BlueXP operational resiliency

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BlueXP operational resiliency

Release notes

What’s new

Learn what’s new in BlueXP operational resiliency.

02 April 2023

Using the new BlueXP operational resiliency service and its automated IT operational risk remediation suggestions, you can implement suggested remediations before an outage or failure occurs.

Operational resiliency is a service that helps you analyze alerts and events to maintain the health, uptime, and performance of services and solutions.

Learn more about BlueXP operational resiliency.

Get started

Learn about BlueXP operational resiliency

BlueXP operational resiliency is a service thats helps you analyze alerts and events to maintain the health, uptime, and performance of services and solutions. Using the operational resiliency service and its automated IT operational risk remediation suggestions, you can implement suggested remediations before an outage or failure occurs.

This BlueXP service implements remediations to NetApp ONTAP clusters based on BlueXP digital advisor (Active IQ) guidance. The service detects security vulnerabilities, such as firmware and software configuration issues.

Benefits of using BlueXP operational resiliency

BlueXP operational resiliency offers the following benefits:

- Automated procedures for corrections on the cluster
- Summary view in the Dashboard showing the state of each risk remediation
- Log that lets you track the different actions taken

What you can do with BlueXP operational resiliency

Using the operational resiliency service, you can accomplish the following goals:

- Use automated workflows that help you detect risks impacting your storage environment and take actions to mitigate them.
- Review and act on operational recommendations, such as issues related to security vulnerabilities.

Cost

NetApp doesn’t charge you for using the service.

Supported environments

BlueXP operational resiliency analyzes on-premises NetApp ONTAP clusters.

BlueXP operational resiliency prerequisites

Get started by verifying the readiness of your operational environment, login, network access, and web browser.

To use the operational resiliency service, you should ensure that your environment meets all requirements.

- Your environment must meet all BlueXP requirements including a login and network access from a web browser.

  Refer to the BlueXP Quick start and BlueXP networking information.

- The service requires that all clusters are monitored by BlueXP digital advisor (Active IQ), which requires AutoSupport enabled on the asset. Refer to BlueXP digital advisor documentation.
- You need to have access credentials to the clusters.
- For automatic remediation, a BlueXP Connector is required. It is helpful if the BlueXP Connector is in place and enabled and the ONTAP system is discovered before you initiate the remediation using BlueXP operational resiliency. If the Connector is not in place, the operational resiliency service walks you through those processes. If instead you remediate using an Ansible file, the BlueXP Connector is not required.

Quick start for BlueXP operational resiliency

Here's an overview of the steps needed to get started with BlueXP operational resiliency. The links within each step take you to a page that provides more details.

Review prerequisites

Ensure your environment meets these requirements.

Set up the operational resiliency service

Complete steps to set up the service.

What's next?

After you finish setting up the service, here's what you might do next.

- Review and remediate security risk issues.
- Remediate automatically.
- Remediate with an Ansible playbook.
- Determine the risk remediation status.

Set up BlueXP operational resiliency

The first step on the path to using BlueXP operational resiliency is making data available from the monitoring tools in your environment.

Setting up the service involves the following steps:

- Review prerequisites to ensure that your environment is ready
- Optionally before using the service, create a Connector in BlueXP
- Optionally before using the service, discover the cluster in BlueXP

Create a Connector in BlueXP

A BlueXP Connector includes credentials to NetApp ONTAP machines so that the Operational resiliency service can advise on security risks and execute remediations.

You can create a Connector directly in BlueXP and use that Connector in the operational resiliency service. Or, you can initiate the process of looking at the cluster and in the middle of that process, deploy the Connector.

To create a Connector in BlueXP before using the service, refer to BlueXP documentation that describes how to create a Connector.

Discover the cluster in BlueXP

Part of the setup involves identifying the cluster name, IP, user name, and password within BlueXP.

For instructions, refer to BlueXP documentation that explains how to identify the cluster.

Access BlueXP operational resiliency

You can use BlueXP operational resiliency by logging in to NetApp BlueXP.

To log in to BlueXP, you can use your NetApp Support Site credentials or you can sign up for a NetApp cloud login using your email and a password. Learn more about logging in.

Steps

1. Open a web browser and go to the BlueXP console.

   The NetApp BlueXP login page appears.

2. Log in to BlueXP.
3. From the BlueXP left navigation, select **Health** > **Operational resiliency**.

Frequently asked questions for BlueXP operational resiliency

This FAQ can help if you're just looking for a quick answer to a question.

Access to BlueXP operational resiliency

What's the BlueXP operational resiliency URL?

For the URL, in a browser, enter: https://console.bluexp.netapp.com/

Licensing

Do you need a license to use BlueXP operational resiliency?

A NetApp License File (NLF) is not required.

Use BlueXP operational resiliency

Review and remediate security risk issues

BlueXP operational resiliency enables you to review security risks related to firmware issues and implement remediations.

