# Monitoring documentation

## Monitoring

NetApp
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# Monitoring documentation

# What's new

Learn what's new with the Monitoring service.

## 1 August 2021

### Change to Acquisition Unit name

We changed the default name of the Acquisition Unit instance to CloudInsights-AU-*UUID* so that the name is more descriptive (the UUID is a generated hash).

Cloud Manager deploys this instance when you enable the Monitoring service on a Cloud Volumes ONTAP working environment.

## 5 May 2021

### Support for existing tenants

You can now enable the Monitoring service on a Cloud Volumes ONTAP working environment even if you have an existing Cloud Insights tenant.

### Free Trial transition

When you enable the Monitoring service, Cloud Manager sets up a free trial of Cloud Insights. On the 29th day, your plan now automatically transitions from the Trial Version to the Basic Edition.

## 9 February 2021

### Support in Azure

The Monitoring service is now supported with Cloud Volumes ONTAP for Azure.

### Support in Government regions

The Monitoring service is also supported in Government regions in AWS and Azure.

## 10 May 2020

### Introducing the Monitoring service

By leveraging NetApp's Cloud Insights service, Cloud Manager gives you insights into the health and performance of your Cloud Volumes ONTAP instances and helps you troubleshoot and optimize the performance of your cloud storage environment.

# Get started

## Learn about the Monitoring service

The Monitoring service gives you insights into the health and performance of your Cloud Volumes ONTAP instances and helps you troubleshoot and optimize the performance of your cloud storage environment.

### Features

- Automatically monitor all volumes
- View volume performance data in terms of IOPS, throughput, and latency
- Identify performance issues to minimize impact on your users and apps

### Supported cloud providers

The Monitoring service is supported with Cloud Volumes ONTAP for AWS and Cloud Volumes ONTAP for Azure.

### Cost

NetApp doesn't charge you for using the Monitoring service, but Cloud Manager launches a virtual machine in your VPC to facilitate monitoring. This VM results in charges from your cloud provider.

### How the Monitoring service works

Cloud Manager leverages NetApp's Cloud Insights service to provide monitoring.

At a high-level, Cloud Insights integration with Cloud Manager works like this:

1. You enable the Monitoring service on Cloud Volumes ONTAP.
2. Cloud Manager configures your environment. It does the following:
    a. Creates a Cloud Insights tenant (also called *environment*) and associates all users in your NetApp account to the tenant.

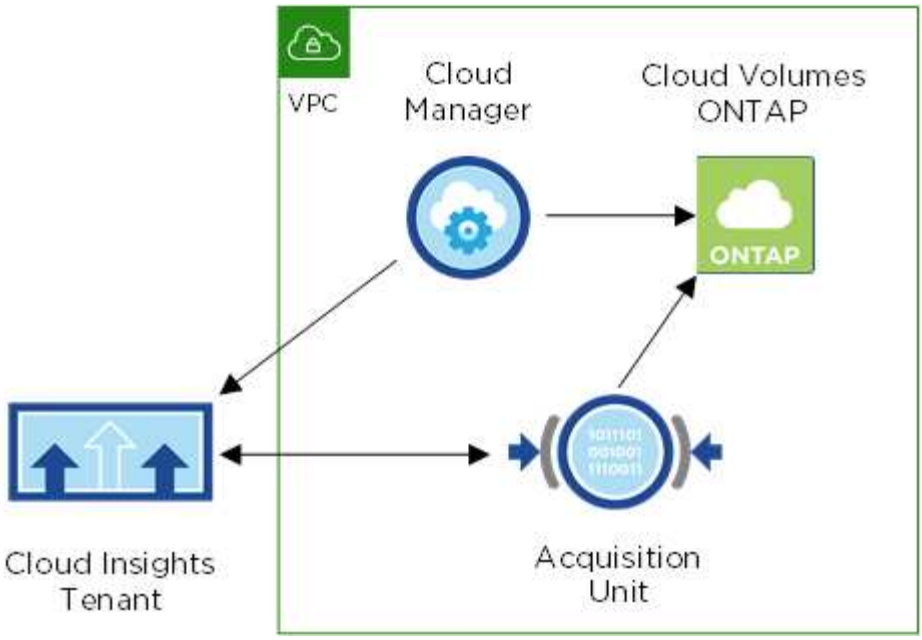
       If you already have a tenant, then Cloud Manager uses that existing tenant.

    b. Enables a free trial of Cloud Insights.

