl binary with curl on Windows ↗

1. Download the latest 1.28 patch release: `kubectl 1.28.3`.

Or if you have `curl` installed, use this command:

```
curl.exe -LO "https://dl.k8s.io/release/v1.28.3/bin/wi
```

Note: To find out the latest stable version (for example, for scripting), take a look at <https://dl.k8s.io/release/stable.txt>.

2. Validate the binary (optional)

Download the `kubectl` checksum file:

✎ Edit this page

✎ Create child page

🗨 Create an issue

🖨 Print entire section

Before you begin

Install kubectl on Windows

Install kubectl binary with curl on
Windows

Install on Windows using
Chocolatey, Scoop, or winget

Verify kubectl configuration

Optional kubectl configurations and
plugins

Enable shell autocompletion

Install kubectl plugins



Welcome to Kubernetes - Minikube Setup

Setup will guide you through the installation of Kubernetes - Minikube.

It is recommended that you close all other applications before starting Setup. This will make it possible to update relevant system files without having to reboot your computer.

Click Next to continue.

Next >

Cancel



Choose Install Location

Choose the folder in which to install Kubernetes - Minikube.



Setup will install Kubernetes - Minikube in the following folder. To install in a different folder, click Browse and select another folder. Click Install to start the installation.

Destination Folder

C:\Program Files\Kubernetes\Minikube

Browse...

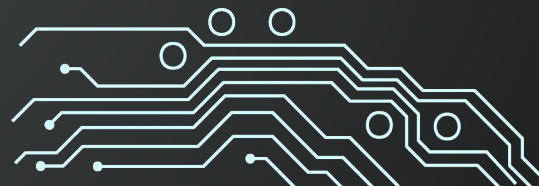
Space required: 82.6 MB

Space available: 7.6 GB

< Back

Install

Cancel

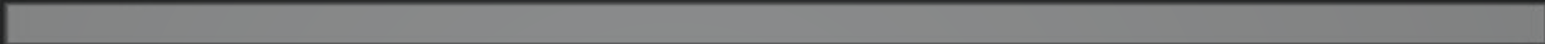


Installation Complete

Setup was completed successfully.



Completed



Show details

< Back

Next >

Cancel

Installing Kubectl command binary in windows

Install kubectl on Windows

The following methods exist for installing kubectl on Windows:

- Install kubectl binary with curl on Windows
- Install on Windows using Chocolatey, Scoop, or winget

Install kubectl binary with curl on Windows

1. Download the latest release v1.26.0.

Or if you have `curl` installed, use this command:

```
curl.exe -LO "https://dl.k8s.io/release/v1.26.0/bin/windows/amd64/kubectl.exe"
```

Note: To find out the latest stable version (for example, for scripting), take a look at <https://dl.k8s.io/release/stable.txt>.

2. Validate the binary (optional)

- Edit this page
- Create child page
- Create an issue
- Print entire section

Before you begin

Install kubectl on Windows

Install kubectl binary with Windows

Install on Windows using Chocolatey, Scoop, or winget

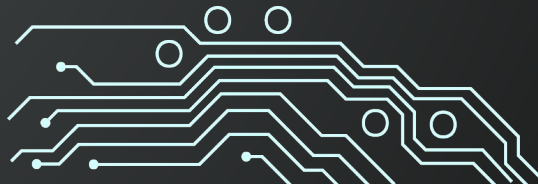
Verify kubectl configuration

Optional kubectl configuration and plugins


Enable shell autocompletion

Install kubectl convert plugin

What's next




Creating a folder called mytools in Cdrive


	Intel	10/14/2023 2:10 PM	File folder
<input checked="" type="checkbox"/>	mytools	11/4/2023 4:38 PM	File folder

