Exercise 4: Creating a FabricPool Aggregate

In this exercise, you create a FabricPool aggregate.

Objectives

This exercise focuses on enabling you to do the following:

- Create FabricPool performance and cloud tiers
- Convert an aggregate to a FabricPool aggregate

Case Study

Sales at Zarrot Industries are continuing to grow rapidly. The company sales tracking database is filling with old sales invoices. Mr. Zarrot decides rather than expanding the storage capacity of the ONTAP cluster to house stale sales data, the data should be tiered to low-cost cloud storage.

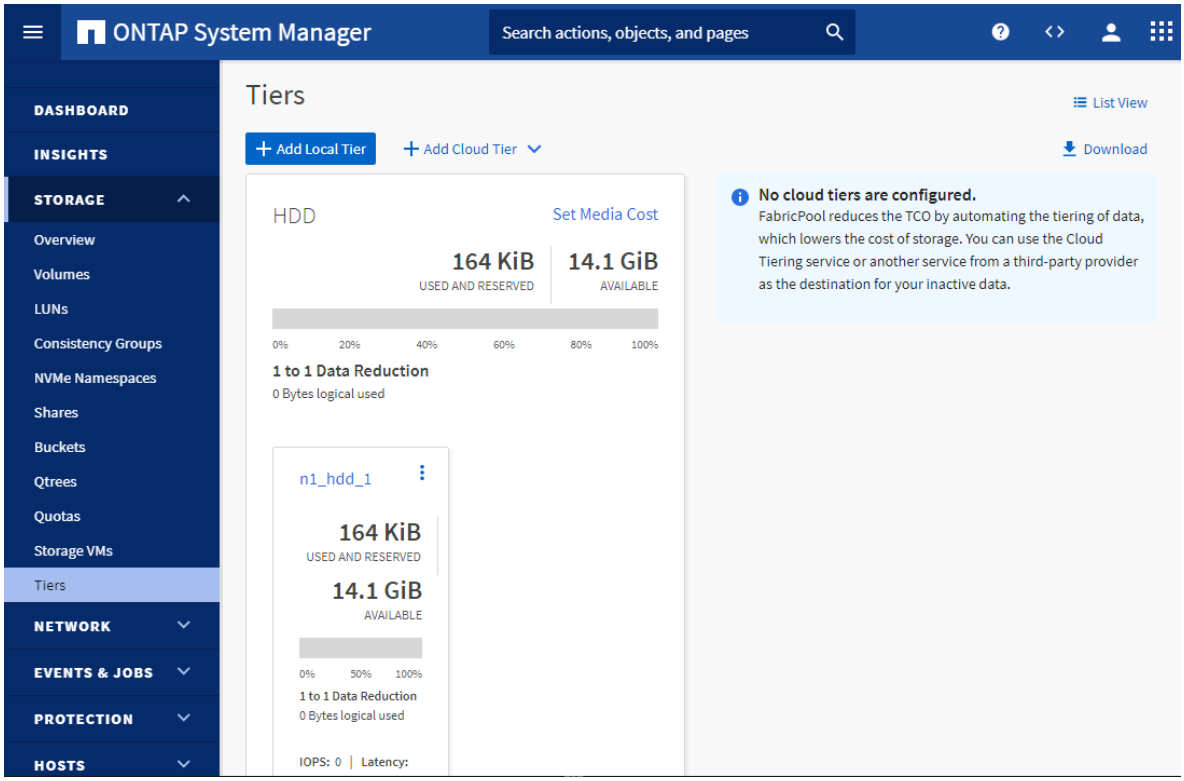
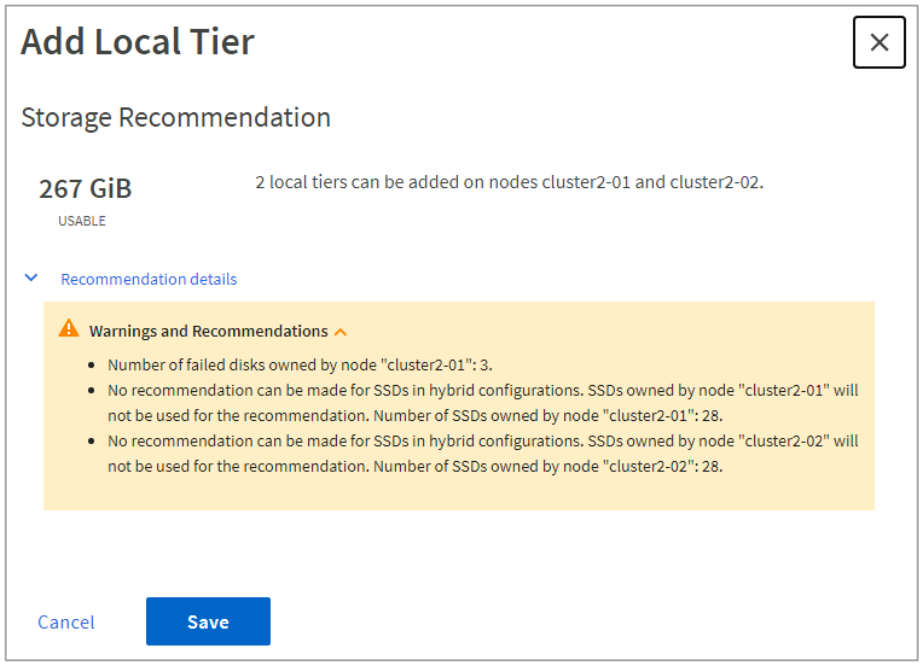
Lab Equipment

Use the following equipment to complete the exercise:

