# Upgrade Azure Kubernetes Service (AKS) node images.

# Azure Kubernetes Service (AKS) regularly provides new node images, so it's beneficial to upgrade your node images frequently to use the latest AKS features. Linux node images are updated weekly, and Windows node images are updated monthly. Node image upgrades can also be performed automatically and scheduled using planned maintenance.

The below describes, how to upgrade AKS cluster node images using planned schedule and how to update node pool images without upgrading the Kubernetes version.

1. **Created New 3node AKS Cluster**
2. **List out current node Image version of Aks cluster.**
3. **List out available node Image version of Aks cluster.**
4. **Upgrade the node pool.**
5. **Use Planned Maintenance to schedule and control upgrades for your Azure (AKS) cluster.**
6. **Created New 3node AKS cluster**:

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1. **List out current Node Image version of aks cluster.**

Use the below command to check the current Node Image version of AKS Cluster

az aks nodepool show \

--resource-group myResourceGroup \

--cluster-name myAKSCluster \

--name nodepool1 \

--query nodeImageVersion

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1. **List out available Node Image version of aks cluster**

Check for available node image upgrades using the [az aks nodepool get-upgrades](https://learn.microsoft.com/en-us/cli/azure/aks/nodepool" \l "az_aks_nodepool_get_upgrades) command.

az aks nodepool get-upgrades \

--nodepool-name nodepool \

--cluster-name myAKSCluster \

--resource-group myResourceGroup

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## **Upgrade the node pool:**

Now upgraded to the latest version using the below command.

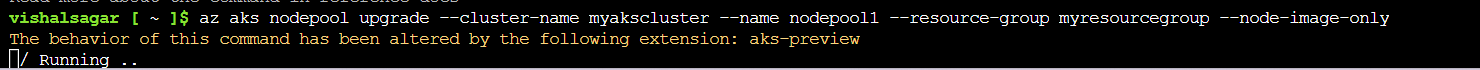
az aks upgrade \

--resource-group myResourceGroup \

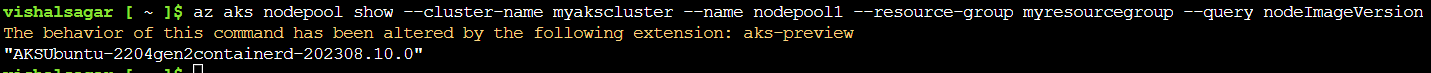
--name myAKSCluster \

--nodepool-name mynodepool

--node-image-only



Validate the upgrade node version by below commands.



When the upgrade is complete, use the [az aks nodepool show](https://learn.microsoft.com/en-us/cli/azure/aks/nodepool" \l "az_aks_nodepool_show) command to get the updated node pool details. The current node image is shown in the nodeImageVersion property.

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# Use Planned Maintenance to schedule and control upgrades for your Azure (AKS) cluster.

# Add a maintenance window configuration with a JSON file.

To create a maintenance window, you can use the az aks maintenanceconfiguration add command using the -- name value default, aksManagedAutoUpgradeSchedule, or aksManagedNodeOSUpgradeSchedule.

#### Create an autoUpgradenodeWindow.json file with the following contents for Daily schedule:

{

"properties": {

"maintenanceWindow": {

"schedule": {

"weekly": {

"intervalweeks": 2,

"dayofweek": "Friday"

}

},

"durationHours": 4,

"utc": "+08:00",

"startTime": "06:00",

"notAllowedDates": [

{

"start": "2023-08-30",

"end": "2023-09-15"

}

]

}

}

}

The above JSON file specifies maintenance windows every three days between 6:00 AM - 10:00 AM in the UTC+08 timezone. There's also an exception from 2023-08-30 to 2024-08-30 where maintenance isn't allowed even if it overlaps with a maintenance window.

By running the below command, we can schedule a maintenance window for Node OS.

az aks maintenanceconfiguration add -g myResourceGroup --cluster-name myAKSCluster --name aksManagedNodeOSUpgradeSchedule --config-file ./autoUpgradenodeWindow.json

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## List all maintenance windows in an existing cluster.

az aks maintenanceconfiguration list -g myResourceGroup --cluster-name myAKSCluster

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**Update an existing maintenance window.**

To update an existing maintenance configuration, use the az aks maintenanceconfiguration update command.

az aks maintenanceconfiguration update -g myResourceGroup --cluster-name myAKSCluster --name default --weekday Monday --start-hour 2

1. **Reference: -**
2. [Use Planned Maintenance to schedule and control upgrades for your Azure Kubernetes Service (AKS) cluster - Azure Kubernetes Service | Microsoft Learn](https://learn.microsoft.com/en-us/azure/aks/planned-maintenance)
3. [Automatically upgrade an Azure Kubernetes Service (AKS) cluster - Azure Kubernetes Service | Microsoft Learn](https://learn.microsoft.com/en-us/azure/aks/auto-upgrade-cluster)