

# k8s

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# k3s

## Install Script

K3s provides an installation script that is a convenient way to install it as a service on systemd or openrc based systems. This script is available at <https://get.k3s.io>. To install K3s using this method, just run:

```
curl -sfL https://get.k3s.io | sh -
```

After running this installation:

- The K3s service will be configured to automatically restart after node reboots or if the process crashes or is killed
- Additional utilities will be installed, including `kubectl`, `crictl`, `ctr`, `k3s-killall.sh`, and `k3s-uninstall.sh`
- A `kubeconfig` file will be written to `/etc/rancher/k3s/k3s.yaml` and the `kubectl` installed by K3s will automatically use it

A single-node server installation is a fully-functional Kubernetes cluster, including all the datastore, control-plane, kubelet, and container runtime components necessary to host workload pods. It is not necessary to add additional server or agents nodes, but you may want to do so to add additional capacity or redundancy to your cluster.

To install additional agent nodes and add them to the cluster, run the installation script with the `K3S_URL` and `K3S_TOKEN` environment variables. Here is an example showing how to join an agent:

```
curl -sfL https://get.k3s.io | K3S_URL=https://myserver:6443 K3S_TOKEN=mynodetoken sh -
```

Setting the `K3S_URL` parameter causes the installer to configure K3s as an agent, instead of a server. The K3s agent will register with the K3s server listening at the supplied URL. The value to use for `K3S_TOKEN` is stored at `/var/lib/rancher/k3s/server/node-token` on your server node.

### Kubectl config

First set up your an environmental variable for `KUBECONFIG=~/kube/config`.

```
export KUBECONFIG=~/.kube/config
```

Then let's generate the file at that location. [Your k3s.yaml file should NOT be world readable.](#) This is by-design. It should be owned by root and set to `0600`. Instead copy the config locally as [described here](#),

```
mkdir ~/.kube 2> /dev/null
sudo k3s kubectl config view --raw > "$KUBECONFIG"
chmod 600 "$KUBECONFIG"
```

You can add `KUBECONFIG=~/.kube/config` to your `~/.profile` or `~/.bashrc` to make it persist on reboot.

# Helm

```
$ curl -fsSL -o get_helm.sh https://raw.githubusercontent.com/helm/helm/main/scripts/get-helm-3
$ chmod 700 get_helm.sh
$ ./get_helm.sh
```