

## Lesson 08 Demo 09

### Upgrading an AKS Cluster

**Objective:** To upgrade an AKS cluster for improved security and performance

**Tools required:** Azure management tools

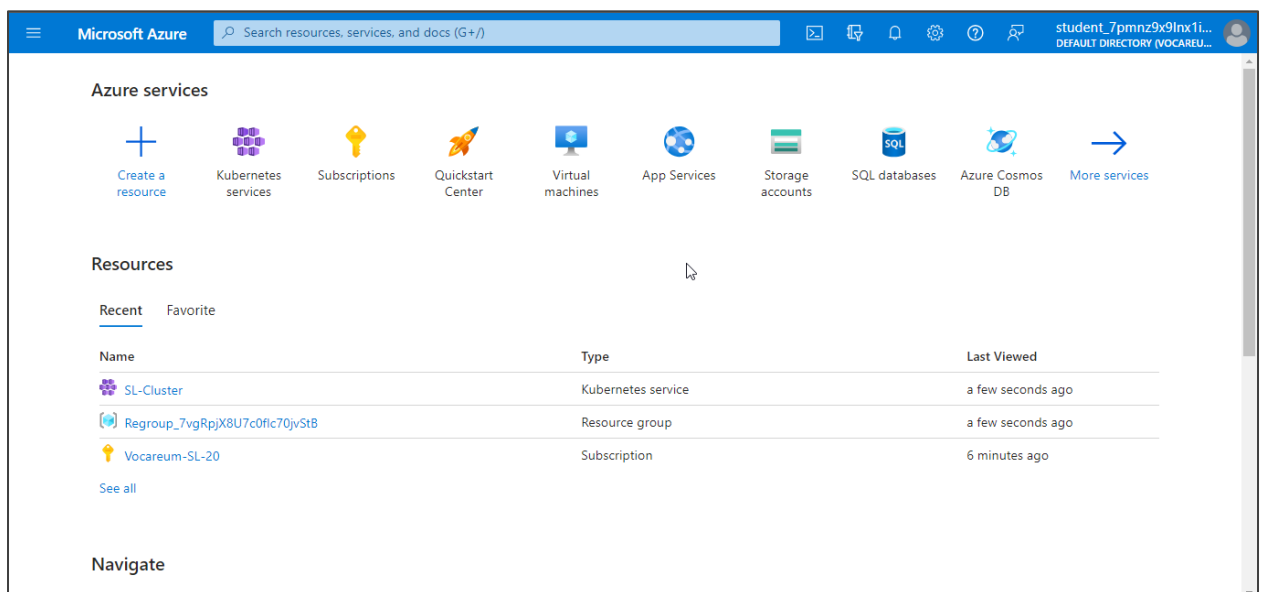
**Prerequisites:** An AKS cluster should already be set up (refer to the steps provided in Lesson 08, Demo 01 for guidance).

Steps to be followed:

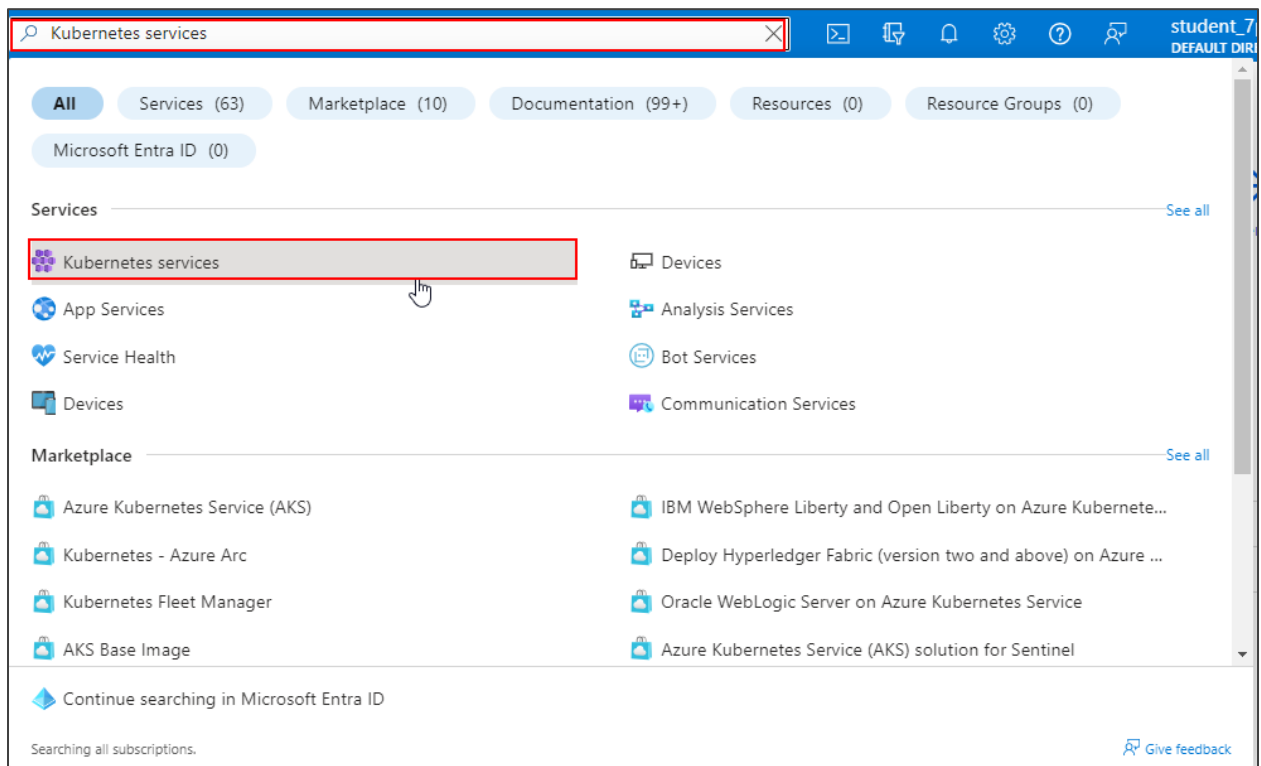
1. Upgrade and verify the AKS cluster

#### Step 1: Upgrade and verify the AKS cluster

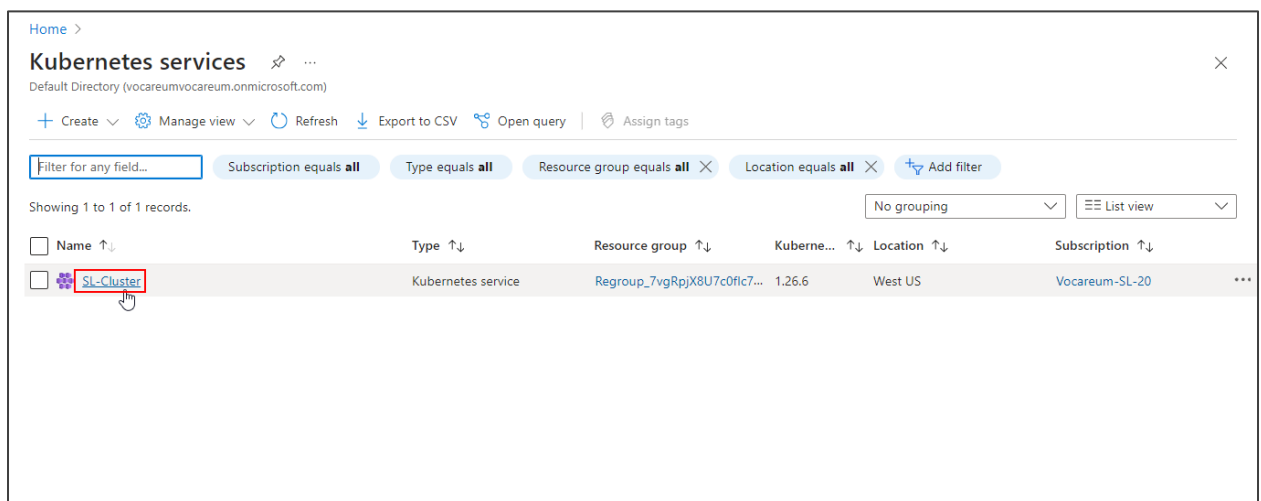
- 1.1 Sign in to the Microsoft Azure portal using the given lab credentials



