

Kubernetes Installation

19 November 2025 10:58

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Never outgrow
Whether testing locally or running a global enterprise, Kubernetes flexibility grows with you to deliver your applications consistently and easily no matter how complex your need is.



Run K8s anywhere
Kubernetes is open source giving you the freedom to take advantage of on-premises, hybrid infrastructure, letting you effortlessly move workloads to where it matters to you.
To download Kubernetes, visit the [download](#) section.

`kubectl` reference documentation.

`kubectl` is installable on a variety of Linux platforms, macOS and Windows. Find your preferred operating system below.

- [Install kubectl on Linux](#)
- [Install kubectl on macOS](#)
- [Install kubectl on Windows](#)

unforeseen issues.

Configure kubectl
[Install kubectl convert plug](#)
What's next

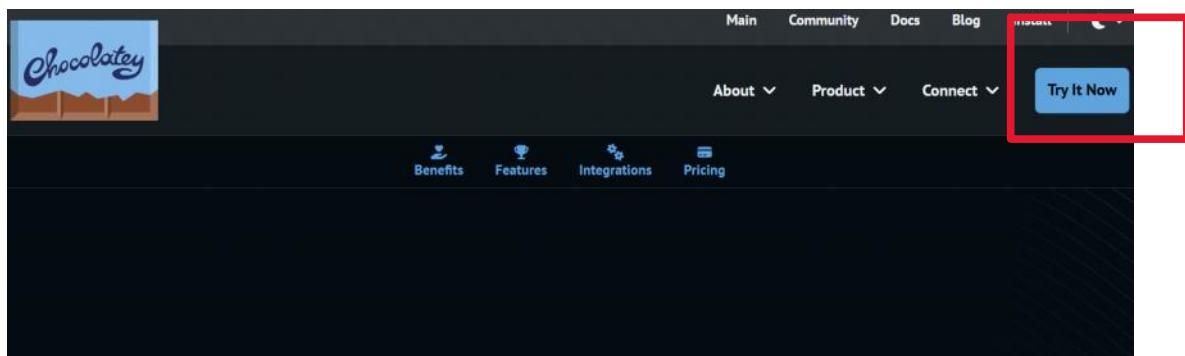
Install kubectl on Windows

The following methods exist for installing kubectl on Windows:

- [Install kubectl binary on Windows \(via direct download or curl\)](#)
- [Install on Windows using Chocolatey, Scoop, or Winget](#)

Install kubectl binary on Windows (via direct download or curl)

1. You have two options for installing kubectl on your Windows device
 - Direct download:



NOTE

Please inspect <https://community.chocolatey.org/install.ps1> prior to running any of these scripts to ensure safety. We already know it's safe, but you should verify the security and contents of *any* script from the internet you are not familiar with. All of these scripts download a remote PowerShell script and execute it on your machine. We take security very seriously. [Learn more about our security protocols.](#)

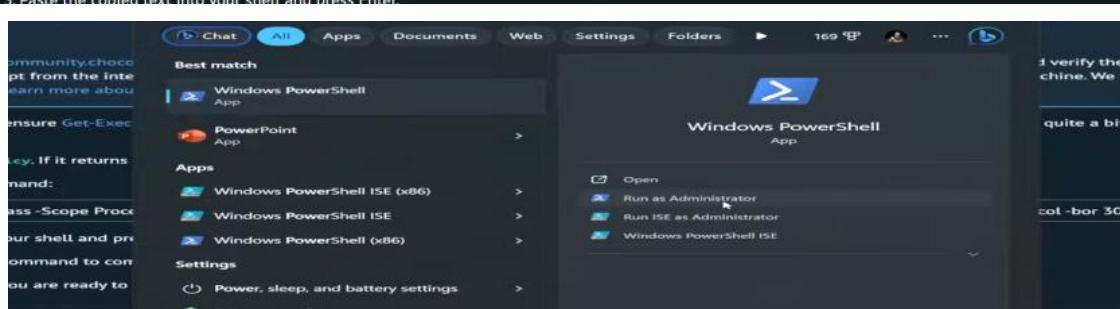
With PowerShell, you must ensure `Get-ExecutionPolicy` is not Restricted. We suggest using `Bypass` to bypass the policy to get things installed or `AllSigned` for quite a bit more security.