Paste kubectl binary on this folder

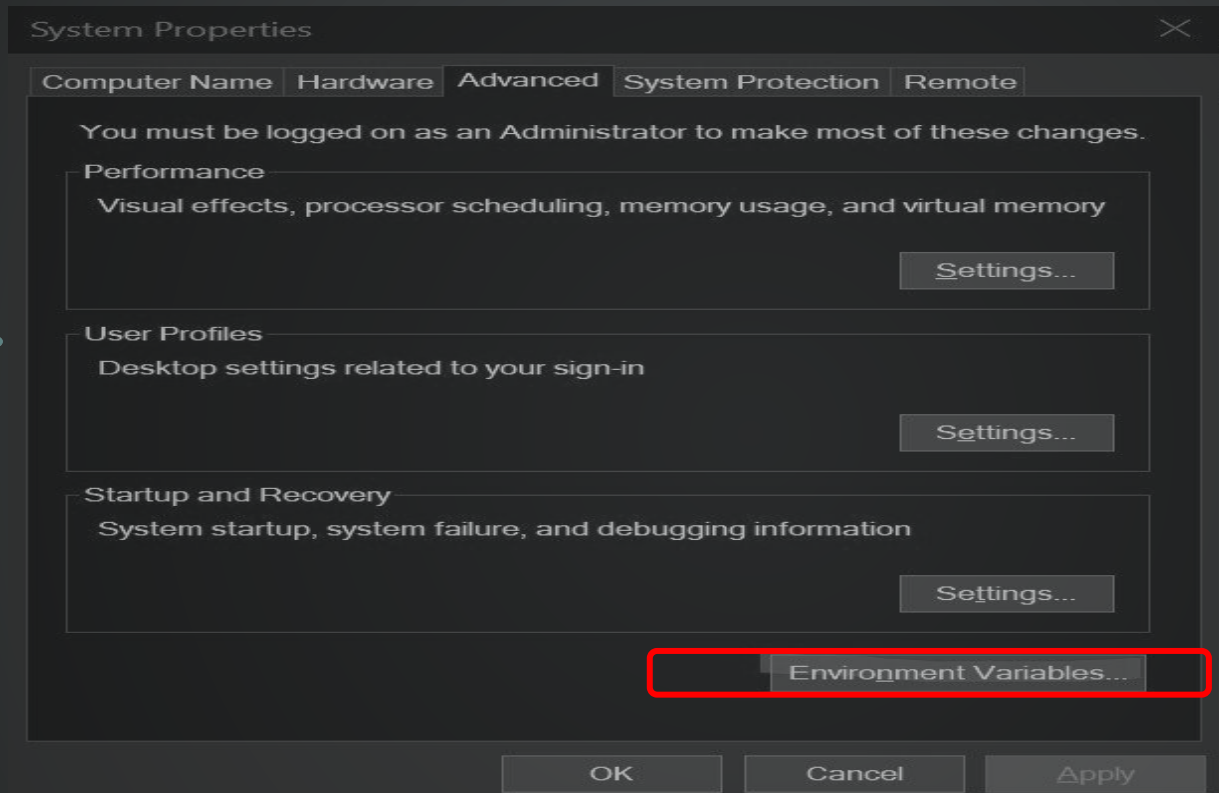
This PC > Local Disk (C:) > mytools

<input type="checkbox"/> Name	Date modified	Type	Size
 kubectl	11/4/2023 4:37 PM	Application	49,407 KB

