Use BlueXP volume caching

BlueXP volume caching

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Use BlueXP volume caching

Use BlueXP volume caching overview

Using BlueXP volume caching, you can accomplish the following goals:

- Create a cache.
- View cache details.
- Change the export policy and resize a cache.
- Delete a cache.
- Monitor volume caching operations on the BlueXP Timeline.

Create a cache

You can create a volume caching between Amazon FSx for ONTAP, Cloud Volumes ONTAP, and on-premises ONTAP with one or more source volumes from the source working environment as the cache source. You then choose the storage virtual machine for the cache volumes.

The cache volume can be on the same cluster or a different cluster than that of the source volume. The volumes you select to cache must belong to the same storage VM and the storage VMs must use the same protocols.

> If volumes are not eligible for caching, they are greyed out so that you cannot select them.

You can enter the size for cache volumes as a percentage of source volume size.

> The IPSpace used by the cache volume depends on the IPSpace used by the source storage VM.

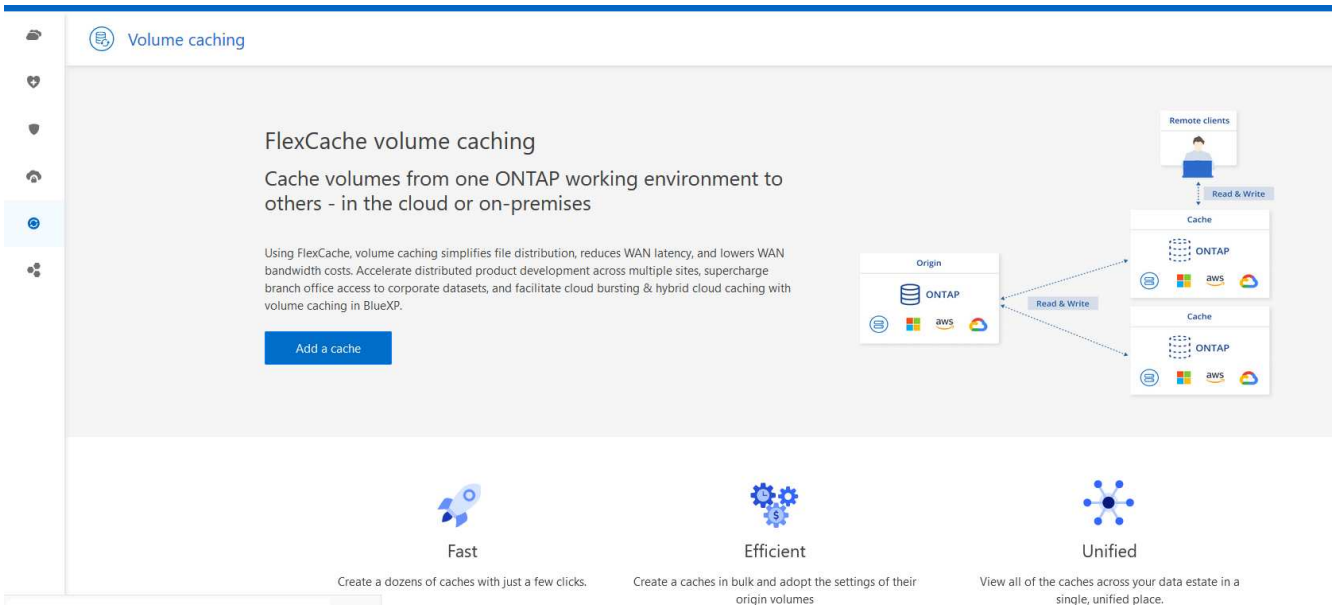
The cache volume name uses a suffix of `_cache` added to the original volume name.

Steps from the BlueXP volume caching landing page

1. Log in to BlueXP and select **Mobility** > **Volume caching** from the left navigation.

   You'll land on the BlueXP volume caching Dashboard page. When you first start with the service, you need to add the cache information. Later, the Dashboard appears instead and displays data about the caches.

   > If you have not yet set up a BlueXP Connector, the option **Add a connector** appears instead of the **Add a cache**. In this case, you need to set up the Connector first. Refer to the BlueXP Quick start.



2. Select **Add a cache**.
3. In the Cache data page, select the working environment source and target cache and select **Start caching wizard**.
4. In the Configure your caches page, select the volume or volumes you want to cache.

   You can select up to 50 volumes.

5. Scroll down the page to make additional changes to the VM details or volume size.
6. Enter the size for cache volumes as a percentage of the source volume size.

   A good rule of thumb is that the cache volume size should be about 15% of the source volume size.

7. Check the **Cache access** box to replicate the NFS export policy rules and the SMB/CIFS share configuration from the source volume to the target cache volume.

   Then the NFS export policy rules and SMB/CIFS share in the source volume will be replicated to the cache volume. If the SMB/CIFS protocol isn't enabled on the cache storage VM, the SMB/CIFS share will not replicate.

8. Optionally, enter the cache name prefix.

   The suffix of `_cache` is appended to the name in the format: `<user-specified prefix>_<source volume name>_cache`

9. Select **Create caches**.

   The new cache appears on the Caching list. The cache volume name will show `_cache` as a suffix to the source volume name.

