# Get started

## BlueXP volume caching

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# Get started

## Learn about BlueXP volume caching

Volume caching, a feature of ONTAP 9 software, is a remote caching capability that simplifies file distribution, reduces WAN latency by bringing resources closer to where your users and compute resources are, and lowers WAN bandwidth costs. Volume caching provides a persistent, writable volume in a remote place. You can use BlueXP volume caching to speed up access to data or to offload traffic from heavily accessed volumes. Cache volumes are ideal for read-intensive workloads, especially where clients need to access the same data repeatedly.

With BlueXP volume caching, you have caching capabilities for the cloud, specifically for Amazon FSx for NetApp ONTAP, Cloud Volumes ONTAP, and on-premises as working environments.

The service also provides branch office access to corporate datasets. By serving *hot data*, data that needs to be accessed frequently from multiple controllers in a cluster, you can increase the performance delivered to key applications. And, by caching hot data local to users at multiple locations around the world, you can enhance their collaboration by enabling simultaneous access to centralized datasets while also reducing the response time they receive when accessing the hot data.

### What is a cache?

A cache is a temporary storage location that resides between a host and the source of data. The objective of a cache is to store frequently accessed portions of source data in a way that allows the data to be served faster than it would be by fetching the data from the source. Caches are most beneficial in read-intensive environments where data is accessed more than once and is shared by multiple hosts. A cache system is faster than the system with data source, which is achieved through a faster storage system and proximity of the cache storage space to the host.

### Benefits of using BlueXP volume caching

BlueXP volume caching offers the following benefits:

- Accelerate performance in a hybrid cloud infrastructure
- Remove cloud silos by caching data from one cloud provider to another
- Lower storage costs
- Collaborate across geographic locations
- Use of a NetApp-managed service in BlueXP
- Ability to adapt to changing IT environments faster
- On-demand or subscription-based volume caching hosted in the cloud

### What you can do with BlueXP volume caching

The BlueXP volume caching provides you with full use of several NetApp technologies to accomplish the following goals:

The BlueXP volume caching service provides you with full use of several NetApp technologies to accomplish

the following goals:

- Cache data from one cloud provider to another
- View and edit a cache export policy
- Resize an existing cache
- Delete a cache

### Cost

NetApp doesn't charge you for using the BlueXP volume caching service, but you'll need to check your cloud provider for applicable data ingress and egress charges.

### Licensing

No special ONTAP licenses are needed for BlueXP volume caching.

### How BlueXP volume caching works

A cache volume is a sparsely populated volume that is backed by a source volume. The cache volume can be on the same cluster as or on a different cluster than that of the source volume.

The cache volume provides access to data in the source volume without requiring that all the data be in the cache volume. Data storage in the caching volume is efficiently managed by retaining only the hot data (working, or recently used data).

BlueXP volume caching reads requests if the cache volume contains the data requested by the client. Otherwise, the volume caching service requests the data from the source volume and stores the data before serving the client request. Subsequent requests for the data are then served directly from the cache volume. This improves performance when the same data is accessed repeatedly, because after the first request, the data no longer must travel across the network or be served from an overloaded system.

## BlueXP volume caching prerequisites

Get started by verifying the readiness of your operational environment, login, network access, and web browser.

To use BlueXP volume caching, you should ensure that your environment meets all requirements.

- ONTAP 9.8 and later
  - Cluster Admin ONTAP permissions
  - Intercluster LIFs on the clusters
- In BlueXP:
  - The BlueXP Connector needs to be set up in NetApp BlueXP. All source and target clusters must be on the same BlueXP Connector. Refer to the BlueXP Quick start and Learn about Connectors.
  - The working environment should be set up.
  - The clusters should be added in the target working environment and in an ON or degraded state.
  - Standard BlueXP requirements. Refer to BlueXP requirements.

# Quick start for BlueXP volume caching

Here's an overview of the steps needed to get started with BlueXP volume caching. The links within each step take you to a page that provides more details.

1 **Review prerequisites**

Ensure your environment meets these requirements.

2 **Set up the volume caching service**

Set up BlueXP volume caching.

3 **What's next?**

After you set up the service, here's what you might do next.

- Create a cache.
- Manage a cache, edit a cache, resize a cache, or delete a cache.
- Monitor volume caching operations.

# Set up BlueXP volume caching

To use BlueXP volume caching, perform a few steps to set it up.