- Run `Get-ExecutionPolicy`. If it returns `Restricted`, then run `Set-ExecutionPolicy AllSigned` OR `Set-ExecutionPolicy Bypass -Scope Process`.

Now run the following command:

```
> Set-ExecutionPolicy Bypass -Scope Process -Force; [System.Net.ServicePointManager]::SecurityProtocol = [System.Net.ServicePointManager]
```

3. Paste the copied text into your shell and press Enter.



```
Install the latest PowerShell for new features and improvements! https://aka.ms/PSWindows
PS C:\WINDOWS\system32> Set-ExecutionPolicy Bypass -Scope Process -Force; [System.Net.ServicePointManager]::SecurityProtocol = [System.Net.ServicePointManager]::SecurityProtocol -bor 3072; iex ((New-Object System.Net.WebClient).DownloadString('https://community.chocolatey.org/install.ps1'))
WARNING: 'choco' was found at 'C:\ProgramData\chocolatey\bin\choco.exe'.
WARNING: An existing Chocolatey installation was detected. Installation will not continue. This script will not
overwrite existing installations.
If there is no Chocolatey installation at 'C:\ProgramData\chocolatey', delete the folder and attempt the installation
again.

Please use choco upgrade chocolatey to handle upgrades of Chocolatey itself.
If the existing installation is not functional or a prior installation did not complete, follow these steps:
- Backup the files at the path listed above so you can restore your previous installation if needed.
- Remove the existing installation manually.
- Rerun this installation script.
- Reinstall any packages previously installed, if needed (refer to the lib folder in the backup).

Once installation is completed, the backup folder is no longer needed and can be deleted.
PS C:\WINDOWS\system32>
```

Install on Windows using Chocolatey, Scoop, or winget

- To install kubectl on Windows you can use either Chocolatey package manager, Scoop command-line installer, or winget package manager.



- Test to ensure the version you installed is up-to-date:

```
:> Windows\System32>choco install kubernetes-cli
chocolatey v2.2.2
kubernetes-cli
By installing, you accept licenses for the packages.
Progress: Downloading kubernetes-cli 1.28.2... 100%
kubernetes-cli v1.28.2 [Approved]
kubernetes-cli package files install completed. Performing other installation steps.
The package kubernetes-cli wants to run 'chocolateyInstall.ps1'.
Note: If you don't run this script, the installation will fail.
Note: To confirm automatically next time, use '-y' or consider:
choco feature enable -n allowGlobalConfirmation
```

```
C:\Windows\System32>choco install kubernetes-cli  
Chocolatey v2.2.2  
  
kubernetes-cli  
By installing, you accept licenses for the packages.  
Progress: Downloading kubernetes-cli 1.28.2... 100%  
  
kubernetes-cli v1.28.2 [Approved]  
kubernetes-cli package files install completed. Performing other installation steps.  
The package kubernetes-cli wants to run 'chocolateyInstall.ps1'.  
Note: If you don't run this script, the installation will fail.  
Note: To confirm automatically next time, use '-y' or consider:  
choco feature enable -n allowGlobalConfirmation  
Do you want to run the script?([Y]es/[A]ll - yes to all/[N)o/[P]rint):
```

```
C:\Users\DELL>kubectl version --client  
Client Version: v1.32.2  
Kustomize Version: v5.5.0  
C:\Users\DELL>
```

What's next

- [Install Minikube](#)
- See the [getting started guides](#) for more about creating clusters.
- [Learn how to launch and expose your application.](#)
- If you need access to a cluster you didn't create, see the [Sharing Cluster Access document](#).
- Read the [kubectl reference docs](#)

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

Linux

macOS

Windows

Architecture

x86-64

Release type

Stable

Installer type

.exe download

Windows Package Manager

Chocolatey

To install the latest minikube **stable** release on **x86-64 Windows** using **Chocolatey**.

