FabricPool tier management with System Manager

ONTAP 9

NetApp
April 15, 2022

This PDF was generated from https://docs.netapp.com/us-en/ontap/concept_cloud_overview.html on April 15, 2022. Always check docs.netapp.com for the latest.

Table of Contents

FabricPool tier management with System Manager . . . 1
- FabricPool tier management overview with System Manager . . . 1
- Add a connection to the cloud . . . 2
- Tier data to cloud . . . 2
- Install a FabricPool license . . . 3
- Tier data to local bucket . . . 4
- Create tags for tiering objects . . . 4
- Enable inactive data reporting . . . 5

FabricPool tier management with System Manager

FabricPool tier management overview with System Manager

The topics in this section show you how to configure and manage a FabricPool cloud tier with System Manager in ONTAP 9.7 and later releases.

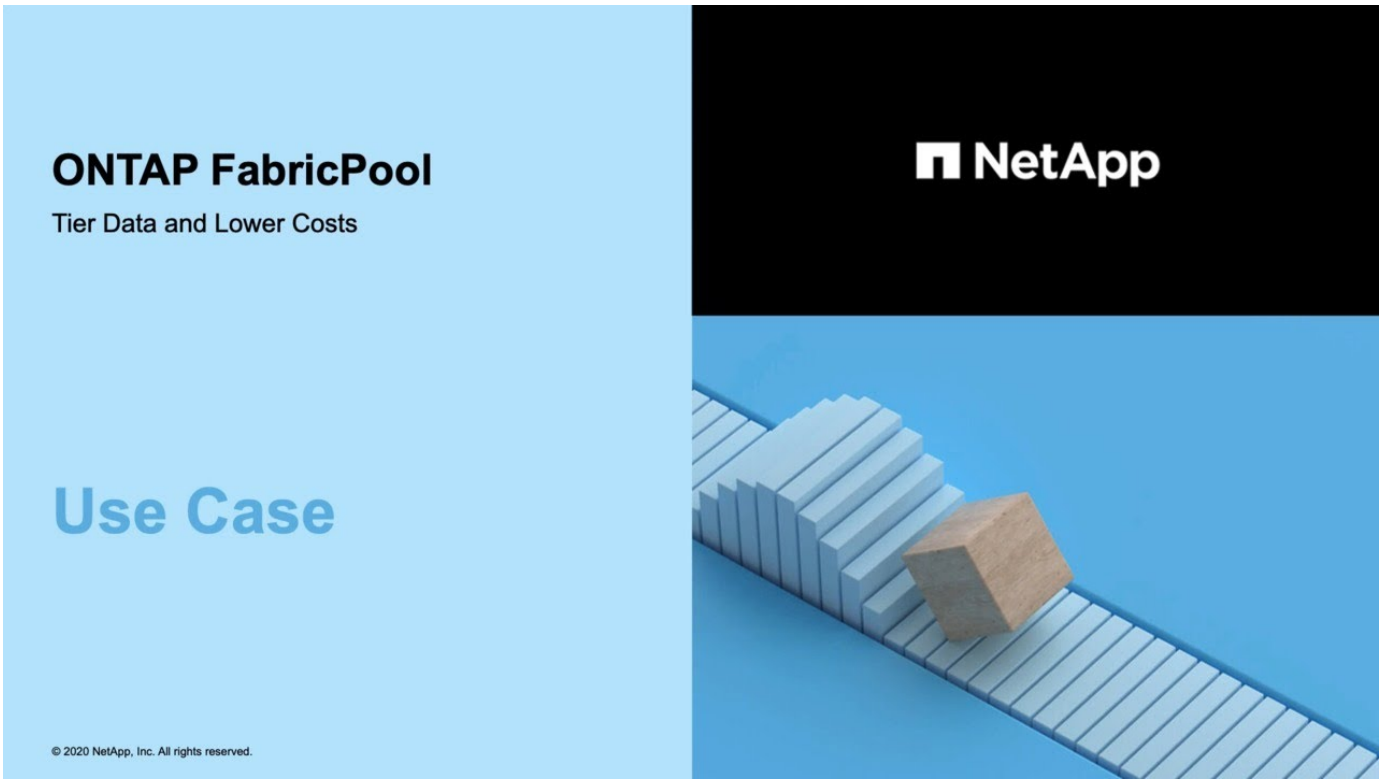
You can use FabricPool to automatically tier data depending on how frequently the data is accessed.

FabricPool is a hybrid storage solution that uses an all flash (all SSD) aggregate as the performance tier and an object store as the cloud tier. Using a FabricPool helps you reduce storage cost without compromising performance, efficiency, or protection.

The cloud tier can be located on NetApp StorageGRID or ONTAP S3 (beginning with ONTAP 9.8), or one of the following service providers:

- Alibaba cloud
- Amazon S3
- Google Cloud
- IBM cloud
- Microsoft Azure Blob Storage

Tier Data and Lower Costs Use Case video



Add a connection to the cloud

Beginning with ONTAP 9.9.0, you can use System Manager to add a connection to the cloud.

