



Amazon FSx for NetApp ONTAP

Astra Trident

NetApp

January 14, 2026

Table of Contents

Amazon FSx for NetApp ONTAP	1
Use Astra Trident with Amazon FSx for NetApp ONTAP	1
Overview	1
Considerations	1
FSx for ONTAP driver details	1
Authentication	2
Cloud identity for EKS	2
Find more information	4
Integrate Amazon FSx for NetApp ONTAP	4
Requirements	4
ONTAP SAN and NAS driver integration	4
Prepare to provision SMB volumes	7
FSx for ONTAP configuration options and examples	8
Backend configuration options	8
Backend configuration options for provisioning volumes	13
Example configurations	14
Configure the Astra Trident EKS add-on version 23.10 on EKS cluster	15
Prerequisites	16
Steps	16
Install/uninstall the Astra Trident EKS add-on using CLI	18

Amazon FSx for NetApp ONTAP

Use Astra Trident with Amazon FSx for NetApp ONTAP

[Amazon FSx for NetApp ONTAP](#) is a fully managed AWS service that enables customers to launch and run file systems powered by the NetApp ONTAP storage operating system. FSx for ONTAP enables you to leverage NetApp features, performance, and administrative capabilities you are familiar with, while taking advantage of the simplicity, agility, security, and scalability of storing data on AWS. FSx for ONTAP supports ONTAP file system features and administration APIs.

Overview

A file system is the primary resource in Amazon FSx, analogous to an ONTAP cluster on premises. Within each SVM you can create one or multiple volumes, which are data containers that store the files and folders in your file system. With Amazon FSx for NetApp ONTAP, Data ONTAP will be provided as a managed file system in the cloud. The new file system type is called **NetApp ONTAP**.

Using Astra Trident with Amazon FSx for NetApp ONTAP, you can ensure Kubernetes clusters running in Amazon Elastic Kubernetes Service (EKS) can provision block and file persistent volumes backed by ONTAP.

Considerations

- SMB volumes:
 - SMB volumes are supported using the `ontap-nas` driver only.
 - SMB volumes are not supported with Astra Trident EKS add-on.
 - Astra Trident supports SMB volumes mounted to pods running on Windows nodes only.
- Prior to Astra Trident 24.02, volumes created on Amazon FSx file systems that have automatic backups enabled, could not be deleted by Trident. To prevent this issue in Astra Trident 24.02 or later, specify the `fsxFilesystemID`, AWS `apiRegion`, AWS `apiKey`, and AWS `secretKey` in the backend configuration file for AWS FSx for ONTAP.



If you are specifying an IAM role to Astra Trident, then you can omit specifying the `apiRegion`, `apiKey`, and `secretKey` fields to Astra Trident explicitly. For more information, refer to [FSx for ONTAP configuration options and examples](#).

FSx for ONTAP driver details

You can integrate Astra Trident with Amazon FSx for NetApp ONTAP using the following drivers:

- `ontap-san`: Each PV provisioned is a LUN within its own Amazon FSx for NetApp ONTAP volume.
- `ontap-san-economy`: Each PV provisioned is a LUN with a configurable number of LUNs per Amazon FSx for NetApp ONTAP volume.
- `ontap-nas`: Each PV provisioned is a full Amazon FSx for NetApp ONTAP volume.
- `ontap-nas-economy`: Each PV provisioned is a qtree, with a configurable number of qtrees per Amazon FSx for NetApp ONTAP volume.

- `ontap-nas-flexgroup`: Each PV provisioned is a full Amazon FSx for NetApp ONTAP FlexGroup volume.

For driver details, refer to [NAS drivers](#) and [SAN drivers](#).

Authentication

Astra Trident offers two modes of authentication.

- Certificate-based: Astra Trident will communicate with the SVM on your FSx file system using a certificate installed on your SVM.
- Credential-based: You can use the `fsxadmin` user for your file system or the `vsadmin` user configured for your SVM.



Astra Trident expects to be run as a `vsadmin` SVM user or as a user with a different name that has the same role. Amazon FSx for NetApp ONTAP has an `fsxadmin` user that is a limited replacement of the ONTAP `admin` cluster user. We strongly recommend using `vsadmin` with Astra Trident.

