# Upgrades

# Kubernetes Upgrades

## What is the recommended way to upgrade NWS Managed Kubernetes

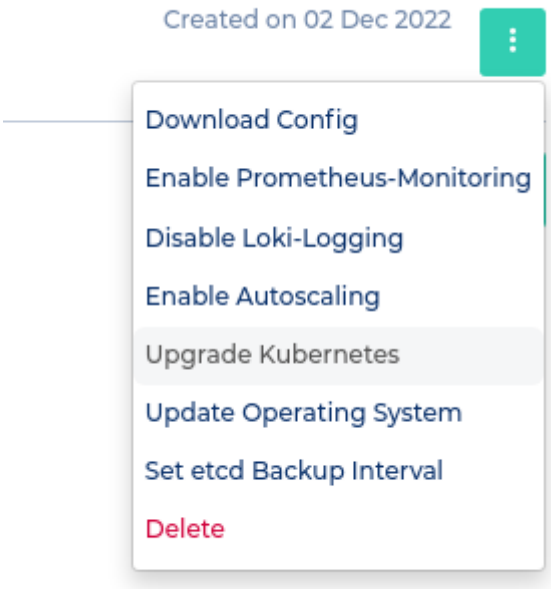
We recommend to upgrade the masters by two minor versions. Afterwards you can upgrade extra nodegroups to the version of the masters. This way you can skip a minor version on the nodes.

Tip: Replacing extra nodegroups is in most cases faster than upgrading existing ones. Just start new nodegroups (the nodes will spawn with the current Kubernetes version of the masters) and delete the old ones. Only do this if you are sure that you don't have persistent data stored on the nodes' filesystems.

## How do I start a Kubernetes version upgrade on the masters?

**Note that the steps below will only upgrade the master nodegroup and the default-worker nodegroup. See the next Question to find out how to upgrade extra nodegroups.**

To upgrade to a more recent Kubernetes version you have to press the "Upgrade Kubernetes" button in the cluster's context menu. Afterwards choose the Kubernetes version you want to upgrade to and press "Upgrade" in the modal to start the upgrade.

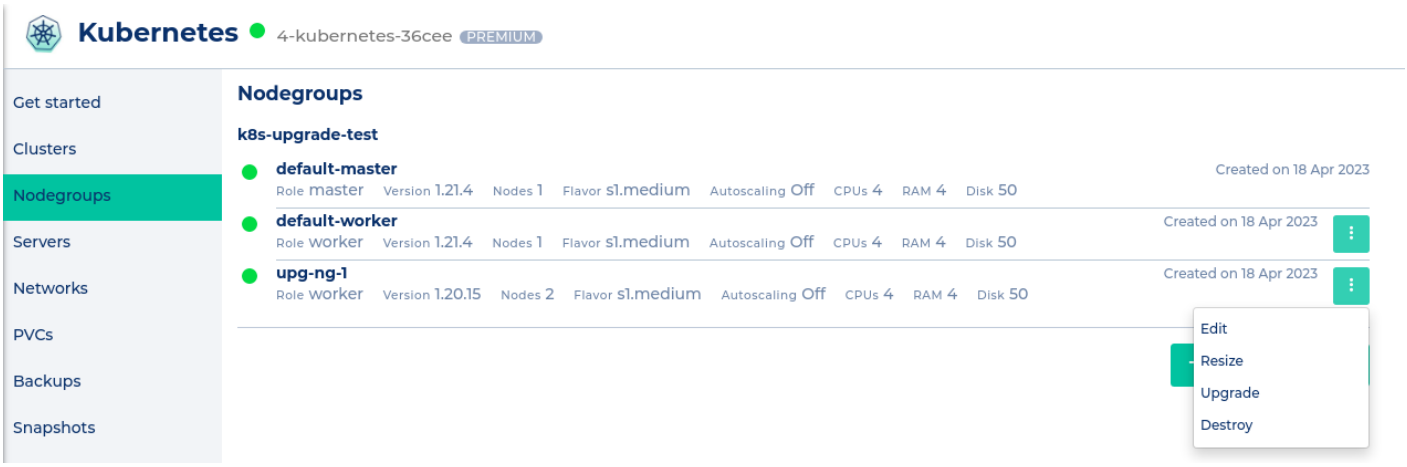



- If you do not see an upgrade button you have to disable OS Upgrades first
- Do not enable OS Upgrades while running a Kubernetes Upgrade
- Please make sure that the cluster health status is "healthy" before upgrading

## How do I upgrade extra worker nodes?

To upgrade extra worker nodes you have to switch to the nodegroup menu. In the context menu of the nodegroups you can select "Upgrade". Click the "Upgrade!" button in the modal to start the upgrade.

Note that you can not choose the Kubernetes version of extra node groups. It is only possible to upgrade to the current master version.




## What will be upgraded?

On the master node(s)

- etcd
- kube-apiserver
- kube-controller-manager
- kube-scheduler

On master and worker node(s)

- kube-proxy
- kubelet

Also the cluster services in kube-system namespace will be upgraded.

## How is the Upgrade performed?

The nodes are upgraded one by one.

**Important**: Each node will be drained during the upgrade, which means that all the pods on a node are evicted and rescheduled. Make sure to have enough resources left in your cluster so that pods can be rescheduled quickly on other nodes.

## How long will the upgrade take?

The Upgrade takes 5 to 10 minutes per node.

## Where can I get help for Kubernetes upgrades?

You should always consider to get a MyEngineer involved if you upgrade one of your NWS Kubernetes clusters, especially on production clusters. Our support can help you to detect breaking changes you will run into when upgrading. With the help of MyEngineer you can keep upgrade related downtimes as low as possible.

# Operating System Updates

To configure automatic OS Upgrades for your Kubernetes nodes, you have to click on "Update Operating System" in the cluster's context menu.

The upgrades are orchestrated by zincati. You get to choose between immediate, periodic and lock-based upgrades. Keep in mind that your nodes will be rebooted if an upgrade takes place. Take a look at the zincati documentation for further explanations.

We maintain our own FCOS updates graph to be able to test the official releases before making them available to you.

---

Revision #16
Created 21 October 2022 06:59:27 by Sebastian Saemann

Updated 5 July 2023 12:36:44 by Dominik Seidel