



GCP

Cloud Manager

NetApp
March 22, 2022

Table of Contents

- GCP 1
 - Google Cloud projects, permissions, and accounts 1
 - Managing GCP credentials and subscriptions for Cloud Manager 2

GCP

Google Cloud projects, permissions, and accounts

A service account provides Cloud Manager with permissions to deploy and manage Cloud Volumes ONTAP systems that are in the same project as the Connector, or in different projects.

Project and permissions for Cloud Manager

Before you can deploy Cloud Volumes ONTAP in Google Cloud, you must first deploy a Connector in a Google Cloud project. The Connector can't be running on your premises, or in a different cloud provider.

Two sets of permissions must be in place before you deploy a Connector directly from Cloud Manager:

1. You need to deploy a Connector using a Google account that has permissions to launch the Connector VM instance from Cloud Manager.
2. When deploying the Connector, you are prompted to select a [service account](#) for the VM instance. Cloud Manager gets permissions from the service account to create and manage Cloud Volumes ONTAP systems on your behalf. Permissions are provided by attaching a custom role to the service account.

We have set up two YAML files that include the required permissions for the user and the service account. [Learn how to use the YAML files to set up permissions.](#)

The following image depicts the permission requirements described in numbers 1 and 2 above:



Project for Cloud Volumes ONTAP

Cloud Volumes ONTAP can reside in the same project as the Connector, or in a different project. To deploy Cloud Volumes ONTAP in a different project, you need to first add the Connector service account and role to that project.

- [Learn how to set up service account \(see step 2\).](#)
- [Learn how to deploy Cloud Volumes ONTAP in GCP and select a project.](#)

Account for data tiering



Cloud Manager requires a GCP account for Cloud Volumes ONTAP 9.6, but not for 9.7 and later. If you want to use data tiering with Cloud Volumes ONTAP 9.7 or later, then follow step 4 in [Getting started with Cloud Volumes ONTAP in Google Cloud Platform](#).

Adding a Google Cloud account to Cloud Manager is required to enable data tiering on a Cloud Volumes ONTAP 9.6 system. Data tiering automatically tiers cold data to low-cost object storage, enabling you to reclaim space on your primary storage and shrink secondary storage.

When you add the account, you need to provide Cloud Manager with a storage access key for a service account that has Storage Admin permissions. Cloud Manager uses the access keys to set up and manage a Cloud Storage bucket for data tiering.

After you add a Google Cloud account, you can then enable data tiering on individual volumes when you create, modify, or replicate them.

- [Learn how to set up and add GCP accounts to Cloud Manager.](#)
- [Learn how to tier inactive data to low-cost object storage.](#)

Managing GCP credentials and subscriptions for Cloud Manager

You can manage two types of Google Cloud Platform credentials from Cloud Manager: the credentials that are associated with the Connector VM instance and storage access keys used with a Cloud Volumes ONTAP 9.6 system for [data tiering](#).

Associating a Marketplace subscription with GCP credentials

When you deploy a Connector in GCP, Cloud Manager creates a default set of credentials that are associated with the Connector VM instance. These are the credentials that Cloud Manager uses to deploy Cloud Volumes ONTAP.

At any time, you can change the Marketplace subscription that's associated with these credentials. The subscription enables you to create a pay-as-you-go Cloud Volumes ONTAP system, and to use other NetApp cloud services.

Steps

1. In the upper right of the Cloud Manager console, click the Settings icon, and select **Credentials**.
2. Click the action menu for a set of credentials and then select **Associate Subscription**.



3. Select a Google Cloud project and subscription from the down-down list.

A screenshot of a form for selecting a Google Cloud project and subscription. It has two dropdown menus. The first is labeled "Google Cloud Project" and has "OCCM-Dev" selected. The second is labeled "Subscription" and has "GCP subscription for staging" selected, which is preceded by a green dot icon. Below these dropdowns is a horizontal line, and then a blue button with a plus icon and the text "Add Subscription".

4. Click **Associate**.
5. If you don't already have a subscription, click **Add Subscription** and follow the steps to create a new subscription below.



Before you complete the following steps, ensure that you have both Billing Admin privileges in your Google Cloud account as well as a NetApp Cloud Central login.

6. Reivew the subscription steps and click **Continue**.

Add Subscription

Subscription Steps:

- 1 **Cloud Manager**
Clicking **Continue** to create your subscription from the Google Cloud Marketplace.
 - 2 **Google Cloud Marketplace**
Subscribe and then then click **Register With NetApp** to configure your account from Cloud Central.
 - 3 **Cloud Central**
Save your subscription.
 - 4 **Cloud Manager**
Associate the Marketplace subscription with your Google Cloud project.
-  View video instructions

Continue

Cancel

7. After you're redirected to the [NetApp Cloud Manager page on the Google Cloud Marketplace](#), ensure that the correct project is selected at the top navigation menu.

