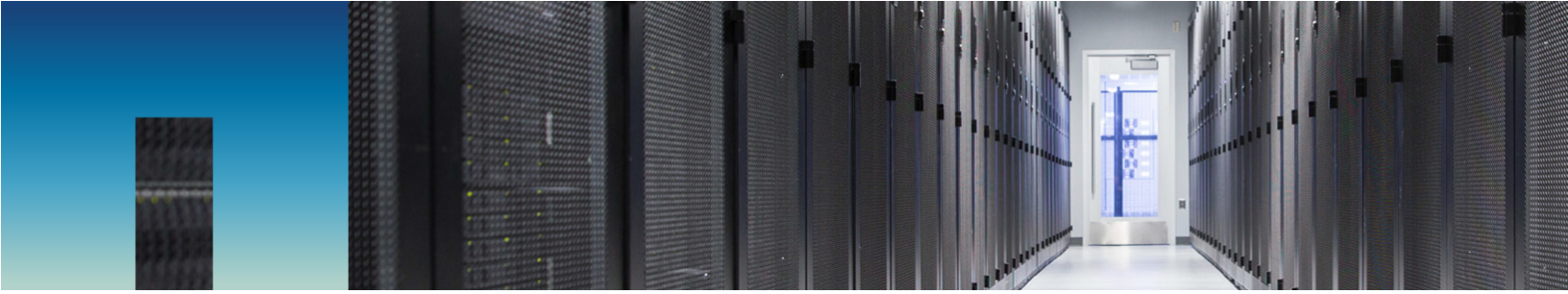

NetApp Cloud Volumes Service for AWS

AWS Account Setup

Cloud Volumes Team, NetApp
December 2018

Abstract

This document provides instructions to help users set up the initial environment for using NetApp® Cloud Volumes Service for Amazon Web Services (AWS).

NetApp®

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1 Overview

This document guides users through the required steps to (1) Subscribe to NetApp Cloud Volumes Service (CVS) on the AWS Marketplace, (2) Setup a user account in Cloud Volumes Service, and (3) how to setup your network connections from your AWS account to your Cloud Volumes Service account.

2 Important Information

To fully activate your Cloud Volumes Service, you will need to follow these instructions carefully to ensure that your AWS account is set up to accept and connect to the CVS service through the Virtual interfaces that will be published to your account from NetApp, as part of this setup procedure.

Before proceeding with the subscription, you may need to first consult with your AWS administrator, and/or your network security and administration team to review these setup instructions.

3 Requirements

This section details the requirements to access Cloud Volumes Service for AWS.

Administrative

The following administrative tasks are required to access Cloud Volumes Service for AWS:

- Willingness to accept the NetApp End-User License Agreement (EULA)

  Note: This EULA is presented as part of the AWS Marketplace subscription process.

- An active AWS account

  Note: Please take note of your AWS account ID, a 12-digit number. You will need this during the setup process.

Skills and Knowledge

The following skills and information are required to access Cloud Volumes Service for AWS:

- Access to and knowledge of the AWS Marketplace.
- You must be prepared to enter an IPv4 Classless Inter-Domain Routing (CIDR) for the AWS region in the /28 range when setting up your route table. This CIDR must only contain RFC 1918 (private) addresses.
- Knowledge of your AWS network and connectivity settings and controls.

  Note: If necessary, please consult with your AWS and network team prior to completing these setup instructions.

Compute Resources

The following compute resources are required to access Cloud Volumes Service for AWS:

- A valid AWS subscription (with permissions to subscribe to new Marketplace listings).

  Note: All AWS compute and other resources used are the sole responsibility of the user.

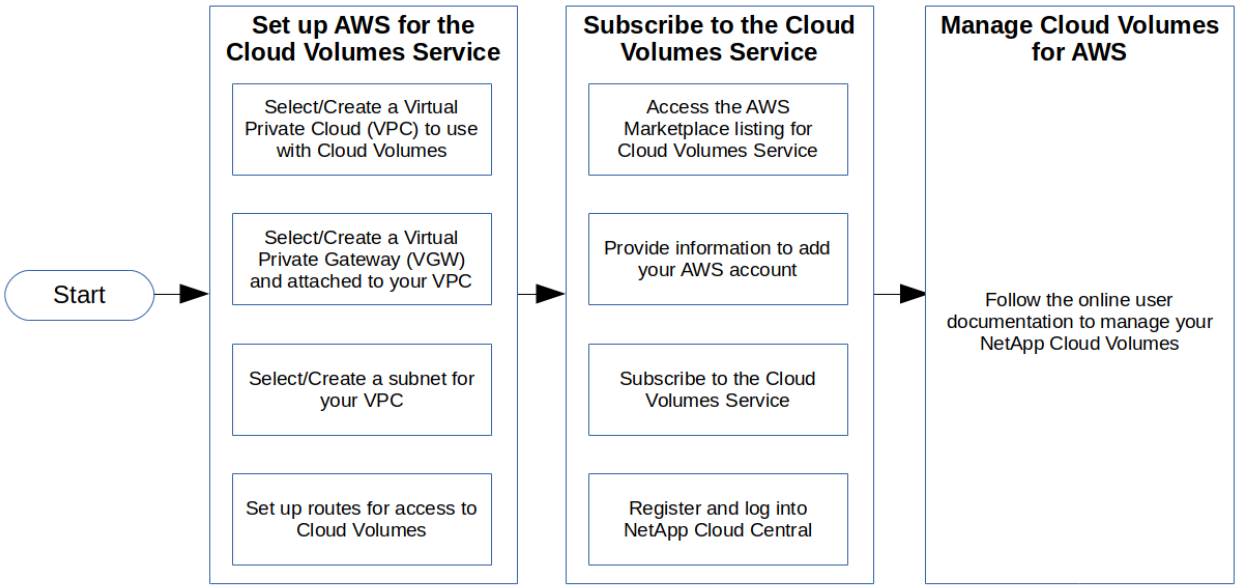
- A Virtual Private Cloud (VPC) that has been configured and running prior to the setup of Cloud Volumes Service for AWS.
- An Internet browser.

