



Reference

Cloud Backup

NetApp
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Table of Contents

- Reference 1
 - AWS S3 archival storage classes and restore retrieval times 1
 - Azure archival tiers and restore retrieval times 2
 - Cross-account and cross-region configurations 3

Reference

AWS S3 archival storage classes and restore retrieval times

Cloud Backup supports two S3 archival storage classes and most regions.

Supported S3 archival storage classes for Cloud Backup

When backup files are initially created they're stored in S3 *Standard* storage. This tier is optimized for storing data that's infrequently accessed; but that also allows you to access it immediately. After 30 days the backups transition to the S3 *Standard-Infrequent Access* storage class to save on costs.

If your source clusters are running ONTAP 9.10.1 or greater, you can choose to tier backups to either S3 *Glacier* or S3 *Glacier Deep Archive* storage after a certain number of days (typically more than 30 days) for further cost optimization. Data in these tiers can't be accessed immediately when needed, and will require a higher retrieval cost, so you need to consider how often you may need to restore data from these archived backup files. See the section about [restoring data from archival storage](#).

Note that when you configure Cloud Backup with this type of lifecycle rule, you must not configure any lifecycle rules when setting up the bucket in your AWS account.

[Learn about S3 storage classes](#).

Restoring data from archival storage

While storing older backup files in archival storage is much less expensive than Standard or Standard-IA storage, accessing data from a backup file in archive storage for restore operations will take a longer amount of time and will cost more money.

How much does it cost to restore data from Amazon S3 Glacier and Amazon S3 Glacier Deep Archive?

There are 3 restore priorities you can choose when retrieving data from Amazon S3 Glacier, and 2 restore priorities when retrieving data from Amazon S3 Glacier Deep Archive. S3 Glacier Deep Archive costs less than S3 Glacier:

| Archive Tier | Restore Priority & Cost | | |
|-------------------------|---------------------------------|-------------------------------|--------------------------------|
| | High | Standard | Low |
| S3 Glacier | Fastest retrieval, highest cost | Slower retrieval, lower cost | Slowest retrieval, lowest cost |
| S3 Glacier Deep Archive | | Faster retrieval, higher cost | Slower retrieval, lowest cost |

Each method has a different per-GB retrieval fee and per-request fee. For detailed S3 Glacier pricing by AWS Region, visit the [Amazon S3 pricing page](#).

How long will it take to restore my objects archived in Amazon S3 Glacier?

There are 2 parts that make up the total restore time:

- **Retrieval time:** The time to retrieve the backup file from archive and place it in Standard storage. This is sometimes called the "rehydration" time. The retrieval time is different depending on the restore priority you choose.

| Archive Tier | Restore Priority & Retrieval Time | | |
|--------------------------------|-----------------------------------|-----------|------------|
| | High | Standard | Low |
| S3 Glacier | 3-5 minutes | 3-5 hours | 5-12 hours |
| S3 Glacier Deep Archive | | 12 hours | 48 hours |

- **Restore time:** The time to restore the data from the backup file in Standard storage. This time is no different than the typical restore operation directly from Standard storage - when not using an archival tier.

For more information about Amazon S3 Glacier and S3 Glacier Deep Archive retrieval options, refer to [the Amazon FAQ about these storage classes](#).

Azure archival tiers and restore retrieval times

Cloud Backup supports one Azure archival access tier and most regions.

Supported Azure Blob access tiers for Cloud Backup

When backup files are initially created they're stored in the *Cool* access tier. This tier is optimized for storing data that's infrequently accessed; but when needed, can be accessed immediately.

If your source clusters are running ONTAP 9.10.1 or greater, you can choose to tier backups from *Cool* to *Azure Archive* storage after a certain number of days (typically more than 30 days) for further cost optimization. Data in this tier can't be accessed immediately when needed, and will require a higher retrieval cost, so you need to consider how often you may need to restore data from these archived backup files. See the next section about [restoring data from archival storage](#).

Note that when you configure Cloud Backup with this type of lifecycle rule, you must not configure any lifecycle rules when setting up the container in your Azure account.

[Learn about Azure Blob access tiers](#).

Restoring data from archival storage

While storing older backup files in archival storage is much less expensive than Cool storage, accessing data from a backup file in Azure Archive for restore operations will take a longer amount of time and will cost more money.

