



BlueXP digital wallet documentation

BlueXP digital wallet

NetApp
June 10, 2024

Table of Contents

- BlueXP digital wallet documentation 1
- Release notes 2
 - What's new 2
- Get started 5
 - Learn about the BlueXP digital wallet 5
- Use the BlueXP digital wallet 6
 - Manage licenses for Cloud Volumes ONTAP 6
 - Manage licenses for BlueXP data services 14
 - Manage PAYGO subscriptions and contracts 16
 - Manage Keystone subscriptions 18
 - Manage licenses for on-premises ONTAP clusters 21
- Knowledge and support 24
 - Register for support 24
 - Get help 28
- Legal notices 34
 - Copyright 34
 - Trademarks 34
 - Patents 34
 - Privacy policy 34
 - Open source 34

BlueXP digital wallet documentation

Release notes

What's new

Learn what's new with the BlueXP digital wallet.

5 March 2024

BlueXP disaster recovery

The BlueXP digital wallet now enables you to manage licenses for BlueXP disaster recovery. You can add licenses, update licenses, and view details about licensed capacity.

[Learn how to manage licenses for BlueXP data services](#)

30 July 2023

Usage reports enhancements

Several improvements to the Cloud Volumes ONTAP usage reports are now available:

- The TiB unit is now included in the name of columns.
- A new *node(s)* field for serial numbers is now included.
- A new *Workload Type* column is now included under the Storage VMs usage report.
- Working environment names are now included in the Storage VMs and Volume usage reports.
- The volume type *file* is now labeled *Primary (Read/Write)*.
- The volume type *secondary* is now labeled *Secondary (DP)*.

For more information about the usage reports, refer to [Download usage reports](#).

7 May 2023

Google Cloud private offers

The BlueXP digital wallet now identifies Google Cloud Marketplace subscriptions that are associated with a private offer and shows the end date and term of the subscription. This enhancement enables you to verify that you've successfully accepted the private offer and to validate its terms.

Charging usage breakdown

Now you can find out what you're being charged for when you're subscribed to capacity-based licenses. The following types of usage reports are available for download from the BlueXP digital wallet. The usage reports provide capacity details of your subscriptions and tell you how you're being charged for the resources in your Cloud Volumes ONTAP subscriptions. The downloadable reports can be easily shared with others.

- Cloud Volumes ONTAP package usage
- High-level usage
- Storage VMs usage

- Volumes usage

For more information about the usage reports, refer to [Download usage reports](#).

3 April 2023

Email notifications

Email notifications are now supported with the BlueXP digital wallet.

If you configure your notification settings, you can receive email notifications when your BYOL licenses are about to expire (a "Warning" notification) or if they have already expired (an "Error" notification).

[Learn how to set up email notifications](#)

Licensed capacity for marketplace subscriptions

When viewing capacity-based licensing for Cloud Volumes ONTAP, the BlueXP digital wallet now shows the licensed capacity that you purchased with marketplace private offers.

[Learn how to view the consumed capacity in your account.](#)

6 November 2022

Subscriptions and annual contracts

Your PAYGO subscriptions and annual contracts for BlueXP are now available to view and manage from the BlueXP digital wallet.

[Learn how to manage your subscriptions.](#)

18 September 2022

Optimized I/O and WORM capacity

The BlueXP digital wallet now shows a summary of the Optimized I/O licensing package and the provisioned WORM capacity for Cloud Volumes ONTAP systems across your account.

These details can help you better understand how you're being charged and whether you need to purchase additional capacity.

[Learn how to view the consumed capacity in your account.](#)

31 July 2022

Change charging method

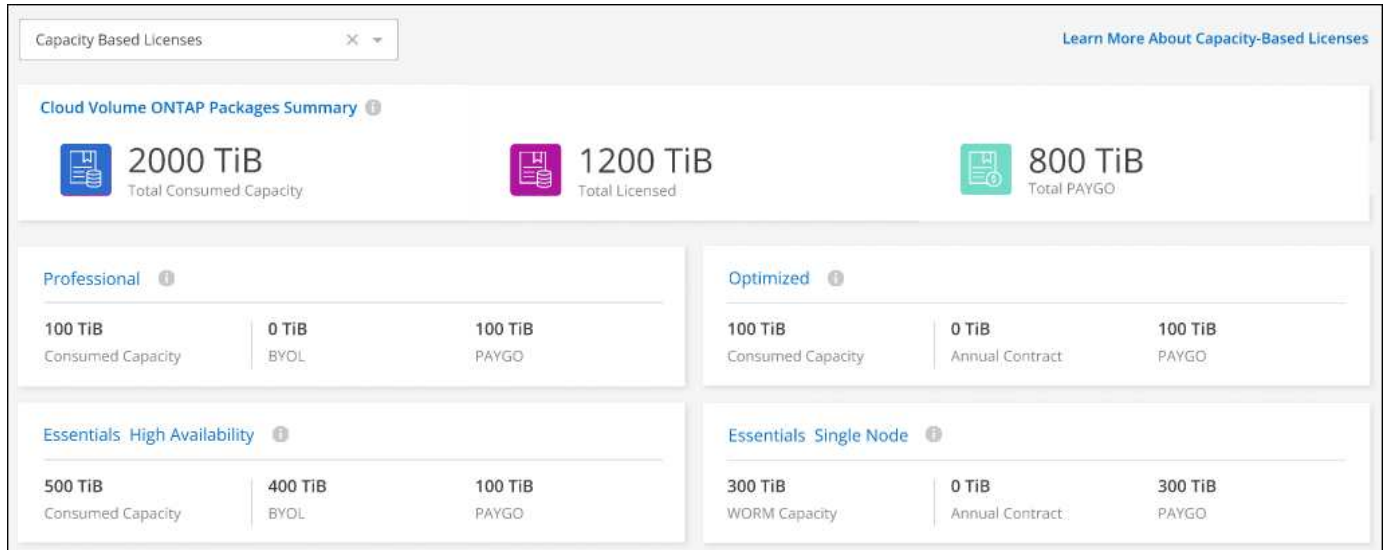
You can now change the charging method for a Cloud Volumes ONTAP system that uses capacity-based licensing. For example, if you deployed a Cloud Volumes ONTAP system with the Essentials package, you can change it to the Professional package if your business needs changed.

[Learn how to change charging methods.](#)

3 July 2022

Consumed capacity

The now shows you the total consumed capacity in your account and the consumed capacity by licensing package. This can help you understand how you're being charged and whether you need to purchase additional capacity.



27 February 2022

Licenses for on-premises ONTAP clusters

You can now view an inventory of your on-prem ONTAP clusters along with their hardware and service contracts expiration dates. Additional details about the clusters are also available.

[Learn how to manage licenses for on-prem ONTAP clusters.](#)

2 January 2022

Licensing terms update automatically

If you change the capacity or term for any of your licenses, the license terms now automatically update in the . You don't need to manually update the license yourself.

The automatic license update works with all types of Cloud Volumes ONTAP licenses and all licenses for data services.

Get started

Learn about the BlueXP digital wallet

The BlueXP digital wallet enables you to manage and monitor BlueXP licenses purchased from NetApp (BYOL), BlueXP marketplace subscriptions, and NetApp Keystone.

Features

- Manage capacity-based and node-based licenses for Cloud Volumes ONTAP
- Add and manage licenses for BlueXP data services
- Manage subscriptions for PAYGO and annual contracts associated with your BlueXP account and with Astra Control
- Manage Keystone Subscription services for use with Cloud Volumes ONTAP and on-premises ONTAP clusters, and request changes to committed capacity
- View hardware and software contract status information for on-premises ONTAP clusters

Supported services

The BlueXP digital wallet enables you to manage licenses for the following services:

- [Backup and recovery](#)
- [Classification](#)
- [Cloud Volumes ONTAP](#)
- [Disaster recovery](#) (BYOL only)
- [On-prem ONTAP clusters](#)
- [Tiering](#)

Use the BlueXP digital wallet

Manage licenses for Cloud Volumes ONTAP

Manage capacity-based licenses

Manage your capacity-based licenses from the BlueXP digital wallet to ensure that your NetApp account has enough capacity for your Cloud Volumes ONTAP systems.

Capacity-based licenses enable you to pay for Cloud Volumes ONTAP per TiB of capacity.

The *BlueXP digital wallet* enables you to manage licenses for Cloud Volumes ONTAP from a single location. You can add new licenses and update existing licenses.



