

Manage Kubernetes clusters

Kubernetes clusters

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Manage Kubernetes clusters

Manage Astra Trident

After you add a managed Kubernetes cluster to the Canvas, you can use BlueXP to confirm a compatible Astra Trident installation, install or upgrade Astra Trident to the latest version, or uninstall Astra Trident.

Astra Trident in BlueXP

After adding Kubernetes clusters to BlueXP, you can manage Astra Trident and your Kubernetes clusters from the overview page. To open the overview page, double-click the Kubernetes working environment on the Canvas.

		Kubernetes Cluster	
Capacity Distribution	312 Bachura	Kubernetes Cluster Status: On	
	Datkup	Kubernetes Type: EKS	Ć
125.25 TIB 80.15 TIB Allocated Capacity Used Capacity	View Backup	Kubernetes Cluster Version: 1.25.4	Ć
- 24		Working Environment ID: Working Environ	Č
Persistent Volumes	Storage Classes	VPC: Kubernetes_cluster_vpc	ľ

Supported Astra Trident versions

One of the four most recent versions of Astra Trident deployed using the Trident operator—either manually or using Helm chart—is required. If Astra Trident is not installed, or an incompatible version of Astra Trident is installed, the cluster will show there is an action required.



Astra Trident deployed using tridentctl is not supported. If you deployed Astra Trident using tridentctl, you cannot use BlueXP to manage your Kubernetes clusters or uninstall Astra Trident. You must uninstall using tridentctl and reinstall Astra Trident either manually using the Trident operator or in BlueXP using Install or upgrade Astra Trident.

To learn more about Astra Trident, see Astra Trident documentation.

Install or upgrade Astra Trident

You can review your Astra Trident installation status and version on the overview page. If Astra Trident is not already installed, or an incompatible version is installed, you can manage that using BlueXP.

Steps

- 1. Double-click the Kubernetes working environment on the Canvas or click Enter Working Environment.
 - a. If Astra Trident is not installed, click Install Trident.



Upgrade Astra Trident	
Astra Trident enables management of storage resources across all popular NetApp storage platforms.	Upgrade Trident

You cannot use BlueXP to upgrade from Astra Trident versions earlier than 21.01. To upgrade from an earlier version, refer to Upgrade with the operator.

Results

The latest version of Astra Trident is installed. You can now add storage classes.

Uninstall Astra Trident

If you installed Astra Trident using BlueXP or using the Trident operator (either Helm or manually), you can uninstall it using BlueXP.

- After uninstalling Astra Trident you cannot create new persistent volumes, but existing volumes are still available.
- While Astra Trident is uninstalled, backup is unavailable.
- You can reinstall Astra Trident to the working environment at any time to continue managing clusters.

Uninstalling Astra Trident using BlueXP does not remove all Astra Trident services applied during installation. To completely remove Astra Trident, including all custom resource definitions (CRDs) it creates, refer to uninstall using the Trident operator

Steps

(;)

1. From the overview page, select the ellipses and Uninstall Astra Trident.



2. Select Uninstall to confirm and uninstall Astra Trident.

Astra Trident is now uninstalled from the working environment. You can reinstall Astra Trident at any time.

Manage storage classes

After you add a managed Kubernetes cluster to the Canvas, you can use BlueXP to manage storage classes.



If no storage class is defined, the cluster will show there is an action required. Double-clicking the cluster on the Canvas opens the action page to add a storage class.

Add storage class

Steps

- 1. From the Canvas, drag and drop the Kubernetes working environment on to the Cloud Volumes ONTAP or Amazon FSx for ONTAP working environment to open the storage class wizard.
- 2. Provide a name for the storage class.
- 3. Select Filesystem or Block storage.
 - a. For **Block** storage, select a File System Type (fstype)

	Storage Class Name	
	-cm	
	O Filesystem	Block
Storage Class	Select File System Typ	e
	ext4	A.,
	ext4	
	ext3	
Storage Class Economy	xfs	
Support Volume Expansion	• Yes	O No
Volume Binding Mode	 Immediate 	O WaitForFirstConsumer
Set as Default Storage Class	• Yes	O No

b. For **Block** or **Filesystem** storage, you can select to enable storage class economy.

Storage Class	• Filesystem	O Block
Storage Class Economy 🕕	Enable Economy	for Storage Class
Support Volume Expansion	• Yes	O No
Volume Binding Mode	Immediate	O WaitForFirstConsumer
Set as Default Storage Class	• Yes	O No

(i)

Backup and restore are not supported when using storage class economy.

- 4. Select options for volume expansion, volume binding, and default storage class. Click Next.
- 5. Select a working environment to connect to the cluster. Click Add.

	Select Working Environment								
Wo	rking Environment	÷1	Туре	91	Configuration	٢	Region	÷1	Connected to K8s Clusters
D.	Working Environment Name On		Cloud Volumes ONTAP		High Avallability		US East (Northern Virginia)		Not Connected
C	Working Environment Name On		Cloud Volumes ONTAP		High Availability		US East (Northern Virginia)		Not Connected
C	Working Environment Name On		Cloud Volumes ONTAP		High Availability		US East (Northern Virginia)		Not Connected
	Working Environment Name On		Cloud Volumes ONTAP		Single Node		US East (Northern Virginia)		Not Connected
	Working Environment Name On		Cloud Volumes ONTAP		Single Node		US East (Northern Virginia)		Not Connected
D	Working Environment Name On		Cloud Volumes ONTAP		High Availability		US East (Northern Virginia)		Not Connected
	Working Environment Name On		Cloud Volumes ONTAP		Single Node		US East (Northern Virginia)		Not Connected
C	Working Environment Name On		Cloud Volumes ONTAP		Single Node		US East (Northern Virginia)		Not Connected

Results

You can click to view the storage class from the resource page for the Kubernetes cluster.