       On the 29th day, your plan automatically transitions from the Trial Version to the Basic Edition.

    c. Deploys a virtual machine in your VPC/VNet called an Acquisition Unit. The Acquisition Unit facilitates monitoring of volumes (this is the VM mentioned in the Cost section above).
    d. Connects the Acquisition Unit to Cloud Volumes ONTAP and to the Cloud Insights tenant.
3. In Cloud Manager, you click Monitoring and use the performance data to troubleshoot and optimize performance.

The following image shows the relationship between these components in an AWS VPC:




### The Acquisition Unit

When you enable Monitoring, Cloud Manager deploys an Acquisition Unit in the same subnet as the Connector.

An *Acquisition Unit* collects performance data from Cloud Volumes ONTAP and sends it to the Cloud Insights tenant. Cloud Manager then queries that data and presents it to you.

Note the following about the Acquisition Unit instance:

- In AWS, the Acquisition Unit runs on a t3.xlarge instance with a 100 GiB GP2 volume.
- In Azure, the Acquisition Unit runs on a D4_v3 virtual machine with a 30 GiB Standard SSD.
- The instance is named *CloudInsights-AU* with a generated hash (UUID) concatenated to it. For example: *CloudInsights-AU-FAN7FqeH*
- Only one Acquisition Unit is deployed per Connector.
- The instance must be running to access performance information in the Monitoring tab.

### Cloud Insights tenant

If you don’t already have a *tenant*, Cloud Manager sets one up for you when you enable Monitoring. A Cloud Insights tenant enables you to access the performance data that the Acquisition Unit collects. The tenant is a secure data partition within the NetApp Cloud Insights service.

### Cloud Insights web interface

The Monitoring tab in Cloud Manager provides basic performance data for your volumes. You can go to the Cloud Insights web interface from your browser to perform more in-depth monitoring and to configure alerts for your Cloud Volumes ONTAP systems.

### Free trial and subscription

Cloud Manager enables a free trial of Cloud Insights to provide performance data within Cloud Manager and for you to explore the features that Cloud Insights Standard Edition has to offer.

On the 29th day, your plan automatically transitions from the Trial Version to the Basic Edition

You have the option to subscribe to the Standard or Premium editions to gain access to additional features from the Cloud Insights web interface.

Learn how to subscribe to Cloud Insights

# Quick start for the Monitoring service

Complete a few steps to start monitoring Cloud Volumes ONTAP performance.

## Quick start

Get started quickly by following these steps or scroll down to the remaining sections for full details.

**Verify support for your configuration**

- You need a Cloud Volumes ONTAP system running in AWS or Azure.
- For AWS, you need a Connector running version 3.8.4 or later.
- For Azure, you need a Connector running version 3.9.3 or later.

Learn more about requirements.

**Enable Monitoring on your new or existing system**

- New working environments: Be sure to keep Monitoring enabled when you create the working environment (it's enabled by default).
- Existing working environments: Select a working environment and click **Start Monitoring**.

Learn more about enabling the Monitoring service.

**View performance data**

Click **Monitoring** and view performance data for your volumes.

Learn more about monitoring performance.

# Enable monitoring

Complete a few steps to start monitoring Cloud Volumes ONTAP performance.

## Requirements

Read the following requirements to make sure that you have a supported configuration.

**Supported Cloud Volumes ONTAP versions**

Any version of Cloud Volumes ONTAP in AWS or in Azure.

### Supported Connector

- For AWS, you need a Connector running version 3.8.4 or later.
- For Azure, you need a Connector running version 3.9.3 or later.

You can view a Connector's version by clicking the icon and then **Support > Connector**.

