**Kubernetes**
<https://kubernetes.io>

Kubernetes

Kubernetes is an open source container management system for automating deployment, scaling, and management of containerized applications. It groups containers that make up an ...

Documentation

Kubernetes is an open source container ...

Kubernetes Blog

Introducing Headlamp Plugin for ...

Training

Build your cloud native career Kubernetes ...

Partners

Kubernetes works with partners to create ...

[See results only from kubernetes.io](#)

Community


The Kubernetes community – users, ...

Case Studies

Kubernetes User Case Studies Case ...

Versions


Release History The Kubernetes project ...

**kubernetes**

[Documentation](#) [Kubernetes Blog](#) [Training](#) [Careers](#) [Partners](#) [Commu](#)

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.

[kubect1 reference documentation.](#)

kubect1 is installable on a variety of Linux platforms, macOS and Windows. Find your preferred operating system below.

- [Install kubect1 on Linux](#)
- [Install kubect1 on macOS](#)
- [Install kubect1 on Windows](#)

unforeseen issues.

[Configure kubect1](#)

[Install kubect1 convert plug](#)

[What's next](#)

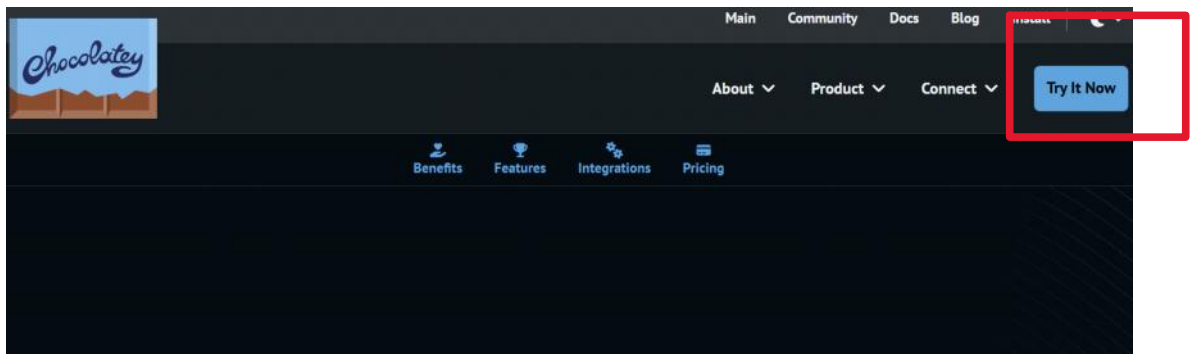
Install kubect1 on Windows

The following methods exist for installing kubect1 on Windows:

- [Install kubect1 binary on Windows \(via direct download or curl\)](#)
- [Install on Windows using Chocolatey, Scoop, or Winget](#)

Install kubect1 binary on Windows (via direct download or curl)

- You have two options for installing kubect1 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](#).

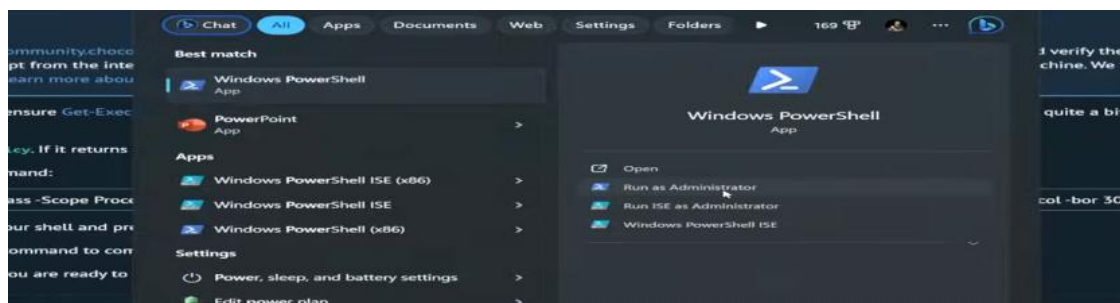
With PowerShell, you must ensure [Get-ExecutionPolicy](#) is not Restricted. We suggest using `Bypass` to bypass the policy to get things installed or `AllSigned` for quite a bit more security.