4 Workflow Overview

Figure 1 is a high-level workflow diagram illustrating how to set up your Cloud Volumes Service for AWS account, and how to subscribe to the Cloud Volumes Service for AWS.

For detailed information about creating your Cloud Volumes Service for AWS account, see section 5 and section 6.

Figure 1) Workflow diagram: Cloud Volumes Service for AWS account.



Need to remove the text box about "Provide information…" AND add in the last box a step about accepting the virtual interfaces.

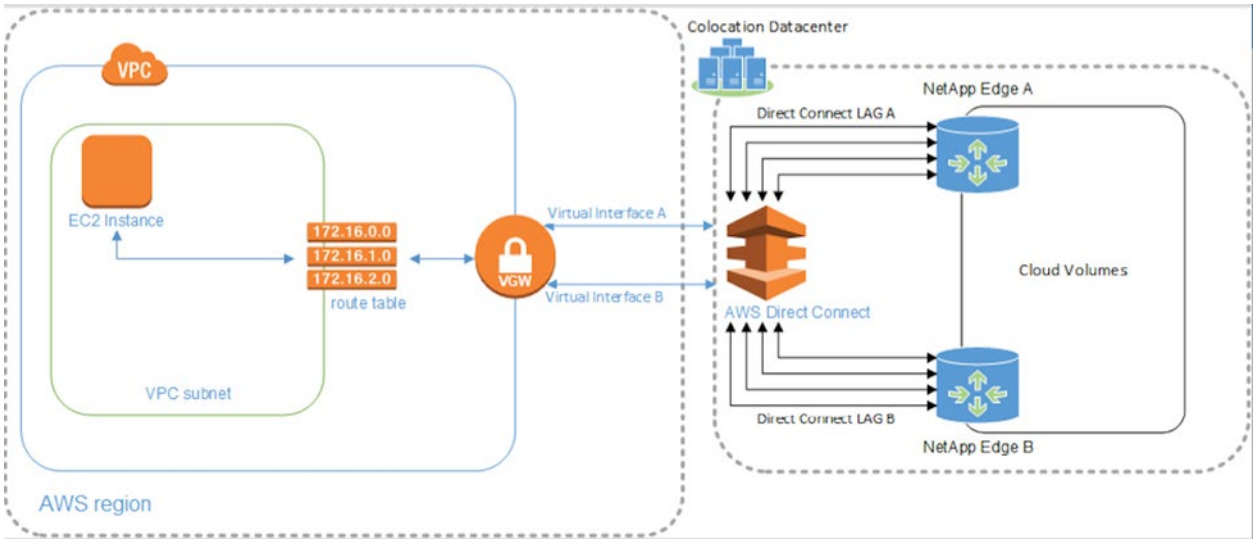
5 Set Up your AWS Account for the Cloud Volumes Service

IMPORTANT: **Before you subscribe to NetApp Cloud Volumes Service for AWS**, you must complete or verify that your AWS account is correctly configured by completing these tasks:

- Select/create a VPC to use with Cloud Volumes
- Select/create a Virtual Private Gateway (VGW)
- Select/create a subnet for the VPC
- Set up routes to include the Cloud Volumes network

Figure 2 illustrates the connectivity and setup for the Cloud Volumes Service for AWS.

Figure 2) Cloud Volumes Service Architecture for AWS.



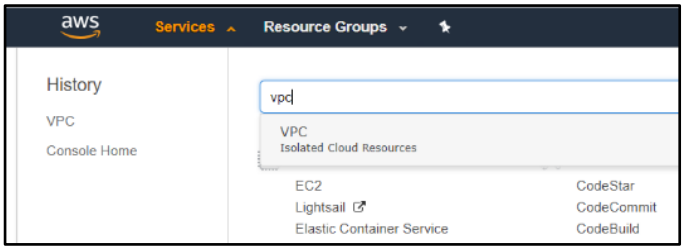
If you already have a VPC and virtual gateway configured, and you plan to use these components to connect to CVS, jump to section 5.5

5.1 Create a VPC to use with Cloud Volumes

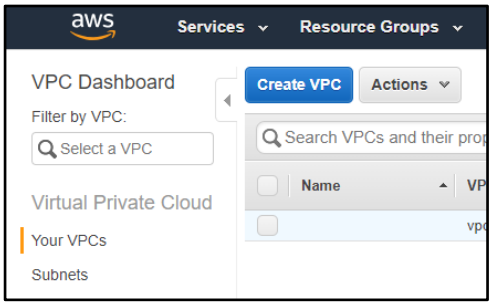
It is not mandatory that you create a new Amazon Virtual Private Cloud (VPC); however, you might need a new VPC to isolate instances associated with the Cloud Volumes project from work in other VPCs.