How much does it cost to restore data from Azure Archive?

There are two restore priorities you can choose when retrieving data from Azure Archive:

- **High:** Fastest retrieval, higher cost
- **Standard:** Slower retrieval, lower cost

Each method has a different per-GB retrieval fee and per-request fee. For detailed Azure Archive pricing by Azure Region, visit the [Azure pricing page](#).

How long will it take to restore my data archived in Azure Archive?

There are 2 parts that make up the restore time:

- **Retrieval time:** The time to retrieve the archived backup file from Azure Archive and place it in Cool storage. This is sometimes called the "rehydration" time. The retrieval time is different depending on the restore priority you choose:
 - **High:** < 1 hour
 - **Standard:** < 15 hours
- **Restore time:** The time to restore the data from the backup file in Cool storage. This time is no different than the typical restore operation directly from Cool storage - when not using an archival tier.

For more information about Azure Archive retrieval options, refer to [this Azure FAQ](#).

Cross-account and cross-region configurations

These topics describe how to configure Cloud Backup for cross account configurations when using different cloud providers.

- [Configure Cloud Backup for multi-account access in AWS](#)
- [Configure Cloud Backup for multi-account access in Azure](#)

Configure backup for multi-account access in AWS

Cloud Backup enables you to create backup files in an AWS account that is different than where your source Cloud Volumes ONTAP volumes reside. And both of those accounts can be different than the account where the Cloud Manager Connector resides.

These steps are required only when you are [backing up Cloud Volumes ONTAP data to Amazon S3](#).

Follow the steps below to set up your configuration in this manner.

Set up VPC peering between accounts

1. Log in to second account and Create Peering Connection:
 - a. Select a local VPC: Select the VPC of the second account.
 - b. Select another VPC: Enter the account ID of the first account.
 - c. Select the Region where the Cloud Manager Connector is running. In this test setup both accounts are running in same region.
 - d. VPC ID: Log into first account and enter the acceptor VPC ID. This is the VPC ID of the Cloud Manager Connector.

aws Services ▾

Peering Connections > Create Peering Connection

Create Peering Connection

Peering connection name tag ⓘ

Select a local VPC to peer with

VPC (Requester)* ↕ ↻

| CIDRs | CIDR | Status | Status Reason |
|-------|-------------|--------------|---------------|
| | 10.0.0.0/16 | ● associated | |

Select another VPC to peer with

Account ☐ My account ☒ Another account

Account ID*

Region ☒ This region (us-east-1) ☐ Another Region

VPC ID (Accepter)*

A Success dialog displays.

Success

A VPC peering connection (pcx-049758069d9b7c140) has been requested.
The owner of **vpc-116d9174** must accept the peering connection.

| | | | |
|-----------------------------|-----------------------------|----------------------------|--------------|
| Requester VPC owner | 733004784675 (This account) | Accepter VPC owner | 464262061435 |
| Requester VPC ID | vpc-82f55afa | Accepter VPC ID | vpc-116d9174 |
| Requester VPC Region | us-east-1 | Accepter VPC Region | us-east-1 |
| Requester VPC CIDRs | 10.0.0.0/16 | Accepter VPC CIDRs | - |

The status of the peering connection shows as Pending Acceptance.

| <input type="checkbox"/> | Name | Peering Connecti... | Status | Requester VPC | Accepter VPC | Requester CIDRs | Accepter CIDRs | Requester Owner | Accepter Owner |
|-------------------------------------|-----------------|---------------------|--------------------|----------------------|----------------------|-----------------|----------------|-----------------|----------------|
| <input checked="" type="checkbox"/> | cbs-multi-ac... | pcx-049758069d9... | Pending Acceptance | vpc-82f55afa VP... | vpc-116d9174 | 10.0.0.0/16 | - | 733004784675 | 464262061435 |
| <input type="checkbox"/> | cbs-multi-peer | pcx-05f2d310cb7f... | Deleted | vpc-82f55afa VP... | vpc-116d9174 | - | - | 733004784675 | 464262061435 |
| <input type="checkbox"/> | New_Peering | pcx-6d55ca04 | Active | vpc-b16c90d4 V... | vpc-fc2aa39a De... | 172.31.0.0/16 | 192.168.0.0/16 | 733004784675 | 733004784675 |