### Email address for Cloud Central

The email address for your Cloud Central user account should be your business email address. Free email domains like gmail and hotmail aren't supported when creating a Cloud Insights tenant.

### Networking for the Acquisition Unit

The Acquisition Unit uses 2-way/mutual authentication to connect to the Cloud Insights server. The client certificate must be passed to the Cloud Insights server to be authenticated. To accomplish this, the proxy must be set up to forward the http request to the Cloud Insights server without decrypting the data.

The Acquisition Unit uses the following two endpoints to communicate with Cloud Insights. If you have a firewall between the Acquisition Unit server and Cloud Insights, you need these endpoints when configuring firewall rules:

```
https://aulogin.<Cloud Insights Domain>
https://<your-tenant-ID>.<Cloud Insights Domain>
```

For example:

```
https://aulogin.c01.cloudinsights.netapp.com
https://cg0c586a-ee05-45rb-a5ac-
333b5ae7718d7.c01.cloudinsights.netapp.com
```

Contact us through the in-product chat if you need help identifying your Cloud Insights domain and tenant ID.

### Networking for the Connector

Similar to the Acquisition Unit, the Connector must have outbound connectivity to the Cloud Insights tenant. But the endpoint that the Connector contacts is slightly different. It contacts the tenant host URL using the shortened tenant ID:

```
https://<your-short-tenant-ID>.<Cloud Insights Domain>
```

For example:

```
https://abcd12345.c01.cloudinsights.netapp.com
```

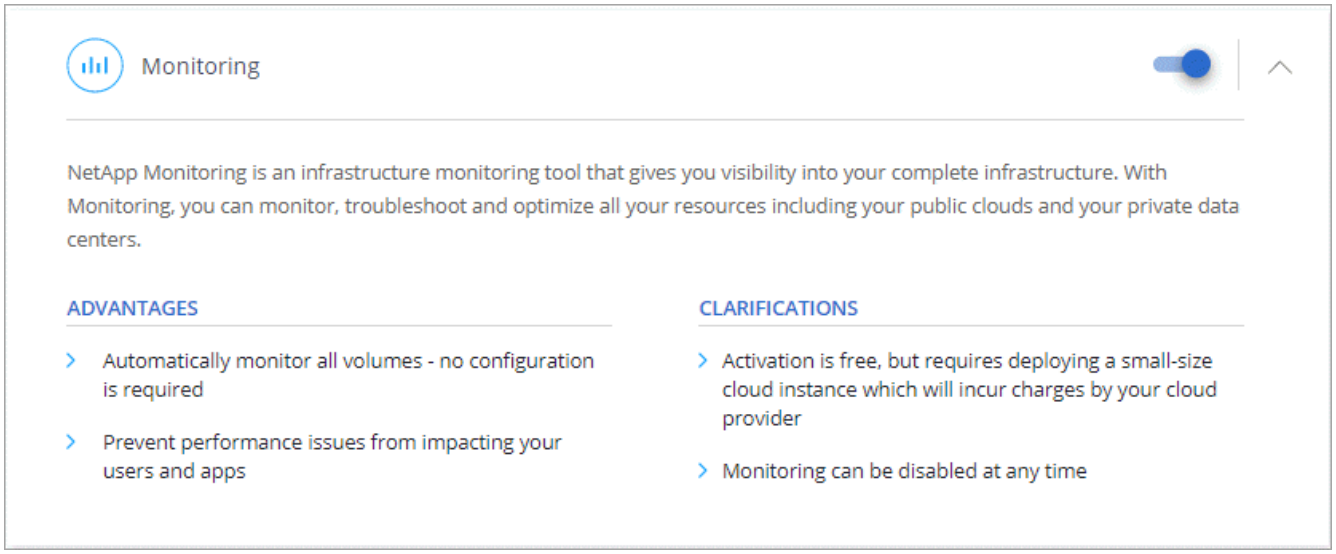
Again, you can contact us through the in-product chat if you need help identifying the tenant host URL.