While the actual usage and metering for the products and services managed in BlueXP are always calculated in GiB and TiB, the terms GB/GiB and TB/TiB are used interchangeably. This is reflected in the Cloud Marketplace listings, price quotes, listing descriptions, and in other supporting documentation

[Learn more about Cloud Volumes ONTAP licenses.](#)

How licenses are added to the BlueXP digital wallet

After you purchase a license from your NetApp sales representative, NetApp will send you an email with the serial number and additional licensing details.

In the meantime, BlueXP automatically queries NetApp's licensing service to obtain details about the licenses associated with your NetApp Support Site account. If there are no errors, BlueXP automatically adds the licenses to the digital wallet.

If BlueXP can't add the license, you'll need to manually add them to the digital wallet yourself. For example, if the Connector is installed in a location that doesn't have internet access, you'll need to add the licenses yourself. [Learn how to add purchased licenses to your account.](#)

View the consumed capacity in your account

The BlueXP digital wallet shows you the total consumed capacity in your account and the consumed capacity by licensing package. This can help you understand how you're being charged and whether you need to purchase additional capacity.

Steps

1. From the BlueXP navigation menu, select **Governance > Digital wallet**.
2. On the **Cloud Volumes ONTAP** tab, keep **Capacity Based Licenses** selected.
3. View the packages summary, which shows you consumed capacity, total precommitted capacity, and total PAYGO capacity.
 - *Total consumed capacity* is the total provisioned capacity of all Cloud Volumes ONTAP systems in your NetApp account. The charging is based on each volume's provisioned size, regardless of local, used, stored, or effective space within the volume.
 - *Total precommitted capacity* is the total licensed capacity (BYOL or Marketplace Contract) that you purchased from NetApp.

- *Total PAYGO* is the total provisioned capacity using cloud marketplace subscriptions. Charging via PAYGO is used only if the consumed capacity is higher than the licensed capacity or if there is no BYOL license available in the BlueXP digital wallet.

Here's an example of a Cloud Volumes ONTAP packages summary in BlueXP digital wallet:

[A screenshot that shows a Cloud Volumes ONTAP packages summary including total consumed capacity]

4. Under the summary, view the consumed capacity for each of your licensing packages.

- *Consumed capacity* shows you the capacity of the volumes for that package. For more details about a specific package, hover your mouse over the tooltip.

To better understand the capacities that display for the Essentials package, you should be familiar with how charging works. [Learn about charging for the Essentials package.](#)

- *Precommitted capacity* is the licensed capacity (BYOL or Marketplace Contract) that you purchased from NetApp.
 - *BYOL* shows you the licensed capacity that you purchased from NetApp for this package type.
 - *Marketplace Contracts* shows the licensed capacity that you purchased with a marketplace contract for this package type.
- *PAYGO* shows you the consumed capacity by license consumption model.

Here's an example for an account that has several licensing packages:

[A screenshot that shows consumed capacity]

Download usage reports

Account administrators can download four usage reports from the digital wallet in BlueXP. These usage reports provide capacity details of your subscriptions and tell you how you're being charged for the resources in your Cloud Volumes ONTAP subscriptions. The downloadable reports capture data at a point in time and can be easily shared with others.

[Screenshot shows the digital wallet Cloud Volumes ONTAP capacity based licenses page and highlights the usage report button.]

The following reports are available for download. Capacity values shown are in TiB.

- **High-level usage:** This report shows you exactly what's in the "Cloud Volumes ONTAP Packages Summary" card in the digital wallet. It includes the following information:
 - Total consumed capacity
 - Total precommitted capacity
 - Total BYOL capacity
 - Total Marketplace contracts capacity
 - Total PAYGO capacity
- **Cloud Volumes ONTAP package usage:** This report shows you exactly what's on the package cards in the digital wallet. It includes the following information for each package except the Optimized I/O package:
 - Total consumed capacity

- Total precommitted capacity
- Total BYOL capacity
- Total Marketplace contracts capacity
- Total PAYGO capacity
- **Storage VMs usage:** This report shows how charged capacity is broken down across Cloud Volumes ONTAP systems and storage virtual machines (SVMs). This information is not available on any screen in the digital wallet. It includes the following information:
 - Working environment ID and name (appears as the UUID)
 - Cloud
 - NetApp account ID
 - Working environment configuration
 - SVM name
 - Provisioned capacity
 - Charged capacity roundup
 - Marketplace billing term
 - Cloud Volumes ONTAP package or feature
 - Charging SaaS Marketplace subscription name
 - Charging SaaS Marketplace subscription ID
 - Workload type
- **Volumes usage:** This report shows how charged capacity is broken down by volumes in a working environment. This information is not available on any screen in the digital wallet. It includes the following information:
 - Working environment ID and name (appears as the UUID)
 - SVN name
 - Volume ID
 - Volume type
 - Volume provisioned capacity



FlexClone volumes aren't included in this report because these types of volumes don't incur charges.

Steps

1. From the BlueXP navigation menu, select **Governance > Digital wallet**.
2. On the **Cloud Volumes ONTAP** tab, keep **Capacity Based Licenses** selected and click **Usage report**.

The usage report downloads.

3. Open the downloaded file to access the reports.

Add purchased licenses to your account

If you don't see your purchased licenses in the BlueXP digital wallet, you'll need to add the licenses to BlueXP so that the capacity is available for Cloud Volumes ONTAP.

What you'll need

- You need to provide BlueXP the serial number of the license or the license file.
- If you want to enter the serial number, you first need to [add your NetApp Support Site account to BlueXP](#). This is the NetApp Support Site account that's authorized to access the serial number.

Steps

1. From the BlueXP navigation menu, select **Governance > Digital wallet**.
2. On the **Cloud Volumes ONTAP** tab, keep **Capacity Based Licenses** selected and click **Add License**.
3. Enter the serial number for your capacity-based license or upload the license file.

If you entered a serial number, you also need to select the NetApp Support Site account that's authorized to access the serial number.

4. Click **Add License**.

Update a capacity-based license

If you purchased additional capacity or extended the term of your license, BlueXP automatically updates the license in the digital wallet. There's nothing that you need to do.

However, if you deployed BlueXP in a location that doesn't have internet access, then you'll need to manually update the license in BlueXP.

What you'll need

The license file (or *files* if you have an HA pair).



For more information on how to obtain a license file, see [Obtain a system license file](#).

Steps

1. From the BlueXP navigation menu, select **Governance > Digital wallet**.
2. On the **Cloud Volumes ONTAP** tab, click the action menu next to the license and select **Update License**.
3. Upload the license file.
4. Click **Upload License**.

Change charging methods

Capacity-based licensing is available in the form of a *package*. When you create a Cloud Volumes ONTAP working environment, you can choose from several licensing packages based on your business needs. If your needs change after you create the working environment, you can change the package at any time. For example, you might change from the Essentials package to the Professional package.

[Learn more about capacity-based licensing packages.](#)

About this task

- Changing the charging method doesn't affect whether you're charged through a license purchased from NetApp (BYOL) or from your cloud provider's marketplace (pay as you go).

BlueXP always attempts to charge against a license first. If a license isn't available, it charges against a marketplace subscription. No "conversion" is required for BYOL to marketplace subscription or vice versa.

- If you have a private offer or contract from your cloud provider's marketplace, changing to a charging method that's not included in your contract will result in charging against BYOL (if you purchased a license from NetApp) or PAYGO.

Steps

1. From the BlueXP navigation menu, select **Governance > Digital wallet**.
2. On the **Cloud Volumes ONTAP** tab, click **Change Charging Method**.

[A screenshot of the Cloud Volumes ONTAP page in the BlueXP digital wallet where the Change Charging Method button is just above the table.]

3. Select a working environment, choose the new charging method, and then confirm your understanding that changing the package type will affect service charges.

[A screenshot of the Change Charging Method dialog box where you choose a new charging method for a Cloud Volumes ONTAP working environment.]

4. Click **Change Charging Method**.

Result

BlueXP changes the charging method for the Cloud Volumes ONTAP system.

You might also notice that the BlueXP digital wallet refreshes the consumed capacity for each package type to account for the change that you just made.

Remove a capacity-based license

If a capacity-based license expired and is no longer in use, then you can remove it at any time.

Steps

1. From the BlueXP navigation menu, select **Governance > Digital wallet**.
2. On the **Cloud Volumes ONTAP** tab, click the action menu next to the license and select **Remove License**.
3. Click **Remove** to confirm.

Manage node-based licenses

Manage node-based licenses in the BlueXP digital wallet to ensure that each Cloud Volumes ONTAP system has a valid license with the required capacity.