Recommendations are provided at the system or node level.

After reviewing risks, you can remediate those risks in two ways:

- Have the service execute the remediation, which will fix the issue for you.
- Download an Ansible playbook, an open-source deployment system that enables you to run configuration tasks, and you perform the actions suggested in the playbook.

Using the operational resiliency service, you can accomplish these goals:

- Review security risk issues
- Remediate automatically
- Remediate using an Ansible playbook
- Determine the risk remediation status

Review security risk issues

BlueXP operational resiliency identifies security risks on your on-premises ONTAP cluster.

Reviewing the risks and executing the automated remediation involves the following processes:

- Create a Connector in BlueXP (if one does not already exist for the operational resiliency service).
- Discover the cluster (if one does not already exist for the service).
- Execute the remediation or download an Ansible playbook.
- View the remediation status.

Steps

1. From the BlueXP left navigation, select **Health** > **Operational resiliency** > **Risk Remediation**.
2. In the list of risks, sort by the Impact level column to see the highest risks first.
3. Select the risk and see additional details.
4. Select **Remediate risk**.
5. Do one of the following:
    - For each cluster, select **Remediate**.

      This action leads to remediating the issue automatically (after you select **Execute** to start the remediation). Continue with Remediate risk issues automatically.

    - To remediate the issue yourself with an Ansible playbook, select **Download**. Continue with Remediate

risk issues with an Ansible playbook.

Remediate the issue automatically

If you selected the **Remediate** option in BlueXP operational resiliency, the service can implement the remediation for you.

Steps

1. From the BlueXP left navigation, select **Health** > **Operational resiliency** > **Risk Remediation**.
2. From the Risk Remediation page, sort by the Impact level column to see the highest risks first.
3. Select the risk and select **Remediate risk**.
4. For each cluster, select **Remediate**.

   Instructions appear, depending on the issue. Some of the options on this page do not appear if a BlueXP Connector exists or a cluster is known.

   - If a Connector does not exist or is not yet enabled, the service displays the Create a Connector page, where you can create the Connector. If the Connector exists, but is not active, you must enable it in the Cloud provider service.

     Refer to the BlueXP documentation that describes how to create a Connector.

   - If a cluster does not exist, the service displays a page where you identify the cluster.

     Refer to BlueXP documentation that explains how to identify the cluster.

5. After the Connector is deployed and the cluster is discovered, review the remediation.

   If you selected the **Remediate** option to have the service implement the remediation for you, the Review and Execute Required Fix page appears.

6. Review the risk and other information.
7. Select **Execute**.

   This action deploys the Connector (if not already done), discovers the cluster, downloads the fix and automatically implements the fix on the selected cluster.

8. To view the status of the remediation fix, note the cluster name on the Remediation Status page.

Remediate risks using an Ansible playbook

You can review security risks and download an Ansible playbook that you can follow to fix the issue.

You can download an Ansible playbook, an open-source deployment system that enables you to run configuration tasks. To use Ansible, simply run the playbook file, which uses the inventory and helper files stored in the same directory.

What you'll need

The system must be able access the cluster IP over the network for executing Ansible playbooks.

Steps

1. From the BlueXP left navigation, select **Health** > **Operational resiliency** > **Risk Remediation**.
2. In the list of risks, sort by the Impact level column to see the highest risks first.
3. Select the risk and select **Remediate risk**.
4. To download an Ansible playbook that you use to remediate the issue yourself, select **Download**.

   The service installs the Ansible playbook to your local machines in a location that you choose. The playbook downloads as a zip file, which contains several YML files.

5. Locate the Ansible playbook in the download folder.
6. Run the Ansible playbook:

   ```
   $ ansible-playbook <playbook.yml>
   ```

   For instructions on how to use an Ansible playbook, refer to the Ansible documentation.

7. Follow the instructions in the playbook.

Review the remediation status

You can check on the status of a remediation at any time. You can see whether it's running, completed, or failed.

Steps

1. From the BlueXP left navigation, select **Health** > **Operational resiliency** > **Remediation status**.

   The Remediation Status page appears.

2. To see details of an issue, select the issue to expand it.

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 960xxxxxxxxx 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

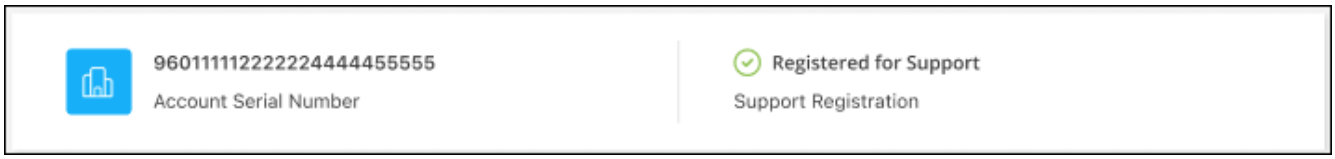
If you're a NetApp customer with an NSS account, you simply need to register for support through BlueXP.