## 1.2 Search for and click on **Kubernetes services**

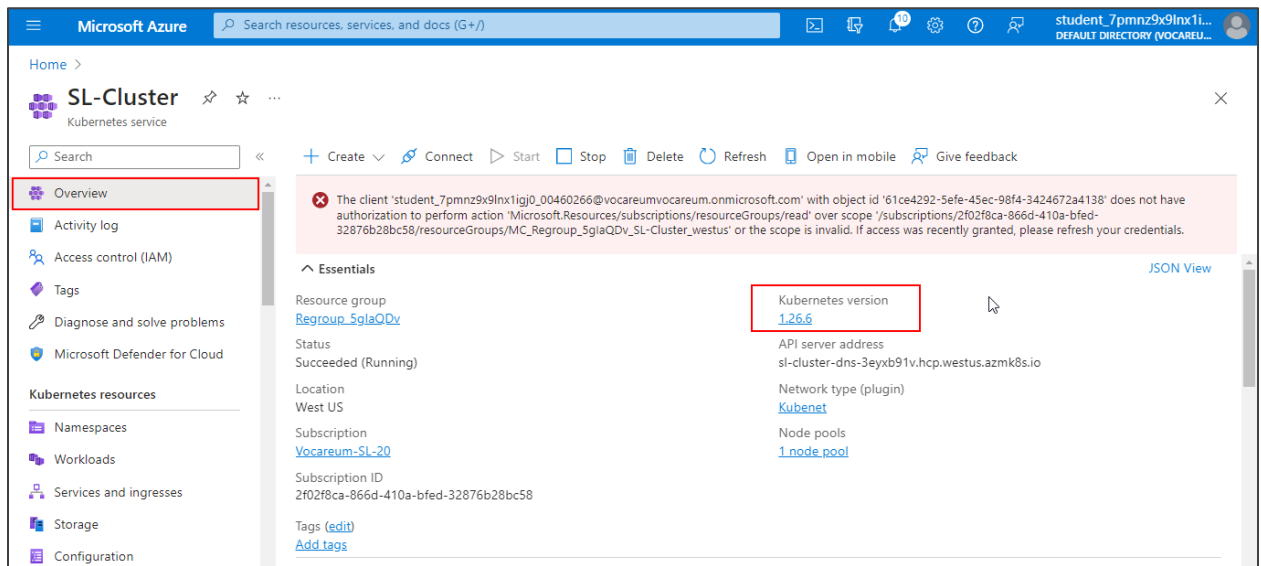


## 1.3 Click on the name of the cluster

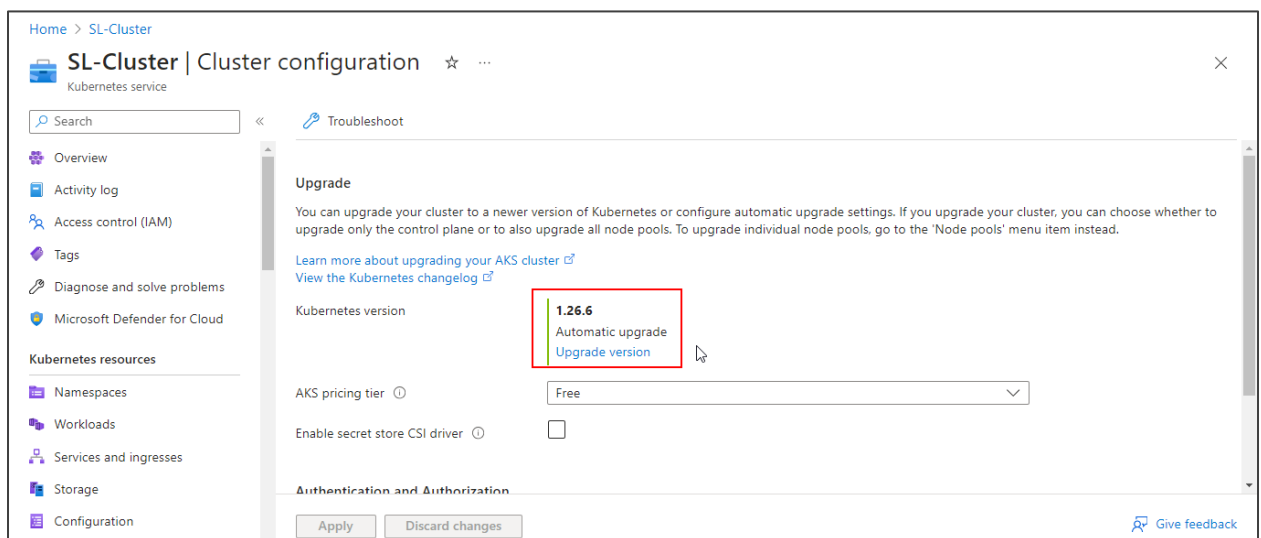


**Note:** Refer to the steps provided in Lesson 08, Demo 01 for creating the AKS cluster

1.4 Click on **Overview** in the list on the left, and click on the **Kubernetes version** link as shown in the screenshot below:



1.5 Click on the **Upgrade version** link



## 1.6 Click on the current version

Home > SL-Cluster | Cluster configuration >

### Upgrade Kubernetes version ...

You can upgrade your cluster to a newer version of Kubernetes or configure automatic upgrade settings. If you upgrade your cluster, you can choose whether to upgrade only the control plane or to also upgrade all node pools. To upgrade individual node pools, go to the 'Node pools' menu item instead.

[Learn more about upgrading your AKS cluster](#)  
[View the Kubernetes changelog](#)

Automatic upgrade ⓘ Enabled with patch (recommended) ▼

Kubernetes version ⓘ 1.26.6 (current) ▼

Upgrade scope ⓘ ☒ Upgrade control plane + all node pools ☐ Upgrade control plane only

**i** Cluster auto upgrade only supports upgrading both control plane and the node pools together. If you want to upgrade control plane first and then upgrade the individual node pools set automatic upgrade to disabled. [Learn more](#)

Save Cancel

## 1.7 Select the latest version from the list as shown in the screenshot below:

Home > SL-Cluster | Cluster configuration >