To create a VPC to use with Cloud Volumes you can use the VPC wizard, or you can follow the configuration steps shown below:

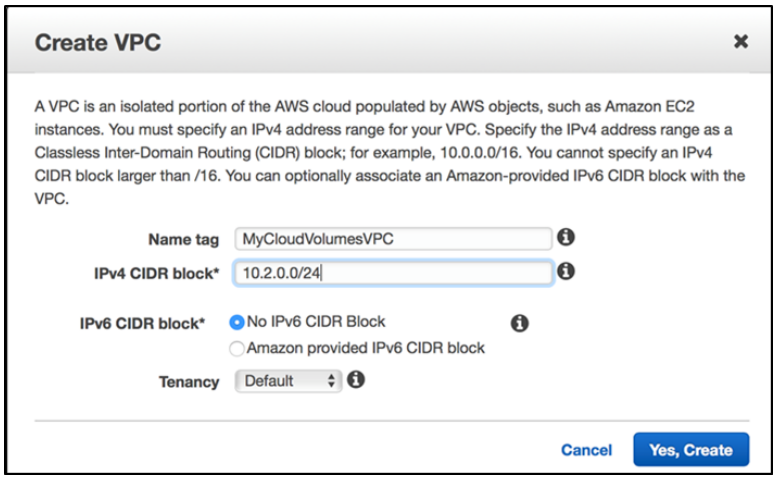
1. Log in to your AWS account and navigate to the VPC dashboard.



2. Click **Your VPCs** on the navigation pane to the left. Then click **Create VPC**.



3. On the Create VPC page, complete these tasks:
   a. Enter a unique name to help you identify this VPC to use for Cloud Volumes.
   b. Enter a private range Classless Inter-Domain Routing (CIDR) block that works for your environment. It doesn't matter what it is, you can select from any private class range. A /24 CIDR block is sufficient. In this example, the CIDR block name is 10.2.0.0/24.
   c. Click **Yes, Create**. A new VPC is created.



5.2 Create a Virtual Private Gateway and Attach it to Your VPC

The VGW is a network gateway that provides a route to NetApp Cloud Volumes.

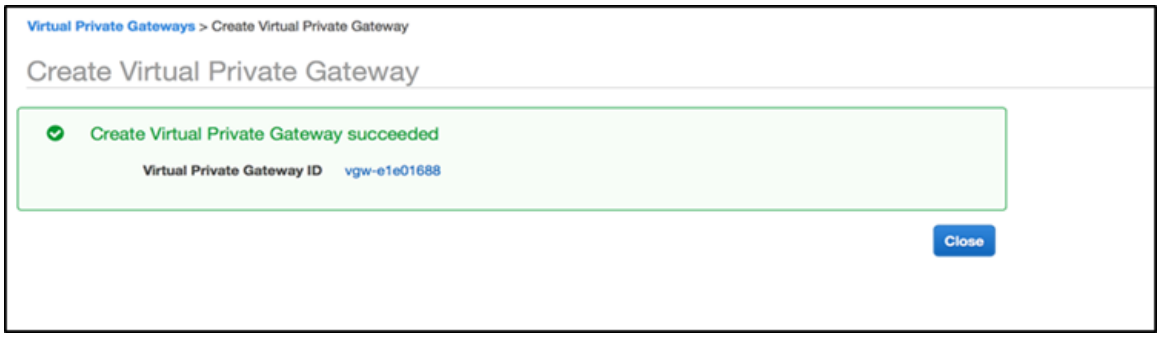
To create a VGW and attach it to your VPC, complete the following steps:

1. On the VPC page of the AWS console, select **Virtual Private Gateway**.
2. At the top of the page, select **Create Virtual Private Gateway**.
3. Provide an appropriate name tag for the VGW.
4. In the ASN field, NetApp recommends selecting **Amazon default ASN**, in which case your VGW will be assigned an ASN of 64512. You can select the Custom ASN option and assign any valid private ASN.

   Note: Make a note of the ASN as you will need to enter this information when setting up your first cloud volume in an AWS region.

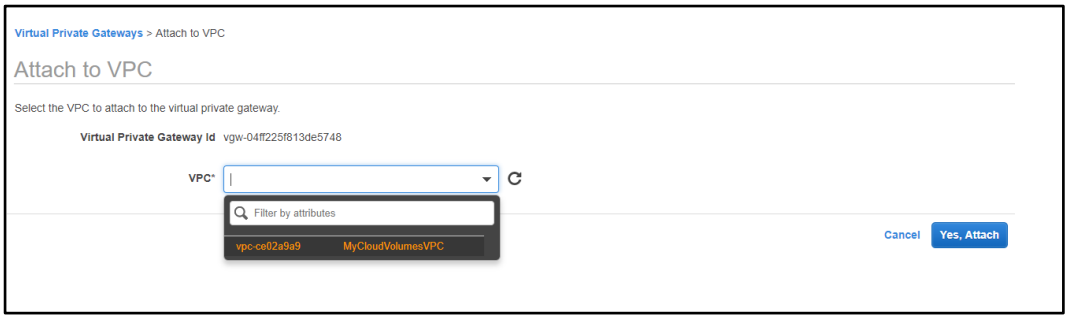
5. Click **Create Virtual Private Gateway**.