2. Log into the first account and accept the peering request:

Create Peering Connection

Actions ▾

☒ Filter by tags and attributes

| <input type="checkbox"/> | Name | Peering Connecti... | Status | Requester VPC | Accepter VPC | Requester CIDRs | Accepter CIDRs | Requester Owner | Accepter Owner |
|-------------------------------------|--------------------|-----------------------|--------------------|---------------------|----------------------|-----------------|----------------|-----------------|----------------|
| <input type="checkbox"/> | estycvoconnect | pcx-049758069d9b7c140 | Active | vpc-0647747d M... | vpc-116d9174 | 10.2.0.0/24 | 172.31.0.0/16 | 464262061435 | 464262061435 |
| <input checked="" type="checkbox"/> | hlll-vpc-peer-chen | pcx-0d0e5c7fc4360254d | Active | vpc-116d9174 | vpc-445d4f21 | 172.31.0.0/16 | 10.129.0.0/20 | 464262061435 | 759995470648 |
| <input type="checkbox"/> | | pcx-049758069d9b7c140 | Pending Acceptance | vpc-82f55afa | vpc-116d9174 | 10.0.0.0/16 | - | 733004784675 | 464262061435 |
| <input type="checkbox"/> | | pcx-0d0e5c7fc4360254d | Active | vpc-0d12df59528f... | vpc-824dc0e4 nf... | 10.0.0.0/24 | 10.20.30.0/24 | 464262061435 | 464262061435 |

Accept Request

Reject Request

Delete VPC Peering Connection

Edit ClassicLink Settings

Edit DNS Settings

Add/Edit Tags

Accept VPC Peering Connection Request

×

Are you sure you want to accept this VPC peering connection request (pcx-049758069d9b7c140)?

| | | | |
|----------------------|--------------|---------------------|-----------------------------|
| Requester Account ID | 733004784675 | Accepter Account ID | 464262061435 (This account) |
| Requester VPC ID | vpc-82f55afa | Accepter VPC ID | vpc-116d9174 |
| Requester VPC Region | us-east-1 | Accepter VPC Region | us-east-1 |
| Requester VPC CIDR | 10.0.0.0/16 | Accepter VPC CIDR | - |

Cancel

Yes, Accept

a. Click **Yes**.

Accept VPC Peering Connection Request

×

Your VPC Peering Connection has been established.

To send and receive traffic across this VPC peering connection, you must add a route to the peered VPC in one or more of your VPC route tables. [Learn more](#)

[Modify my route tables now](#)

Close

The connection now shows as Active. We have also added a Name tag to identify the peering connection called `cbs-multi-account`.

| <input type="checkbox"/> | Name | Peering Connection | Status | Requester VPC | Accepter VPC | Requester CIDRs | Accepter CIDRs | Requester Owner | Accepter Owner |
|-------------------------------------|--------------------|-----------------------|--------|---------------------|----------------------|-----------------|----------------|-----------------|----------------|
| <input type="checkbox"/> | | pcx-004715531514cb0d8 | Active | vpc-0647747d M... | vpc-116d9174 | 10.2.0.0/24 | 172.31.0.0/16 | 464262061435 | 464262061435 |
| <input type="checkbox"/> | estycvoconnect | pcx-0305041f9cc2dfbdb | Active | vpc-116d9174 | vpc-445d4f21 | 172.31.0.0/16 | 10.129.0.0/20 | 464262061435 | 759995470648 |
| <input checked="" type="checkbox"/> | cbs-multi-account | pcx-049758069d9b7c140 | Active | vpc-82f55afa | vpc-116d9174 | 10.0.0.0/16 | 172.31.0.0/16 | 733004784675 | 464262061435 |
| <input type="checkbox"/> | hili-vpc-peer-chen | pcx-0d0e5c7fc4360254d | Active | vpc-0d12df59528f... | vpc-824dc0e4 nf... | 10.0.0.0/24 | 10.20.30.0/24 | 464262061435 | 464262061435 |

b. Refresh the peering connection in the second account and notice that the status changes to Active.