Node-based licenses are the previous generation licensing model (and not available for new customers):

- BYOL licenses purchased from NetApp
- Hourly pay-as-you-go (PAYGO) subscriptions from your cloud provider's marketplace

The *BlueXP digital wallet* enables you to manage licenses for Cloud Volumes ONTAP from a single location. You can add new licenses and update existing licenses.

[Learn more about Cloud Volumes ONTAP licenses.](#)

Manage PAYGO licenses

The BlueXP digital wallet page enables you to view details about each of your PAYGO Cloud Volumes ONTAP systems, including the serial number and PAYGO license type.

Steps

1. From the BlueXP navigation menu, select **Governance > Digital wallet**.
2. On the **Cloud Volumes ONTAP** tab, select **Node Based Licenses** from the drop-down.
3. Click **PAYGO**.
4. View details in the table about each of your PAYGO licenses.

[A screenshot that shows a table in the BlueXP digital wallet page with three paygo licenses. Each row shows the name, type of system, serial number, package, and a link to manage the license.]

5. If needed, click **Manage PAYGO License** to change the PAYGO license or to change the instance type.

Manage BYOL licenses

Manage licenses that you purchased directly from NetApp by adding and removing system licenses and extra capacity licenses.

Add unassigned licenses

Add a node-based license to the BlueXP digital wallet so that you can select the license when you create a new Cloud Volumes ONTAP system. The digital wallet identifies these licenses as *unassigned*.

Steps

1. From the BlueXP navigation menu, select **Governance > Digital wallet**.
2. On the **Cloud Volumes ONTAP** tab, select **Node Based Licenses** from the drop-down.
3. Click **Unassigned**.
4. Click **Add Unassigned Licenses**.
5. Enter the serial number of the license or upload the license file.

If you don't have the license file yet, refer to the section below.

6. Click **Add License**.

Result

BlueXP adds the license to the digital wallet. The license will be identified as unassigned until you associate it with a new Cloud Volumes ONTAP system. After that happens, the license moves to the **BYOL** tab in the digital wallet.

Exchange unassigned node-based licenses

If you have an unassigned node-based license for Cloud Volumes ONTAP that you haven't used, you can exchange the license by converting it to a BlueXP backup and recovery license, a BlueXP classification license, or a BlueXP tiering license.

Exchanging the license revokes the Cloud Volumes ONTAP license and creates a dollar-equivalent license for the service:

- Licensing for a Cloud Volumes ONTAP HA pair is converted to a 51 TiB data service license
- Licensing for a Cloud Volumes ONTAP single node is converted to a 32 TiB data service license

The converted license has the same expiry date as the Cloud Volumes ONTAP license.

Steps

1. From the BlueXP navigation menu, select **Governance > Digital wallet**.
2. On the **Cloud Volumes ONTAP** tab, select **Node Based Licenses** from the drop-down.
3. Click **Unassigned**.
4. Click **Exchange License**.

[A screenshot of the Exchange License option that appears on the Unassigned license page.]

5. Select the service that you'd like to exchange the license with.
6. If you're prompted, select an additional license for the HA pair.
7. Read the legal consent and click **Agree**.

Result

BlueXP converts the unassigned license to the service that you selected. You can view the new license in the **Data Services Licenses** tab.

Obtain a system license file

In most cases, BlueXP can automatically obtain your license file using your NetApp Support Site account. But if it can't, then you'll need to manually upload the license file. If you don't have the license file, you can obtain it from netapp.com.

Steps

1. Go to the [NetApp License File Generator](#) and log in using your NetApp Support Site credentials.
2. Enter your password, choose your product, enter the serial number, confirm that you have read and accepted the privacy policy, and then click **Submit**.

Example

[Screen shot: Shows an example of the NetApp License Generator web page with the available product lines.]

3. Choose whether you want to receive the serialnumber.NLF JSON file through email or direct download.

Update a system license

When you renew a BYOL subscription by contacting a NetApp representative, BlueXP automatically obtains the new license from NetApp and installs it on the Cloud Volumes ONTAP system.

If BlueXP can't access the license file over the secure internet connection, you can obtain the file yourself and then manually upload the file to BlueXP.

Steps

1. From the BlueXP navigation menu, select **Governance > Digital wallet**.
2. On the **Cloud Volumes ONTAP** tab, select **Node Based Licenses** from the drop-down.

3. In the **BYOL** tab, expand the details for a Cloud Volumes ONTAP system.
4. Click the action menu next to the system license and select **Update License**.
5. Upload the license file (or files if you have an HA pair).
6. Click **Update License**.

Result

BlueXP updates the license on the Cloud Volumes ONTAP system.

Manage extra capacity licenses

You can purchase extra capacity licenses for a Cloud Volumes ONTAP BYOL system to allocate more than the 368 TiB of capacity that's provided with a BYOL system license. For example, you might purchase one extra license capacity to allocate up to 736 TiB of capacity to Cloud Volumes ONTAP. Or you could purchase three extra capacity licenses to get up to 1.4 PiB.

The number of licenses that you can purchase for a single node system or HA pair is unlimited.

Add capacity licenses

Purchase an extra capacity license by contacting us through the chat icon in the lower-right of BlueXP. After you purchase the license, you can apply it to a Cloud Volumes ONTAP system.

Steps

1. From the BlueXP navigation menu, select **Governance > Digital wallet**.
2. On the **Cloud Volumes ONTAP** tab, select **Node Based Licenses** from the drop-down.
3. In the **BYOL** tab, expand the details for a Cloud Volumes ONTAP system.
4. Click **Add Capacity License**.
5. Enter the serial number or upload the license file (or files if you have an HA pair).
6. Click **Add Capacity License**.

Update capacity licenses

If you extended the term of an extra capacity license, you'll need to update the license in BlueXP.

Steps

1. From the BlueXP navigation menu, select **Governance > Digital wallet**.
2. On the **Cloud Volumes ONTAP** tab, select **Node Based Licenses** from the drop-down.
3. In the **BYOL** tab, expand the details for a Cloud Volumes ONTAP system.
4. Click the action menu next to the capacity license and select **Update License**.
5. Upload the license file (or files if you have an HA pair).
6. Click **Update License**.

Remove capacity licenses

If an extra capacity license expired and is no longer in use, then you can remove it at any time.

Steps

1. From the BlueXP navigation menu, select **Governance > Digital wallet**.
2. On the **Cloud Volumes ONTAP** tab, select **Node Based Licenses** from the drop-down.
3. In the **BYOL** tab, expand the details for a Cloud Volumes ONTAP system.
4. Click the action menu next to the capacity license and select **Remove License**.
5. Click **Remove**.

Convert an Eval license to a BYOL

An evaluation license is good for 30 days. You can apply a new BYOL license on top of the evaluation license for an in-place upgrade.

When you convert an Eval license to a BYOL, BlueXP restarts the Cloud Volumes ONTAP system.

- For a single-node system, the restart results in I/O interruption during the reboot process.
- For an HA pair, the restart initiates takeover and giveback to continue serving I/O to clients.

Steps

1. From the BlueXP navigation menu, select **Governance > Digital wallet**.
2. On the **Cloud Volumes ONTAP** tab, select **Node Based Licenses** from the drop-down.
3. Click **Eval**.
4. In the table, click **Convert to BYOL License** for a Cloud Volumes ONTAP system.
5. Enter the serial number or upload the license file.
6. Click **Convert License**.

Result

BlueXP starts the conversion process. Cloud Volumes ONTAP automatically restarts as part of this process. When it's back up, the licensing information will reflect the new license.

Change between PAYGO and BYOL

Converting a system from PAYGO by-node licensing to BYOL by-node licensing (and vice versa) isn't supported. If you want to switch between a pay-as-you-go subscription and a BYOL subscription, then you need to deploy a new system and replicate data from the existing system to the new system.

Steps

1. Create a new Cloud Volumes ONTAP working environment.
2. Set up a one-time data replication between the systems for each volume that you need to replicate.

[Learn how to replicate data between systems](#)

3. Terminate the Cloud Volumes ONTAP system that you no longer need by deleting the original working environment.

[Learn how to delete a Cloud Volumes ONTAP working environment.](#)

Manage licenses for BlueXP data services

The BlueXP digital wallet enables you to manage licenses that you purchased directly

from NetApp (BYOL) for use with BlueXP backup and recovery, classification, disaster recovery, and tiering. You can view used license capacity, how much free capacity you have left, and you'll see notifications if you reached the capacity limit or the expiration date.

The instructions on this page provide information that applies to each service. For more specific information about the licensing for these services, refer to the following pages:

- [Set up licensing for BlueXP backup and recovery](#)
- [Set up licensing for BlueXP classification](#)
- [Set up licensing for BlueXP disaster recovery](#)
- [Set up licensing for BlueXP tiering](#)

Obtain a license file

After you purchase a license, you can activate the license in BlueXP either by entering the serial number and NSS account, or by uploading the NetApp license file (NLF). The steps below show how to get the NLF license file if you plan to use that method.