### Upgrade Kubernetes version ...

You can upgrade your cluster to a newer version of Kubernetes or configure automatic upgrade settings. If you upgrade your cluster, you can choose whether to upgrade only the control plane or to also upgrade all node pools. To upgrade individual node pools, go to the 'Node pools' menu item instead.

[Learn more about upgrading your AKS cluster](#)  
[View the Kubernetes changelog](#)

Automatic upgrade ⓘ Enabled with patch (recommended) ▼

Kubernetes version ⓘ

- 1.26.6 (current)
- 1.27.3
- 1.27.1
- 1.26.6 (current)

Upgrade scope ⓘ

Save Cancel

## 1.8 Once the latest version is selected, click on the **Save** button

Home > SL-Cluster | Cluster configuration >

### Upgrade Kubernetes version

[Learn more about upgrading your AKS cluster](#)  
[View the Kubernetes changelog](#)

Automatic upgrade ☐ Enabled with patch (recommended)

Kubernetes version

Upgrade scope ☒ Upgrade control plane + all node pools ☐ Upgrade control plane only

**i** Cluster auto upgrade only supports upgrading both control plane and the node pools together. If you want to upgrade control plane first and then upgrade the individual node pools set automatic upgrade to disabled. [Learn more](#)

**i** Kubernetes has removed objects from ApiGroups between version 1.26.6 and 1.27.3. If you have any resources calling the ApiGroups below, migrate them to new ApiGroups ahead of time to avoid impact. [Learn more](#)

CSIStorageCapacity - storage.k8s.io/v1beta1

Beginning in the release of Kubernetes 1.25, the cgroup version 2 API has reached general availability (GA). AKS now uses cgroup version 2 API by default. To make sure the cgroup version 2 API is available for use in other environments to prevent the memory saturation issue please follow the guidance in here. [Learn more](#)