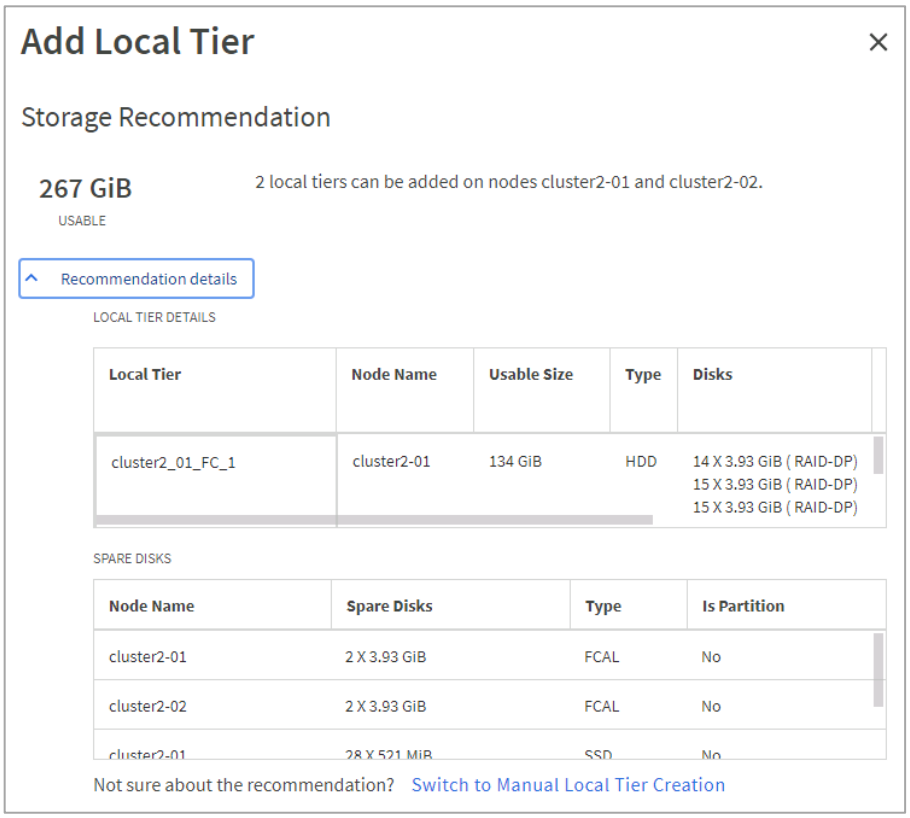
System	Host Name	IP Addresses	User Name	Password
Windows Server	jumphost	192.168.0.5	DEMO\Administrator	Netapp1!
ONTAP cluster-management LIF (cluster2)	cluster2	192.168.0.102	admin (case-sensitive)	Netapp1!

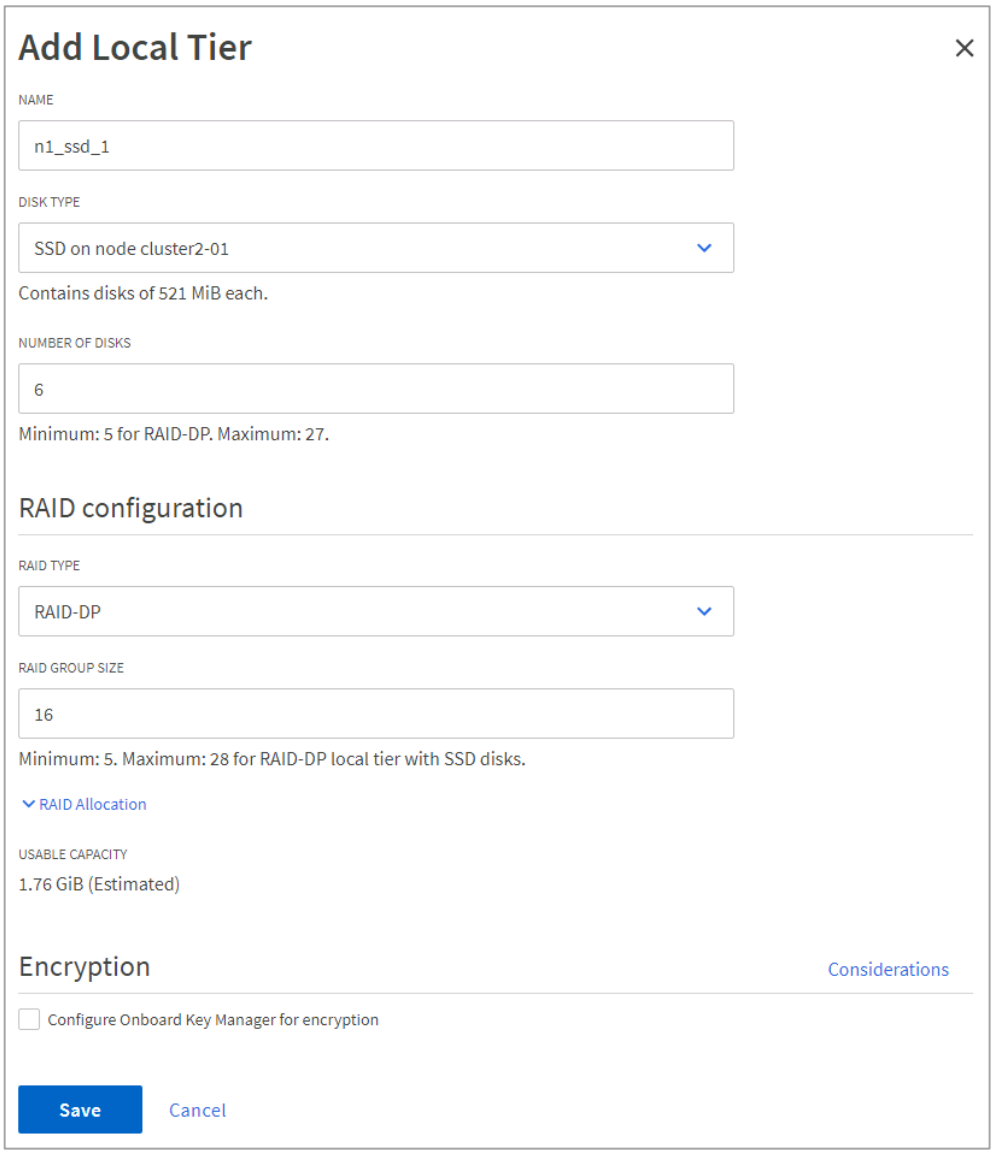
Task 1: Create FabricPool Performance and Cloud Tiers