Steps

1. Sign in to the [NetApp Support Site](#) and select **Systems > Software Licenses**.
2. Enter the serial number for your license.

[A screenshot that shows a table of licenses after searching by serial number.]

3. In the **License Key** column, select **Get NetApp License File**.
4. Enter your BlueXP Account ID (this is called a Tenant ID on the support site) and select **Submit** to download the license file.

[A screenshot that shows the get license dialog box where you enter your tenant ID and then select Submit to download the license file.]

You can find your BlueXP Account ID by selecting the **Account** drop-down from the top of BlueXP, and then selecting **Manage Account** next to your account. Your Account ID is in the Overview tab.

Add a license

After you purchase a license for a BlueXP data service, you need to add the license to BlueXP.

Steps

1. From the BlueXP menu, select **Governance > Digital wallet** and then select the **Data Services Licenses** tab.
2. Select **Add License**.
3. In the *Add License* dialog, enter the license information and select **Add License**:
 - If you have the serial number and know your NSS account, select the **Enter Serial Number** option and enter that information.

If your NetApp Support Site account isn't available from the drop-down list, [add the NSS account to BlueXP](#)

- If you have the license file (required when using BlueXP in private mode), select the **Upload License File** option and follow the prompts to attach the file.

[A screenshot that shows the page to add the BYOL license.]

Result

BlueXP adds the license.

Update a license

If your licensed term is nearing the expiration date, or if your licensed capacity is reaching the limit, you'll be notified in the BlueXP digital wallet. You can update your license before it expires so that there is no interruption in your ability to use the BlueXP data service.

[A screenshot that shows an expiring license in the Digital Wallet page.]

Steps

1. Select the chat icon in the lower-right of BlueXP, or contact support, to request an extension to your term or additional capacity to your license for the particular serial number.

After you pay for the license and it is registered with the NetApp Support Site, BlueXP automatically updates the license in the digital wallet and the Data Services Licenses page will reflect the change in 5 to 10 minutes.

2. If BlueXP can't automatically update the license (for example, when using BlueXP in private mode), then you'll need to manually upload the license file.
 - a. You can [obtain the license file from the NetApp Support Site](#).
 - b. On the *Data Services Licenses* tab, select [More icon] for the service serial number you are updating, and select **Update License**.

[A screenshot of selecting the Update License button for a particular service.]

- c. In the *Update License* page, upload the license file and select **Update License**.

Result

BlueXP updates the license.

Manage PAYGO subscriptions and contracts

When you subscribe to BlueXP from a cloud provider's marketplace, you're redirected to the BlueXP website where you need to save your subscription and associate it with specific accounts. After you've subscribed, each subscription is available to manage from the BlueXP digital wallet.

- [Learn how to subscribe to BlueXP \(standard mode\)](#)
- [Learn how to subscribe to BlueXP \(restricted mode\)](#)

View your subscriptions

The BlueXP digital wallet provides details about each PAYGO subscription and annual contract associated with

your BlueXP account and with Astra Control (Astra Control uses BlueXP's charging service).

For Google Cloud, you can also identify marketplace subscriptions that are associated with a private offer, which enables you to verify that you've successfully accepted the offer.

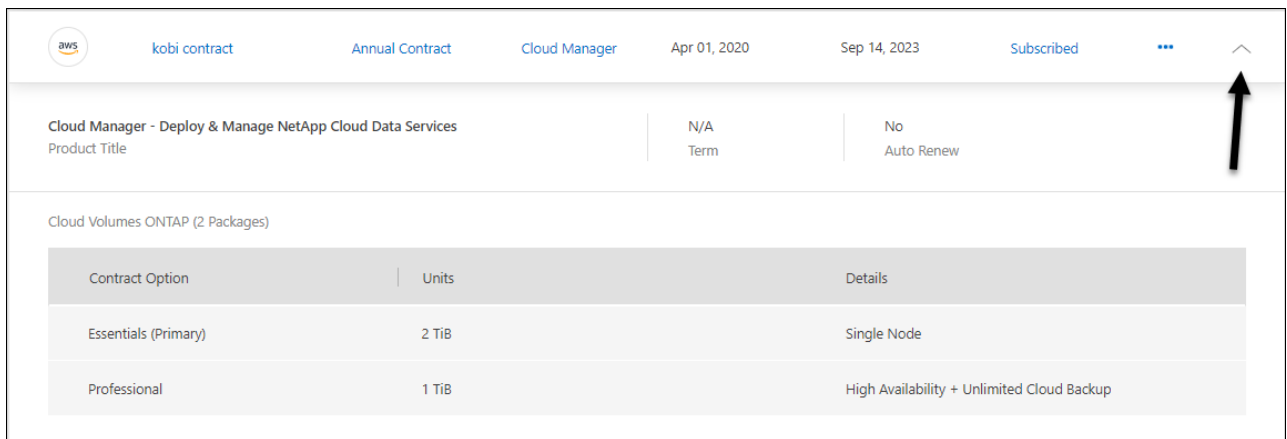
Steps

1. From the BlueXP navigation menu, select **Governance > Digital wallet**.
2. Select **Subscriptions**.


You'll only see the subscriptions that are associated with the account that you're currently viewing.

3. As you view the information about your subscriptions, you can interact with the details in the table as follows:

- Expand a row to view more details.



Contract Option	Units	Details
Essentials (Primary)	2 TiB	Single Node
Professional	1 TiB	High Availability + Unlimited Cloud Backup

- Select  to choose which columns appear in the table.

Note that the Term and Auto Renew columns don't appear by default. The Auto Renew column displays renewal information for Azure contracts only.

Note the following about what you see in the table:

Start date

The start date is when you successfully associated the subscription with your account and charging started.

N/A

If you see N/A in the table, the information isn't available from the cloud provider's API at this time.

Term

If your Google Cloud subscription is associated with a private offer and that private offer was modified after it was created and accepted, then the term shows N/A. In this scenario, the API response that we receive from the Google Cloud Marketplace doesn't include term-related information.

Contracts

- If you expand the details for a contract, the BlueXP digital wallet shows what's available for your current plan: the contract options and units (capacity or number of nodes).
- The BlueXP digital wallet identifies the end date and whether the contract will renew soon, end

soon, or whether it has already ended.

- If you have an AWS contract and you changed any of the contract's options after the start date, be sure to validate your contract options from the AWS Marketplace.
- If you have a Google Cloud private offer, contract options aren't available.

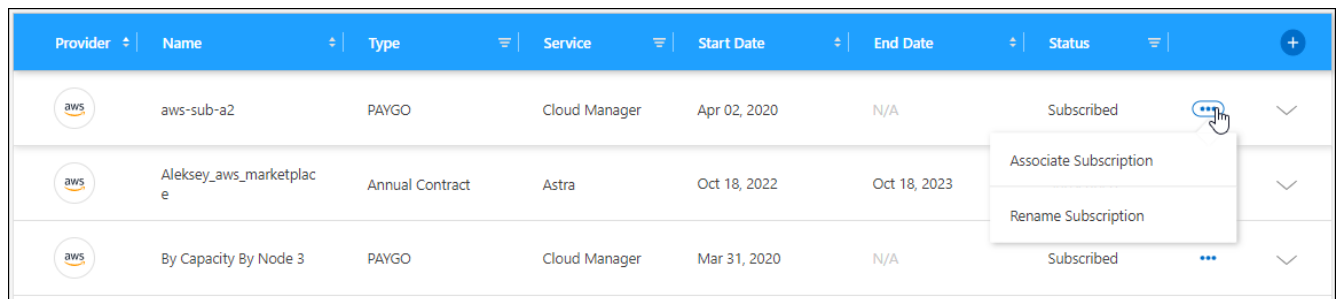
Manage your subscriptions

You can manage your subscriptions from the BlueXP digital wallet by renaming a subscription and choosing the accounts that are associated with the subscription.

For example, let's say that you have two accounts and each is billed through separate subscriptions. You might disassociate a subscription from one of the accounts so the users in that account don't accidentally choose the wrong subscription when creating a Cloud Volumes ONTAP working environment.

Steps

1. From the BlueXP navigation menu, select **Governance > Digital wallet**.
2. Select **Subscriptions**.
3. Select the action menu in the row that corresponds to the subscription that you want to manage.