6. Make a note of the VGW ID and click **Close**. The new VGW is displayed in the detached state.



7. Click the button next to the new Virtual Private Gateway and press **Actions** (above the table).
8. Click **Attach to VPC**.
9. Select the newly created VPC to attach to the VGW, and then click **Yes, Attach**.

   Note: You are returned to the Virtual Private Gateway page.



It can take a minute or two for the VGW to transition from the Attaching state to Attached.

Note: Use the Refresh button in the upper-right corner of the page to refresh the status.

5.3 Create a Subnet for the VPC

To create a subnet for the VPC, complete the following steps:

1. On the VPC dashboard, select **Subnets** from the navigation pane on the left. A list of existing subnets is displayed. Click **Create Subnet**.
2. On the Create Subnet page, complete these steps:
   a. Enter an appropriate name tag for your environment.

b. Select the newly created VPC.

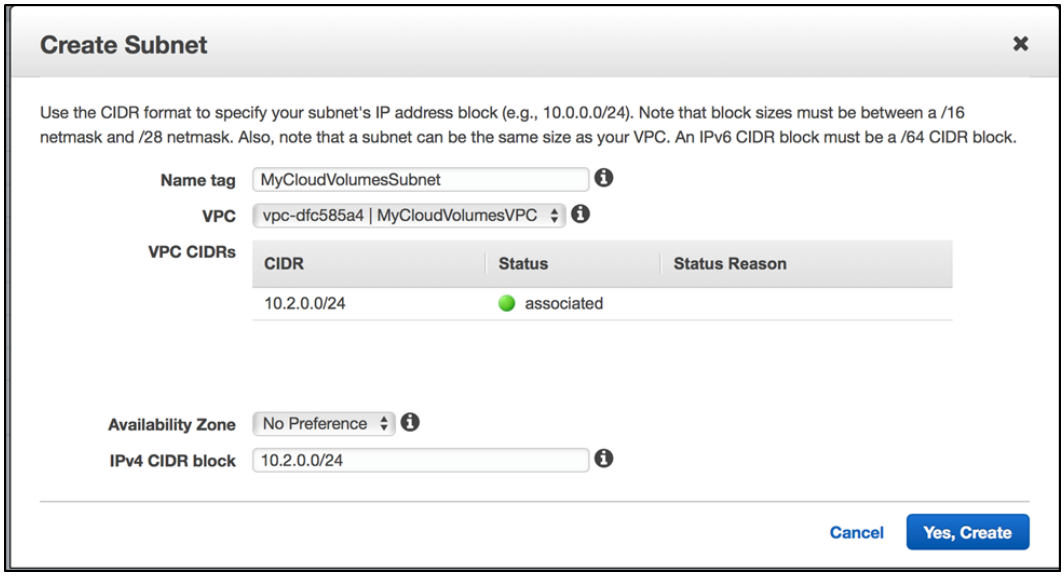
c. Unless you want to select a specific availability zone, leave the No Preference default value and the system will select the availability zone for you.

d. Unless you need to divide the VPC into multiple subnets, use the CIDR block for the entire VPC.

   In this example, the `10.2.0.0/24` CIDR block was used—it represents the entire VPC CIDR block.

e. Click **Yes, Create**. The new subnet will reside in the VPC you selected.

Note: This process can take a few minutes.



5.4 Set Up Routes

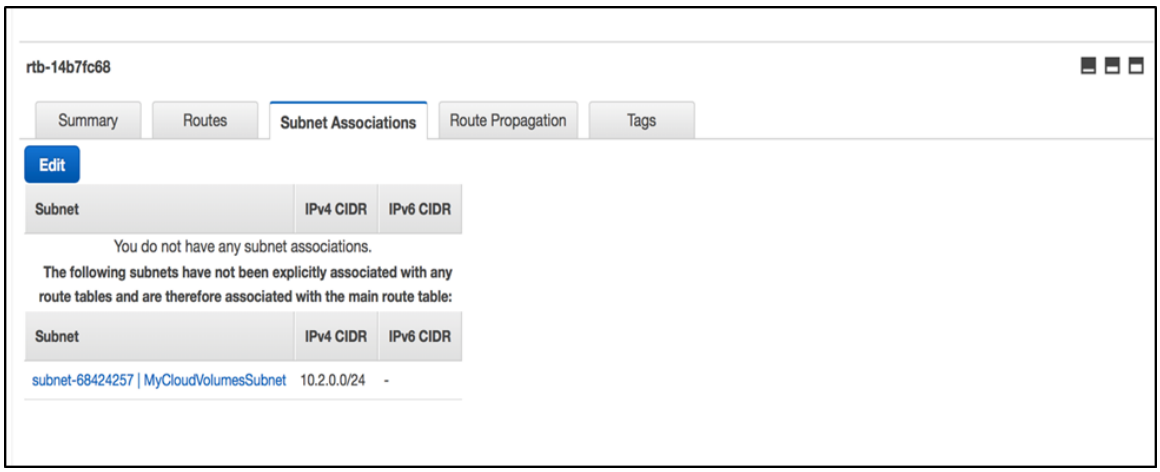
To set up routes, complete the following steps:

1. On the VPC dashboard, select **Route Tables** from the navigation pane on the left.

   Note: A route table is automatically assigned as part of the VPC creation.

