



## **Get started**

### Kubernetes clusters

NetApp  
April 07, 2022

# Table of Contents

- Get started ..... 1
  - Kubernetes data management in Cloud Manager ..... 1
  - Get started with Kubernetes clusters ..... 1

# Get started

## Kubernetes data management in Cloud Manager

Astra Trident is a fully-supported open source project maintained by NetApp. Astra Trident integrates natively with Kubernetes and its Persistent Volume framework to seamlessly provision and manage volumes from systems running any combination of NetApp storage platforms. [Learn more about Trident](#).

### Features

You can directly manage your Kubernetes clusters using Cloud Manager.

- Install Astra Trident.
- Add and manage clusters as part of your hybrid cloud infrastructure.
- Add and manage storage classes and connect them to Working Environments.
- Back up persistent volumes using Cloud Backup Service.

### Supported Kubernetes deployments

Cloud Manager supports managed-Kubernetes clusters running in:

- [Amazon Elastic Kubernetes Service \(Amazon EKS\)](#)
- [Microsoft Azure Kubernetes Service \(AKS\)](#)
- [Google Kubernetes Engine \(GKE\)](#)

### Supported Astra Trident deployments

One of the four most recent versions of Astra Trident is required. You can install Astra Trident directly from Cloud Manager. You should [review the prerequisites](#) prior to installation.

To upgrade Astra Trident, [upgrade with the operator](#).

### Supported backend storage

NetApp's Astra Trident must be installed on each Kubernetes cluster and Cloud Volumes ONTAP must be configured as backend storage for the clusters.

### Cost

There are no charges to *discover* your Kubernetes clusters in Cloud Manager, but you will be charged when you back up persistent volumes using Cloud Backup Service.

## Get started with Kubernetes clusters

Add Kubernetes clusters to Cloud Manager for advanced data management in a few quick steps.

## Quick start

Get started quickly by following these steps.

1

### Review prerequisites

Ensure your environment meets the prerequisites for your cluster type.

[Requirements for Kubernetes clusters in AWS](#)

[Requirements for Kubernetes clusters in Azure](#)

[Requirements for Kubernetes clusters in Google Cloud](#)

2

### Add your Kubernetes clusters to Cloud Manager

You can add Kubernetes clusters and connect them to a Working Environment using Cloud Manager.

[Add an Amazon Kubernetes cluster](#)

[Add an Azure Kubernetes cluster](#)

[Add a Google Cloud Kubernetes cluster](#)

3

### Start provisioning Persistent Volumes

Request and manage Persistent Volumes using native Kubernetes interfaces and constructs. Cloud Manager creates NFS and iSCSI storage classes that you can use when provisioning Persistent Volumes.

[Learn more about provisioning your first volume with Astra Trident.](#)

4

### Manage your clusters using Cloud Manager

After adding Kubernetes clusters to Cloud Manager, you can manage the clusters from the Cloud Manager resource page.

[Learn how to manage Kubernetes clusters.](#)

## Copyright Information

Copyright © 2022 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-without 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.

RESTRICTED RIGHTS LEGEND: Use, duplication, or disclosure by the government is subject to restrictions as set forth in subparagraph (c)(1)(ii) of the Rights in Technical Data and Computer Software clause at DFARS 252.277-7103 (October 1988) and FAR 52-227-19 (June 1987).

## 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.