You can update backends to move between credential-based and certificate-based methods. However, if you attempt to provide **credentials and certificates**, backend creation will fail. To switch to a different authentication method, you must remove the existing method from the backend configuration.

For details on enabling authentication, refer to the authentication for your driver type:

- [ONTAP NAS authentication](#)
- [ONTAP SAN authentication](#)

Cloud identity for EKS

Cloud identity enables Kubernetes pods to access AWS resources by authenticating as an AWS IAM role instead of by providing explicit AWS credentials.

To take advantage of cloud identity in AWS, you must have:

- A Kubernetes cluster deployed using EKS
- Astra Trident installed that includes the `cloudProvider` specifying "AWS" and `cloudIdentity` specifying AWS IAM role.

Trident operator

To install Astra Trident using the Trident operator, edit `tridentoperator_cr.yaml` to set `cloudProvider` to "AWS" and set `cloudIdentity` to AWS IAM role.

For example:

```
apiVersion: trident.netapp.io/v1
kind: TridentOrchestrator
metadata:
  name: trident
spec:
  debug: true
  namespace: trident
  imagePullPolicy: IfNotPresent
  cloudProvider: "AWS"
  cloudIdentity: "'eks.amazonaws.com/role-arn:
arn:aws:iam::123456:role/astratrident-role'"
```

Helm

Set the values for **cloud provider** and **cloud identity** flags using the following environment variables:

```
export CP="AWS"
export CI="'eks.amazonaws.com/role-arn:
arn:aws:iam::123456:role/astratrident-role'"
```

The following example installs Astra Trident and sets `cloudProvider` to AWS using the environment variable `$CP` and sets the 'cloudIdentity' using the environment variable `$CI`:

```
helm install trident trident-operator-100.2402.0.tgz --set
cloudProvider=$CP --set cloudIdentity=$CI
```

`tridentctl`

Set the values for **cloud provider** and **cloud identity** flags using the following environment variables:

```
export CP="AWS"
export CI="'eks.amazonaws.com/role-arn:
arn:aws:iam::123456:role/astratrident-role'"
```

The following example installs Astra Trident and sets the `cloud-provider` flag to `$CP`, and `cloud-identity` to `$CI`:

```
tridentctl install --cloud-provider=$CP --cloud-identity="$CI" -n
trident
```

Find more information

- [Amazon FSx for NetApp ONTAP documentation](#)
- [Blog post on Amazon FSx for NetApp ONTAP](#)

Integrate Amazon FSx for NetApp ONTAP

You can integrate your Amazon FSx for NetApp ONTAP file system with Astra Trident to ensure Kubernetes clusters running in Amazon Elastic Kubernetes Service (EKS) can provision block and file persistent volumes backed by ONTAP.

Requirements

In addition to [Astra Trident requirements](#), to integrate FSx for ONTAP with Astra Trident, you need:

- An existing Amazon EKS cluster or self-managed Kubernetes cluster with `kubectl` installed.
- An existing Amazon FSx for NetApp ONTAP file system and storage virtual machine (SVM) that is reachable from your cluster's worker nodes.
- Worker nodes that are prepared for [NFS](#) or [iSCSI](#).

 Ensure you follow the node preparation steps required for Amazon Linux and Ubuntu [Amazon Machine Images](#) (AMIs) depending on your EKS AMI type.

- Astra Trident supports SMB volumes mounted to pods running on Windows nodes only. Refer to [Prepare to provision SMB volumes](#) for details.

ONTAP SAN and NAS driver integration



If you are configuring for SMB volumes, you must read [Prepare to provision SMB volumes](#) before creating the backend.

Steps

1. Deploy Astra Trident using one of the [deployment methods](#).
2. Collect your SVM management LIF DNS name. For example, using the AWS CLI, find the `DNSName` entry under `Endpoints` → `Management` after running the following command:

```
aws fsx describe-storage-virtual-machines --region <file system region>
```

3. Create and install certificates for [NAS backend authentication](#) or [SAN backend authentication](#).



You can log in to your file system (for example to install certificates) using SSH from anywhere that can reach your file system. Use the `fsxadmin` user, the password you configured when you created your file system, and the management DNS name from `aws fsx describe-file-systems`.