You start by using NetApp Cloud Insights to configure a collector. During the configuration process, you copy a pairing code that is generated by Cloud Insights, and then you log on to a cluster using System Manager. There, you add a cloud connection using that pairing code. The rest of the process is completed in Cloud Insights.

Steps

1. In Cloud Insights, during the process to configure a collector, copy the generated pairing code.
2. Using System Manager with ONTAP 9.9.0 or later, log on to the cluster.
3. Go to **Cluster > Settings**.
4. In the Cloud Connections section, select **Add** to add a connection.
5. Enter a name for the connection, and paste the pairing code in the space provided.
6. Click **Add**.
7. Return to Cloud Insights to complete the configuration of the collector.

For additional information about using Cloud Insights, refer to Cloud Insights Cloud Agent documentation.

Tier data to cloud

Storing data in tiers can enhance the efficiency of your storage system. You can manage storage tiers by using FabricPool to store data in a tier, based on how frequently the data is accessed.

This procedure sets up an object store as the cloud tier for FabricPool. Keep in mind that once you attach to a local tier (aggr) the cloud tier cannot be unattached.

Starting August 21, 2021, a new Cloud Tiering BYOL licensing was introduced for tiering configurations that are supported within Cloud Manager using the Cloud Tiering service. Learn more about installing a FabricPool license.

If you are tiering to ONTAP S3, there are additional requirements:

- There must be an entry for the remote ONTAP S3 server's hostname in the DNS server configured for the admin storage VM, including the S3 server's FQDN name and the IP addresses on its network interfaces.
- Intercluster network interfaces must be configured on both local and remote clusters, although cluster peering is not required.

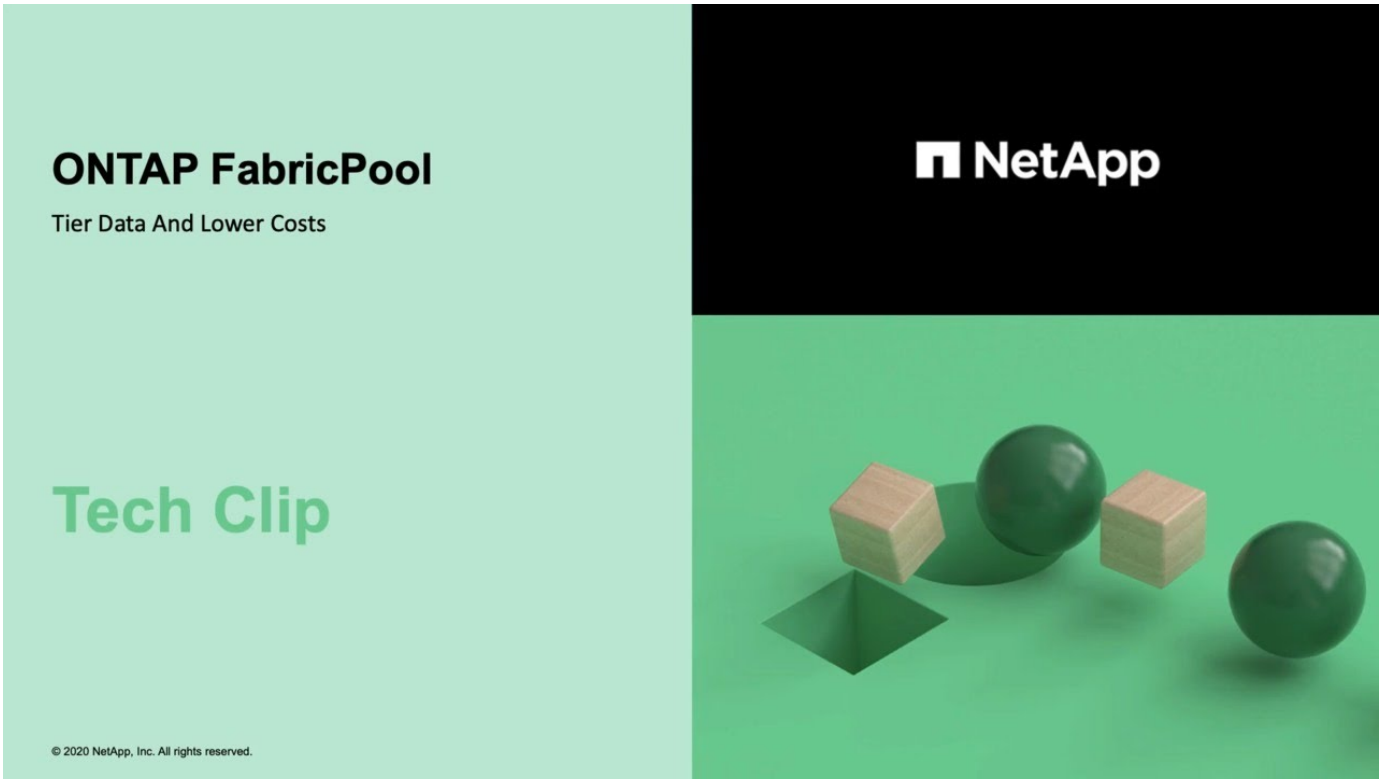
You also have the option to create a volume tiering policy in System Manager.