## Enabling monitoring on a new system

The Monitoring service is enabled by default in the working environment wizard. Be sure to keep the option enabled.

### Steps

1. Click **Create Cloud Volumes ONTAP**.
2. Select Amazon Web Services or Microsoft Azure as the cloud provider and then choose a single node or HA system.
3. Fill out the Details & Credentials page.
4. On the Services page, leave the Monitoring service enabled and click **Continue**.

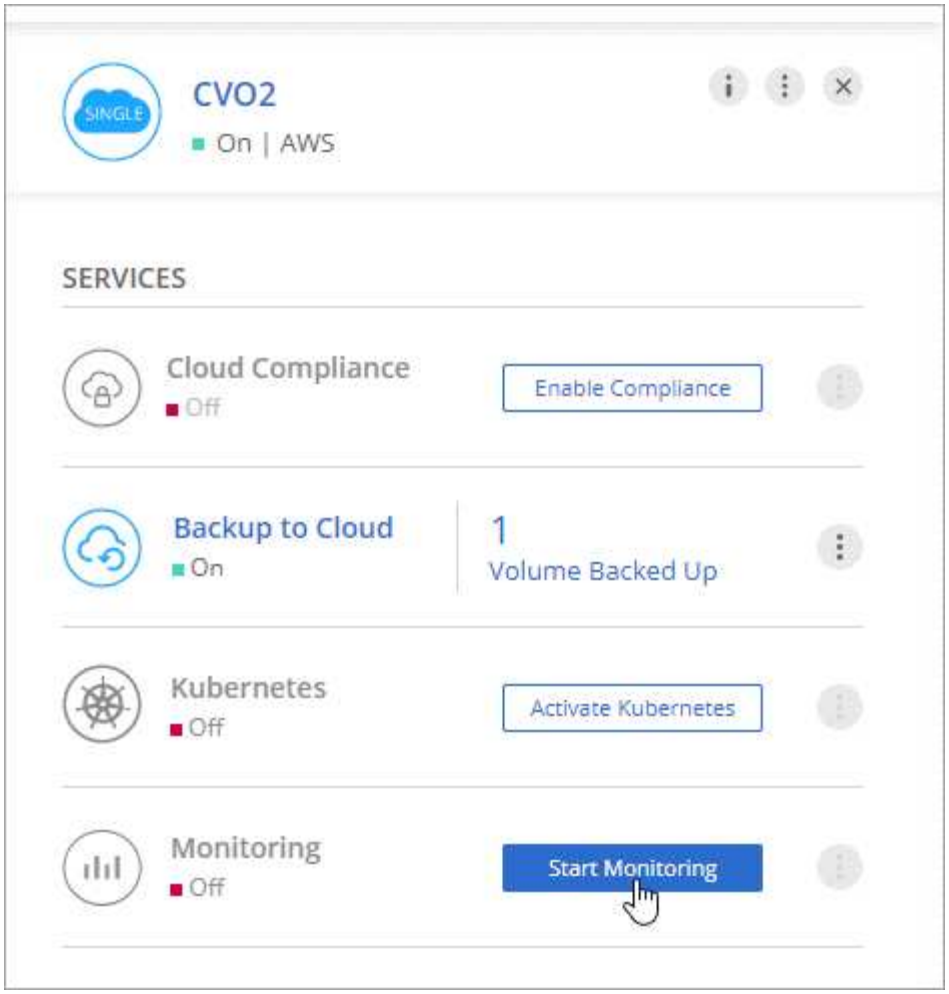



## Enabling monitoring on an existing system

Enable monitoring at any time from the working environment.

### Steps

1. At the top of Cloud Manager, click **Canvas**.
2. Select a working environment.
3. In the pane on the right, click **Start Monitoring**.


SINGLE
CVO2
On | AWS
SERVICES
Cloud Compliance
Off
Enable Compliance
Backup to Cloud
On
1
Volume Backed Up
Kubernetes
Off
Activate Kubernetes
Monitoring
Off
Start Monitoring

# Use the Monitoring service

## Monitor volume performance

Gain insights into the health and performance of your Cloud Volumes ONTAP instances and troubleshoot and optimize the performance of your cloud storage environment.