4. Create a backend file using your certificates and the DNS name of your management LIF, as shown in the sample below:

YAML

```
version: 1
storageDriverName: ontap-san
backendName: customBackendName
managementLIF: svm-XXXXXXXXXXXXXXXXXX.fs-XXXXXXXXXXXXXXXXXX.fsx.us-
east-2.aws.internal
svm: svm01
clientCertificate: ZXR0ZXJwYXB...ICMgJ3BhcGVyc2
clientPrivateKey: vciwKIyAgZG...0cnksIGRlc2NyaX
trustedCACertificate: zcyBbaG...b3Igb3duIGNsYXNz
```

JSON

```
{
  "version": 1,
  "storageDriverName": "ontap-san",
  "backendName": "customBackendName",
  "managementLIF": "svm-XXXXXXXXXXXXXXXXXX.fs-
XXXXXXXXXXXXXXXXXX.fsx.us-east-2.aws.internal",
  "svm": "svm01",
  "clientCertificate": "ZXR0ZXJwYXB...ICMgJ3BhcGVyc2",
  "clientPrivateKey": "vciwKIyAgZG...0cnksIGRlc2NyaX",
  "trustedCACertificate": "zcyBbaG...b3Igb3duIGNsYXNz"
}
```

Alternatively, you can create a backend file using the SVM credentials (username and password) stored in AWS Secret Manager as shown in this example:

YAML

```
apiVersion: trident.netapp.io/v1
kind: TridentBackendConfig
metadata:
  name: backend-tbc-ontap-nas
spec:
  version: 1
  storageDriverName: ontap-nas
  backendName: tbc-ontap-nas
  svm: svm-name
  aws:
    fsxFilesystemID: fs-xxxxxxxxxx
  managementLIF:
    credentials:
      name: "arn:aws:secretsmanager:us-west-2:xxxxxxxx:secret:secret-name"
      type: awsarn
```

JSON

```
{
  "apiVersion": "trident.netapp.io/v1",
  "kind": "TridentBackendConfig",
  "metadata": {
    "name": "backend-tbc-ontap-nas"
  },
  "spec": {
    "version": 1,
    "storageDriverName": "ontap-nas",
    "backendName": "tbc-ontap-nas",
    "svm": "svm-name",
    "aws": {
      "fsxFilesystemID": "fs-xxxxxxxxxx"
    },
    "managementLIF": null,
    "credentials": {
      "name": "arn:aws:secretsmanager:us-west-2:xxxxxxxx:secret:secret-name",
      "type": "awsarn"
    }
  }
}
```

For information about creating backends, see these links:

- [Configure a backend with ONTAP NAS drivers](#)
- [Configure a backend with ONTAP SAN drivers](#)

Prepare to provision SMB volumes

You can provision SMB volumes using the `ontap-nas` driver. Before you complete [ONTAP SAN and NAS driver integration](#) complete the following steps.

Before you begin

Before you can provision SMB volumes using the `ontap-nas` driver, you must have the following.

- A Kubernetes cluster with a Linux controller node and at least one Windows worker node running Windows Server 2019. Astra Trident supports SMB volumes mounted to pods running on Windows nodes only.
- At least one Astra Trident secret containing your Active Directory credentials. To generate secret `smbcreds`:

```
kubectl create secret generic smbcreds --from-literal username=user  
--from-literal password='password'
```

- A CSI proxy configured as a Windows service. To configure a `csi-proxy`, refer to [GitHub: CSI Proxy](#) or [GitHub: CSI Proxy for Windows](#) for Kubernetes nodes running on Windows.

Steps

1. Create SMB shares. You can create the SMB admin shares in one of two ways either using the [Microsoft Management Console Shared Folders snap-in](#) or using the ONTAP CLI. To create the SMB shares using the ONTAP CLI:

- a. If necessary, create the directory path structure for the share.

The `vserver cifs share create` command checks the path specified in the `-path` option during share creation. If the specified path does not exist, the command fails.

