



# **Architecture and components**

## **Astra**

Ben Cammett  
August 16, 2021

# Table of Contents

- Architecture and components ..... 1
  - Astra Control components ..... 1
  - Astra Control interfaces ..... 1
  - For more information ..... 1

# Architecture and components

Here's an overview of the various components of the Astra Control environment.

[Astra Control architecture diagram and components]

## Astra Control components

- **Kubernetes clusters:** Kubernetes is a portable, extensible, open-source platform for managing containerized workloads and services, that facilitates both declarative configuration and automation. Astra Control provides management services for applications hosted in a Kubernetes cluster.
- **Trident:** As a fully supported open source storage provisioner and orchestrator maintained by NetApp, Trident enables you to create storage volumes for containerized applications managed by Docker and Kubernetes. When deployed with Astra Control, Trident includes a configured ONTAP storage backend.
- **Storage backend:** Astra Control Service uses [NetApp Cloud Volumes Service for Google Cloud](#) as the backend storage for GKE clusters and [Azure NetApp Files](#) as the backend storage for AKS clusters.

Astra Control Center uses an ONTAP AFF and FAS storage backend. As a storage software and hardware platform, ONTAP provides core storage services, support for multiple storage access protocols, and storage management functionality, such as snapshots and mirroring.

- **Cloud Insights:** A NetApp cloud infrastructure monitoring tool, Cloud Insights enables you to monitor performance and utilization for your Kubernetes clusters managed by Astra Control Center. Cloud Insights correlates storage usage to workloads.

## Astra Control interfaces

You can complete tasks using different interfaces:

- **Web user interface (UI):** Both Astra Control Service and Astra Control Center use the same web-based UI where you can manage, migrate and protect apps. Use the UI to manage user accounts and configuration settings.
- **API:** Both Astra Control Service and Astra Control Center use the same Astra API. Using the API, you can perform the same tasks that you would using the UI.

## For more information

- [Astra Control Center documentation](#)
- [Use the Astra API](#)
- [Trident documentation](#)
- [Cloud Insights documentation](#)
- [ONTAP documentation](#)

## Copyright Information

Copyright © 2021 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.