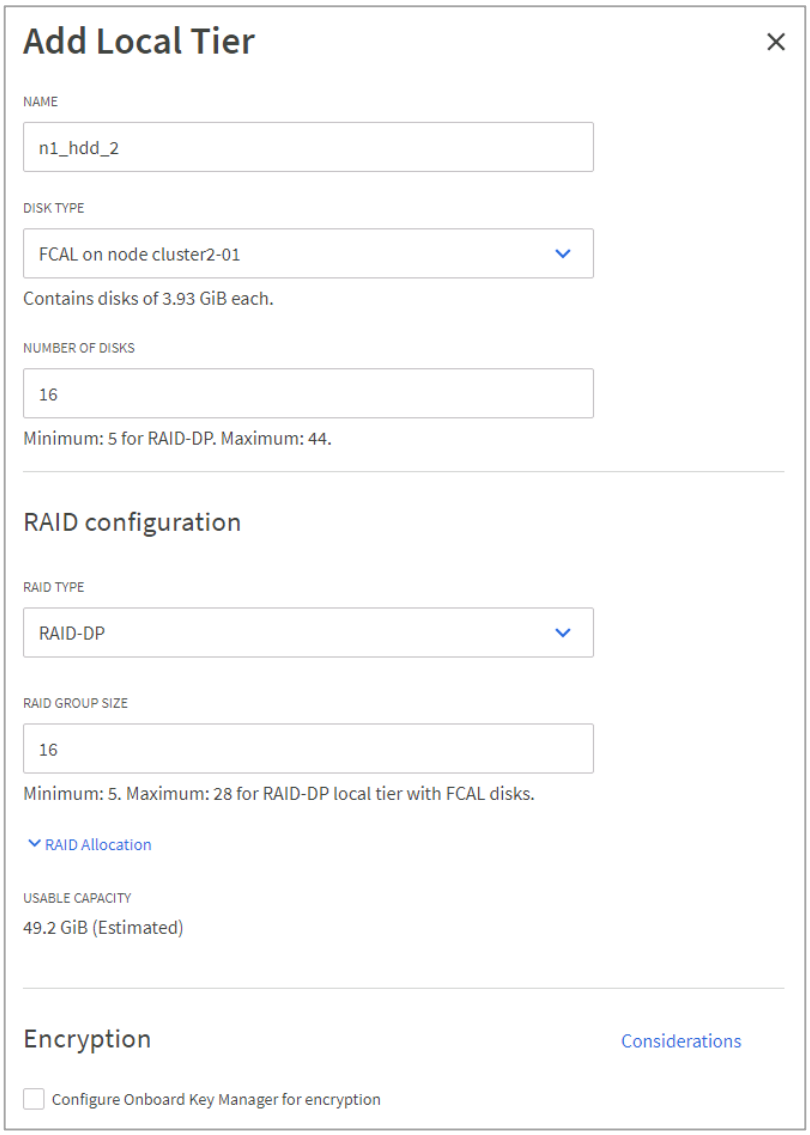
Step	Action
1-1	Log in to NetApp ONTAP System Manager on **cluster2**.
1-2	From the System Manager navigation menu, select **Storage > Tiers**.

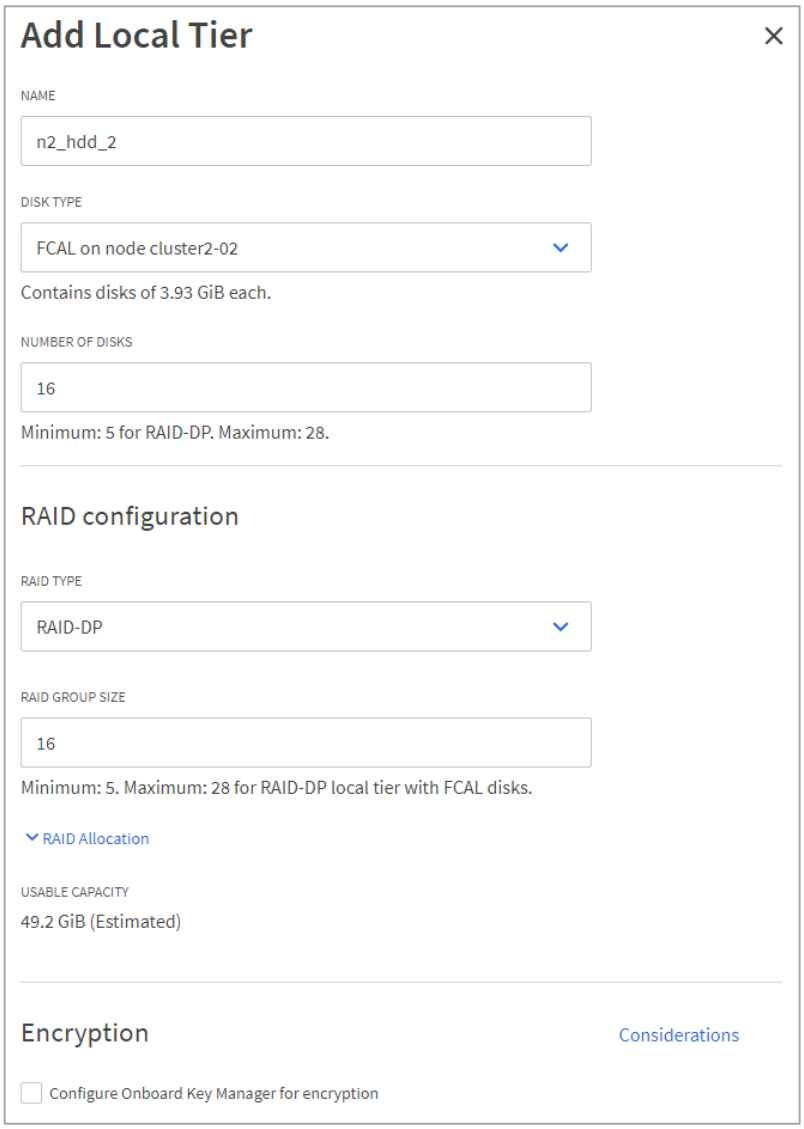
Step	Action
1-3	Click **Add local tier** to create a new local data aggregate. 
1-4	In the Add Local Tier dialog box, expand the **Recommendation details**. 