Provider	Name	Type	Service	Start Date	End Date	Status	
aws	aws-sub-a2	PAYGO	Cloud Manager	Apr 02, 2020	N/A	Subscribed	⋮
aws	Aleksey_aws_marketplace	Annual Contract	Astra	Oct 18, 2022	Oct 18, 2023		⋮
aws	By Capacity By Node 3	PAYGO	Cloud Manager	Mar 31, 2020	N/A	Subscribed	⋮

4. Choose to rename the subscription or to manage the BlueXP accounts that are associated with the subscription.

Manage Keystone subscriptions

Manage your Keystone subscriptions from the BlueXP digital wallet by enabling subscriptions for use with Cloud Volumes ONTAP and by requesting changes to the committed capacity for your subscription's service levels. Requesting additional capacity for a service level provides more storage for on-premises ONTAP clusters or for Cloud Volumes ONTAP systems.

NetApp Keystone is a flexible pay-as-you-grow subscription-based service that delivers a hybrid cloud experience for customers who prefer OpEx to CapEx or leasing.

[Learn more about Keystone](#)

Authorize your account

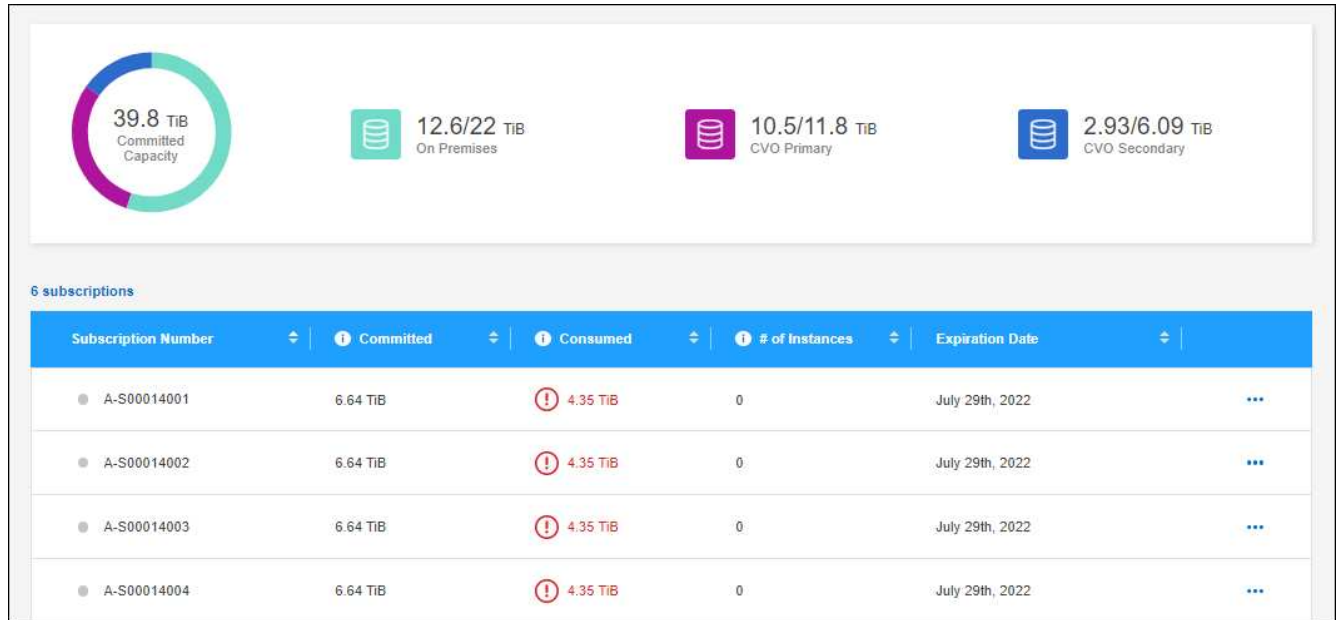
Before you can use and manage Keystone subscriptions in BlueXP, you need to contact NetApp to authorize your BlueXP user account with your Keystone subscriptions.

Steps

1. From the BlueXP navigation menu, select **Governance > Digital wallet**.
2. Select **Keystone**.
3. If you see the **Welcome to NetApp Keystone** page, send an email to the address listed on the page.

A NetApp representative will process your request by authorizing your user account to access the subscriptions.

4. Come back to the **Keystone Subscription** to view your subscriptions.

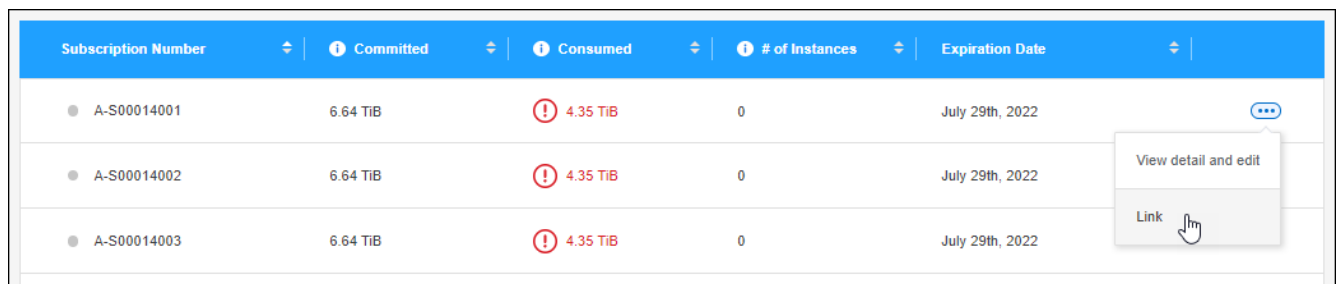


Link a subscription

After NetApp authorizes your account, you can link Keystone subscriptions for use with Cloud Volumes ONTAP. This action enables users to select the subscription as the charging method for new Cloud Volumes ONTAP systems.

Steps

1. From the BlueXP navigation menu, select **Governance > Digital wallet**.
2. Select **Keystone**.
3. For the subscription that you want to link, click **...** and select **Link**.



Result

The subscription is now linked to your BlueXP account and available to select when creating a Cloud Volumes

ONTAP working environment.



Request more or less committed capacity

If you want to change the committed capacity for your subscription's service levels, you can send a request to NetApp directly from BlueXP. Requesting additional capacity for a service level provides more storage for on-premises clusters or for Cloud Volumes ONTAP systems.

Steps

1. From the BlueXP navigation menu, select **Governance > Digital wallet**.
2. Select **Keystone**.
3. For the subscription that you want adjust the capacity, click **...** and select **View detail and edit**.
4. Enter the requested committed capacity for one or more subscriptions.

Subscription Modification for A-S00014001

Service Level	Current Committed Capacity	Current Consumed Capacity	Requested Committed Capacity
Extreme	0.977 TiB	0.293 TiB	<input type="text" value="Enter amount"/> TiB
Premium	0.977 TiB	0.488 TiB	<input type="text" value="Enter amount"/> TiB
Performance	0 TiB	0 TiB	<input type="text" value="Enter amount"/> TiB
Standard	0.732 TiB	0.439 TiB	<input type="text" value="Enter amount"/> TiB
Value	0.977 TiB	 0.879 TiB	<input type="text" value="Enter amount"/> TiB
Data Tiering	0 TiB	0 TiB	<input type="text" value="Enter amount"/> TiB
CVO Primary	1.96 TiB	 1.76 TiB	<input type="text" value="3"/> TiB
CVO Secondary	1.02 TiB	0.488 TiB	<input type="text" value="Enter amount"/> TiB

Additional Information

Is there anything else we should know about your request?
Please be as descriptive as possible.

5. Scroll down, enter any additional details for the request, and then click **Submit**.

Result

Your request creates a ticket in NetApp's system for processing.

Monitor usage

The BlueXP digital advisor dashboard enables you to monitor Keystone subscription usage and to generate

reports.

[Learn more about monitoring subscription usage](#)

Unlink a subscription

If you no longer want to use a Keystone Subscription with BlueXP, you can unlink the subscription. Note that you can only unlink a subscription that isn't attached to an existing Cloud Volumes ONTAP subscription.

Steps

1. From the BlueXP navigation menu, select **Governance > Digital wallet**.
2. Select **Keystone**.
3. For the subscription that you want to unlink, click **...** and select **Unlink**.

Result

The subscription is unlinked from your BlueXP account and no longer available to select when creating a Cloud Volumes ONTAP working environment.

Manage licenses for on-premises ONTAP clusters

The BlueXP digital wallet enables you to view contract details for each of your on-prem ONTAP clusters. If you haven't discovered a cluster in BlueXP yet, you can also discover them from the digital wallet.