- b. Create an SMB share associated with the specified SVM:

```
vserver cifs share create -vserver vserver_name -share-name  
share_name -path path [-share-properties share_properties,...]  
[other_attributes] [-comment text]
```

- c. Verify that the share was created:

```
vserver cifs share show -share-name share_name
```



Refer to [Create an SMB share](#) for full details.

2. When creating the backend, you must configure the following to specify SMB volumes. For all FSx for

ONTAP backend configuration options, refer to [FSx for ONTAP configuration options and examples](#).

Parameter	Description	Example
smbShare	<p>You can specify one of the following: the name of an SMB share created using the Microsoft Management Console or ONTAP CLI or a name to allow Astra Trident to create the SMB share.</p> <p>This parameter is required for Amazon FSx for ONTAP backends.</p>	smb-share
nasType	Must set to smb. If null, defaults to nfs.	smb
securityStyle	<p>Security style for new volumes.</p> <p>Must be set to ntfs or mixed for SMB volumes.</p>	ntfs or mixed for SMB volumes
unixPermissions	Mode for new volumes. Must be left empty for SMB volumes.	""

FSx for ONTAP configuration options and examples

Learn about backend configuration options for Amazon FSx for ONTAP. This section provides backend configuration examples.

Backend configuration options

See the following table for the backend configuration options:

Parameter	Description	Example
version		Always 1
storageDriverName	Name of the storage driver	ontap-nas, ontap-nas-economy, ontap-nas-flexgroup, ontap-san, ontap-san-economy
backendName	Custom name or the storage backend	Driver name + “_” + dataLIF

Parameter	Description	Example
managementLIF	<p>IP address of a cluster or SVM management LIF</p> <p>A fully-qualified domain name (FQDN) can be specified.</p> <p>Can be set to use IPv6 addresses if Astra Trident was installed using the IPv6 flag. IPv6 addresses must be defined in square brackets, such as [28e8:d9fb:a825:b7bf:69a8:d02f:9e7b:3555].</p>	"10.0.0.1", "[2001:1234:abcd::fefe"]
dataLIF	<p>IP address of protocol LIF.</p> <p>ONTAP NAS drivers: We recommend specifying dataLIF. If not provided, Astra Trident fetches data LIFs from the SVM. You can specify a fully-qualified domain name (FQDN) to be used for the NFS mount operations, allowing you to create a round-robin DNS to load-balance across multiple data LIFs. Can be changed after initial setting. Refer to Update dataLIF after initial configuration.</p> <p>ONTAP SAN drivers: Do not specify for iSCSI. Astra Trident uses ONTAP Selective LUN Map to discover the iSCSI LIFs needed to establish a multi path session. A warning is generated if dataLIF is explicitly defined.</p> <p>Can be set to use IPv6 addresses if Astra Trident was installed using the IPv6 flag. IPv6 addresses must be defined in square brackets, such as [28e8:d9fb:a825:b7bf:69a8:d02f:9e7b:3555].</p>	
autoExportPolicy	<p>Enable automatic export policy creation and updating [Boolean].</p> <p>Using the autoExportPolicy and autoExportCIDRs options, Astra Trident can manage export policies automatically.</p>	false

Parameter	Description	Example
autoExportCIDRs	<p>List of CIDRs to filter Kubernetes' node IPs against when <code>autoExportPolicy</code> is enabled.</p> <p>Using the <code>autoExportPolicy</code> and <code>autoExportCIDRs</code> options, Astra Trident can manage export policies automatically.</p>	["0.0.0.0/0", "::/0"]
labels	Set of arbitrary JSON-formatted labels to apply on volumes	""
clientCertificate	Base64-encoded value of client certificate. Used for certificate-based auth	""
clientPrivateKey	Base64-encoded value of client private key. Used for certificate-based auth	""
trustedCACertificate	Base64-encoded value of trusted CA certificate. Optional. Used for certificate-based authentication.	""
username	Username to connect to the cluster or SVM. Used for credential-based authentication. For example, <code>vsadmin</code> .	
password	Password to connect to the cluster or SVM. Used for credential-based authentication.	
svm	Storage virtual machine to use	Derived if an SVM <code>managementLIF</code> is specified.
storagePrefix	<p>Prefix used when provisioning new volumes in the SVM.</p> <p>Cannot be modified after creation. To update this parameter, you will need to create a new backend.</p>	trident
limitAggregateUsage	<p>Do not specify for Amazon FSx for NetApp ONTAP.</p> <p>The provided <code>fsxadmin</code> and <code>vsadmin</code> do not contain the permissions required to retrieve aggregate usage and limit it using Astra Trident.</p>	Do not use.