- 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]::SecurityProtocol -bor 3072; iex ((New-Object System.Net.WebClient).DownloadString('https://community.chocolatey.org/install.ps1'))
```

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

1. To install kubectl on Windows you can use either [Chocolatey](#) package manager, [Scoop](#) command-line installer, or [winget](#) package manager.



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

```
C:\Windows\System32>choco install kubernetes-cli
chocolatey v2.2.2
Installing kubernetes-cli v1.28.2
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
Installing the following packages:
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
Customize 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:
minikube
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 v1.34.0 on Microsoft Windows 11 Pro 10.0.22H2.7171 Build 22H2.7171
* 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/networking/proxy/
* Preparing Kubernetes v1.34.0 on Docker 28.4.0 ...
* Verifying Kubernetes components ...
  - Using image docker.io/kubernetescni/metrics-scraper:v1.0.8
  - Using image docker.io/kubernetescni/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 with
Kubernetes v1.34.0.
  - Want kubectl v1.34.0? Try 'minikube kubectl -- get pods -A'
* Done! kubectl is now configured to use "minikube" cluster and "default" namespace by default
```

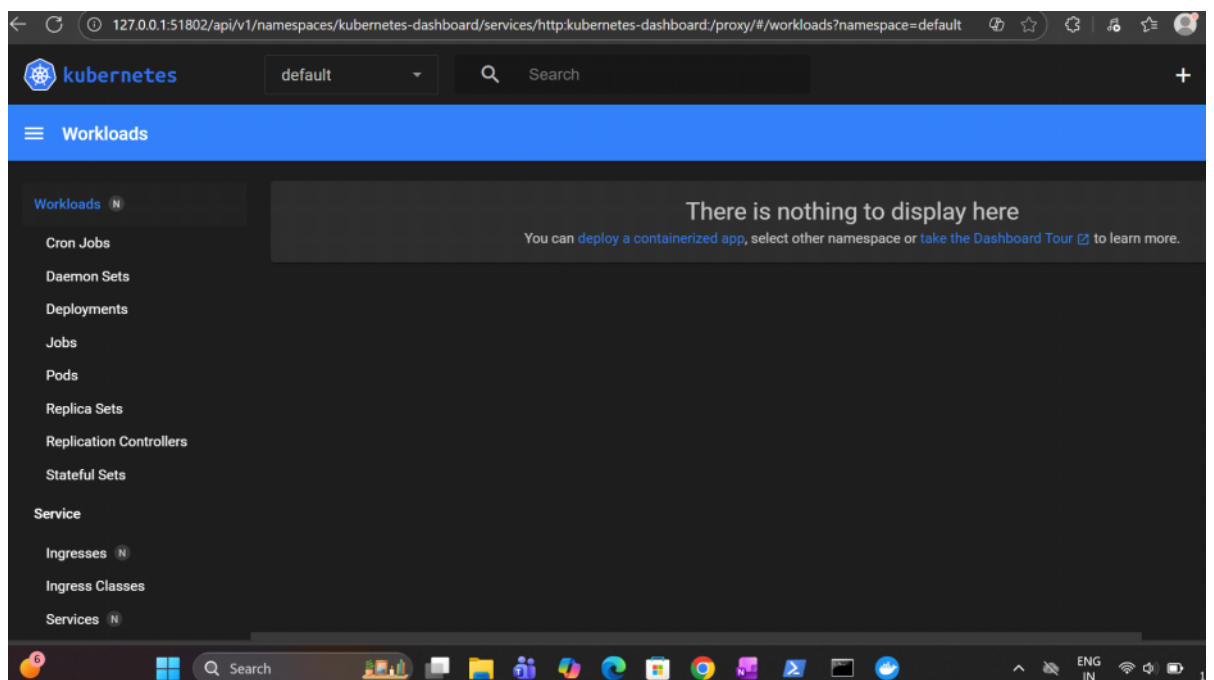
```
C:\Windows\System32>docker ps
```

CONTAINER ID	IMAGE	COMMAND	CREATED	STATUS
3b39b30f6977	gcr.io/k8s-minikube/kicbase:v0.0.48	"/usr/local/bin/entr..."	4 weeks ago	Up About a minute

```
C:\Windows\System32>docker ps
```

CONTAINER ID	IMAGE	COMMAND	CREATED	STATUS	PORTS
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

```
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 your default browser...
```



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

```
Microsoft Windows [Version 10.0.18260.1171]
(c) Microsoft Corporation. All rights reserved.