2. Select the route table and the details are displayed at the bottom of the page.

3. Select the **Subnet Associations** tab and associate the newly created subnet with this route table.



4. Click **Save**.

5. Select the **Routes** tab if you want to configure a static route or select the **Route Propagation** tab if you want to propagate the routes.

   a. To configure a static route, in the Routes tab click **Edit** routes. Then enter the destination CIDR block for Destination and select a target for Target, and **Save** the configuration.

   The CIDR block must be an IPv4 range for the region in the /28 range. This CIDR must only contain RFC 1918 (private) addresses.

b. To propagate a route, in the Route Propagation tab, click **Edit** and enable the toggle button to the right of the VGW name, and then click **Save**.

5.5 Gather required AWS configuration information

You are now ready to subscribe to NetApp Cloud Volumes in the AWS Marketplace. When subscribing, be prepared to provide the following information:

- AWS account number
- Regions required
- Private network CIDR preference you entered in the routing section (for example, Class A, B, or C network in RFC 1918)
- ASN: When using a Virtual Private Gateway, use that ASN. When using a Direct Connect Gateway, use that ASN.

6 Enable AWS Subscription and Cloud Volumes Service

6.1 Access AWS Marketplace Listing for Cloud Volumes Service

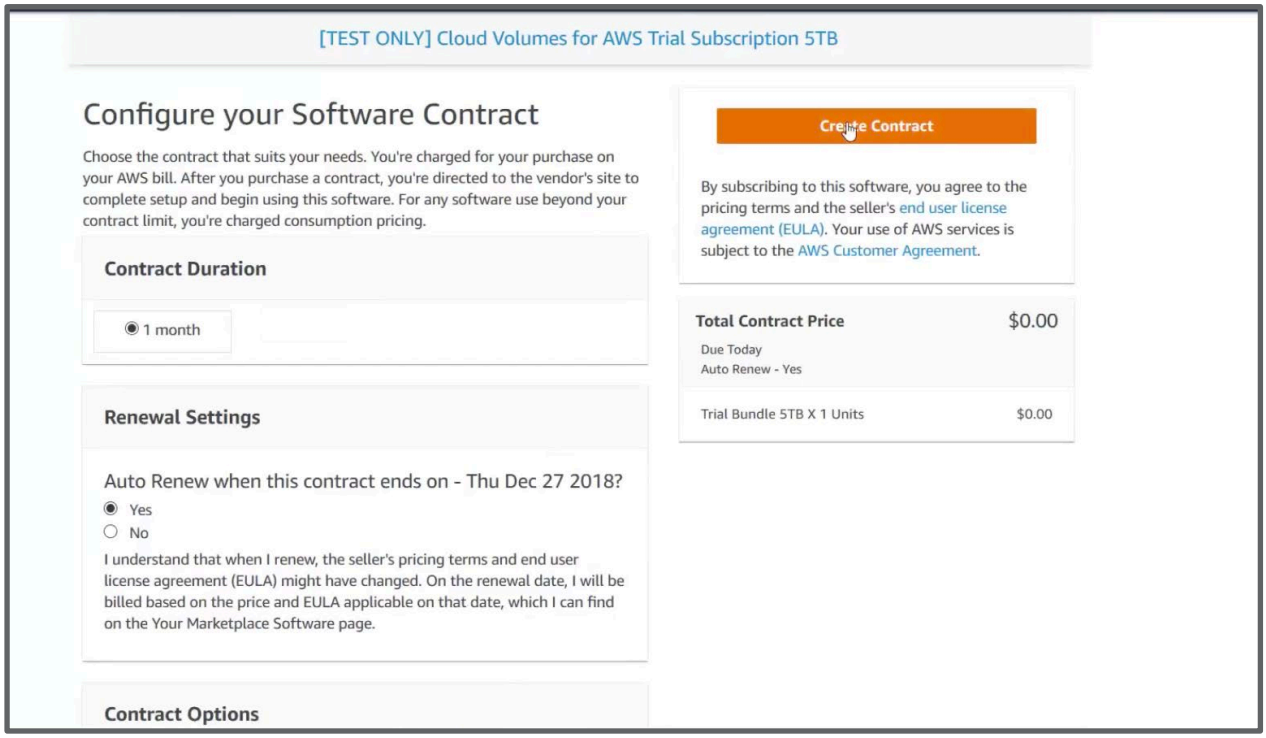
Locate the **NetApp Cloud Volumes Service** listing on the AWS Marketplace.

Complete the following steps:

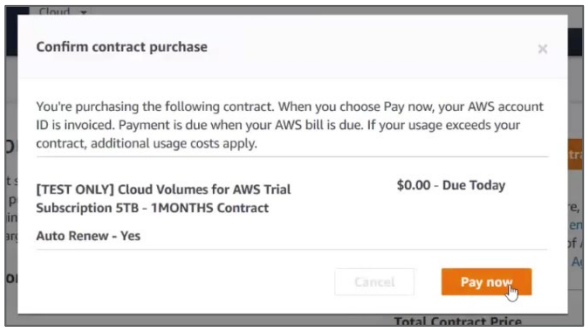
1. Go to the AWS marketplace page and sign in to your AWS account.
2. Type “NetApp Cloud Volumes” in the search bar to view these NetApp products.
3. Select the **NetApp Cloud Volumes Service for AWS** product.
4. Review the content on that page to fully understand the solutions the product provides, and click on the documentation links to identify the prerequisites tasks you must perform before creating your first cloud volume.
5. Click **Continue to Subscribe**.
6. Select the quantity of TB of capacity you wish to subscribe to.
7. Select or unselect the Auto Renew option for the contract.