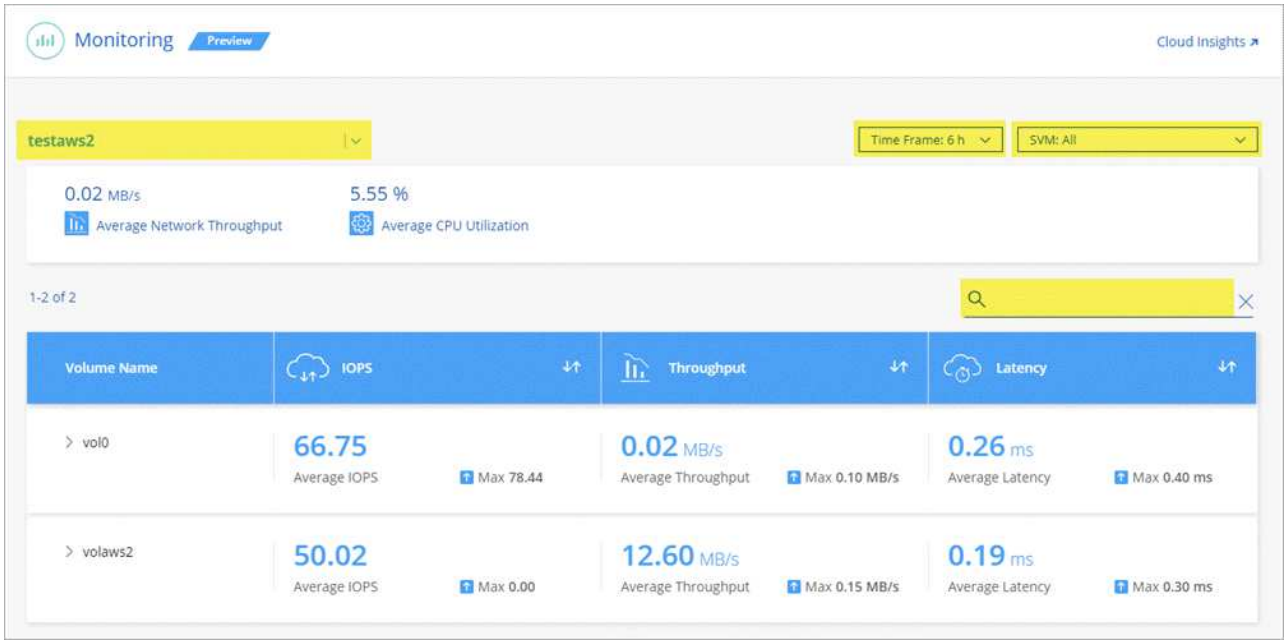
### Monitor your volumes from Cloud Manager

Monitor performance by viewing IOPS, throughput, and latency for each of your volumes.