 Google Cloud Platform 





Cloud Manager for Cloud Volumes ONTAP

NetApp, Inc.

Enterprise-grade data management and protection

[SUBSCRIBE](#)

[OVERVIEW](#) [PRICING](#) [SUPPORT](#)

Overview

Cloud Volumes ONTAP is a data-management layer that runs natively on Google Cloud infrastructure enabling enhanced control, data protection, mobility and agility for business application data. Get consistent enterprise-grade storage across your hybrid cloud platforms with built-in disaster recovery, backup and ransomware protection. Seamlessly migrate enterprise applications without reengineering. Create company-wide file shares with simultaneous NFS and CIFS/SMB access and iSCSI block storage for GCE instances with scalability up to 368TB. Automate persistent storage provisioning for your Kubernetes clusters. Accelerate CI/CD cycles with instant, zero-capacity data replication. Reduce storage costs by 70% with advanced storage efficiencies. Cloud Manager is the console used to deploy, manage and automate Cloud Volumes ONTAP instances across the hybrid multi-cloud.

[Learn more](#)

Additional details

Type: [APIs & services](#)

Last updated: 3/26/21

Category: [Storage](#)

Runs on: NetApp, Inc. Cloud Servers

8. Click **Subscribe**.
9. Select the appropriate billing account and agree to the terms and conditions.

2. Purchase details

Select a billing account *
Secondary_Billing_Account

3. Terms

Cancellation and change policy

- Usage fee is billed every month.
- You can cancel the service at any time and it will take effect immediately. You will be billed by the amount you used for that month.

Additional terms

- ☒ I understand this subscription will be automatically renewed at the end of the current term.
- ☒ I authorize Google LLC and its affiliates ("Google") to share my purchase, usage, operational (e.g., project lifecycle events), support ticket, and account information with NetApp, Inc., its affiliates and subcontractors, for the purposes of providing the service, sales attribution, and technical support. I represent that I have the authority to bind my company.
- ☒ By deploying the software or accessing the service you are agreeing to comply with the [End User License Agreement](#), [GCP Marketplace Terms of Service](#), and the terms of applicable open source software licenses bundled with the software or service. Please review these terms and licenses carefully for details about any obligations you may have related to the software or service. To the limited extent an open source software license related to the software or service expressly supersedes the GCP Marketplace Terms of Service, that open source software license governs your use of that software or service.

By using this product, you understand that certain account and usage information may be shared with NetApp, Inc. for the purposes of financial accounting, sales attribution, performance analysis, and support. ?

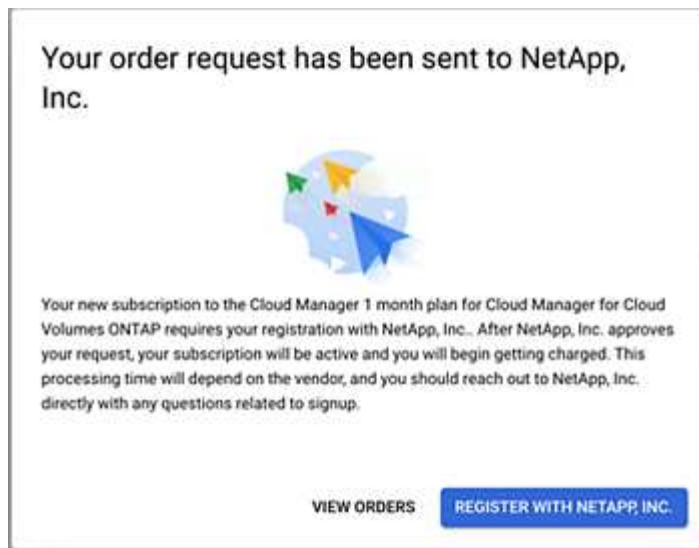
Google is providing this software or service "as-is" and any support for this software or service will be provided by NetApp, Inc. under their terms of service.

SUBSCRIBE

10. Click **Subscribe**.

This step sends your transfer request to NetApp.

11. On the pop-up dialog box, click **Register with NetApp, Inc.** to be redirected to NetApp Cloud Central.



This step must be completed to link the GCP subscription to your NetApp account. The process of linking a subscription isn't complete until you are redirected from this page and then sign in to NetApp Cloud Central.