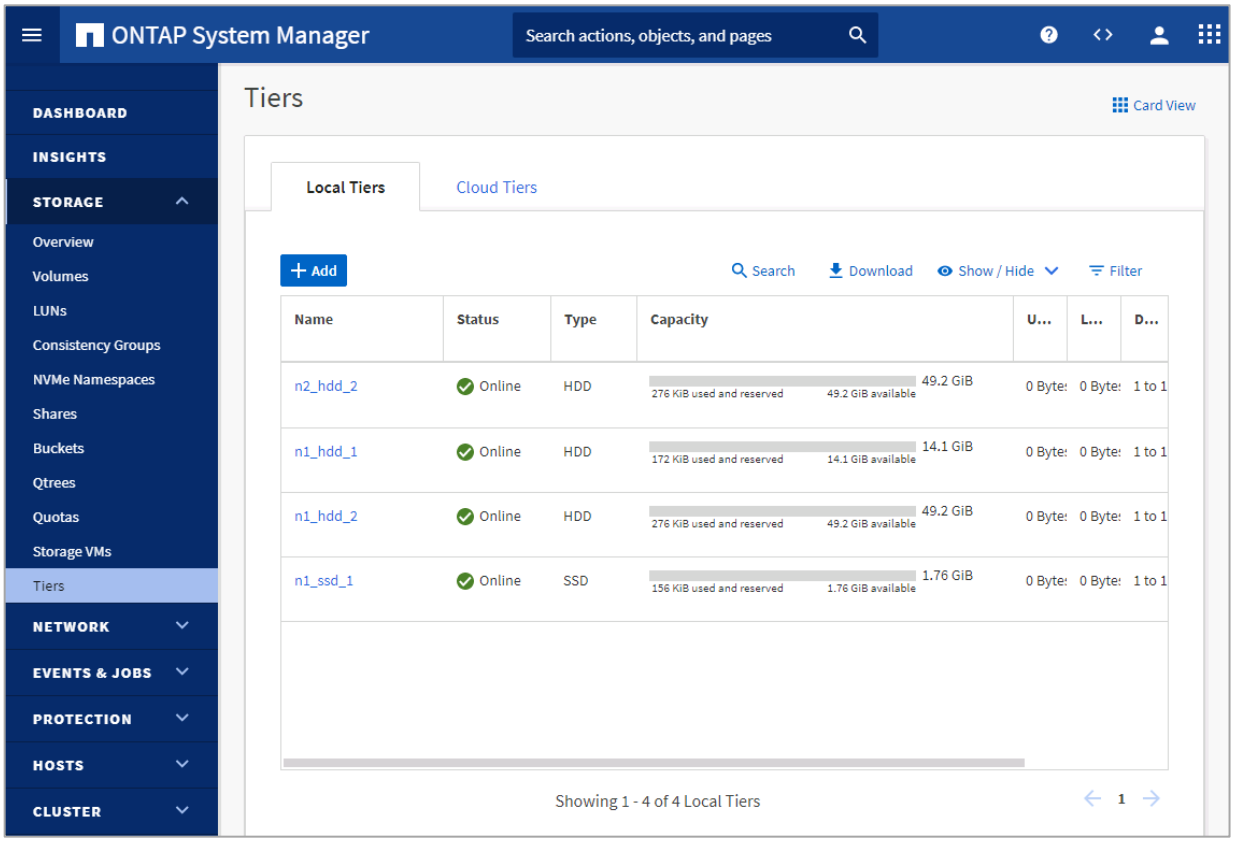
Step	Action
1-5	Click **Switch to Manual Local Tier Creation**.



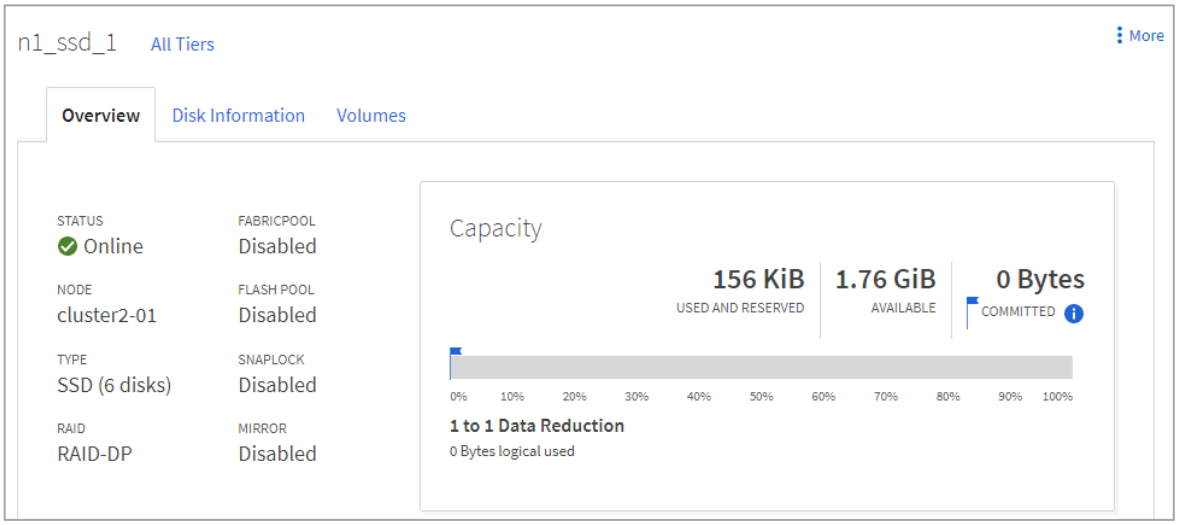
Step	Action
1-6	Create an aggregate to store the FabricPool performance tier with the following settings: • Name: **n1_ssd_1** • Disk Type: **SSD on node cluster2-01** • Number of Disks: **6** • RAID Type: **RAID-DP** (default) • RAID Group Size: **16** (default) • Configure Onboard Key Manager for encryption: **<unselected>** 
1-7	Click **Save**.