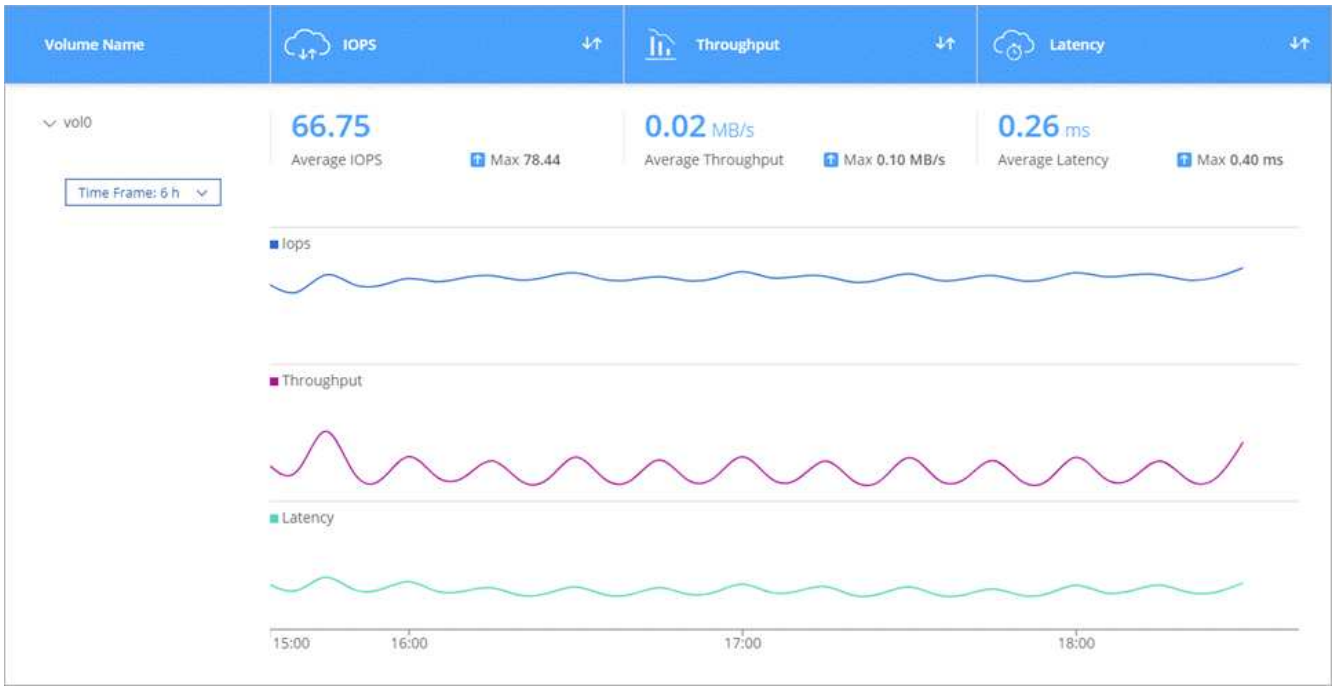
**Steps**

1. At the top of Cloud Manager, click **Monitoring**.
2. Filter the contents of the dashboard to get the information that you need.
   - Select a specific working environment.
   - Select a different timeframe.
   - Select a specific SVM.
   - Search for a specific volume.

   The following image highlights each of these options:




3. Click a volume in the table to expand the row and view a timeline for IOPS, throughput, and latency.



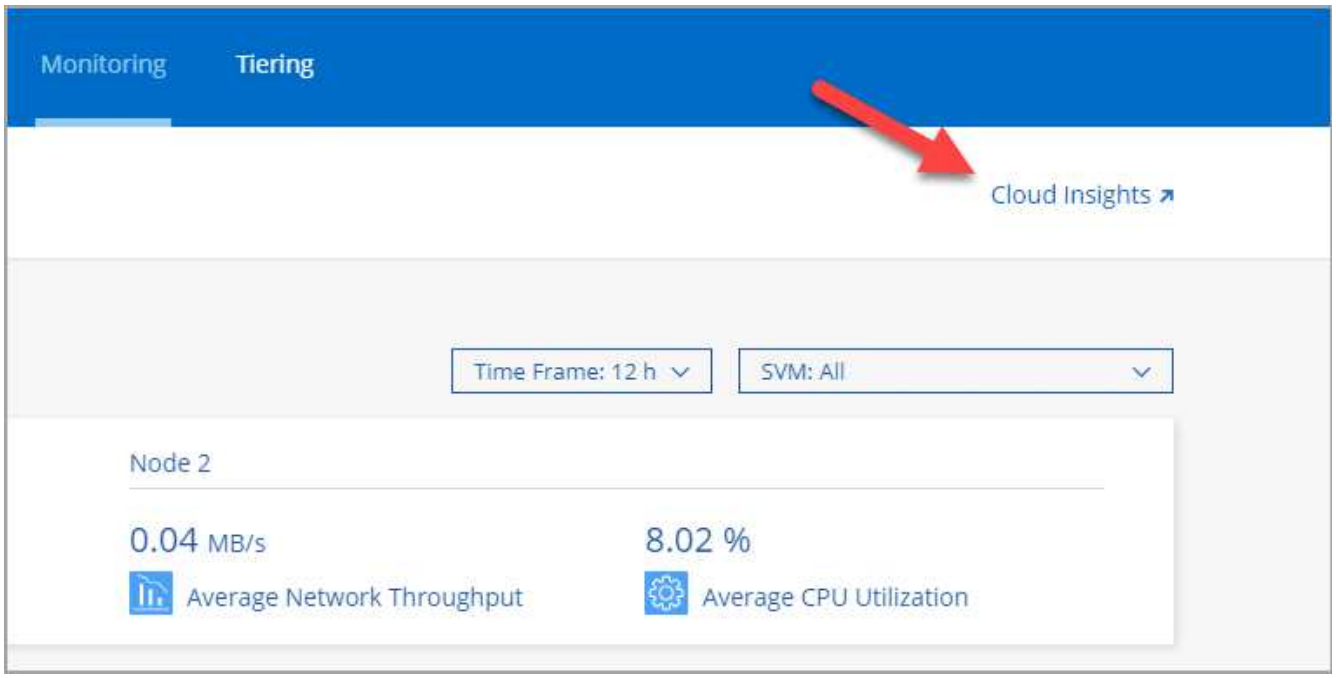

4. Use the data to identify performance issues to minimize impact on your users and apps.

## Get more information from Cloud Insights

The Monitoring tab in Cloud Manager provides basic performance data for your volumes. You can go to the Cloud Insights web interface from your browser to perform more in-depth monitoring and to configure alerts for your Cloud Volumes ONTAP systems.

**Steps**

1. At the top of Cloud Manager, click **Monitoring**.
2. Click the **Cloud Insights** link.



**Result**

Cloud Insights open in a new browser tab. If you need help, refer to the Cloud Insights documentation.

# Disable the Monitoring service

If you no longer want to monitor Cloud Volumes ONTAP, you can disable the Monitoring service at any time.

If you disable monitoring from each of your working environments, you'll need to delete the virtual machine instance yourself. The instance is named *AcquisitionUnit* with a generated hash (UUID) concatenated to it. For example: *AcquisitionUnit-FAN7FqeH*

**Steps**

1. At the top of Cloud Manager, click **Canvas**.
2. Select a working environment.
3. In the pane on the right, click the  icon and select **Deactivate Scan**.

# Knowledge and support

## Register for support

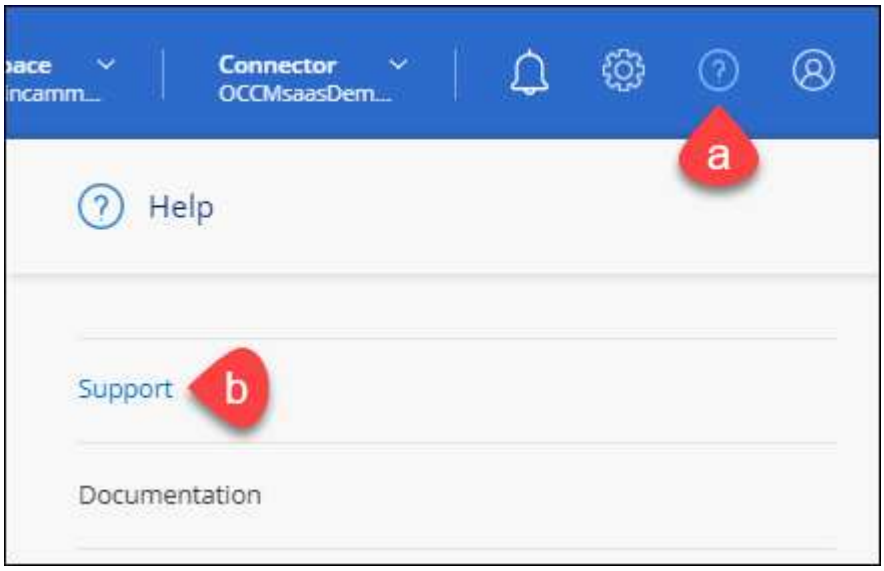
Before you can open a support case with NetApp technical support, you need to add a NetApp Support Site account to Cloud Manager and then register for support.