Parameter	Description	Example
limitVolumeSize	<p>Fail provisioning if requested volume size is above this value.</p> <p>Also restricts the maximum size of the volumes it manages for qtrees and LUNs, and the <code>qtreesPerFlexvol</code> option allows customizing the maximum number of qtrees per FlexVol.</p>	"" (not enforced by default)
lunsPerFlexvol	<p>Maximum LUNs per Flexvol, must be in range [50, 200].</p> <p>SAN only.</p>	100
debugTraceFlags	<p>Debug flags to use when troubleshooting. Example, <code>{"api":false, "method":true}</code></p> <p>Do not use <code>debugTraceFlags</code> unless you are troubleshooting and require a detailed log dump.</p>	null
nfsMountOptions	<p>Comma-separated list of NFS mount options.</p> <p>The mount options for Kubernetes-persistent volumes are normally specified in storage classes, but if no mount options are specified in a storage class, Astra Trident will fall back to using the mount options specified in the storage backend's configuration file.</p> <p>If no mount options are specified in the storage class or the configuration file, Astra Trident will not set any mount options on an associated persistent volume.</p>	""
nasType	<p>Configure NFS or SMB volumes creation.</p> <p>Options are <code>nfs</code>, <code>smb</code>, or <code>null</code>.</p> <p>Must set to <code>smb</code> for SMB volumes. Setting to <code>null</code> defaults to NFS volumes.</p>	<code>nfs</code>
qtreesPerFlexvol	Maximum Qtrees per FlexVol, must be in range [50, 300]	200

Parameter	Description	Example
smbShare	<p>You can specify one of the following: the name of an SMB share created using the Microsoft Management Console or ONTAP CLI or a name to allow Astra Trident to create the SMB share.</p> <p>This parameter is required for Amazon FSx for ONTAP backends.</p>	smb-share
useREST	<p>Boolean parameter to use ONTAP REST APIs. Tech preview</p> <p>useREST is provided as a tech preview that is recommended for test environments and not for production workloads. When set to <code>true</code>, Astra Trident will use ONTAP REST APIs to communicate with the backend.</p> <p>This feature requires ONTAP 9.11.1 and later. In addition, the ONTAP login role used must have access to the <code>ontap</code> application. This is satisfied by the pre-defined <code>vsadmin</code> and <code>cluster-admin</code> roles.</p>	false
aws	<p>You can specify the following in the configuration file for AWS FSx for ONTAP:</p> <ul style="list-style-type: none"> - <code>fsxFilesystemID</code>: Specify the ID of the AWS FSx file system. - <code>apiRegion</code>: AWS API region name. - <code>apikey</code>: AWS API key. - <code>secretKey</code>: AWS secret key. 	"" "" ""
credentials	<p>Specify the FSx SVM credentials to store in AWS Secret Manager.</p> <ul style="list-style-type: none"> - <code>name</code>: Amazon Resource Name (ARN) of the secret, which contains the credentials of SVM. - <code>type</code>: Set to <code>awsarn</code>. Refer to Create an AWS Secrets Manager secret for more information. 	

Update dataLIF after initial configuration

You can change the data LIF after initial configuration by running the following command to provide the new backend JSON file with updated data LIF.

```
tridentctl update backend <backend-name> -f <path-to-backend-json-file-with-updated-dataLIF>
```



If PVCs are attached to one or multiple pods, you must bring down all corresponding pods and then bring them back up in order for the new data LIF to take effect.

Backend configuration options for provisioning volumes

You can control default provisioning using these options in the `defaults` section of the configuration. For an example, see the configuration examples below.