| <input type="checkbox"/> | Name | Peering Connection | Status | Requester VPC | Accepter VPC | Requester CIDRs | Accepter CIDRs | Requester Owner | Accepter Owner |
|-------------------------------------|-------------------|-----------------------|--------|----------------------|----------------------|-----------------|----------------|-----------------|----------------|
| <input checked="" type="checkbox"/> | cbs-multi-account | pcx-049758069d9b7c140 | Active | vpc-82f55afa VP... | vpc-116d9174 | 10.0.0.0/16 | 172.31.0.0/16 | 733004784675 | 464262061435 |
| <input type="checkbox"/> | New_Peering | pcx-6d55ca04 | Active | vpc-b16c90d4 V... | vpc-fc2aa39a De... | 172.31.0.0/16 | 192.168.0.0/16 | 733004784675 | 733004784675 |

Add a route to the route tables in both accounts

- Go to VPC > Subnet > Route table.

VPC > Subnets > subnet-4d315328

subnet-4d315328 / The Subnet created

Details

| | | | |
|--|--------------------------------|---|----------------------------------|
| Subnet ID subnet-4d315328 | State Available | VPC vpc-116d9174 | IPv4 CIDR 172.31.64.0/20 |
| Available IPv4 addresses 3587 | IPv6 CIDR - | Availability Zone us-east-1a | Availability Zone ID use1-az1 |
| Network border group us-east-1 | Route table rtb-4da55528 | Network ACL acl-c37384a6 | Default subnet Yes |
| Auto-assign public IPv4 address Yes | Auto-assign IPv6 address No | Auto-assign customer-owned IPv4 address No | Customer-owned IPv4 pool - |
| Outpost ID - | Owner 464262061435 | Subnet ARN arn:aws:ec2:us-east-1:464262061435:subnet/subnet-4d315328 | |

[Flow logs](#)
[Route table](#)
[Network ACL](#)
[Sharing](#)
[Tags](#)

2. Click on the Routes tab.

Route Table ID: rtb-4da55528 Add filter

| Name | Route Table ID | Explicit subnet association | Edge associations | Main | VPC ID | Owner |
|------|----------------|-----------------------------|-------------------|------|--------------|--------------|
| | rtb-4da55528 | subnet-4d315328 | - | Yes | vpc-116d9174 | 464262061435 |

Route Table: rtb-4da55528

[Summary](#)
[Routes](#)
[Subnet Associations](#)
[Edge Associations](#)
[Route Propagation](#)
[Tags](#)

[Edit routes](#)

View All routes

| Destination | Target | Status | Propagated |
|---------------|------------------------|--------|------------|
| 172.31.0.0/16 | local | active | No |
| pl-63a5400a | vpce-098587ed33c36408c | active | No |

3. Click **Edit routes**.

Edit routes

| Destination | Target | Status | Propagated |
|---------------|-----------------------|--------|------------|
| 172.31.0.0/16 | local | active | No |
| 10.20.30.0/24 | pcx-0791b47f6f9a27d65 | active | No |
| 10.129.0.0/20 | pcx-0305041f9cc2dfbdb | active | No |

[Add route](#)

* Required

[Cancel](#)
[Save routes](#)

4. Click **Add route**, and from the Target drop-down list select **Peering Connection**, and then select the peering connection that you created.

a. In the Destination, enter the other account's subnet CIDR.

Edit routes

| Destination | Target | Status | Propagated |
|---------------|-----------------------|--------|------------|
| 172.31.0.0/16 | local | active | No |
| 10.20.30.0/24 | pcx-0791b47f6f9a27d65 | active | No |
| 10.129.0.0/20 | pcx-0305041f9cc2dfbdb | active | No |
| 10.0.0.0/24 | pcx- | | No |

Add route

* Required

pcx-05f2d310cb7f49843

pcx-004715531514cb0d8

pcx-049758069d9b7c140 cbs-multi-account

pcx-094f9fdb10a2045ea hill-peer-vadim-vpc

pcx-0791b47f6f9a27d65

pcx-0305041f9cc2dfbdb estycvoconnect

Cancel Save routes

b. Click **Save routes** and a Success dialog displays.