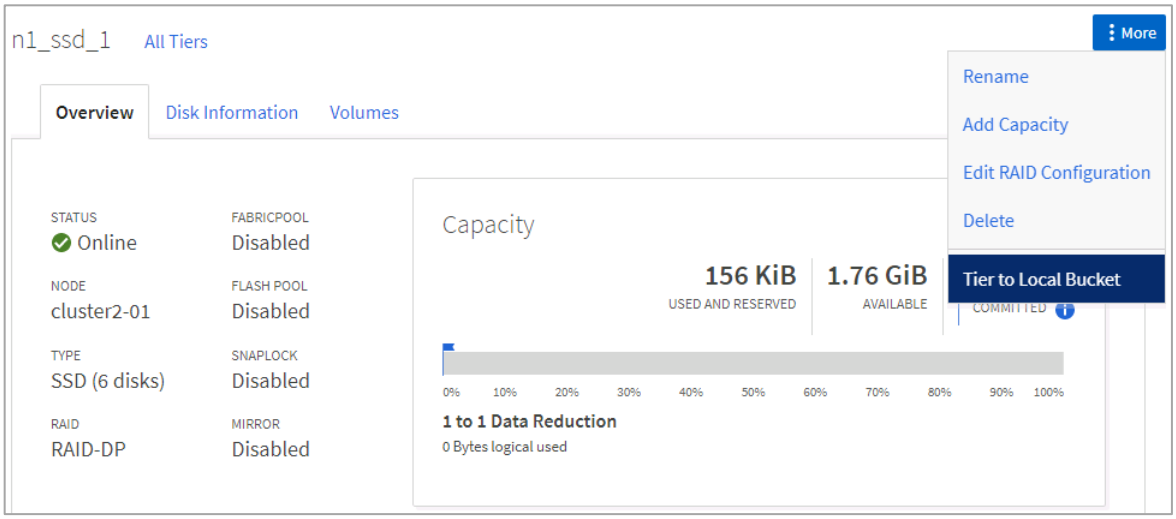
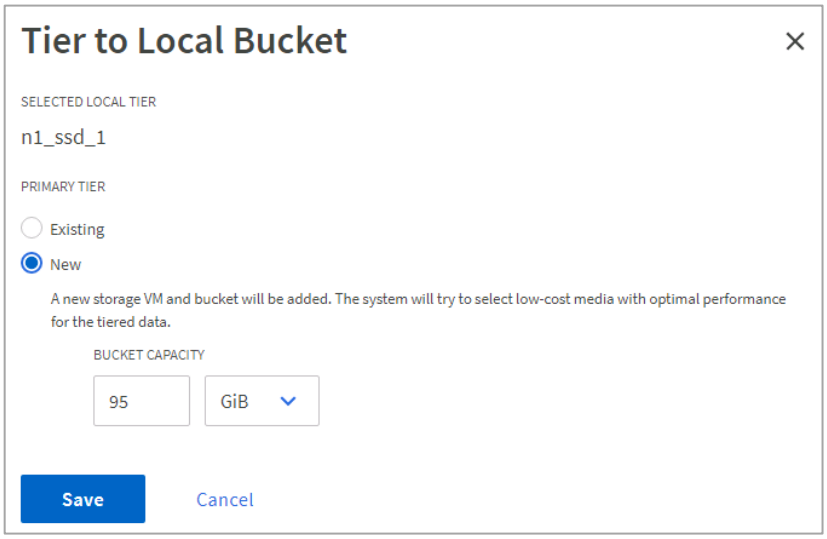
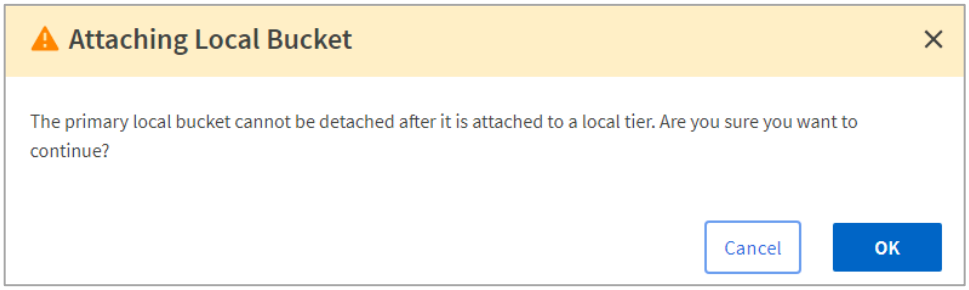
Step	Action
1-8	Repeat step 1-3 through 1-7 to create an aggregate to store the FabricPool cloud tier with the following settings: • Name: **n1_hdd_2** • Disk Type: **FCAL on node cluster2-01** • Number of Disks: **16** • RAID Type: **RAID-DP** (default) • RAID Group Size: **16** (default) • Configure Onboard Key Manager for encryption: **<unselected>** 