8. Review the quantity and price of your contract. The Contract Signup page is displayed.
9. Select the quantity of bundles and then click **Create Contract**.

   Note: Only select the quantity that matches your total terabyte subscription. In this example, a 5TB is a quantity of 1 (1x 5TB).

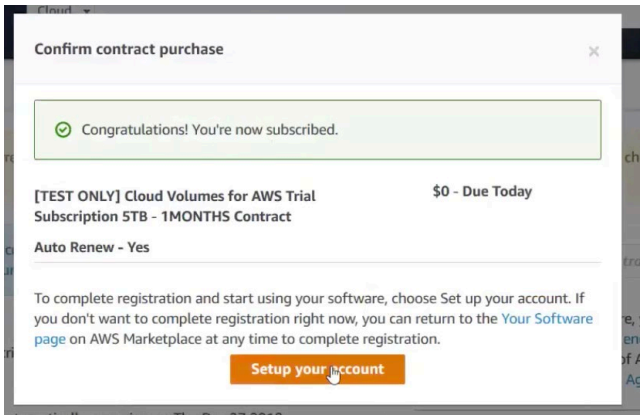


10. The Pay Now pop up window displays. If all is OK, click **Pay now**.



Need to replace all these screenshots with the real pages for the full service.

11. When the congratulations message is displayed, click **Setup Your Account**. Ensure you turn off any ad blocker or pop up blocker on your browser before you select Setup Your Account.



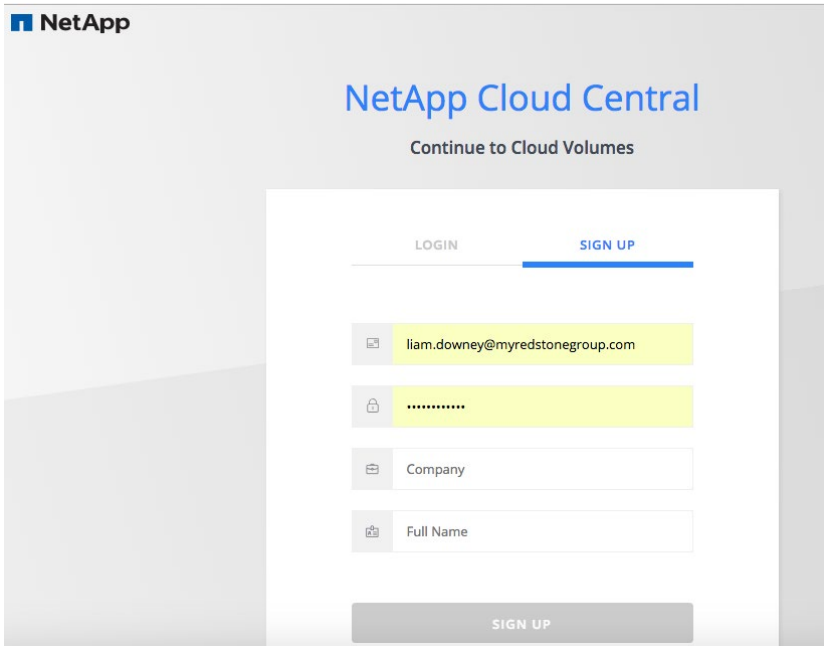
12. You will be redirected to the NetApp Cloud Central page. Complete the steps in the next section to register and log into NetApp Cloud Central.

6.2 Register and Log into NetApp Cloud Central

You may already have a NetApp Cloud Central account. If you do, and this is the account you want to use for CVS, select the “LOGIN” tab and enter your existing User ID and Password.

If this is your first time registering with NetApp Cloud Central, or if you wish to set up an additional account, you will need to register a new account. Select the “SIGN UP” tab.

1. Enter a valid email address.
2. Enter a Password.
3. Enter your company name.
4. Enter your full name.
5. Click Sign Up.



You have completed the initial process for creating Cloud Volumes Service for AWS. The Cloud Volumes user interface is displayed.

6.3 Create your first Cloud Volume

Create your first cloud volume using the Cloud Volumes user interface.

1. Go to the Creating a cloud volume topic in the NetApp Cloud Volumes Service for AWS documentation and follow the steps to create your first cloud volume.

   Note: Make sure you select the same AWS region that you created on AWS from the top of the Cloud Volumes user interface before creating the cloud volume.