[Route Tables](#) > Edit routes

Edit routes


Routes successfully edited

Close

Add the second AWS account credentials in Cloud Manager

1. Add the second AWS account, for example, *Saran-XCP-Dev*.

Credentials

+ Add Credentials

3 Credentials


Instance Profile

Credential Type: AWS Keys

464262061435
AWS Account ID

CBS-SR-OCCMOCCM1620912870830...
IAM Role

aws-sub-a2
Subscription

2
Working Environments


Saran-XCP-Dev

Credential Type: AWS Keys

733004784675
AWS Account ID

AKIA2VKT5MQRZRAWW3HI
AWS Access Key

aws-sub-a2
Subscription

0
Working Environments

2. In the Discover Cloud Volumes ONTAP page, select the newly added credentials.

Choose an AWS region and then select the working environment that you want to discover.

AWS Region
US East | N. Virginia

aws AWS Credentials

Credential Name

Saran-XCP-Dev | Account ID: 733004784675

Instance Profile | Account ID: 464262061435

To add new AWS credentials, go to the [Credentials settings](#).

Apply Cancel

3. Select the Cloud Volumes ONTAP system you want to discover from second account. You can also deploy a new Cloud Volumes ONTAP system in the second account.

Add an Existing Cloud Volumes ONTAP Region

↑ Previous Step This working environment will be created in Cloud Provider Account: **Saran-XCP-Dev** | Account ID: **733004784675** | [Switch Account](#)

Choose an AWS region and then select the working environment that you want to discover.

AWS Region
US East | N. Virginia

Cloud Volumes ONTAP instances found

| Name | VPC Name | Availability Zone | Subnet Id | Cloud Formation Name | Cluster Address | Type |
|-----------------|-------------|-------------------|-----------------|----------------------|---------------------------|------------------------|
| cbscv001 | VPC-NAT | us-east-1f | subnet-68e8d464 | cbscv001 | 10.0.0.80 | Cloud Volumes ONTAP |
| testbyolliraz | VPC for VSA | us-east-1a | subnet-c1d99699 | testbyolliraz | 172.31.5.142 | Cloud Volumes ONTAP |
| idanAwsHa991001 | VPC for VSA | us-east-1a | subnet-c1d99699 | idanAwsHa991001 | 172.31.5.234,172.31.5.110 | HA Cloud Volumes ONTAP |

Continue

The Cloud Volumes ONTAP system from the second account is now added to Cloud Manager which is running in a different account.



Enable backup in the other AWS account

1. In Cloud Manager, enable backup for the Cloud Volumes ONTAP system running in the first account, but select the second account as the location for creating the backup files.



2. Then select a backup policy and the volumes you want to back up, and Cloud Backup attempts to create a new bucket in the selected account.

However, adding the bucket to the Cloud Volumes ONTAP system will fail because Cloud Backup uses the instance profile to add the bucket and the Cloud Manager instance profile doesn't have access to the resources in the second account.

3. Get the working environment ID for the Cloud Volumes ONTAP system.



Cloud Backup creates every bucket with the prefix `Netapp-backup-` and will include the working environment ID; for example: `87ULeAI0`

4. In the EC2 portal, go to S3 and search for the bucket with name ending with `87uLeAI0` and you'll see the bucket name displayed as `Netapp-backup-vsa87uLeAI0`.



5. Click on the bucket, then click the Permissions tab, and then click **Edit** in the Bucket policy section.



6. Add a bucket policy for the newly created bucket to provide access to the Cloud Manager's AWS account, and then Save the changes.

```
{
  "Version": "2012-10-17",
  "Statement": [
    {
      "Sid": "PublicRead",
      "Effect": "Allow",
      "Principal": {
        "AWS": "arn:aws:iam::464262061435:root"
      },
      "Action": [
        "s3:ListBucket",
        "s3:GetBucketLocation",
        "s3:GetObject",
        "s3:PutObject",
        "s3:DeleteObject"
      ],
      "Resource": [
        "arn:aws:s3:::netapp-backup-vsa87uleai0",
        "arn:aws:s3:::netapp-backup-vsa87uleai0/*"
      ]
    }
  ]
}
```

Note that "AWS": "arn:aws:iam::464262061435:root" gives complete access this bucket for all resources in account 464262061435. If you want to reduce it to specific role, level, you can update the policy with specific role(s). If you are adding individual roles, ensure that occm role also added, otherwise backups will not get updated in the Cloud Backup UI.