View working environment details

Steps

- 1. Double-click the Kubernetes working environment on the Canvas or click Enter Working Environment.
- 2. Click the Storage Classes tab.
- 3. Click the information icon to view details for the working environment.

Results

The working environment details panel opens.

Storage	Class Name #1 34567890123456789 🏠 De	fault Storage Class			()
	csi.trident.netapp.com Provisioner Name	Nas Storage Class Type (Driver)	WaitForFirstConsumer Volume Binding Mode	True Volume Expansion	Working Environment Name
Storage	Class Name #1 14567890123456789				Node: High Availability Provider: AWS
•	csi.trident.netapp.com Provisioner Name	Nas Storage Class Type (Driver)	WaitForFirstConsumer Volume Binding Mode	True Volume Expansion	Status : • ON Region: US East (Northern Virginia)

Set default storage class

Steps

- 1. Double-click the Kubernetes working environment on the Canvas or click Enter Working Environment.
- 2. Click the Storage Classes tab.
- 3. Click the action menu for the storage class and click Set as Default.

		(
Remove S	orage Class	
Set as Def	ault	

The selected storage class is set as the default.



Remove storage class

Steps

- 1. Double-click the Kubernetes working environment on the Canvas or click Enter Working Environment.
- 2. Click the Storage Classes tab.
- 3. Click the action menu for the storage class and click Set as Default.

		(D
Remove Stor	age Cla	iss	
Set as Defau	lt		

4. Click Remove to confirm removal of the storage class.

Remove Storage Class "Storage Class Name #1"
Are you sure you want to remove Storage Class "Storage Class Name #1"?
Remove Cancel

Results

The selected storage class is removed.

View persistent volumes

After you add a managed Kubernetes cluster to the Canvas, you can use BlueXP to view persistent volumes.



BlueXP monitors the Kubernetes cluster for changes to the backend and updates the persistent volume table when new volumes are added. If automatic backup was configured on the cluster, backup is automatically enabled on the new persistent volumes.

Steps

- 1. Double-click the Kubernetes working environment on the Canvas or click Enter Working Environment.
- 2. Click **View Volumes** from the **Overview** tab or click the **Persistent Volumes** tab. If no persistent volumes are configured, see Provisioning for details on provisioning volumes in Astra Trident.

A table of the configured persistent volumes displays.

Volumes Summary	8 Total Volumes	400 GIB Total Allocated Capacity	201.2 GIB Total Used Capacity	
8 Volumes				Q
Volume Name	‡ Name Space	Storage Class 🗧 🗧 Access Mode	Allocated Capacity	Used Capacity 🔶 🗍
Volumes Very Long Name On	Name Space	Storage Class Name Access Mode	50 GiB	25.15 GiB
Volumes Very Long Name On	Name Space	Storage Class Name Access Mode	50 GiB	25.15 GiB

Remove Kubernetes clusters from the workspace

After you add a managed Kubernetes cluster to the Canvas, you can use BlueXP to remove clusters from the workspace.

Steps

- 1. Double-click the Kubernetes working environment on the Canvas or click Enter Working Environment.
- 2. At the top right of the page, select the actions menu and click Remove from Workspace.



3. Click **Remove** to confirm removal of the cluster from the workspace. You can rediscover this cluster at any time.

You are about to to remove Kubernetes working environments from workspace.	ent <we name=""></we>
Notice: No resources will be deleted. You can rediscov environment from Cloud Manager at any time.	er this working
Remove	Cancel

The Kubernetes cluster is removed from the workspace and is no longer visible on the Canvas.

Use NetApp cloud data services with Kubernetes clusters

After you add a managed Kubernetes cluster to the Canvas, you can use NetApp cloud data services for advanced data management.

You can use BlueXP backup and recovery to back up persistent volumes to object storage.

Learn how to protect your Kubernetes cluster data using BlueXP backup and recovery.

	1 Selected Kubernetes Clusters * Backup Settings						
					Protected Persistent Volumes Status		
	C 1 Kubernet	es Clusters 5 Protected PVs	97 Tota	7.66 KB Backups Size	S Healthy Backup	0 Failed Backup	
5	5 Backup Jobs						
5	ource KBs Cluster 🕴	Source Persistent Volume	Source Namespace	East Berkup	Backup Copies	≑ Backup Status ₹	
	🥶 🔹 On	pvc-1704aa1f-af1d-49e9-87fd-6edd86125855 Online	default	Nov 25 2021, 14	56:3 2	C Enabled	
	🛞 🔹 On	pvc-d1f839c1-d932-4f49-b620-33321dbe939e Online	trident	Nov 25 2021, 14	56:3 2	G Enabled	•••
	🛞 🔹 On	pvc:/f015f0a8-2d5d-44d0-b4e4-f365cc3fb4a6 Online	default	Nov 25 2021, 14	56;3 2	C Enabled	
	👼 🔹 On	pvc-1615f0a8-2d5d-44d0-b4e4-f365cc3fb4a6 Online	default	Nev 25 2021, 14	56:3 2	ight Enabled	
		MUS 0E001/70 JEC Auda DEST -0-E3600-1	2.12			<u> </u>	

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