10. To see the progress of the operation, from the top menu, select > **Timeline**.

Steps from the BlueXP canvas

1. From the BlueXP canvas, select the working environment.
2. Select the source environment and drag it to the destination.

3. Select the **Volume caching** service.

   This creates a cache volume from the source to the destination.

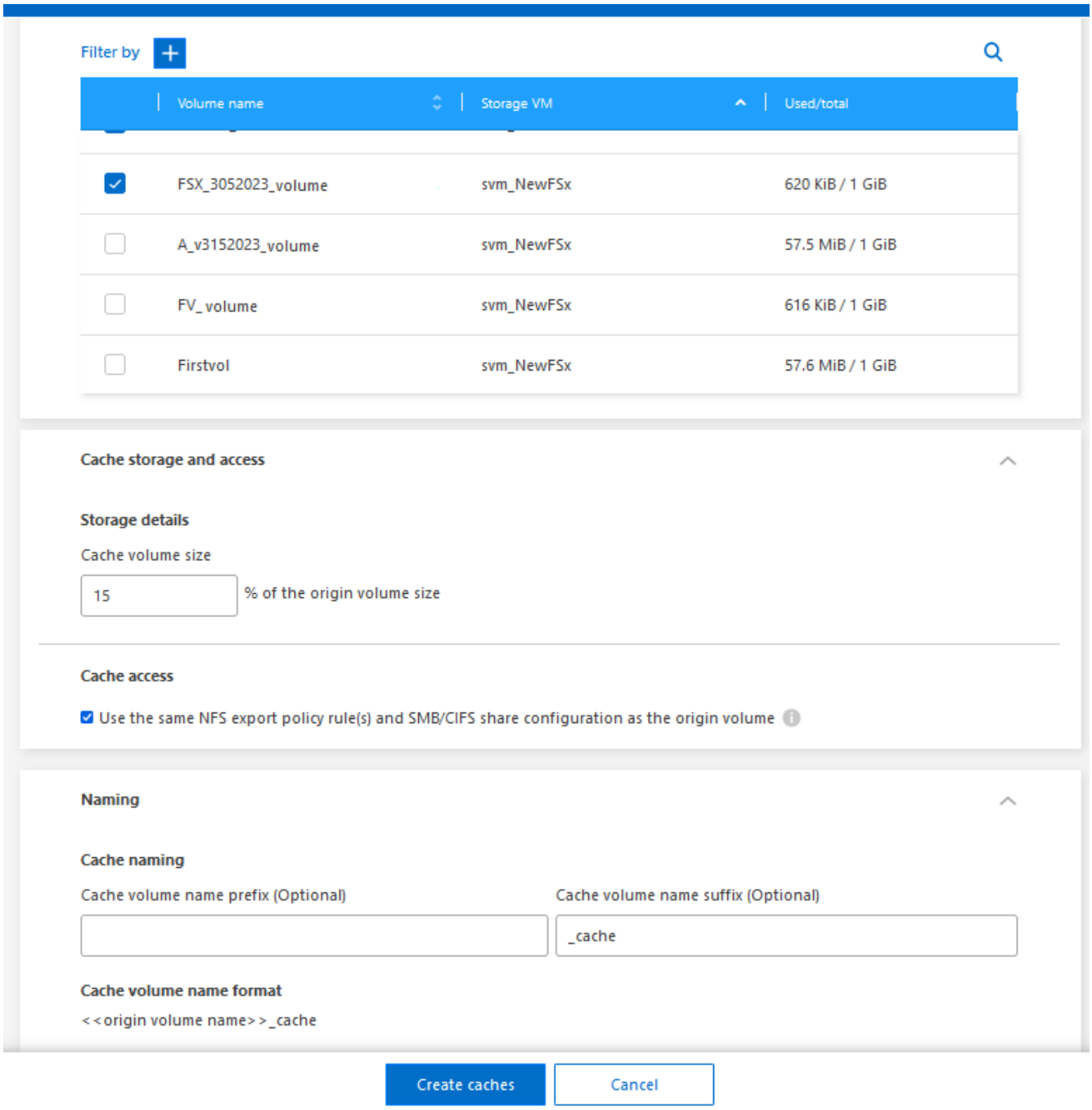
4. In the right pane, in the Caching service box, select **Add**.
5. In the Cache data page, select the working environment you want to cache and select **Start cache wizard**.

6. In the Configure your caches page, select the volume or volumes you want to cache.

   You can select up to 50 volumes.

7. Scroll down the page to make additional changes to the VM details or volume size.
8. Enter the size for cache volumes as a percentage of the source volume size.

A good rule of thumb is that the cache volume size should be about 15% of the source volume size.



9. Check the **Cache access** box to replicate the NFS export policy rules and the SMB/CIFS share configuration from the source volume to the target cache volume.

   Then the NFS export policy rules and SMB/CIFS share in the source volume will be replicated to the cache volume. If the SMB/CIFS protocol isn't enabled on the cache storage VM, the SMB/CIFS share will not replicate.