Before you begin

The BlueXP digital wallet displays details about the on-premises ONTAP clusters that you discovered as a working environment or that are associated with a NetApp Support Site account that you added to BlueXP.

- [Learn how to discover an on-premises ONTAP cluster](#)
- [Learn how to manage NSS credentials associated with your BlueXP account](#)

View cluster information and contract details

View the status of the hardware and software contracts for your on-premises ONTAP clusters so that you can renew them before they expire.

Steps

1. From the BlueXP navigation menu, select **Governance > Digital wallet**.
2. Select **On-Premises ONTAP**.

The Software Contract and Hardware Contract expiration dates appear on the line for each cluster.

If you are prompted to enter your NetApp Support Site (NSS) account credentials first, select **Add NSS Account**. After you add the account, the clusters associated with that NSS account appear.

3. If the contract is close to the expiration date, or has expired, you can select the chat icon in the lower-right of the BlueXP console to request an extension to the contract.
4. To view more details, select **▼** to expand the cluster information.

12 On-Premises					
Host name	Status	Capacity	Software Contract	HW Contract	
OnPremisesHostName#1	Discovered	10.25 TB Used 50.25 TB Allocated	January 1, 2025	January 1, 2025	
Cluster Name		OnPremises_Cluster_#1	Support Offering		Standard
Cluster Management IP Address		196.10.10.196			
UUID		OnPremises_UUID_#1			

Discover clusters

If you haven't discovered an on-premises ONTAP cluster as a working environment, you can do that from the BlueXP digital wallet. Once discovered, a cluster is available as a working environment in BlueXP so that you can manage it.

Before you begin

You should understand your discovery and management options (discovery using a Connector or direct discovery without a Connector) as well as discovery requirements.

[Learn about discovery options and requirements.](#)

Steps

1. From the BlueXP navigation menu, select **Governance > Digital wallet**.
2. Select **On-Premises ONTAP**.

Digital Wallet					
On-Premises		Contract Notification Status			
12 Total	6 Discovered By Cloud Manager	6 Undiscovered	4 About to Expire Contracts	8 Expired Contracts	
12 On-Premises					
Host name	Status	Capacity	Software Contract	HW Contract	
OnPremisesHostName#1	Discovered	10.25 TB Used 50.25 TB Allocated	January 1, 2025	January 1, 2025	
OnPremisesHostName#2	Discovered	10.25 TB Used 50.25 TB Allocated	January 1, 2022	January 1, 2025	
OnPremisesHostName#4	Discovered	10.25 TB Used 50.25 TB Allocated	Expired	January 1, 2025	
OnPremisesHostName#8	Undiscovered	10.25 TB Used 50.25 TB Allocated	January 1, 2022	January 1, 2025	Discover

Your ONTAP clusters display with a status of whether they have been discovered in BlueXP.

If you are prompted to enter your NetApp Support Site (NSS) account credentials first, select **Add NSS Account**. After you add the account, the clusters associated with that NSS account appear.

3. Select **Discover** for the cluster that you want to manage through BlueXP.

4. On the *Discover ONTAP Cluster* page, enter the password for the admin user account and select **Discover**.

Note that the cluster management IP address is populated based on information from your NetApp Support Site account.

Result

BlueXP discovers the cluster and adds it as a working environment in the Canvas. The status for the cluster turns to **Discovered** in the *On-Premises ONTAP* page. Note that the working environment name is the name of the cluster.



You can now start managing the cluster.

- [Learn how to manage clusters discovered with a Connector](#)
- [Learn how to manage clusters discovered directly](#)

Knowledge and support

Register for support

Support registration is required to receive technical support specific to BlueXP and its storage solutions and services. Support registration is also required to enable key workflows for Cloud Volumes ONTAP systems.

Registering for support does not enable NetApp support for a cloud provider file service. For technical support related to a cloud provider file service, its infrastructure, or any solution using the service, refer to "Getting help" in the BlueXP documentation for that product.

- [Amazon FSx for ONTAP](#)
- [Azure NetApp Files](#)
- [Cloud Volumes Service for Google Cloud](#)

Support registration overview

There are two forms of registration to activate support entitlement:

- Registering your BlueXP account ID support subscription (your 20 digit 960xxxxxxxx serial number located on the Support Resources page in BlueXP).

This serves as your single support subscription ID for any service within BlueXP. Each BlueXP account-level support subscription must be registered.

- Registering the Cloud Volumes ONTAP serial numbers associated with a subscription in your cloud provider's marketplace (these are 20 digit 909201xxxxxxxx serial numbers).

These serial numbers are commonly referred to as *PAYGO serial numbers* and get generated by BlueXP at the time of Cloud Volumes ONTAP deployment.

Registering both types of serial numbers enables capabilities like opening support tickets and automatic case generation. Registration is completed by adding NetApp Support Site (NSS) accounts to BlueXP as described below.

Register your BlueXP account for NetApp support

To register for support and activate support entitlement, one user in your BlueXP account must associate a NetApp Support Site account with their BlueXP login. How you register for NetApp support depends on whether you already have a NetApp Support Site (NSS) account.

Existing customer with an NSS account

If you're a NetApp customer with an NSS account, you simply need to register for support through BlueXP.

Steps

1. In the upper right of the BlueXP console, select the Settings icon, and select **Credentials**.
2. Select **User Credentials**.

3. Select **Add NSS credentials** and follow the NetApp Support Site (NSS) Authentication prompt.
4. To confirm that the registration process was successful, select the Help icon, and select **Support**.

The **Resources** page should show that your account is registered for support.



Note that other BlueXP users will not see this same support registration status if they have not associated a NetApp Support Site account with their BlueXP login. However, that doesn't mean that your BlueXP account is not registered for support. As long as one user in the account has followed these steps, then your account has been registered.

Existing customer but no NSS account

If you're an existing NetApp customer with existing licenses and serial numbers but *no* NSS account, you need to create an NSS account and associate it with your BlueXP login.

Steps

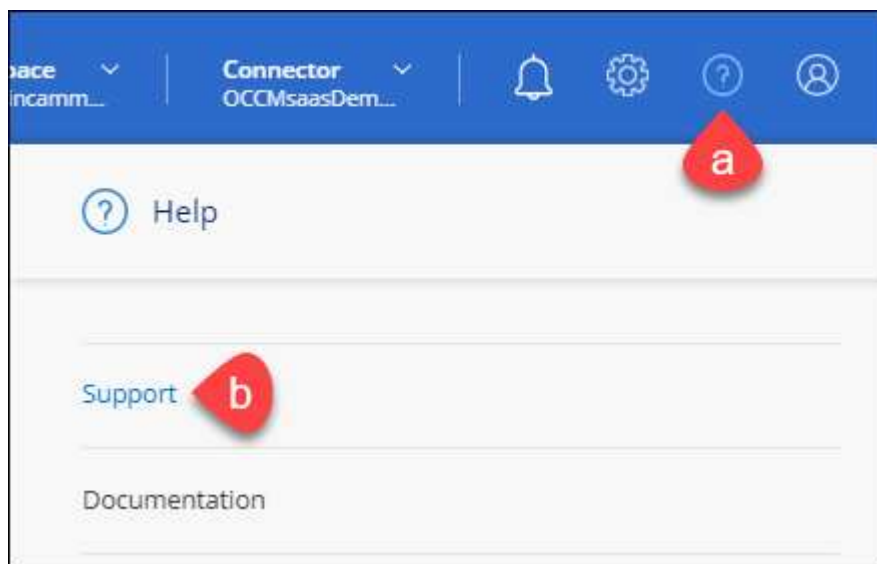
1. Create a NetApp Support Site account by completing the [NetApp Support Site User Registration form](#)
 - a. Be sure to select the appropriate User Level, which is typically **NetApp Customer/End User**.
 - b. Be sure to copy the BlueXP account serial number (960xxxx) used above for the serial number field. This will speed up the account processing.
2. Associate your new NSS account with your BlueXP login by completing the steps under [Existing customer with an NSS account](#).

Brand new to NetApp

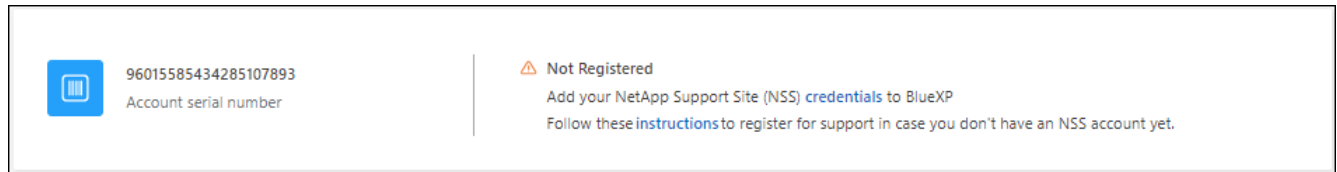
If you are brand new to NetApp and you don't have an NSS account, follow each step below.