Parameter	Description	Default
spaceAllocation	Space-allocation for LUNs	true
spaceReserve	Space reservation mode; “none” (thin) or “volume” (thick)	none
snapshotPolicy	Snapshot policy to use	none
qosPolicy	<p>QoS policy group to assign for volumes created. Choose one of <code>qosPolicy</code> or <code>adaptiveQosPolicy</code> per storage pool or backend.</p> <p>Using QoS policy groups with Astra Trident requires ONTAP 9.8 or later.</p> <p>We recommend using a non-shared QoS policy group and ensuring the policy group is applied to each constituent individually. A shared QoS policy group will enforce the ceiling for the total throughput of all workloads.</p>	""
adaptiveQosPolicy	<p>Adaptive QoS policy group to assign for volumes created. Choose one of <code>qosPolicy</code> or <code>adaptiveQosPolicy</code> per storage pool or backend.</p> <p>Not supported by <code>ontap-nas-economy</code>.</p>	""
snapshotReserve	Percentage of volume reserved for snapshots “0”	If <code>snapshotPolicy</code> is <code>none</code> , else “”
splitOnClone	Split a clone from its parent upon creation	false

Parameter	Description	Default
encryption	<p>Enable NetApp Volume Encryption (NVE) on the new volume; defaults to <code>false</code>. NVE must be licensed and enabled on the cluster to use this option.</p> <p>If NAE is enabled on the backend, any volume provisioned in Astra Trident will be NAE enabled.</p> <p>For more information, refer to: How Astra Trident works with NVE and NAE.</p>	<code>false</code>
luksEncryption	<p>Enable LUKS encryption. Refer to Use Linux Unified Key Setup (LUKS).</p> <p>SAN only.</p>	<code>""</code>
tieringPolicy	Tiering policy to use <code>none</code>	<code>snapshot-only</code> for pre-ONTAP 9.5 SVM-DR configuration
unixPermissions	<p>Mode for new volumes.</p> <p>Leave empty for SMB volumes.</p>	<code>""</code>
securityStyle	<p>Security style for new volumes.</p> <p>NFS supports <code>mixed</code> and <code>unix</code> security styles.</p> <p>SMB supports <code>mixed</code> and <code>ntfs</code> security styles.</p>	<p>NFS default is <code>unix</code>.</p> <p>SMB default is <code>ntfs</code>.</p>

Example configurations

Configuration of storage class for SMB volumes

Using `nasType`, `node-stage-secret-name`, and `node-stage-secret-namespace`, you can specify an SMB volume and provide the required Active Directory credentials. SMB volumes are supported using the `ontap-nas` driver only.

```
apiVersion: storage.k8s.io/v1
kind: StorageClass
metadata:
  name: nas-smb-sc
provisioner: csi.trident.netapp.io
parameters:
  backendType: "ontap-nas"
  trident.netapp.io/nasType: "smb"
  csi.storage.k8s.io/node-stage-secret-name: "smbcreds"
  csi.storage.k8s.io/node-stage-secret-namespace: "default"
```

Configuration for AWS FSx for ONTAP with secret manager

```
apiVersion: trident.netapp.io/v1
kind: TridentBackendConfig
metadata:
  name: backend-tbc-ontap-nas
spec:
  version: 1
  storageDriverName: ontap-nas
  backendName: tbc-ontap-nas
  svm: svm-name
  aws:
    fsxFilesystemID: fs-xxxxxxxxxx
    managementLIF:
    credentials:
      name: "arn:aws:secretsmanager:us-west-2:xxxxxxxx:secret:secret-name"
      type: awsarn
```

Configure the Astra Trident EKS add-on version 23.10 on EKS cluster

Astra Trident streamlines Amazon FSx for NetApp ONTAP storage management in Kubernetes to enable your developers and administrators focus on application deployment. The Astra Trident EKS add-on includes the latest security patches, bug

fixes, and is validated by AWS to work with Amazon EKS. The EKS add-on enables you to consistently ensure that your Amazon EKS clusters are secure and stable and reduce the amount of work that you need to do in order to install, configure, and update add-ons.

