



Access the same Data Across Different Environments

NetApp Solutions

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Access the same Data Across Different Environments

[Previous: Expose Existing NetApp Volumes to Domino.](#)

This section describes the tasks that need to be performed in order to access the same data across different compute environments. In the Domino MLOps platform, compute environments are referred to "data planes." Follow the tasks outlined in this section if your data resides on a NetApp volume in one data plane, but you need to access it in another data plane. This type of scenario is often referred to as "bursting" or, when the destination environment is the cloud, "cloud bursting." This capability is often needed when dealing with constrained or over-subscribed compute resources. For example, if your on-premises compute cluster is over-subscribed, you may want to schedule workloads to the cloud where they can be started immediately.

There are two recommended options for accessing a NetApp volume that resides in a different data plane. These options are outlined in the sub-sections below. Choose one of these options depending on your specific requirements. The benefits and drawbacks of the two options are described in the following table.

Option	Benefits	Drawbacks
Option 1 - Cache	<ul style="list-style-type: none">- Simpler workflow- Ability to cache a subset of data based on needs- Ability to write data back to source- No remote copy to manage	<ul style="list-style-type: none">- Increased latency on initial data access as cache is hydrated.
Option 2 - Mirror	<ul style="list-style-type: none">- Full copy of source volume- No increased latency due to cache hydration (after mirror operation is complete)	<ul style="list-style-type: none">- Must wait for mirror operation to complete before accessing data- Must manage a remote copy- No ability to write back to source

Option 1 - Create a Cache of a Volume that Resides in a Different Data Plane

With [NetApp FlexCache technology](#), you can create a cache of a NetApp volume that resides in a different data plane. For example, if you have a NetApp volume in your on-premises data plane, and you need to access that volume in your AWS data plane, you can create a cache of the volume in AWS. This section outlines the tasks that need to be performed in order to create a cache of a NetApp volume that resides in a different data plane.

Create FlexCache Volume in Destination Environment



If the destination environment is your on-premises data center, you will create the FlexCache volume on your on-premises ONTAP system. If the destination environment is AWS, you will create the FlexCache volume on your Amazon FSx for NetApp ONTAP instance.

First, you must create a FlexCache volume in the destination environment.

We recommend using BlueXP to create the FlexCache volume. To create a FlexCache volume with BlueXP, follow the instructions outlined in the [BlueXP volume caching documentation](#).

If you prefer not to use BlueXP, you can use ONTAP System Manager or the ONTAP CLI to create the FlexCache volume. To create a FlexCache volume with System Manager, refer to the instructions outlined in the [ONTAP documentation](#). To create a FlexCache volume with the ONTAP CLI, refer to the instructions outlined in the [ONTAP documentation](#).

If you wish to automate this process, you can use the [BlueXP API](#), the [ONTAP REST API](#), or the [ONTAP Ansible collection](#).



System Manager is not available in Amazon FSx for NetApp ONTAP.

Expose FlexCache Volume to Domino

Next, you must expose the FlexCache volume to the Domino MLOps platform. To expose the FlexCache volume to Domino, follow the instructions outlined in the 'Expose Existing NFS Volumes that were not Provisioned by Astra Trident' sub-section of the ['Expose Existing NetApp Volumes to Domino' section](#) of this solution.

Now, you will be able to mount the FlexCache volume when launching jobs and workspaces in the destination data plane as shown in the following screenshots.

Before Creating FlexCache Volume

Start a Job

✓

Execution

FILE: main.py

ENV: Domino Sta...

✓

Compute Cluster

(optional)

✓

Data

Data that will be mounted

NAME	DATA TYPE	DATA PLANE	KIND
quick-start	Dataset	Local	Project
image-data	EDV	rtp-aillab-kube02 ...	Nfs

Unavailable in selected Dataplane

Change your Hardware Tier to mount currently unavailable data.

NAME	DATA TYPE	DATA PLANE	KIND
chatbot-data	EDV	rtp-aillab-kube02	Nfs

Cancel

< Back

Start

After Exposing FlexCache Volume to Domino

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Start a Job

✓

Execution

FILE: model.py

ENV: Domino Sta...

✓

Compute Cluster

(optional)

3

Data

Data that will be mounted

NAME	DATA TYPE	DATA PLANE	KIND
quick-start	Dataset	Local	Project
image-data	EDV	rtp-aillab-kube02	Nfs
chatbot-data	EDV	rtp-aillab-kube02	Nfs

Unavailable in selected Dataplane

Change your Hardware Tier to mount currently unavailable data.