Steps

1. In the upper right of the BlueXP console, select the Help icon, and select **Support**.



2. Locate your account ID serial number from the Support Registration page.



3. Navigate to [NetApp's support registration site](#) and select **I am not a registered NetApp Customer**.
4. Fill out the mandatory fields (those with red asterisks).
5. In the **Product Line** field, select **Cloud Manager** and then select your applicable billing provider.
6. Copy your account serial number from step 2 above, complete the security check, and then confirm that you read NetApp's Global Data Privacy Policy.

An email is immediately sent to the mailbox provided to finalize this secure transaction. Be sure to check your spam folders if the validation email doesn't arrive in few minutes.

7. Confirm the action from within the email.

Confirming submits your request to NetApp and recommends that you create a NetApp Support Site account.

8. Create a NetApp Support Site account by completing the [NetApp Support Site User Registration form](#)
 - a. Be sure to select the appropriate User Level, which is typically **NetApp Customer/End User**.
 - b. Be sure to copy the account serial number (960xxxx) used above for the serial number field. This will speed up the account processing.

After you finish

NetApp should reach out to you during this process. This is a one-time onboarding exercise for new users.

Once you have your NetApp Support Site account, associate the account with your BlueXP login by completing the steps under [Existing customer with an NSS account](#).

Associate NSS credentials for Cloud Volumes ONTAP support

Associating NetApp Support Site credentials with your BlueXP account is required to enable the following key workflows for Cloud Volumes ONTAP:

- Registering pay-as-you-go Cloud Volumes ONTAP systems for support

Providing your NSS account is required to activate support for your system and to gain access to NetApp technical support resources.

- Deploying Cloud Volumes ONTAP when you bring your own license (BYOL)

Providing your NSS account is required so that BlueXP can upload your license key and to enable the subscription for the term that you purchased. This includes automatic updates for term renewals.

- Upgrading Cloud Volumes ONTAP software to the latest release

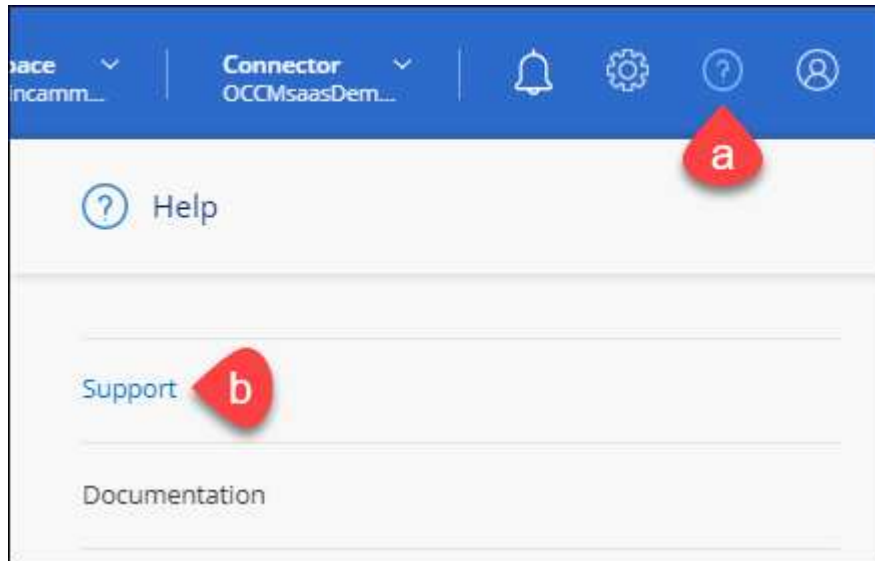
Associating NSS credentials with your BlueXP account is different than the NSS account that is associated with a BlueXP user login.

These NSS credentials are associated with your specific BlueXP account ID. Users who belong to the BlueXP account can access these credentials from **Support > NSS Management**.

- If you have a customer-level account, you can add one or more NSS accounts.
- If you have a partner or reseller account, you can add one or more NSS accounts, but they can't be added alongside customer-level accounts.

Steps

1. In the upper right of the BlueXP console, select the Help icon, and select **Support**.



2. Select **NSS Management > Add NSS Account**.
3. When you're prompted, select **Continue** to be redirected to a Microsoft login page.

NetApp uses Microsoft Entra ID as the identity provider for authentication services specific to support and licensing.

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

These actions enable BlueXP to use your NSS account for things like license downloads, software upgrade verification, and future support registrations.

Note the following:

- The NSS account must be a customer-level account (not a guest or temp account). You can have multiple customer-level NSS accounts.
- There can be only one NSS account if that account is a partner-level account. If you try to add customer-level NSS accounts and a partner-level account exists, you'll get the following error message:

"The NSS customer type is not allowed for this account as there are already NSS Users of different type."

The same is true if you have pre-existing customer-level NSS accounts and try to add a partner-level account.

- Upon successful login, NetApp will store the NSS user name.

This is a system-generated ID that maps to your email. On the **NSS Management** page, you can display your email from the **☰** menu.

- If you ever need to refresh your login credential tokens, there is also an **Update Credentials** option in the **☰** menu.

Using this option prompts you to log in again. Note that the token for these accounts expire after 90 days. A notification will be posted to alert you of this.

Get help

NetApp provides support for BlueXP 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.

Get support for a cloud provider file service

For technical support related to a cloud provider file service, its infrastructure, or any solution using the service, refer to "Getting help" in the BlueXP documentation for that product.

- [Amazon FSx for ONTAP](#)
- [Azure NetApp Files](#)
- [Cloud Volumes Service for Google Cloud](#)

To receive technical support specific to BlueXP and its storage solutions and services, use the support options described below.

Use self-support options

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

- **Documentation**

The BlueXP documentation that you're currently viewing.

- [Knowledge base](#)

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

- [Communities](#)

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

Create a case with NetApp support

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

Before you get started

- To use the **Create a Case** capability, you must first associate your NetApp Support Site credentials with your BlueXP login. [Learn how to manage credentials associated with your BlueXP login.](#)
- If you're opening a case for an ONTAP system that has a serial number, then your NSS account must be associated with the serial number for that system.

Steps

1. In BlueXP, select **Help > Support**.
2. On the **Resources** page, choose one of the available options under Technical Support:
 - a. Select **Call Us** if you'd like to speak with someone on the phone. You'll be directed to a page on netapp.com that lists the phone numbers that you can call.
 - b. Select **Create a Case** to open a ticket with a NetApp Support specialist:
 - **Service:** Select the service that the issue is associated with. For example, BlueXP when specific to a technical support issue with workflows or functionality within the service.
 - **Working Environment:** If applicable to storage, select **Cloud Volumes ONTAP** or **On-Prem** and then the associated working environment.


The list of working environments are within scope of the BlueXP account, workspace, and Connector you have selected in the top banner of the service.

- **Case Priority:** Choose the priority for the case, which can be Low, Medium, High, or Critical.

To learn more details about these priorities, hover your mouse over the information icon next to the field name.


- **Issue Description:** Provide a detailed description of your problem, including any applicable error messages or troubleshooting steps that you performed.
- **Additional Email Addresses:** Enter additional email addresses if you'd like to make someone else aware of this issue.
- **Attachment (Optional):** Upload up to five attachments, one at a time.

Attachments are limited to 25 MB per file. The following file extensions are supported: txt, log, pdf, jpg/jpeg, rtf, doc/docx, xls/xlsx, and csv.

ntapitdemo 
NetApp Support Site Account

Service Working Environment


Select Select

Case Priority 


Low - General guidance



Issue Description

Provide detailed description of problem, applicable error messages and troubleshooting steps taken.

Additional Email Addresses (Optional) 

Type here

Attachment (Optional) Upload 

No files selected  

After you finish

A pop-up will appear with your support case number. A NetApp Support specialist will review your case and get back to you soon.

For a history of your support cases, you can select **Settings > Timeline** and look for actions named "create support case." A button to the far right lets you expand the action to see details.

It's possible that you might encounter the following error message when trying to create a case:

"You are not authorized to Create a Case against the selected service"

This error could mean that the NSS account and the company of record it's associated with is not the same company of record for the BlueXP account serial number (ie. 960xxxx) or the working environment serial number. You can seek assistance using one of the following options:

- Use the in-product chat
- Submit a non-technical case at <https://mysupport.netapp.com/site/help>

Manage your support cases (Preview)

You can view and manage active and resolved support cases directly from BlueXP. You can manage the cases associated with your NSS account and with your company.