**Save** Cancel

You should observe that the Kubernetes version takes some time to upgrade; the current version will be upgraded to the latest as shown in the screenshots below:

Home > SL-Cluster | Cluster configuration >

### Upgrade Kubernetes version

[Learn more about upgrading your AKS cluster](#)  
[View the Kubernetes changelog](#)

Automatic upgrade ☐ Enabled with patch (recommended)

Kubernetes version

Upgrade scope ☒ Upgrade control plane + all node pools ☐ Upgrade control plane only

**i** Kubernetes has removed objects from ApiGroups between version 1.26.6 and 1.27.3. If you have any resources calling the ApiGroups below, migrate them to new ApiGroups ahead of time to avoid impact. [Learn more](#)

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Save Cancel

... Saving Kubernetes service

Saving Kubernetes service 'SL-Cluster'.

Home > SL-Cluster | Cluster configuration >

## Upgrade Kubernetes version

You can upgrade your cluster to a newer version of Kubernetes or configure automatic upgrade settings. If you upgrade your cluster, you can choose whether to upgrade only the control plane or to also upgrade all node pools. To upgrade individual node pools, go to the 'Node pools' menu item instead.

[Learn more about upgrading your AKS cluster](#)  
[View the Kubernetes changelog](#)

Automatic upgrade ⓘ

Enabled with patch (recommended)

Kubernetes version ⓘ

1.27.3 (current)

Upgrade scope ⓘ

☒ Upgrade control plane + all node pools
☐ Upgrade control plane only

Cluster auto upgrade only supports upgrading both control plane and the node pools together. If you want to upgrade control plane first and then upgrade the individual node pools set automatic upgrade to disabled. [Learn more](#)

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CSISStorageCanactiv - storage.k8s.io/v1beta1

Save Cancel

### 1.9 Click on the **SL-Cluster | Cluster configuration** link

Home > **SL-Cluster | Cluster configuration** >

## Upgrade Kubernetes version

You can upgrade your cluster to a newer version of Kubernetes or configure automatic upgrade settings. If you upgrade your cluster, you can choose whether to upgrade only the control plane or to also upgrade all node pools. To upgrade individual node pools, go to the 'Node pools' menu item instead.

[Learn more about upgrading your AKS cluster](#)  
[View the Kubernetes changelog](#)

Automatic upgrade ⓘ

Enabled with patch (recommended)

Kubernetes version ⓘ

1.27.3 (current)

Upgrade scope ⓘ

☒ Upgrade control plane + all node pools
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CSISStorageCapacity - storage.k8s.io/v1beta1

Save Cancel

## 1.10 Click on **Overview** in the list on the left, and verify the Kubernetes version

Home > SL-Cluster (Kubernetes service)

Search

Overview (selected)

Activity log

Access control (IAM)

Tags

Diagnose and solve problems

Microsoft Defender for Cloud

Kubernetes resources

- Namespaces
- Workloads
- Services and ingresses
- Storage
- Configuration

Essentials

Resource group: [Regroup\\_SgliaQDv](#)

Status: Succeeded (Running)

Location: West US

Subscription: [Vocareum-SL-20](#)

Subscription ID: 2f02f8ca-866d-410a-bfed-32876b28bc58

Tags: [\(edit\)](#) [Add tags](#)

Kubernetes version: **1.27.3**

API server address: sl-cluster-dns-3eyxb91v.hcp.westus.azure.com

Network type (plugin): [Kubenet](#)

Node pools: [1 node pool](#)

JSON View

Error message: The client 'student\_7pmnz9x9lnx1tj0\_00460266@vocareumvocareum.onmicrosoft.com' with object id '61ce4292-5efe-45ec-98f4-3424672a4138' does not have authorization to perform action 'Microsoft.Resources/subscriptions/resourceGroups/read' over scope '/subscriptions/2f02f8ca-866d-410a-bfed-32876b28bc58/resourceGroups/MC\_Regroup\_SgliaQDv\_SL-Cluster\_westus' or the scope is invalid. If access was recently granted, please refresh your credentials.

**Note:** Refresh the page if you do not see the upgraded version

By following these steps, you have successfully upgraded the AKS cluster, ensuring improved security and performance.