- Review prerequisites to ensure that your environment is ready.
- Create a BlueXP Connector.
- Create working environments.

## Create a Connector in BlueXP

The next step is to create a Connector in BlueXP.

To create a Connector in BlueXP before using the service, refer to the BlueXP documentation that describes How to create a connector.

## Create working environments

If you haven't done so already, you need to create the working environments for the source and target.

- Create an Amazon FSx for ONTAP working environment
- Launch Cloud Volumes ONTAP in AWS
- Launch Cloud Volumes ONTAP in Azure
- Launch Cloud Volumes ONTAP in GCP
- Add existing Cloud Volumes ONTAP systems

- Discover ONTAP clusters

# Access BlueXP volume caching

You use NetApp BlueXP to log in to the BlueXP volume caching service.

To log in to BlueXP, you can use your NetApp Support Site credentials or you can sign up for a NetApp cloud login using your email and a password. Learn more about logging in.

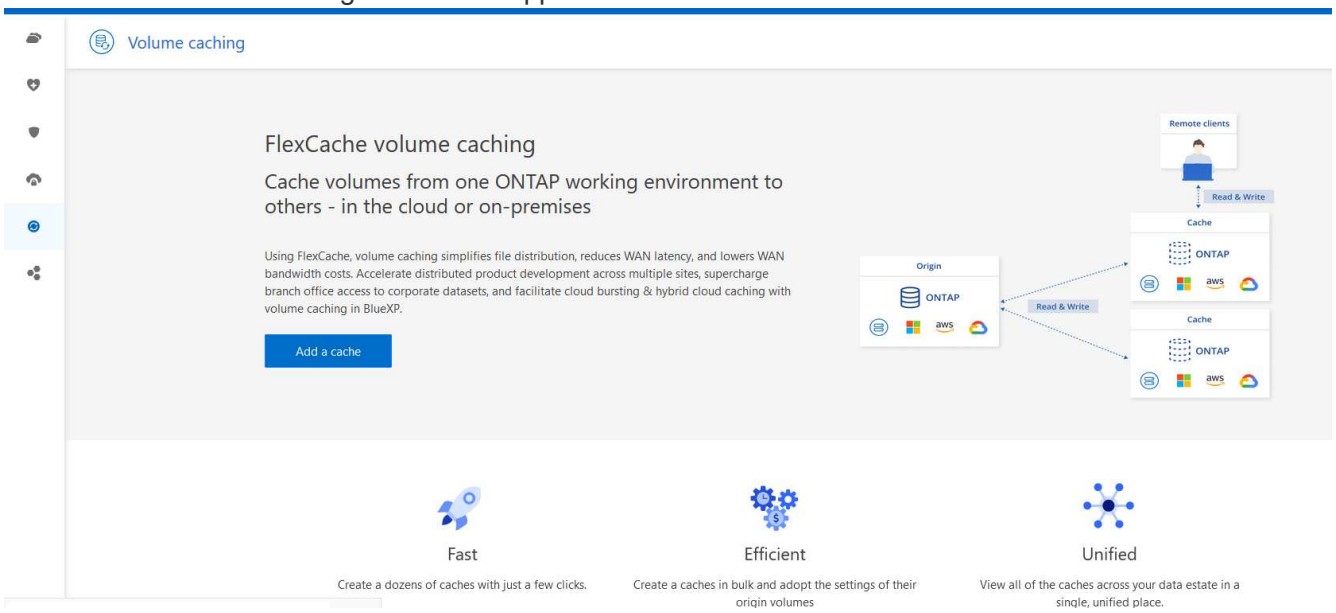
**Steps**

1. Open a web browser and go to the BlueXP console.

   The NetApp BlueXP login page appears.

2. Log in to BlueXP.
3. From the BlueXP left navigation, select **Mobility** > **Volume caching**.

   The BlueXP volume caching Dashboard appears.




> If a BlueXP Connector is not set up, the option **Add a connector** appears. Refer to Set up BlueXP volume caching.

# Frequently asked questions for BlueXP volume caching

This FAQ can help if you're just looking for a quick answer to a question.

**What's the BlueXP volume caching URL?**
For the URL, in a browser, enter: https://console.bluexp.netapp.com/ to access the BlueXP console.

**Do you need a license to use BlueXP volume caching?**
A NetApp License File (NLF) is not required.

**How do you enable BlueXP volume caching?**

BlueXP volume caching does not require any enablement. The volume caching option automatically appears on the BlueXP left navigation.

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