12. After you're redirected to Cloud Central, log in to NetApp Cloud Central or sign up, and then click **Done** to proceed.

The GCP subscription will be linked to all NetApp accounts that your user login is associated with.



If someone from your organization has already subscribed to the NetApp Cloud Manager subscription from your billing account, then you will be redirected to [the Cloud Volumes ONTAP page on NetApp Cloud Central](#) instead. If this is unexpected, contact your NetApp sales team. Google enables only one subscription per Google billing account.

13. Once this process is complete, navigate back to the Credentials page in Cloud Manager and select this new subscription.

Google Cloud Project

OCCM-Dev

Subscription

 GCP subscription for staging




Troubleshooting the Marketplace subscription process

Sometimes subscribing to Cloud Volumes ONTAP through the Google Cloud Marketplace can become fragmented due to incorrect permissions or accidentally not following the redirection to NetApp Cloud Central. If this happens, use the following steps to complete the subscription process.

Steps

1. Navigate to the [NetApp Cloud Manager page on the Google Cloud Marketplace](#) to check on the state of the order. If the page states **Manage on Provider**, scroll down and click **Manage Orders**.

Pricing


 The product was purchased on 12/9/20.

MANAGE ORDERS

- a. If the order shows a green check mark and this is unexpected, somebody else from the organization using the same billing account might already be subscribed. If this is unexpected or you require the details of this subscription, contact your NetApp sales team.

Filter Enter property name or value										
Status	Order number	Plan	Discount	Start date ↓	Plan duration	End date	Payment Schedule	Auto-renew	Next plan	
	2eebbc...	Cloud Manager	-	10/21/21	1 month	-	Postpay	N/A	N/A	⋮

- b. If the order shows a clock and **Pending** status, go back to the marketplace page and choose **Manage on Provider** to complete the process as documented above.

Filter Enter property name or value										
Status	Order number	Plan	Discount	Start date ↓	Plan duration	End date	Payment Schedule	Auto-renew	Next plan	
	d56c66...	Cloud Manager	-	Pending	1 month	Pending	Postpay	N/A	N/A	⋮

Setting up and adding GCP accounts for data tiering with Cloud Volumes ONTAP 9.6

If you want to enable a Cloud Volumes ONTAP 9.6 system for [data tiering](#), you need to provide Cloud Manager with a storage access key for a service account that has Storage Admin permissions. Cloud Manager uses the access keys to set up and manage a Cloud Storage bucket for data tiering.



If you want to use data tiering with Cloud Volumes ONTAP 9.7 or later, then follow step 4 in [Getting started with Cloud Volumes ONTAP in Google Cloud Platform](#).

Setting up a service account and access keys for Google Cloud Storage

A service account enables Cloud Manager to authenticate and access Cloud Storage buckets used for data tiering. The keys are required so that Google Cloud Storage knows who is making the request.

Steps

1. Open the GCP IAM console and [create a service account that has the Storage Admin role](#).



2. Go to [GCP Storage Settings](#).
3. If you're prompted, select a project.
4. Click the **Interoperability** tab.
5. If you haven't already done so, click **Enable interoperability access**.
6. Under **Access keys for service accounts**, click **Create a key for a service account**.
7. Select the service account that you created in step 1.

Select a service account

Email	Name	Keys
<input checked="" type="radio"/> data-tiering-for-netapp@top-monitor-250116.iam.gserviceaccount.com	data tiering for netapp	—

[CANCEL](#) [CREATE KEY](#) | [CREATE NEW ACCOUNT](#)

8. Click **Create Key**.
9. Copy the access key and secret.

You'll need to enter this information in Cloud Manager when you add the GCP account for data tiering.

Adding a GCP account to Cloud Manager

Now that you have an access key for a service account, you can add it to Cloud Manager.

What you'll need

You need to create a Connector before you can change Cloud Manager settings. [Learn how](#).

Steps

1. In the upper right of the Cloud Manager console, click the Settings icon, and select **Credentials**.



2. Click **Add Credentials** and select **Google Cloud**.
3. Enter the access key and secret for the service account.

The keys enable Cloud Manager to set up a Cloud Storage bucket for data tiering.

4. Confirm that the policy requirements have been met and then click **Create Account**.

What's next?

You can now enable data tiering on individual volumes on a Cloud Volumes ONTAP 9.6 system when you create, modify, or replicate them. For details, see [Tiering inactive data to low-cost object storage](#).

But before you do, be sure that the subnet in which Cloud Volumes ONTAP resides is configured for Private Google Access. For instructions, refer to [Google Cloud Documentation: Configuring Private Google Access](#).

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.