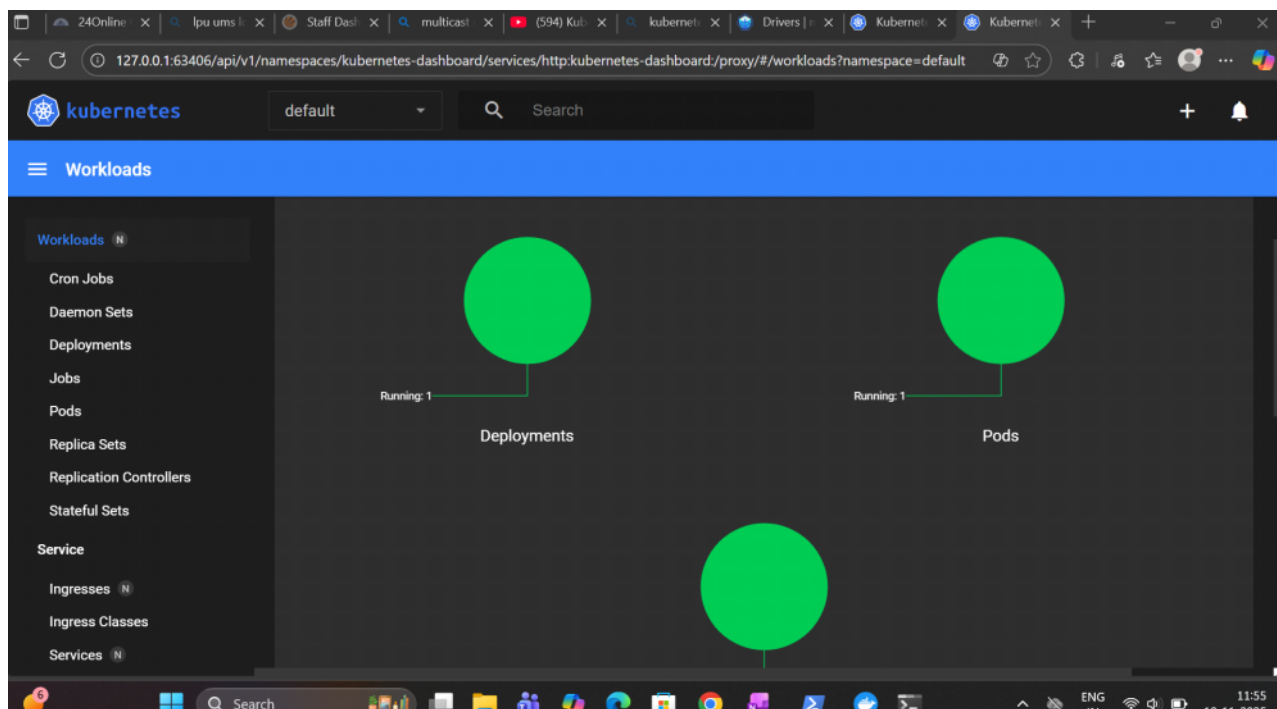
C:\Users\DELL>kubectl get services
NAME      TYPE      CLUSTER-IP    EXTERNAL-IP    PORT(S)    AGE
kubernetes ClusterIP  10.96.0.1      <none>         443/TCP    27d

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

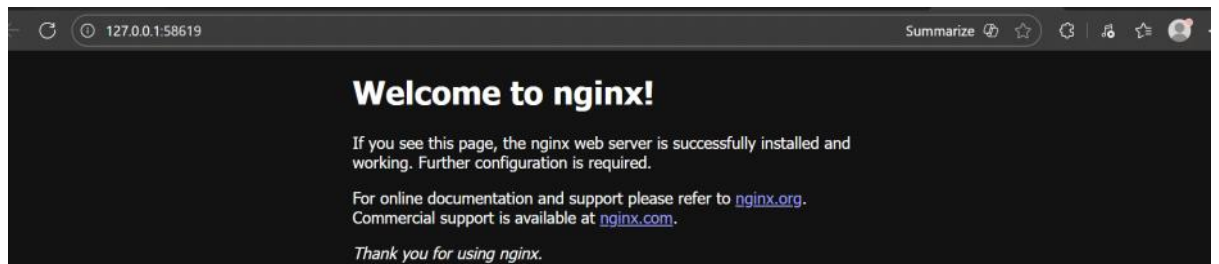
C:\Users\DELL>minikube dashboard
* Verifying dashboard health ...
* Launching proxy ...
* Verifying proxy health ...
* Opening http://127.0.0.1:63406/api/v1/namespaces/kubernetes-dashboard/services/http:kubernetes-dashboard:/proxy/ in yo
ur default browser...
```



```
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