NAME	DATA TYPE	DATA PLANE	KIND
No data found			

Cancel

< Back

Start

Option 2 - Replicate a Volume that Resides in a Different Data Plane

With [NetApp SnapMirror data replication technology](#), you can create a copy of a NetApp volume that resides in a different data plane. For example, if you have a NetApp volume in your on-premises data plane, and you need to access that volume in your AWS data plane, you can create a copy of the volume in AWS. This section outlines the tasks that need to be performed in order to create a copy of a NetApp volume that resides in a different data plane.

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Create SnapMirror Relationship

First, you must create a SnapMirror relationship between your source volume and a new destination volume in the destination environment. Note that the destination volume will be created as part of the process of creating the SnapMirror relationship.

We recommend using BlueXP to create the SnapMirror relationship. To create a SnapMirror relationship with BlueXP, follow the instructions outlined in the [BlueXP replication documentation](#).

If you prefer not to use BlueXP, you can use ONTAP System Manager or the ONTAP CLI to create the SnapMirror relationship. To create a SnapMirror relationship with System Manager, refer to the instructions outlined in the [ONTAP documentation](#). To create a SnapMirror relationship with the ONTAP CLI, refer to the instructions outlined in the [ONTAP documentation](#).

If you wish to automate this process, you can use the [BlueXP API](#), the [ONTAP REST API](#), or the [ONTAP Ansible collection](#).



System Manager is not available in Amazon FSx for NetApp ONTAP.

Break SnapMirror Relationship

Next, you must break the SnapMirror relationship in order to activate the destination volume for data access. Wait until the initial replication is complete before performing this step.



You can determine whether or not the replication is complete by checking the mirror state in BlueXP, ONTAP System Manager, or the ONTAP CLI. When the replication is complete, the mirror state will be "snapmirrored".

We recommend using BlueXP to break the SnapMirror relationship. To break a SnapMirror relationship with BlueXP, follow the instructions outlined in the [BlueXP replication documentation](#).

If you prefer not to use BlueXP, you can use ONTAP System Manager or the ONTAP CLI to break the SnapMirror relationship. To break a SnapMirror relationship with System Manager, refer to the instructions outlined in the [ONTAP documentation](#). To break a SnapMirror relationship with the ONTAP CLI, refer to the instructions outlined in the [ONTAP documentation](#).

If you wish to automate this process, you can use the [BlueXP API](#), the [ONTAP REST API](#), or the [ONTAP Ansible collection](#).

Expose Destination Volume to Domino

Next, you must expose the destination volume to the Domino MLOps platform. To expose the destination volume to Domino, follow the instructions outlined in the 'Expose Existing NFS Volumes that were not Provisioned by Astra Trident' sub-section of the ['Expose Existing NetApp Volumes to Domino' section](#) of this solution.

Now, you will be able to mount the destination volume when launching jobs and workspaces in the destination data plane as shown in the following screenshots.

Before Creating SnapMirror Relationship

Start a Job

✓

Execution

FILE: main.py

ENV: Domino Sta...

✓

Compute Cluster

(optional)

✓

Data

Data that will be mounted

NAME	DATA TYPE	DATA PLANE	KIND
quick-start	Dataset	Local	Project
image-data	EDV	rtp-aillab-kube02 ...	Nfs

Unavailable in selected Dataplane

Change your Hardware Tier to mount currently unavailable data.

NAME	DATA TYPE	DATA PLANE	KIND
chatbot-data	EDV	rtp-aillab-kube02	Nfs

Cancel

< Back

Start

After Exposing Destination Volume to Domino

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Start a Job



Execution

FILE: model.py
ENV: Domino Sta...



Compute Cluster (optional)



Data

Data that will be mounted

NAME	DATA TYPE	DATA PLANE	KIND
quick-start	Dataset	Local	Project
image-data	EDV	rtp-aillab-kube02	Nfs
chatbot-data	EDV	rtp-aillab-kube02	Nfs

Unavailable in selected Dataplane

Change your Hardware Tier to mount currently unavailable data.

NAME	DATA TYPE	DATA PLANE	KIND
No data found			

Cancel

< Back

Start

Next: Additional Information.

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