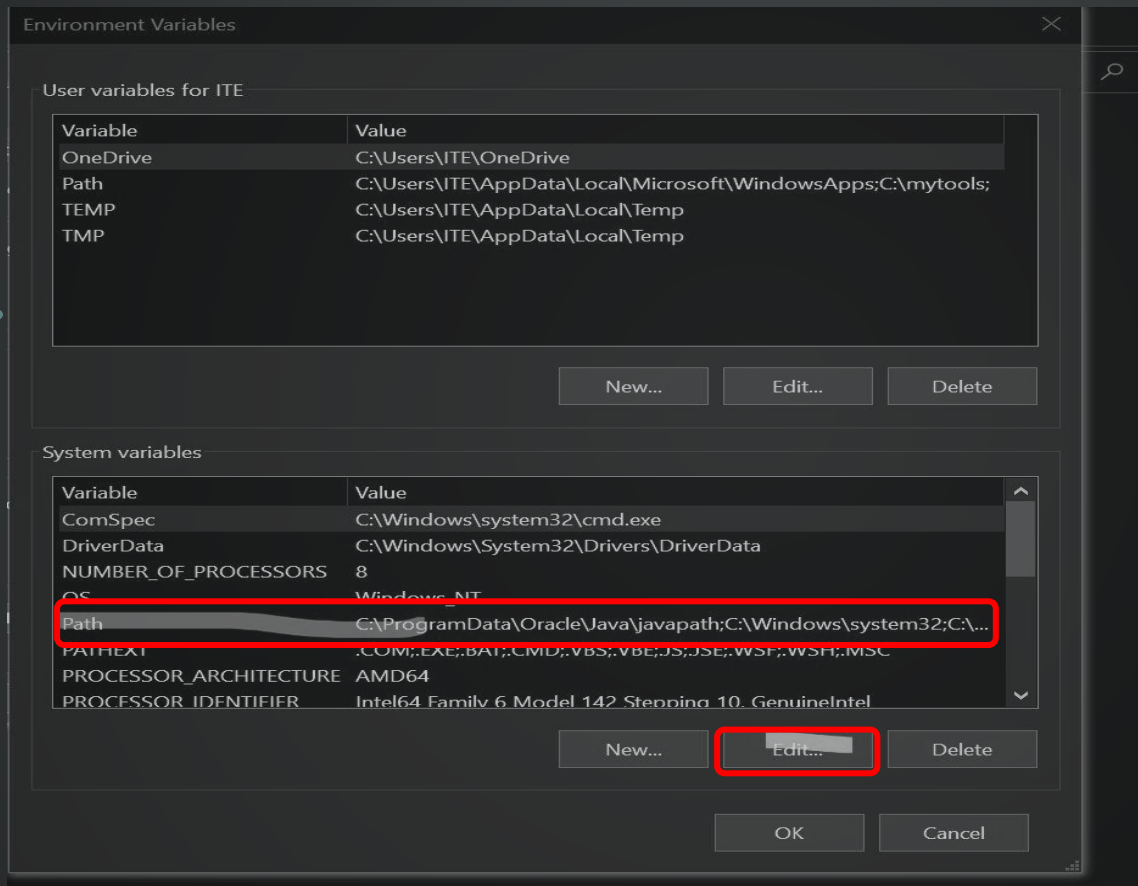
Copy kubectl binary path

This PC > Local Disk (C:) > mytools			
<input type="checkbox"/> Name	Date modified	Type	
 kubectl	11/4/2023 4:37 PM	Application	

Setting up environmental variable in windows



Click on Path and then Edit variable



Edit environment variable



C:\ProgramData\Oracle\Java\javapath
C:\Windows\system32
C:\Windows
C:\Windows\System32\Wbem
C:\Windows\System32\WindowsPowerShell\v1.0\
C:\Windows\System32\OpenSSH\
C:\Program Files\Intel\WiFi\bin\
C:\Program Files\Common Files\Intel\WirelessCommon\
C:\Program Files\Kubernetes\Minikube
C:\mytools

New

Edit

Browse...

Delete

Move Up

Move Down

Edit text...

OK

Cancel

cmd Command Prompt - minikube start --driver=virtualbox --memory=4096 --cpus=2

Microsoft Windows [Version 10.0.19045.3570]
(c) Microsoft Corporation. All rights reserved.

C:\Users\ITE>kubctl version
'kubctl' is not recognized as an internal or external command,
operable program or batch file.

C:\Users\ITE>kubect1 version

Client Version: v1.28.3

Kustomize Version: v5.0.4-0.20230601165947-6ce0bf390ce3

Unable to connect to the server: dial tcp [::1]:8080: connectex: No connection could be made because the target machine actively refused it.

C:\Users\ITE>minikube start --driver=virtualbox --memory=4096 --cpus=2

* minikube v1.31.2 on Microsoft Windows 10 Home 10.0.19045.3570 Build 19045.3570

* Using the virtualbox driver based on user configuration

* Downloading VM boot image ...

E1104 16:44:14.085729 16660 iso.go:90] Unable to download https://storage.googleapis.com/minikube-builds/iso/16971/minikube-v1.31.0-amd64.iso: getter: &{Ctx:context.Background Src:https://storage.googleapis.com/minikube-builds/iso/16971/minikube-v1.31.0-amd64.iso?checksum=file:https://storage.googleapis.com/minikube-builds/iso/16971/minikube-v1.31.0-amd64.iso.sha256 Dst:C:\Users\ITE\.minikube\cache\iso\amd64\minikube-v1.31.0-amd64.iso.download Pwd: Mode:2 Umask:----- Detectores:[0x45ff5e8 0x45ff5e8 0x45ff5e8 0x45ff5e8 0x45ff5e8 0x45ff5e8 0x45ff5e8 0x45ff5e8] Decompressors:map[bz2:0xc000711f88 gz:0xc000711fe0 tar:0xc000711f90 tar.bz2:0xc000711fa0 tar.gz:0xc000711fb0 tar.xz:0xc000711fc0 tar.zst:0xc000711fd0 tbz2:0xc000711fa0 tgz:0xc000711fb0 txz:0xc000711fc0 tzst:0xc000711fd0 xz:0xc000711fe8 zip:0xc000711ff0 zst:0xc0003c8070] Getters:map[file:0xc0006520a0 http:0xc000f80000 https:0xc000f80050] Dir:false ProgressListener:0x4593370 Insecure:false DisableSymlinks:false Options:[0x1911520]}: invalid checksum: Error downloading checksum file: bad response code: 404

* Downloading VM boot image ...

> minikube-v1.31.0-amd64.iso....: 65 B / 65 B [-----] 100.00% ? p/s 0s

> minikube-v1.31.0-amd64.iso: 33.63 MiB / 289.20 MiB 11.63% 4.79 MiB p/s