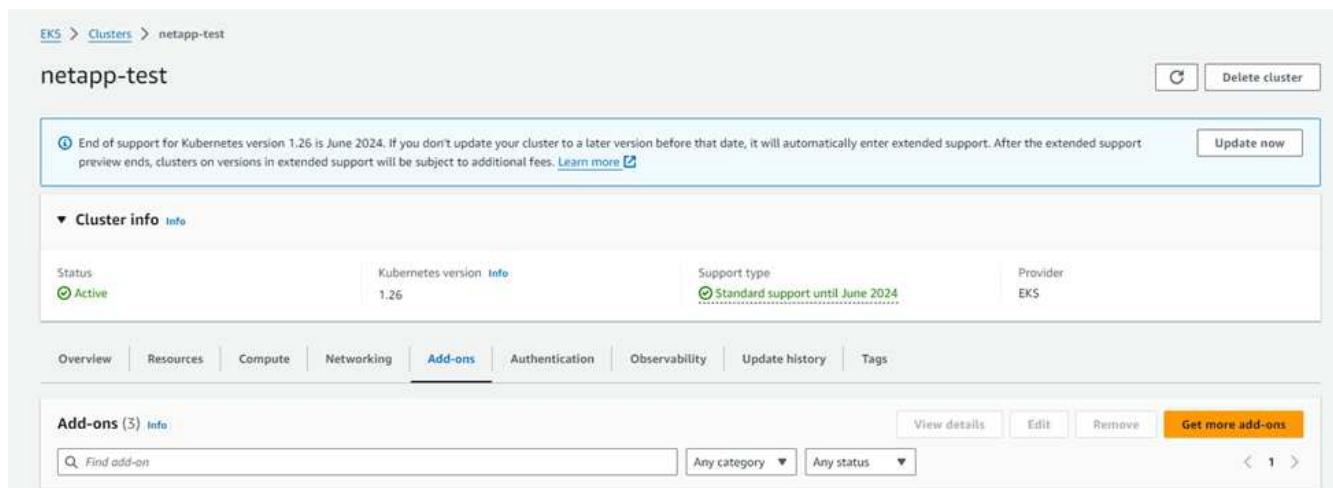
Prerequisites

Ensure that you have the following before configuring the Astra Trident add-on for AWS EKS:

- An Amazon EKS cluster account with add-on subscription
- AWS permissions to the AWS marketplace:
"aws-marketplace:ViewSubscriptions",
"aws-marketplace:Subscribe",
"aws-marketplace:Unsubscribe"
- AMI type: Amazon Linux 2 (AL2_x86_64) or Amazon Linux 2 Arm(AL2_ARM_64)
- Node type: AMD or ARM
- An existing Amazon FSx for NetApp ONTAP file system

Steps

1. On your EKS Kubernetes cluster, navigate to the **Add-ons** tab.



The screenshot shows the AWS EKS Cluster details page for a cluster named 'netapp-test'. The 'Add-ons' tab is selected. At the top, there is a notice about Kubernetes version 1.26 support ending in June 2024, with a 'Update now' button. Below this, the 'Cluster info' section shows the cluster is 'Active', running 'Kubernetes version 1.26', with 'Standard support until June 2024' and 'Provider EKS'. The 'Add-ons' tab is active, showing 3 add-ons: 'Astra Trident', 'Amazon FSx for NetApp ONTAP', and 'Amazon EBS Provisioned IOPS'. There are buttons for 'View details', 'Edit', 'Remove', and 'Get more add-ons'.

2. Go to **AWS Marketplace add-ons** and choose the *storage* category.

AWS Marketplace add-ons (1)

Discover, subscribe to and configure EKS add-ons to enhance your EKS clusters.

Find add-on

Filtering options:

storage Any vendor Any pricing model Clear filters

storage X

AstraTrident by NetApp

Astra Trident streamlines Amazon FSx for NetApp ONTAP storage management in Kubernetes to let your developers and administrators focus on application deployment. FSx for ONTAP flexibility, scalability, and integration capabilities make it the ideal choice for organizations seeking efficient containerized storage workflows. [Product details](#)

Category	Listed by	Supported versions	Pricing starting at
storage	NetApp, Inc.	1.27, 1.26, 1.25, 1.24, 1.23	View pricing details

Cancel Next

3. Locate **AstraTrident by NetApp** and select the checkbox for the Astra Trident add-on.
4. Choose the desired version of the add-on.