Steps

1. Click **Storage > Tiers > Add Cloud Tier** and select the object store provider you want to use.
2. If you want to create a cloud mirror, click **Add as FabricPool Mirror**.

A FabricPool mirror provides a method for you to seamlessly replace a data store, and it helps to ensure that your data is available in the event of disaster.

Tier data and lower costs video



Install a FabricPool license

The FabricPool license you might have used in the past is changing and is being retained only for configurations that aren't supported within Cloud Manager. Starting August 21, 2021, a new Cloud Tiering BYOL licensing was introduced for tiering configurations that are supported within Cloud Manager using the Cloud Tiering service.

Learn more about the new Cloud Tiering BYOL licensing.

Configurations that are supported by Cloud Manager must use the Digital Wallet page in Cloud Manager to license tiering for ONTAP clusters. This requires you to set up a Cloud Manager account and set up tiering for the particular object storage provider you plan to use. Cloud Manager currently supports tiering to the following object storage: Amazon S3, Azure Blob storage, Google Cloud Storage, S3-compatible object storage, and StorageGRID.

Learn more about the Cloud tiering service.

You can download and activate a FabricPool license using System Manager if you have one of the configurations that is not supported within Cloud Manager:

- ONTAP installations in Dark Sites
- ONTAP cluster in a MetroCluster configuration
- ONTAP clusters using FabricPool Mirror functionality

- ONTAP clusters that are tiering data to IBM Cloud Object Storage or Alibaba Cloud Object Storage

The FabricPool license is a cluster-wide license. It includes an entitled usage limit that you purchase for object storage that is associated with FabricPool in the cluster. The usage across the cluster must not exceed the capacity of the entitled usage limit. If you need to increase the usage limit of the license, you should contact your sales representative.

FabricPool licenses are available in perpetual or term-based, 1- or 3- year, formats.

A term-based FabricPool license with 10 TB of free capacity is available for first time FabricPool orders for existing clusters configurations not supported within Cloud Manager. Free capacity is not available with perpetual licenses.
A license is not required if you use NetApp StorageGRID or ONTAP S3 for the cloud tier. Cloud Volumes ONTAP does not require a FabricPool license, regardless of the provider you are using.

This task is supported only by uploading the license file to the cluster using System Manager.

Steps

1. Download the NetApp License File (NLF) for the FabricPool license from the NetApp Support Site.
2. Perform the following actions using System Manager to upload the FabricPool license to the cluster:
   a. In the **Cluster Settings** pane, on the **Licenses** card, click →.
   b. On the **License** page, click + Add .
   c. In the **Add License** dialog box, click **Browse** to select the NLF you downloaded, and then click **Add** to upload the file to the cluster.

Tier data to local bucket

Beginning with ONTAP 9.8, you can tier data to local object storage using ONTAP S3.

Tiering data to a local bucket provides a simple alternative to moving data to a different local tier. This procedure uses an existing bucket on the local cluster, or you can let ONTAP automatically create a new storage VM and a new bucket.

Keep in mind that once you attach to a local tier (aggr) the cloud tier cannot be unattached.

An S3 license is required for this workflow, which creates a new S3 server and new bucket, or uses existing ones. A FabricPool license is not required for this workflow.

Step

1. Tier data to a local bucket: click **Tiers**, select a tier, then click ⋮.
   - You have the option to create a new tier (ONTAP S3) or use an existing one.
   - You have the option to edit an existing volume tiering policy.

Create tags for tiering objects

Beginning with ONTAP 9.8, you can use System Manager to create object tags to help you classify and sort tiering objects for easier data management. You can set tags only on FabricPool volumes attached to StorageGRID. These tags are retained during a volume move.

Steps

1. Navigate to **Storage > Tiers > Volumes**.
2. Locate the volume you want to tag and select **Click to enter tags**.

Enable inactive data reporting

Beginning with ONTAP 9.8, you use System Manager to enable inactive data reporting to show how much inactive data can be tiered to the cloud.
You can enable inactive data reporting on HDD aggregates.

Steps

1. Choose one of the following options:
   - When you have existing HDD aggregates, navigate to **Storage > Tiers** and click ⋮ for the aggregate on which you want to enable inactive data reporting.
   - When no cloud tiers are configured, navigate to **Dashboard** and click the **Enable inactive data reporting** link under **Capacity**.

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.