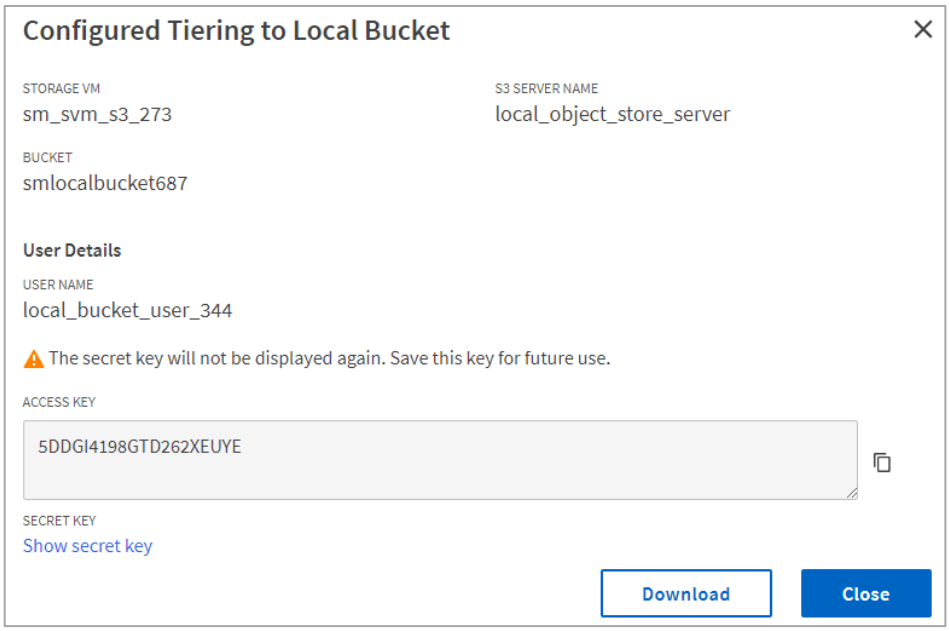
Step	Action
1-9	Repeat step 1-3 through 1-7 to create a second aggregate to also store the FabricPool cloud tier with the following settings: • Name: **n2_hdd_2** • Disk Type: **FCAL on node cluster2-02** • Number of Disks: **16** • RAID Type: **RAID-DP** (default) • RAID Group Size: **16** (default) • Configure Onboard Key Manager for encryption: **<unselected>** 

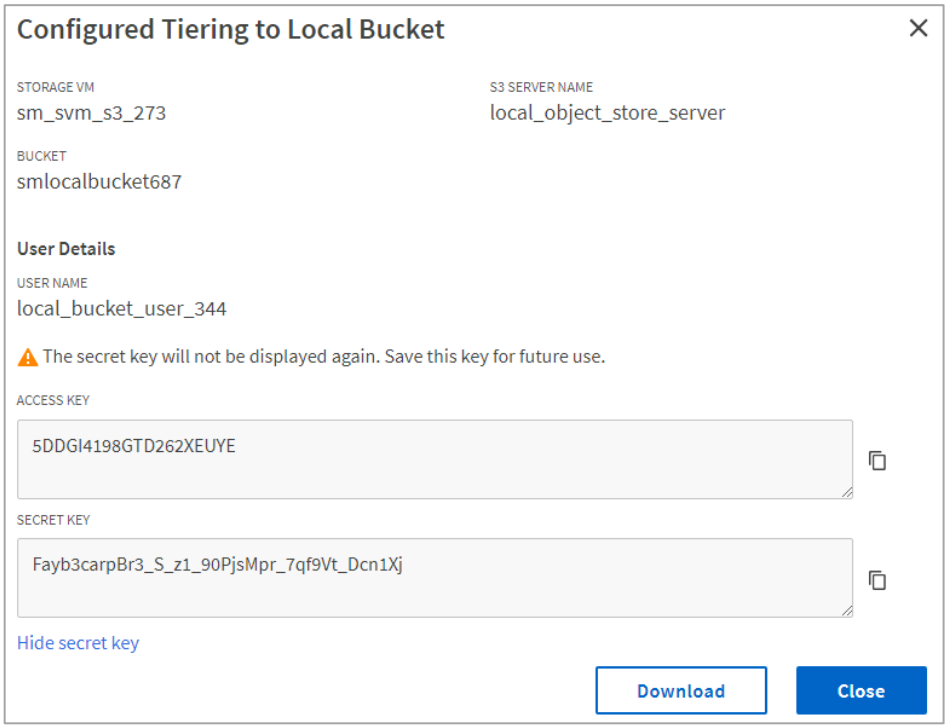
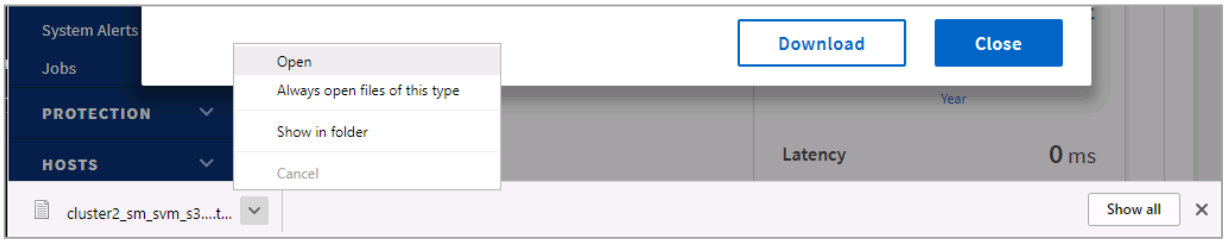
Step	Action
1-10	In the Tiers page, click **List View** and verify that the aggregates are online: 