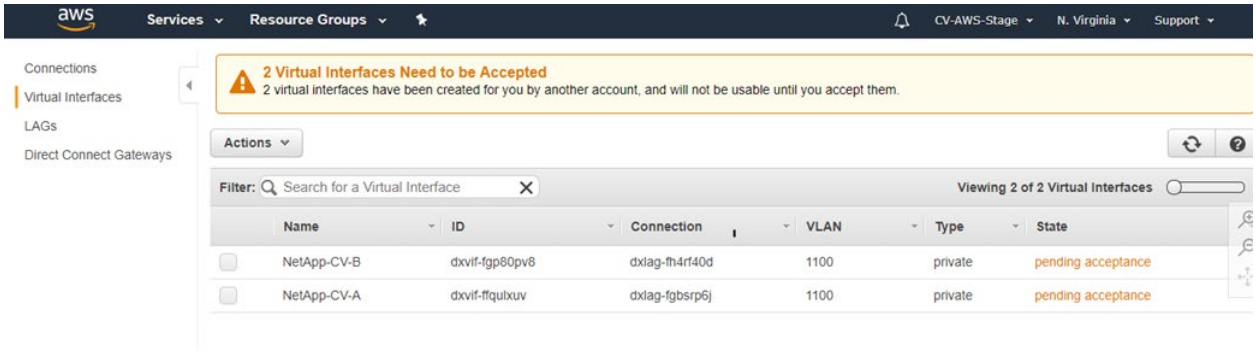
2. At the end of the process when you select **Create Volume** there will be some network configuration that is completed automatically for the first cloud volume in an AWS region. When prompted, follow the steps below to accept the two virtual interface that will be used in this AWS region to connect all your cloud volumes.

6.4 Accept the Direct Connect Virtual Interfaces

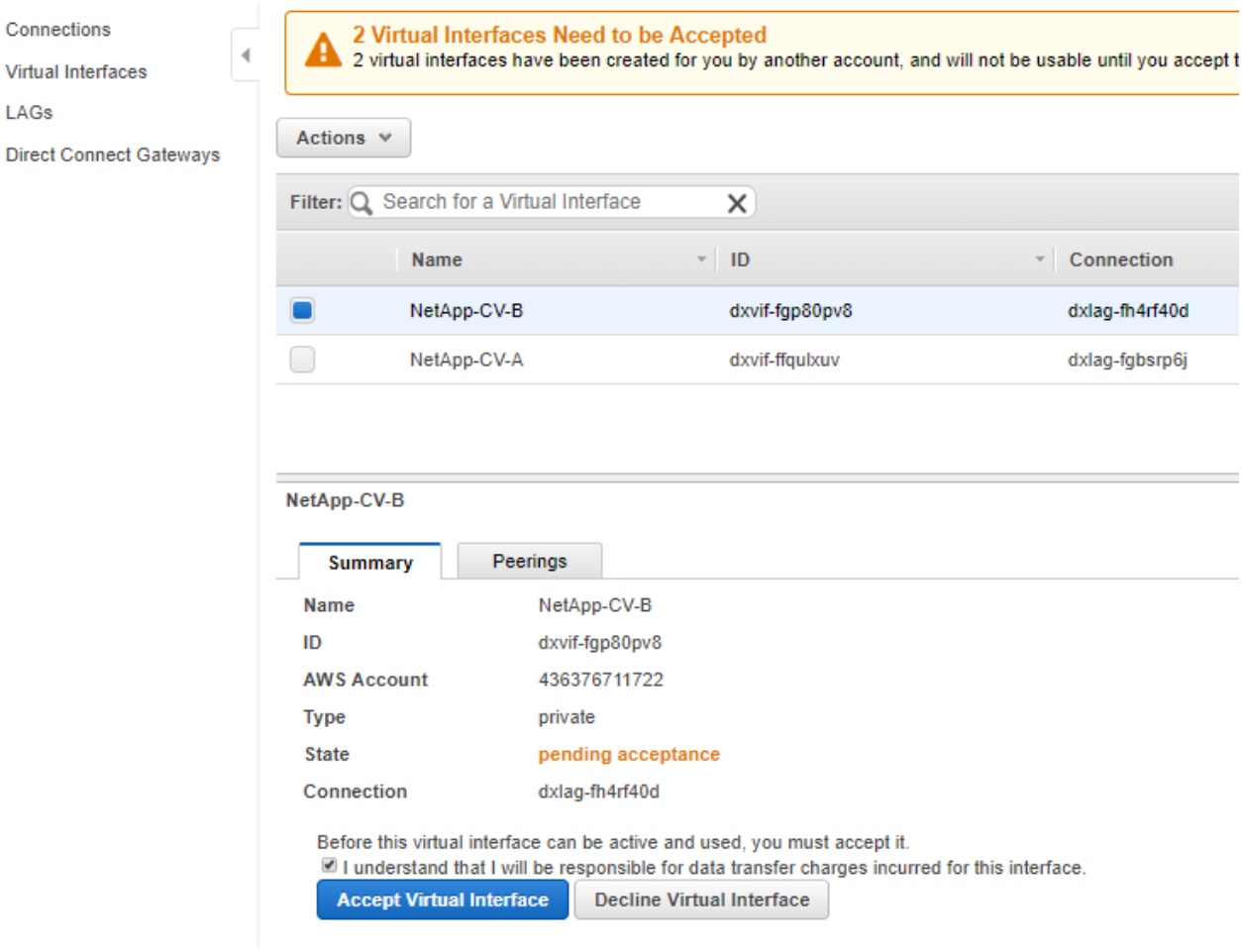
NetApp provides virtual interfaces for connectivity to the Cloud Volumes Service. These virtual interfaces must be accepted before they can be used.