Case management is available as a Preview. We plan to refine this experience and add enhancements in upcoming releases. Please send us feedback by using the in-product chat.

Note the following:

- The case management dashboard at the top of the page offers two views:
 - The view on the left shows the total cases opened in the past 3 months by the user NSS account you provided.
 - The view on the right shows the total cases opened in the past 3 months at your company level based on your user NSS account.

The results in the table reflect the cases related to the view that you selected.

- You can add or remove columns of interest and you can filter the contents of columns like Priority and Status. Other columns provide just sorting capabilities.

View the steps below for more details.

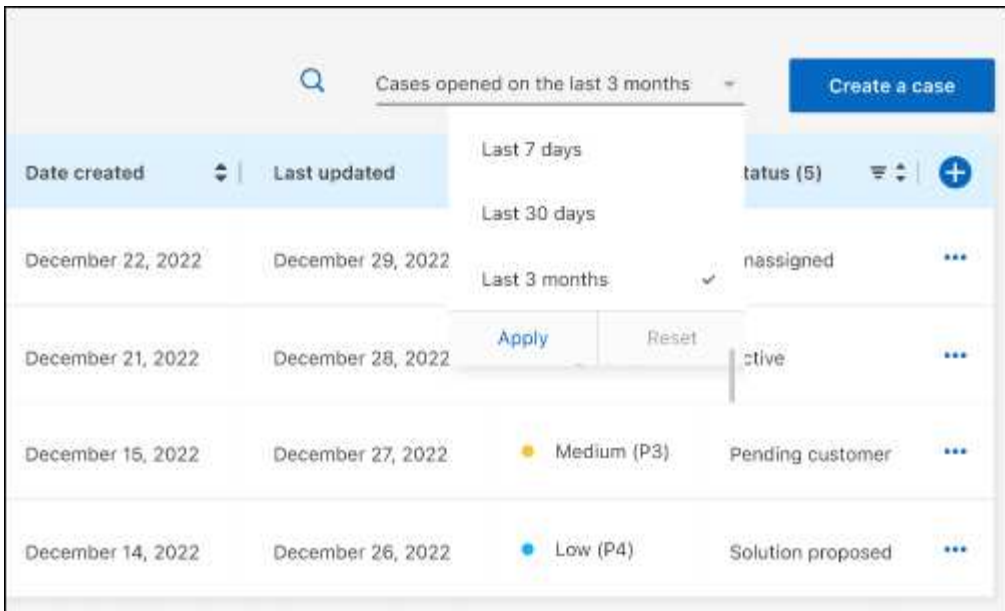
- At a per-case level, we offer the ability to update case notes or close a case that is not already in Closed or Pending Closed status.

Steps

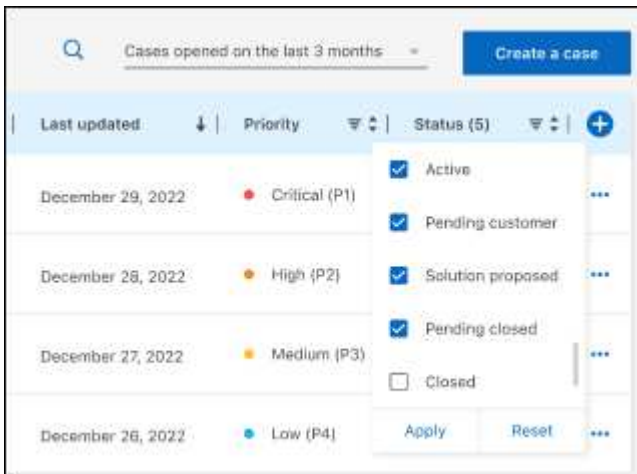
1. In BlueXP, select **Help > Support**.
2. Select **Case Management** and if you're prompted, add your NSS account to BlueXP.


The **Case management** page shows open cases related to the NSS account that is associated with your BlueXP user account. This is the same NSS account that appears at the top of the **NSS management** page.

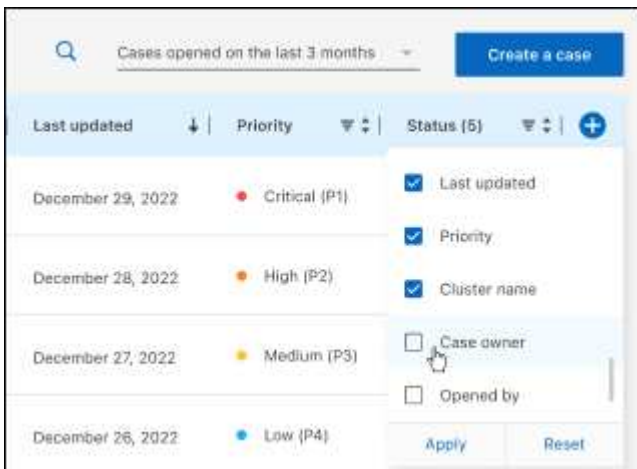
3. Optionally modify the information that displays in the table:
 - Under **Organization's cases**, select **View** to view all cases associated with your company.
 - Modify the date range by choosing an exact date range or by choosing a different time frame.



- Filter the contents of the columns.



- Change the columns that appear in the table by selecting  and then choosing the columns that you'd like to display.

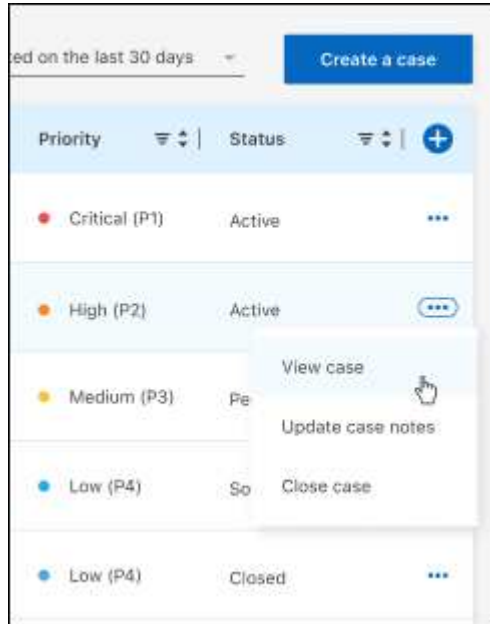


4. Manage an existing case by selecting **...** and selecting one of the available options:

- **View case:** View full details about a specific case.
- **Update case notes:** Provide additional details about your problem or select **Upload files** to attach up to a maximum of five files.

Attachments are limited to 25 MB per file. The following file extensions are supported: txt, log, pdf, jpg/jpeg, rtf, doc/docx, xls/xlsx, and csv.

- **Close case:** Provide details about why you're closing the case and select **Close case**.



Legal notices

Legal notices provide access to copyright statements, trademarks, patents, and more.

Copyright

<https://www.netapp.com/company/legal/copyright/>

Trademarks

NETAPP, the NETAPP logo, and the marks listed on the NetApp Trademarks page are trademarks of NetApp, Inc. Other company and product names may be trademarks of their respective owners.

<https://www.netapp.com/company/legal/trademarks/>

Patents

A current list of NetApp owned patents can be found at:

<https://www.netapp.com/pdf.html?item=/media/11887-patentspage.pdf>

Privacy policy

<https://www.netapp.com/company/legal/privacy-policy/>

Open source

Notice files provide information about third-party copyright and licenses used in NetApp software.

[Notice for BlueXP](#)

Copyright information

Copyright © 2024 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.

LIMITED RIGHTS LEGEND: Use, duplication, or disclosure by the government is subject to restrictions as set forth in subparagraph (b)(3) of the Rights in Technical Data -Noncommercial Items at DFARS 252.227-7013 (FEB 2014) and FAR 52.227-19 (DEC 2007).

Data contained herein pertains to a commercial product and/or commercial service (as defined in FAR 2.101) and is proprietary to NetApp, Inc. All NetApp technical data and computer software provided under this Agreement is commercial in nature and developed solely at private expense. The U.S. Government has a non-exclusive, non-transferrable, nonsublicensable, worldwide, limited irrevocable license to use the Data only in connection with and in support of the U.S. Government contract under which the Data was delivered. Except as provided herein, the Data may not be used, disclosed, reproduced, modified, performed, or displayed without the prior written approval of NetApp, Inc. United States Government license rights for the Department of Defense are limited to those rights identified in DFARS clause 252.227-7015(b) (FEB 2014).

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.