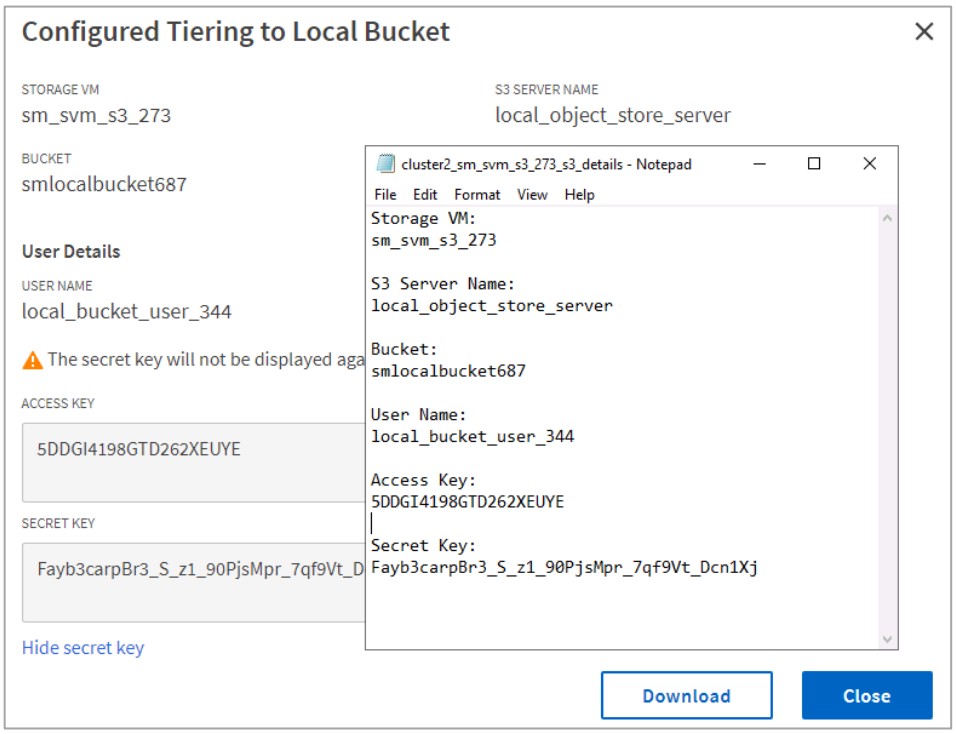
Task 2: Convert an Aggregate to a FabricPool Aggregate

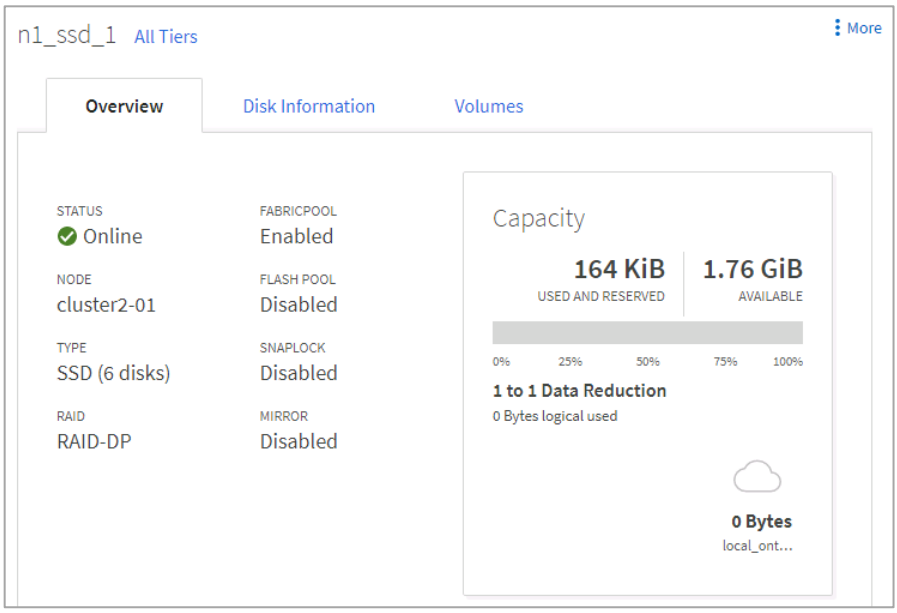
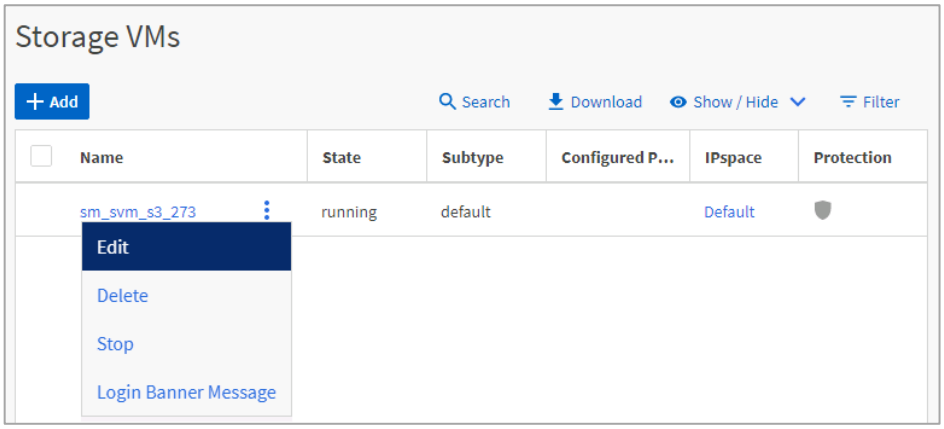
Step	Action
2-1	Click **n1_ssd_1** to view details about the aggregate that is used as the FabricPool performance tier. 

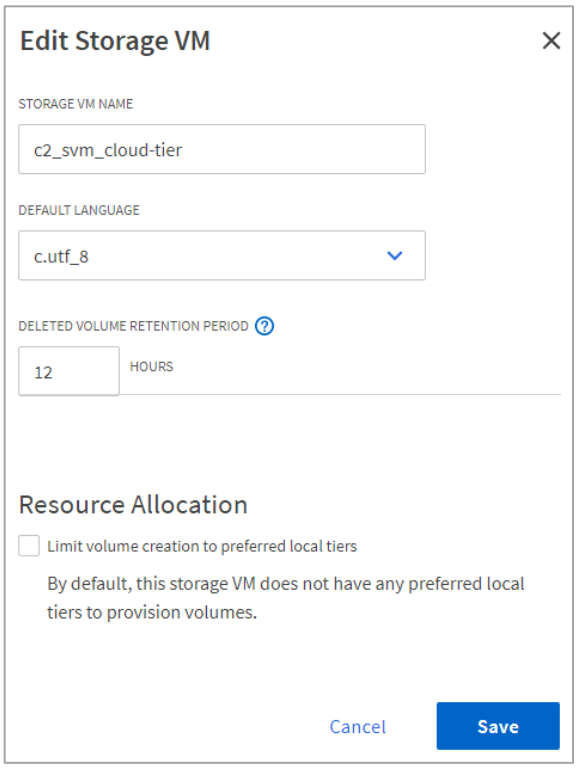
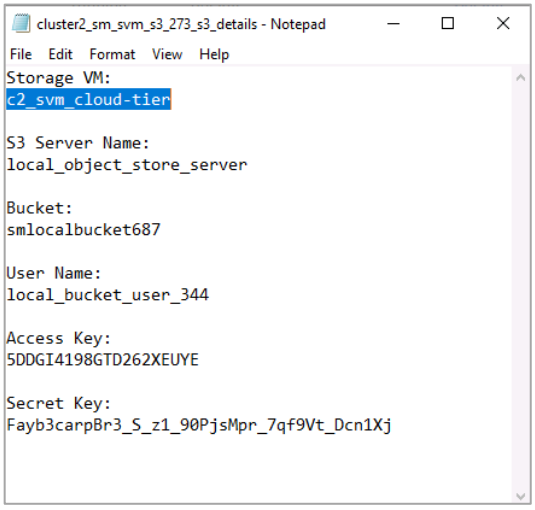
Step	Action
2-2	Click the **More** menu button and select **Tier to Local Bucket**. 
2-3	In the Tier to Local Bucket window, select **New** to create a new bucket for the FabricPool cloud tier. 
2-4	Set the new bucket capacity to **95 GiB**, which is the minimum size.
2-5	Click **Save**.
2-6	Confirm that you want to convert the local tier into a FabricPool aggregate. 

