



## Get started

### On-premises ONTAP clusters

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# Get started

## Learn about on-premises ONTAP cluster management in BlueXP

BlueXP can discover the ONTAP clusters running on AFF/FAS controllers and ONTAP Select. Adding on-premises ONTAP systems to BlueXP enables you to manage all of your storage and data assets from a single interface.

### Features

- Manage NFS and CIFS volumes
- Perform advanced management using ONTAP System Manager
- Get health and performance observability with BlueXP analysis and control
- Use BlueXP services to replicate, back up, scan, classify, and tier data
- View hardware and software contract status information in the BlueXP digital wallet

### Cost

A cost might be associated, but it depends on the following:

- Whether you deploy a Connector to discover and manage your clusters.

You can install the Connector in the cloud or on your premises.

- Whether you use BlueXP services such as backup and recovery, tiering, and classification.

## Discover on-premises ONTAP clusters

Discover on-premises ONTAP clusters from BlueXP so that you can start managing volumes and performing advanced management using ONTAP System Manager, which is available from BlueXP.

### Step 1: Review discovery and management options

BlueXP provides two discovery and management options for on-prem ONTAP clusters:

#### Discovery and management using a Connector

This option enables you to manage clusters running ONTAP 8.3 and later by using the following features:

- The Standard view, which provides basic volume operations
- The Advanced view, which provides management through System Manager (supported with ONTAP 9.10.0 and later)
- Integration with BlueXP services that provide data replication, back up and recovery, data classification, and data tiering

This option requires a Connector, which you can install in a cloud provider or on your premises.

## Direct discovery and management

This option enables you to manage clusters running ONTAP 9.12.1 and later by using System Manager. No other management options are available. You can't use the Standard view and you can't enable BlueXP services.

This option doesn't require a Connector.

When you access System Manager on an on-premises ONTAP cluster running 9.12.1 or later with connectivity to the BlueXP service, you'll be prompted to manage the cluster directly from BlueXP. If you follow this prompt, it discovers the cluster in BlueXP using the direct discovery option.

Once discovered, your clusters are available as a working environment on the BlueXP Canvas.

If you decide to use the other discovery option at a later time, you will need to discover the on-prem cluster as a separate working environment on the Canvas. You then have the option to remove the other working environment.

## Step 2: Set up your environment

Before you discover your on-prem ONTAP clusters, ensure that you've met the following requirements.

### General requirements

- You should have gotten started with BlueXP, which includes logging in and setting up an account. [Learn how to get started with BlueXP](#)
- You need the cluster management IP address and the password for the admin user account.
- BlueXP discovers ONTAP clusters using HTTPS. If you use custom firewall policies, the ONTAP cluster must allow inbound HTTPS access through port 443.

The default "mgmt" firewall policy allows inbound HTTPS access from all IP addresses. If you modified this default policy, or if you created your own firewall policy, you must associate the HTTPS protocol with that policy and enable access from the Connector host.

### Requirements for Connector discovery

- The on-premises cluster must be running ONTAP 8.3 or later.
- A Connector must be installed in a cloud provider or on your premises.

If you want to tier cold data to the cloud, then you should review requirements for the Connector based on where you plan to tier cold data.

- [Learn about Connectors](#)
- [Learn how to switch between multiple Connectors](#)
- [Learn about BlueXP tiering](#)
- The Connector host must allow outbound connections through port 443 (HTTPS) and the ONTAP cluster must allow inbound HTTP access through port 443.

If the Connector is in the cloud, all outbound communication is allowed by the predefined security group.

### Requirements for direct discovery

- The on-premises cluster must be running ONTAP 9.12.1 or later.
- The cluster must have inbound and outbound connectivity to the BlueXP service:

<https://cloudmanager.cloud.netapp.com/ontap-service/check-service-connection>

- The computer that you're using to access the BlueXP console must have a network connection to the on-prem ONTAP cluster, similar to how you would provide connections to other resources in your private network.

### Step 3: Discover a cluster

Discover your on-prem ONTAP clusters from the Canvas in one of two ways:

- From **Canvas > My Working Environments** by manually adding details about the on-premises ONTAP cluster.
- From **Canvas > My estate** by selecting a cluster that BlueXP pre-discovered based on the ONTAP clusters that are associated with the email address for your BlueXP login.