If the [Chocolatey Package Manager](#) is installed, use the following command:

```
choco install minikube
```

```
C:\Windows\System32>choco install minikube  
Chocolatey v2.5.1  
Installing the following packages:  
  
By installing, you accept licenses for the packages.  
Minikube v1.37.0 already installed.  
Use --force to reinstall, specify a version to install, or try upgrade.  
  
Chocolatey installed 0/1 packages.  
See the log for details (C:\ProgramData\chocolatey\logs\chocolatey.log).  
  
Warnings:  
- Minikube - Minikube v1.37.0 already installed.  
Use --force to reinstall, specify a version to install, or try upgrade.  
C:\Windows\System32>  
C:\Windows\System32>
```

2 Start your cluster

From a terminal with administrator access (but not logged in as root), run:

```
minikube start
```

If minikube fails to start, see the [drivers page](#) for help setting up a compatible container or virtual-machine manager.

3 Interact with your cluster

```
C:\Windows\System32>minikube start
  minikube v1.37.0 on Microsoft Windows 10 Pro 10.0.26200.17171 Build 26200.17171
* Using the docker driver based on existing profile
* Starting "minikube" primary control-plane node in "minikube" cluster
* Pulling base image v0.0.48 ...
* Restarting existing docker container for "minikube" ...
! Failing to connect to https://registry.k8s.io/ from inside the minikube container
* To pull new external images, you may need to configure a proxy: https://minikube.sigs.k8s.io/docs/reference/ne
/proxy/
* Preparing Kubernetes v1.34.0 on Docker 28.4.0 ...
* Verifying Kubernetes components...
- Using image docker.io/kubernetesui/metrics-scraper:v1.0.8
- Using image docker.io/kubernetesui/dashboard:v2.7.0
- Using image gcr.io/k8s-minikube/storage-provisioner:v5
* Some dashboard features require the metrics-server addon. To enable all features please run:

    minikube addons enable metrics-server

* Enabled addons: storage-provisioner, default-storageclass, dashboard

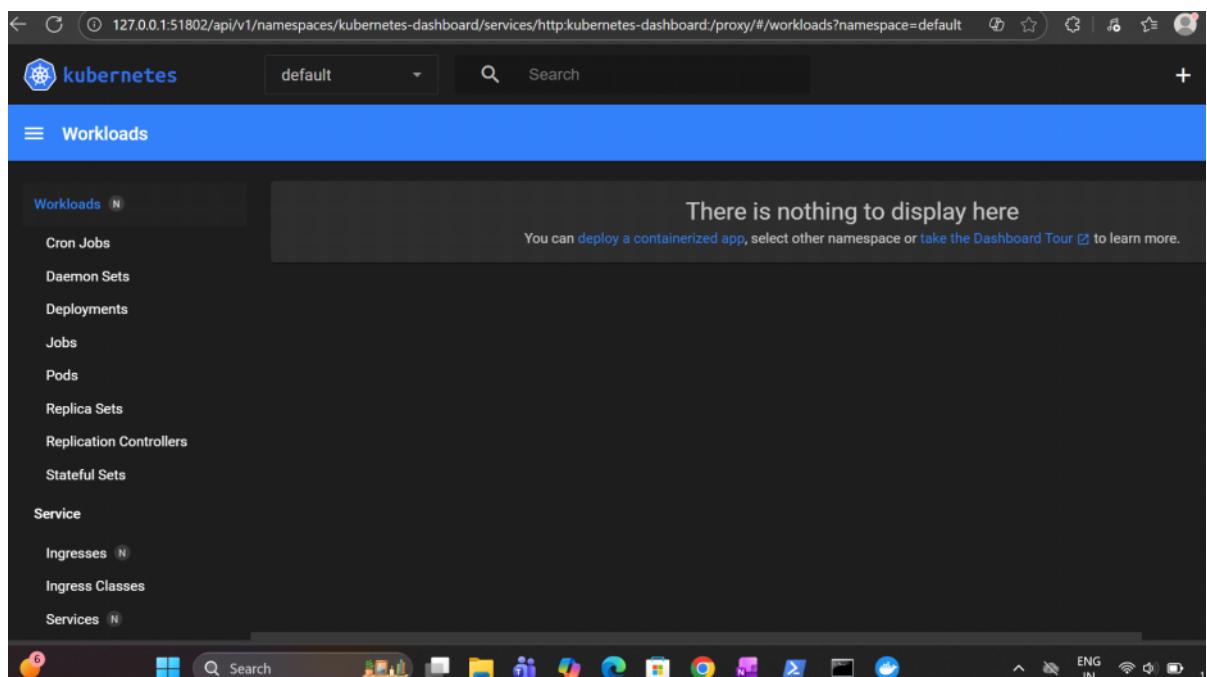
! C:\Program Files\Docker\Docker\resources\bin\kubectl.exe is version 1.32.2, which may have incompatibilities w
nernetes 1.34.0.
- Want kubectl v1.34.0? Try 'minikube kubectl -- get pods -A'

ub* Done! kubectl is now configured to use "minikube" cluster and "default" namespace by default
```

```
C:\Windows\System32>docker ps
CONTAINER ID        IMAGE               COMMAND             CREATED            STATUS              PORTS
 NAMES
3b39b30f6977        gcr.io/k8s-minikube/kicbase:v0.0.48   "/usr/local/bin/entr..."   4 weeks ago        Up About a minute
1:55298->22/tcp, 127.0.0.1:55300->2376/tcp, 127.0.0.1:55296->5000/tcp, 127.0.0.1:55299->8443/tcp, 127.0.0.1:55297->32443
/tcp      minikube
```

```
C:\Windows\System32>docker ps
CONTAINER ID        IMAGE               COMMAND             CREATED            STATUS              PORTS
 NAMES
3b39b30f6977        gcr.io/k8s-minikube/kicbase:v0.0.48   "/usr/local/bin/entr..."   4 weeks ago        Up About a minute    127.0.0.1:55298->22/tcp, 127.0.0.1:55300->2376/tcp, 127.0.0.1:55296->5000/tcp, 127.0.0.1:55299->8443/tcp, 127.0.0.1:55297->32443
/tcp      minikube

C:\Windows\System32>minikube dashboard
* Launching proxy ...
* Verifying proxy health ...
* Opening http://127.0.0.1:51802/api/v1/namespaces/kubernetes-dashboard/services/http:kubernetes-dashboard:/proxy/ in yo
ur default browser...
```



```
C:\Windows\System32>minikube status  
minikube  
type: Control Plane  
host: Running  
kubelet: Running  
apiserver: Running  
kubeconfig: Configured
```

```
Microsoft Windows [Version 10.0.2020.7172]
(c) Microsoft Corporation. All rights reserved.

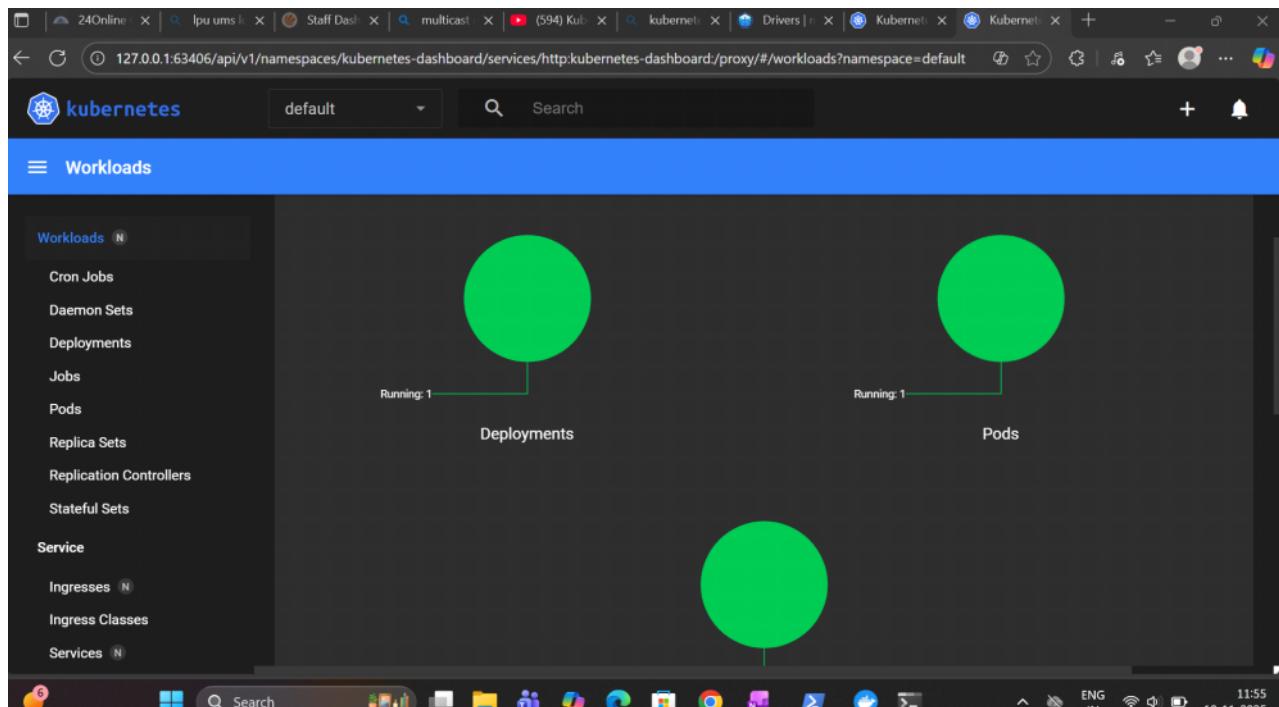
C:\Users\DELL>kubectl get services