For example: "AWS": "arn:aws:iam::464262061435:role/cvo-instance-profile-version10-d8e-lamInstanceRole-IKJPJ1HC2E7R"

7. Retry enabling Cloud Backup on the Cloud Volumes ONTAP system and this time it should be successful.

Configure backup for multi-account access in Azure

Cloud Backup enables you to create backup files in an Azure account that is different than where your source Cloud Volumes ONTAP volumes reside. And both of those accounts can be different than the account where the Cloud Manager Connector resides.

These steps are required only when you are [backing up Cloud Volumes ONTAP data to Azure Blob storage](#).

Just follow the steps below to set up your configuration in this manner.

Set up VNet peering between accounts

Note that if you want Cloud Manager to manage your Cloud Volumes ONTAP system in a different account/region, then you need to setup VNet peering. VNet peering is not required for storage account

connectivity.

1. Log in to the Azure portal and from home, select Virtual Networks.
2. Select the subscription you are using as subscription 1 and click on the VNet where you want to set up peering.

Home > Virtual networks

NetApp HCL (netapphcl.onmicrosoft.com)

+ New Manage view Refresh Export to CSV Open query Assign tags Feedback

Filter for any field... Subscription == OCCM Dev Resource group == all Location == all Add filter

Showing 1 to 60 of 60 records.

| <input type="checkbox"/> Name ↑↓ | Resource group ↑↓ | Location ↑↓ |
|--|-------------------------------|---------------------|
| <input checked="" type="checkbox"/> cbsnetwork | occm_group_eastasia | East Asia |
| <input type="checkbox"/> Vnet1 | occm_group_australiaeast | Australia East |
| <input type="checkbox"/> Vnet1 | occm_group_australiasoutheast | Australia Southeast |

3. Select **cbsnetwork** and from the left panel, click on **Peerings**, and then click **Add**.

Subscription * ⓘ
OCCM Automation

Virtual network *
cbse2evnet

Traffic to remote virtual network ⓘ
☒ Allow (default)
☐ Block all traffic to the remote virtual network

Traffic forwarded from remote virtual network ⓘ
☒ Allow (default)
☐ Block traffic that originates from outside this virtual network

Virtual network gateway or Route Server ⓘ
☐ Use this virtual network's gateway or Route Server
☐ Use the remote virtual network's gateway or Route Server
☒ None (default)

Add

4. Enter the following information on the Peering page and then click **Add**.
 - Peering link name for this network: you can give any name to identify the peering connection.
 - Remote virtual network peering link name: enter a name to identify the remote VNet.

- Keep all the selections as default values.
- Under subscription, select the subscription 2.
- Virtual network, select the virtual network in subscription 2 to which you want to set up the peering.

cbsnetwork | Peerings

Virtual network

Search (Cmd+ /) << + Add Refresh

Filter by name...

| Name | Peering status | Peer |
|------------|----------------|------------|
| cbsnetwork | Connected | cbse2evnet |

Settings

- Address space
- Connected devices
- Subnets
- DDoS protection
- Firewall
- Security
- DNS servers
- Peerings**

5. Perform the same steps in subscription 2 VNet and specify the subscription and remote VNet details of subscription 1.

Subscription * ⓘ

OCCM Dev

Virtual network *

cbsnetwork

Traffic to remote virtual network ⓘ

☒ Allow (default)

☐ Block all traffic to the remote virtual network

Traffic forwarded from remote virtual network ⓘ

☒ Allow (default)

☐ Block traffic that originates from outside this virtual network

Virtual network gateway or Route Server ⓘ

☐ Use this virtual network's gateway or Route Server

☐ Use the remote virtual network's gateway or Route Server

☒ None (default)

Add

The peering settings are added.

cbse2evnet | Peerings ...

Virtual network

Search (Cmd+ /) << + Add ↻ Refresh

Filter by name...

| Name | Peering status | Peer |
|----------------|----------------|------------|
| cbsnetworkpeer | Connected | cbsnetwork |

Overview

Activity log

Access control (IAM)

Tags

Diagnose and solve problems

Settings

Address space

Connected devices

Subnets

DDoS protection

Firewall

Security

DNS servers

Peerings

Create a private endpoint for the storage account

Now you need to create a private endpoint for the storage account. In this example, the storage account is created in subscription 1 and the Cloud Volumes ONTAP system is running in subscription 2.