10. Optionally, enter the cache name prefix.

    The suffix of `_cache` is appended to the name in the format: `<user-specified prefix>_<source`

`volume name>_cache`

11. Select **Create caches**.

    The new cache appears on the Caching list. The cache volume name will show `_cache` as a suffix to the source volume name.

12. To see the progress of the operation, from the top menu, select > **Timeline**.

Manage a cache

You can edit a cache, change the export policy, resize a cache, and delete a cache.

With BlueXP volume caching, you can accomplish these goals:

- View cache details.
- Assign a different export policy to a cache.
- Edit a volume caching and change its size, etc. Edit will have the option to view and change other properties, and more properties will be added in edit in upcoming releases.
- Resize an existing cache based on a percentage of the original volume size.
- Delete a cache.

View cache details

For each caching, you can see the original volume, the working environment, the cache volume, and more.

Steps

1. From the BlueXP left navigation, select **Mobility** > **Volume caching**.

   You can view the list of cache volumes created at the destination environment. The list of caches displays the cache details.

2. To filter the list, select the **Filter by +** option.
3. Select a row and select the **Actions …** option on the right.
4. Select **View and edit details**.
5. Review the details.

Edit a cache

You can change the name, volume size, and export policy for a cache.

Steps

1. From the BlueXP left navigation, select **Mobility** > **Volume caching**.
2. Select a row and select the **Actions …** option on the right.
3. Select **View and edit details**.
4. In the Basic configuration tab, optionally, change the cache name and cache volume size.
5. Optionally, expand the Cache access tab, and modify these values:

   a. The mount path.
   b. An export policy that is different from the existing one.
6. To change SMB/CIFS share details or the export policy rules, click the option to access BlueXP System Manager.
7. Select **Save**.

Assign a different cache export policy

You can assign a different export policy to a cache.

The source export policy rules should be applied to the target cluster.

> You can assign an existing export policy to a cache. You cannot change the export policy rules. If you need to change the export policies, you can use NetApp System Manager.

Steps

1. From the BlueXP left navigation, select **Mobility** > **Volume caching**.
2. Select a row and select the **Actions …** option on the right.
3. Select **Change export policy**.
4. Select the export policy you want to assign to the cache.
5. Select **Save**.

Resize a cache

You can change the size of the cache volume based on a percentage of the source volume.

Steps

1. From the BlueXP left navigation, select **Mobility** > **Volume caching**.
2. Select a row and select the **Actions …** option on the right.
3. Select **Resize**.
4. Enter a new percentage of the origin volume size.

   The cache volume will resize to the new percentage.

5. Select **Save**.

Delete a cache

If you no longer need the cache, you can delete it. This deletes the volume caching relationship and deletes the target volume cache.

Steps

1. From the BlueXP left navigation, select **Mobility** > **Volume caching**.
2. Select a row and select the **Actions …** option on the right.
3. Select **Delete**.
4. Check the box.

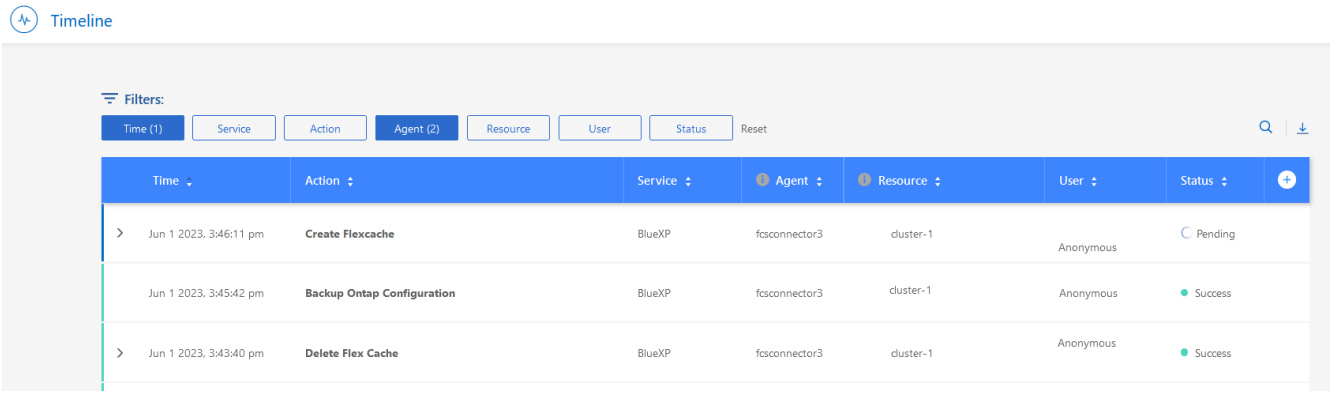
5. Select **Delete**.

Monitor volume caching jobs on the Timeline

You can monitor all volume caching jobs and determine their progress.

Steps

1. From the top menu, select > **Timeline**.



2. Optionally, filter by time, service, action, agent, resource, user, or status.
3. Explore all caches and the operations.

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