To accept the virtual interfaces, complete the following steps:

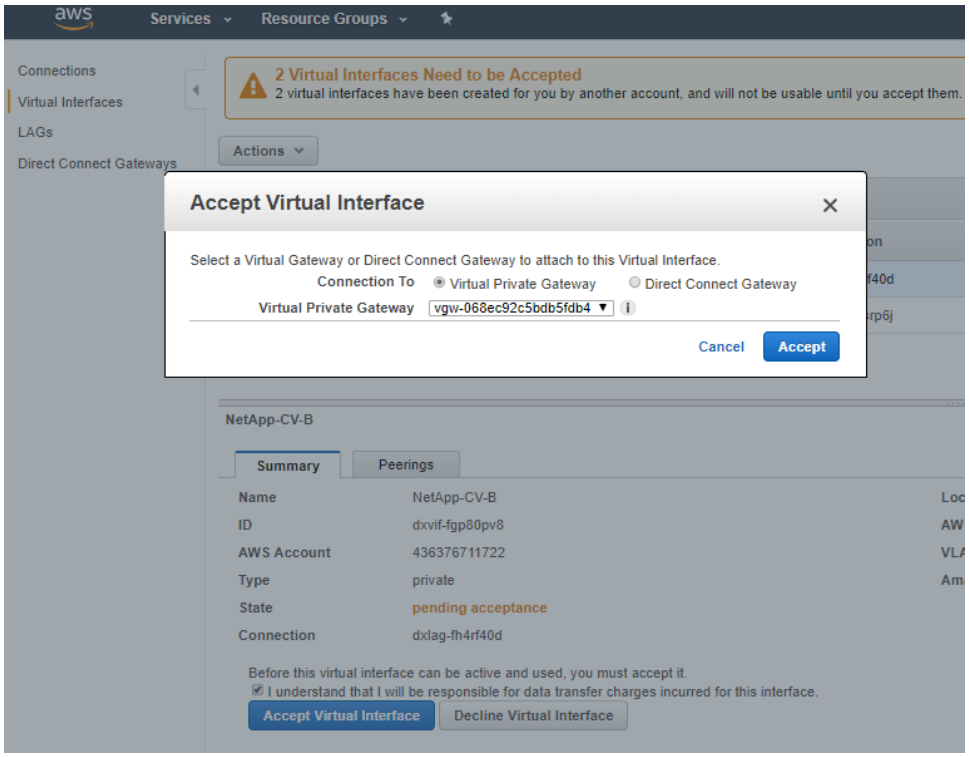
1. From the AWS console for your account, navigate to the Direct Connect service and click **Virtual Interfaces**.



2. Select one of the virtual interfaces, check the box that you understand how you will be charged for this service, and click **Accept Virtual Interface**.

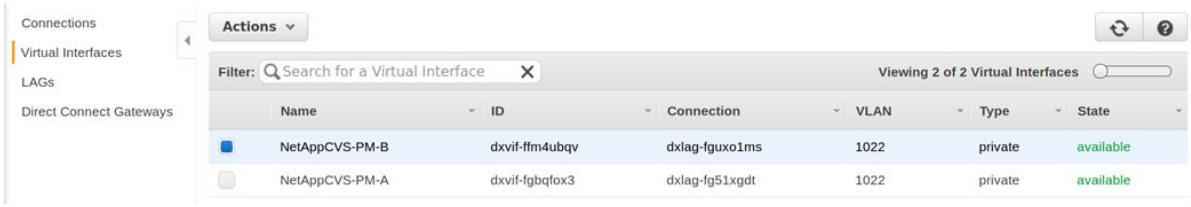


3. From the drop-down menu, select whether you will connect the interfaces to the **Virtual Private Gateway** or **Direct Connect Gateway** and click **Accept**.



4. Repeat steps 1 through 3 for each interface.
5. The state of the virtual interface initially goes to **`down`**, changes to **`up`**, and finally to **`available`**.

   Note: It can take several minutes before the virtual interfaces become available.
6. Verify that the virtual interfaces are available.



7. Return to the Cloud Volumes Service UI to mount the volume and to perform other tasks.

7 Manage Cloud Volumes

To create and manage Cloud Volumes Service for AWS, follow the instructions on NetApp Cloud Volumes Service for AWS Documentation. For example, you can create a cloud volume, mount the volume, and create a NetApp Snapshot™ copy of the volume.

Support

For support information, e-mail aws-bundles-support@netapp.com.

Where to Find Additional Information

To learn more about the information described in this document, refer to the following documents and/or websites:

- NetApp Cloud Volumes product page
  https://www.netapp.com/us/products/cloud-storage/cloud-volumes/index.aspx
- NetApp Cloud Volumes Service for AWS documentation
  https://docs.netapp.com/us-en/cloud_volumes/aws/
- NetApp Cloud Documentation
  https://docs.netapp.com/us-en/cloud/
- NetApp Product Documentation page
  http://docs.netapp.com

Version History

Version	Date	Document Version History
Version 1.0	December 2018	Initial release for self-subscription.

Refer to the Interoperability Matrix Tool (IMT) on the NetApp Support site to validate that the exact product and feature versions described in this document are supported for your specific environment. The NetApp IMT defines the product components and versions that can be used to construct configurations that are supported by NetApp. Specific results depend on each customer's installation in accordance with published specifications.

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