NAME          TYPE        CLUSTER-IP   EXTERNAL-IP   PORT(S)    AGE
kubernetes    ClusterIP  10.96.0.1   <none>       443/TCP   27d

C:\Users\DELL>kubectl create deployment my-nginx --image=nginx
deployment.apps/my-nginx created

C:\Users\DELL>kubectl get deployments
NAME        READY   UP-TO-DATE   AVAILABLE   AGE
my-nginx   0/1     1           0           13s

C:\Users\DELL>kubectl get pods
NAME          READY   STATUS    RESTARTS   AGE
my-nginx-54fc6798c5-s56t2   1/1     Running   0          54s

C:\Users\DELL>minikube dashboard
* Verifying dashboard health ...
* Launching proxy ...
* Verifying proxy health ...
* Opening http://127.0.0.1:63406/api/v1/namespaces/kubernetes-dashboard/services/http:kubernetes-dashboard:/proxy/ in your default browser...
```



```
C:\Users\DELL>kubectl expose deployment my-nginx --port=80 --type=LoadBalancer  
service/my-nginx exposed  
  
C:\Users\DELL>kubectl get services  
NAME           TYPE        CLUSTER-IP   EXTERNAL-IP     PORT(S)          AGE  
kubernetes     ClusterIP   10.96.0.1    <none>         443/TCP        28d  
my-nginx       LoadBalancer 10.107.159.46 <pending>      80:30698/TCP   23s  
  
C:\Users\DELL>minikube service my-nginx  


| NAMESPACE | NAME     | TARGET PORT | URL                       |
|-----------|----------|-------------|---------------------------|
| default   | my-nginx | 80          | http://192.168.49.2:30698 |

  
* Starting tunnel for service my-nginx./  


| NAMESPACE | NAME     | TARGET PORT | URL                    |
|-----------|----------|-------------|------------------------|
| default   | my-nginx |             | http://127.0.0.1:58619 |

  
* Starting tunnel for service my-nginx.  
* Opening service default/my-nginx in default browser...  
! Because you are using a Docker driver on windows, the terminal needs to be open to run it.
```



Kubernetes Basics Modules