You need network contributor permission to perform the following action.

```
{
  "id": "/subscriptions/d333af45-0d07-4154-943dc25fbbce1b18/providers/Microsoft.Authorization/roleDefinitions/4d97b98b-1d4f-4787-a291-c67834d212e7",
  "properties": {
    "roleName": "Network Contributor",
    "description": "Lets you manage networks, but not access to them.",
    "assignableScopes": [
      "/"
    ],
    "permissions": [
      {
        "actions": [
          "Microsoft.Authorization/*/read",
          "Microsoft.Insights/alertRules/*",
          "Microsoft.Network/*",
          "Microsoft.ResourceHealth/availabilityStatuses/read",
          "Microsoft.Resources/deployments/*",
          "Microsoft.Resources/subscriptions/resourceGroups/read",
          "Microsoft.Support/*"
        ],
        "notActions": [],
        "dataActions": [],
        "notDataActions": []
      }
    ]
  }
}
```

1. Go to the storage account > Networking > Private endpoint connections and click **+ Private endpoint**.



2. In the Private Endpoint *Basics* page:

- Select subscription 2 (where the Cloud Manager Connector and Cloud Volumes ONTAP system are deployed) and the resource group.
- Enter an endpoint name.
- Select the region.

Create a private endpoint

1 Basics 2 Resource 3 Configuration 4 Tags 5 Review + create

Use private endpoints to privately connect to a service or resource. Your private endpoint must be in the same region as your virtual network, but can be in a different region from the private link resource that you are connecting to. [Learn more](#)

Project details

Subscription * ⓘ OCCM Dev

Resource group * ⓘ cbsoccmdevcvo-rg [Create new](#)

Instance details

Name * cbse2e ✓

Region * (Asia Pacific) East Asia

3. In the *Resource* page, select Target sub-resource as **blob**.

Create a private endpoint ...

✓ Basics **2 Resource** 3 Configuration 4 Tags 5 Review + create

Private Link offers options to create private endpoints for different Azure resources, like your private link service, a SQL server, or an Azure storage account. Select which resource you would like to connect to using this private endpoint. [Learn more](#)

Subscription OCCM Dev (d333af45-0d07-4154-943d-c25fbbce1b18)

Resource type Microsoft.Storage/storageAccounts

Resource test150521

Target sub-resource * ⓘ

4. In the Configuration page:

- Select the virtual network and subnet.
- Click the **Yes** radio button to "Integrate with private DNS zone".

Create a private endpoint ...

✓ Basics ✓ Resource **3 Configuration** 4 Tags 5 Review + create

Networking

To deploy the private endpoint, select a virtual network subnet. [Learn more](#)

Virtual network * ⓘ

Subnet * ⓘ

ⓘ If you have a network security group (NSG) enabled for the subnet above, it will be disabled for private endpoints on this subnet only. Other resources on the subnet will still have NSG enforcement.

Private DNS integration

To connect privately with your private endpoint, you need a DNS record. We recommend that you integrate your private endpoint with a private DNS zone. You can also utilize your own DNS servers or create DNS records using the host files on your virtual machines. [Learn more](#)

Integrate with private DNS zone ☒ Yes ☐ No

| Configuration name | Subscription | Private DNS zone |
|---------------------------|--------------|-----------------------------------|
| privatelink-blob-core-... | OCCM Dev | privatelink.blob.core.windows.net |

Review + create < Previous Next : Tags >

5. In the Private DNS zone list, ensure that the Private Zone is selected from the correct Region, and click **Review + Create**.

| Configuration name | Subscription | Private DNS zone |
|---------------------------|--------------|--|
| privatelink-blob-core-... | OCCM Dev | privatelink.blob.core.windows.net |
| | | <input type="text" value="Filter private DNS zones"/> <div> <div>occm_group_centralus</div> <div>privatelink.blob.core.windows.net</div> <div>occm_group_eastus</div> <div>privatelink.blob.core.windows.net</div> <div>occm_group_eastus2</div> <div>privatelink.blob.core.windows.net</div> </div> |

Now the storage account (in subscription 1) has access to the Cloud Volumes ONTAP system which is running in subscription 2.

6. Retry enabling Cloud Backup on the Cloud Volumes ONTAP system and this time it should be successful.

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