When you start the discovery process, BlueXP discovers a cluster as follows:

- If you have an active Connector that has a connection to an ONTAP cluster, then BlueXP will use that Connector to discover and manage the cluster.
- If you don't have a Connector or if your Connector doesn't have a connection to the ONTAP cluster, then BlueXP will automatically use the direct discovery and management option.

## Discover a cluster manually

Discover an on-premises ONTAP cluster in BlueXP by entering the cluster management IP address and the password for the admin user account.

### Steps

1. From the navigation menu, select **Storage > Canvas**.
2. On the Canvas page, select **Add Working Environment > On-Premises**.
3. Next to On-Premises ONTAP, select **Discover**.
4. On the *Discover* page, enter the cluster management IP address, and the password for the admin user account.
5. If you're discovering the cluster directly (without a Connector), you can select **Save the credentials**.

If you select this option, you won't need to re-enter the credentials each time that you open the working environment. These credentials are only associated with your BlueXP user login. They aren't saved for use by anyone else in the BlueXP account.

6. Select **Discover**.

If you don't have a Connector and the IP address isn't reachable from BlueXP, then you'll be prompted to create a Connector.

### Result

BlueXP discovers the cluster and adds it as a working environment on the Canvas. You can now start managing the cluster.

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

## Add a pre-discovered cluster

BlueXP automatically discovers information about the ONTAP clusters that are associated with the email address for your BlueXP login and displays them on the **My estate** page as undiscovered clusters. You can view the list of undiscovered clusters and add them one at a time.

### About this task

Note the following about the on-premises ONTAP clusters that appear on the My estate page:

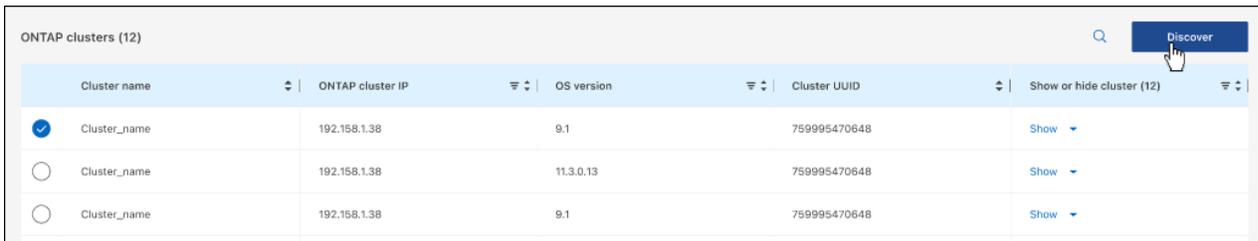
- The email address that you use to log in to BlueXP must be associated with a registered, full-level NetApp Support Site (NSS) account.
  - If you log in to BlueXP with your NSS account and navigate to the My estate page, BlueXP uses that NSS account to find the clusters that are associated with the account.
  - If you log in to BlueXP with a cloud account or a federated connection and you navigate to the My estate page, BlueXP prompts you to verify your email. If that email address is associated with an NSS account, BlueXP uses that information to find the clusters that are associated with the account.
- BlueXP only shows the ONTAP clusters that have successfully sent AutoSupport messages to NetApp.
- To refresh the inventory list, exit the My estate page, wait 5 minutes, and then go back to it.

## Steps

1. From the navigation menu, select **Storage > Canvas**.
2. Select **My estate**.
3. On the My estate page, select **Discover** for on-premises ONTAP.



4. Select a cluster and then select **Discover**.

A screenshot of a table titled "ONTAP clusters (12)". The table has columns for "Cluster name", "ONTAP cluster IP", "OS version", "Cluster UUID", and "Show or hide cluster (12)". There are three rows of data. The first row has a blue checkmark in the "Cluster name" column. In the top right corner of the table area, there is a blue button with the text "Discover" and a hand cursor icon pointing at it.

Cluster name	ONTAP cluster IP	OS version	Cluster UUID	Show or hide cluster (12)
<input checked="" type="radio"/> Cluster_name	192.158.1.38	9.1	759995470648	Show
<input type="radio"/> Cluster_name	192.158.1.38	11.3.0.13	759995470648	Show
<input type="radio"/> Cluster_name	192.158.1.38	9.1	759995470648	Show

5. Enter the password for the admin user account.
6. Select **Discover**.

If you don't have a Connector and the IP address isn't reachable from BlueXP, then you'll be prompted to create a Connector.

## Result

BlueXP discovers the cluster and adds it as a working environment on the Canvas. You can now start managing the cluster.

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

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