### Add an NSS account

The Support Dashboard enables you to add and manage all of your NetApp Support Site accounts from a single location.

**Steps**

1. If you don't have a NetApp Support Site account yet, register for one.
2. In the upper right of the Cloud Manager console, click the Help icon, and select **Support**.




3. Click **NSS Management > Add NSS Account**.
4. When you're prompted, click **Continue** to be redirected to a Microsoft login page.

   NetApp uses Microsoft Azure Active Directory as the identity provider for authentication services specific to support and licensing.

5. At the login page, provide your NetApp Support Site registered email address and password to perform the authentication process.

   This action enables Cloud Manager to use your NSS account.

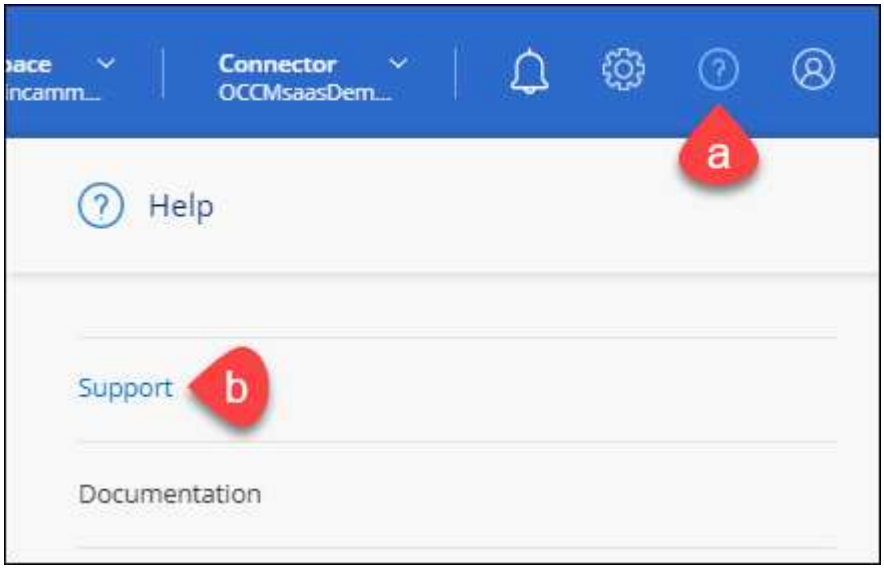
   Note the account must be a customer-level account (not a guest or temp account).

### Register your account for support

Support registration is available from Cloud Manager in the Support Dashboard.

**Steps**

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




2. In the **Resources** tab, click **Register for Support**.
3. Select the NSS credentials that you want to register and then click **Register**.

# Get help

NetApp provides support for Cloud Manager and its cloud services in a variety of ways. Extensive free self-support options are available 24x7, such as knowledgebase (KB) articles and a community forum. Your support registration includes remote technical support via web ticketing.

## Self support

These options are available for free, 24 hours a day, 7 days a week:

- Knowledge base

  Search through the Cloud Manager knowledge base to find helpful articles to troubleshoot issues.

- Communities

  Join the Cloud Manager community to follow ongoing discussions or create new ones.

- Documentation

  The Cloud Manager documentation that you're currently viewing.

- Feedback email

  We value your input. Submit feedback to help us improve Cloud Manager.

## NetApp support

In addition to the self-support options above, you can work with a NetApp Support Engineer to resolve any issues after you activate support.

**Steps**

1. In Cloud Manager, click **Help > Support**.
2. Choose one of the available options under Technical Support:
   a. Click **Call Us** to find phone numbers for NetApp technical support.
   b. Click **Open an Issue**, select one the options, and then click **Send**.

      A NetApp representative will review your case and get back to you soon.

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