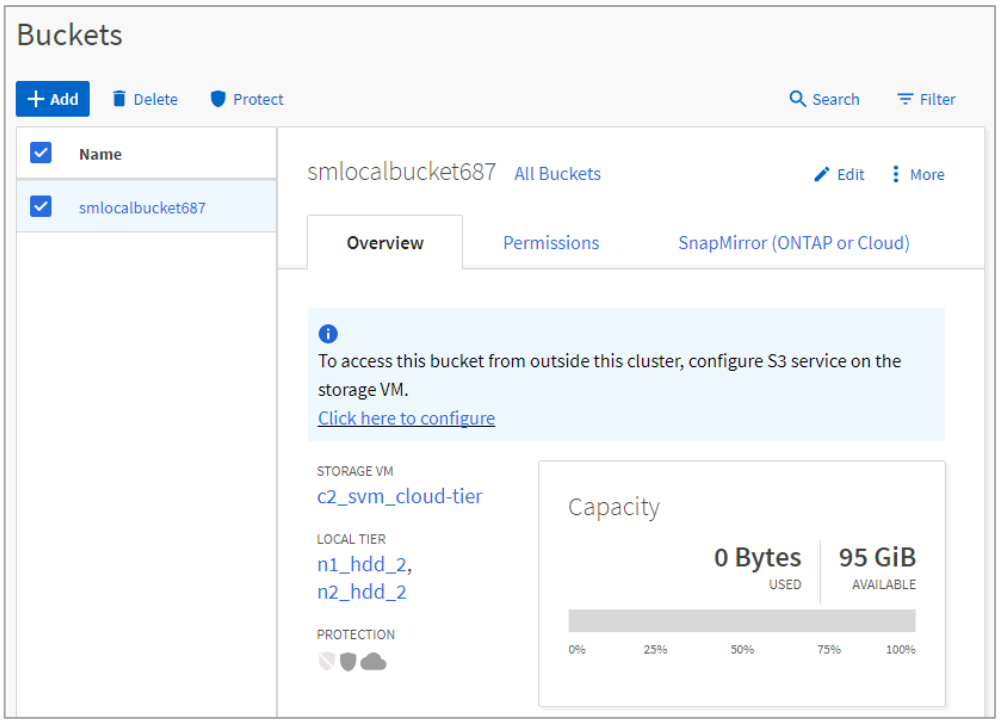
Step	Action
2-7	After System Manager finishes creating the bucket and attaching it to the local tier, a confirmation window is displayed with the bucket configuration information.
2-8	Observe the names that are assigned to the cloud tier objects that were created by ONTAP System Manager: • Cloud tier storage VM name • Cloud tier storage VM S3 server name • Cloud tier S3 bucket name 
2-9	Click **Show secret key**.

Step	Action
2-10	Observe the S3 user account information that you can use to access the FabricPool cloud tier bucket: • Cloud tier S3 user name • Cloud tier S3 user access key • Cloud tier S3 user secret access key 
2-11	Click **Hide secret key**.
2-12	Click **Download** to save the bucket configuration information.
2-13	This window is your only opportunity to view and capture the S3 user access keys. If you have not downloaded or otherwise saved the keys, and the keys are lost, new access keys for the user must be generated.
2-14	Open the downloaded file. 

Step	Action
2-15	Examine the contents of the downloaded file and identify the following information: • S3 storage VM name • S3 server name • Bucket name • S3 user name • S3 user access key • S3 user secret access key 
2-16	Leave the downloaded file open and return to System Manager.
2-17	Close the Configured Tiering to Local Bucket window.

Step	Action
2-18	Confirm that FabricPool has been enabled on the local tier aggregate. 
2-19	From the System Manager Dashboard menu, select **Storage > Storage VMs**.
2-20	Move your cursor over the storage VM, name and click the **More** menu button when it appears.
2-21	Select **Edit** from the menu. 

Step	Action
2-22	Change the storage VM name to **c2_svm_cloud-tier** and click **Save**. 
2-23	Change the storage VM name in the downloaded file containing the FabricPool cloud tier configuration information. 
2-24	Save and close the downloaded file.
2-25	From the System Manager Dashboard menu, select **Storage > Buckets**.

Step	Action
2-26	Click the bucket name, and observe that the FabricPool cloud tier bucket spans across local tier aggregates on both cluster nodes. 
2-27	You can enable the S3 access protocol on the FabricPool cloud tier storage VM if you must perform maintenance. Use the S3 username and access keys that are stored in the downloaded file for credentials. Do not delete or change objects that are placed into the cloud tier bucket by FabricPool. Doing so invalidates the metadata that is stored in the FabricPool performance tier and might cause unpredictable results.

End of exercise