Astra Trident by NetApp

Remove add-on

Listed by: **NetApp** Category: storage Status: **Ready to install**

You're subscribed to this software

You can view the terms and pricing details for this product or choose another offer if one is available.

View subscription X

Version: v23.10.0-eksbuild.1

Select IAM role: Not set

Select an IAM role to use with this add-on. To create a new role, follow the instructions in the [Amazon EKS User Guide](#).

Filter roles

Not set

This add-on will use the IAM role of the node where it runs.

Cancel Previous Next

5. Select the IAM role option to inherit from the node.
6. Configure any optional settings as required and select **Next**.

Review and add

Step 1: Select add-ons

Selected add-ons

Add-on name	Type	Status
netapp_trident-operator	storage	Ready to install

Step 2: Configure selected add-ons settings

Selected add-ons version

Add-on name	Version	IAM role
netapp_trident-operator	v23.10.0-eksbuild.1	Inherit from node

Cancel Previous Create

7. Select **Create**.

8. Verify that the status of the add-on is *Active*.

Add-ons (1) Info		View details Edit Remove Get more add-ons		
		Category	Status	Version
NetApp	AstraTrident by NetApp	Storage	Active	v23.10.0-eksbuild.1

Install/uninstall the Astra Trident EKS add-on using CLI

Install the Astra Trident EKS add-on using CLI:

The following example commands install the Astra Trident EKS add-on:

```
eksctl create addon --cluster K8s-arm --name netapp_trident-operator --version v23.10.0-eksbuild.
```

```
eksctl create addon --cluster K8s-arm --name netapp_trident-operator --version v23.10.0-eksbuild.1 (with a dedicated version)
```

Uninstall the Astra Trident EKS add-on using CLI:

The following command uninstalls the Astra Trident EKS add-on:

```
eksctl delete addon --cluster K8s-arm --name netapp_trident-operator
```

Copyright information

Copyright © 2026 NetApp, Inc. All Rights Reserved. Printed in the U.S. No part of this document covered by copyright may be reproduced in any form or by any means—graphic, electronic, or mechanical, including photocopying, recording, taping, or storage in an electronic retrieval system—with prior written permission of the copyright owner.

Software derived from copyrighted NetApp material is subject to the following license and disclaimer:

THIS SOFTWARE IS PROVIDED BY NETAPP “AS IS” AND WITHOUT ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, WHICH ARE HEREBY DISCLAIMED. IN NO EVENT SHALL NETAPP BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.

NetApp reserves the right to change any products described herein at any time, and without notice. NetApp assumes no responsibility or liability arising from the use of products described herein, except as expressly agreed to in writing by NetApp. The use or purchase of this product does not convey a license under any patent rights, trademark rights, or any other intellectual property rights of NetApp.

The product described in this manual may be protected by one or more U.S. patents, foreign patents, or pending applications.

LIMITED RIGHTS LEGEND: Use, duplication, or disclosure by the government is subject to restrictions as set forth in subparagraph (b)(3) of the Rights in Technical Data -Noncommercial Items at DFARS 252.227-7013 (FEB 2014) and FAR 52.227-19 (DEC 2007).

Data contained herein pertains to a commercial product and/or commercial service (as defined in FAR 2.101) and is proprietary to NetApp, Inc. All NetApp technical data and computer software provided under this Agreement is commercial in nature and developed solely at private expense. The U.S. Government has a non-exclusive, non-transferrable, nonsublicensable, worldwide, limited irrevocable license to use the Data only in connection with and in support of the U.S. Government contract under which the Data was delivered. Except as provided herein, the Data may not be used, disclosed, reproduced, modified, performed, or displayed without the prior written approval of NetApp, Inc. United States Government license rights for the Department of Defense are limited to those rights identified in DFARS clause 252.227-7015(b) (FEB 2014).

Trademark information

NETAPP, the NETAPP logo, and the marks listed at <http://www.netapp.com/TM> are trademarks of NetApp, Inc. Other company and product names may be trademarks of their respective owners.