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

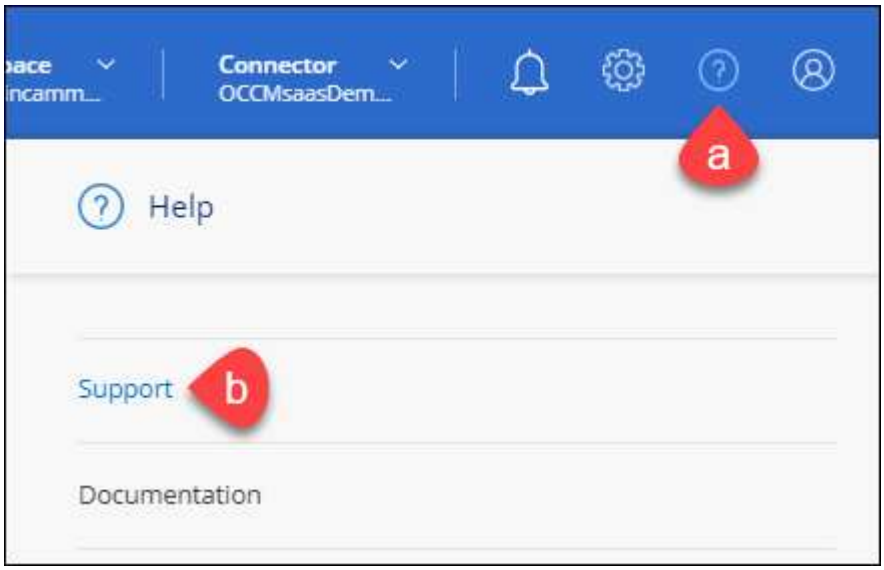
1. Create a NetApp Support Site account by completing the NetApp Support Site User Registration form
   a. Be sure to select the appropriate User Level, which is typically **NetApp Customer/End User**.
   b. Be sure to copy the BlueXP account serial number (960xxxx) used above for the serial number field. 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

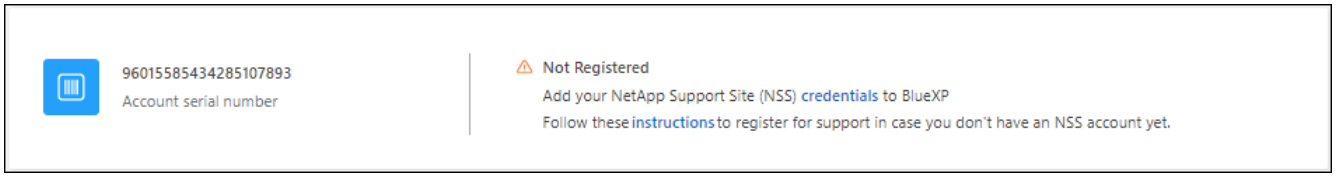
If you are brand new to NetApp and you don't have an NSS account, follow each step below.

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

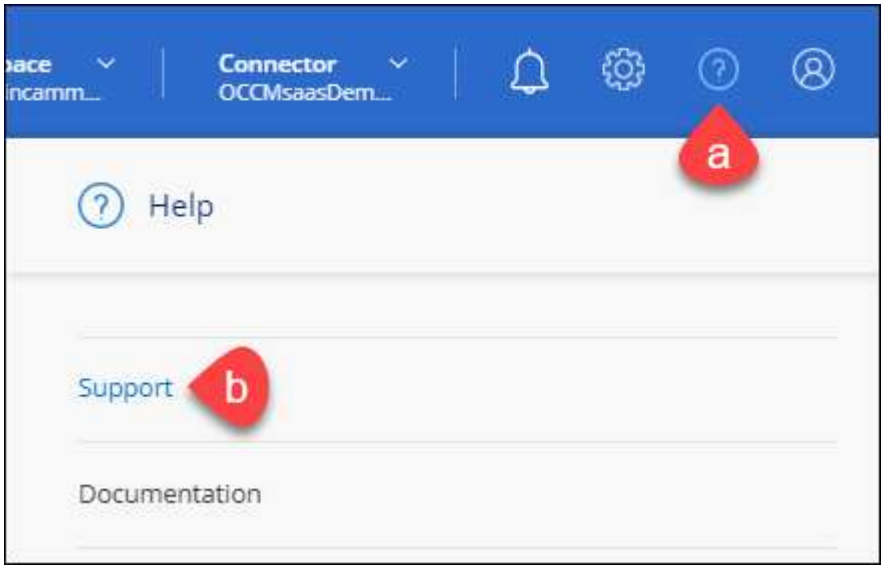
Associating NSS credentials with your BlueXP account is different than the NSS account that is associated with a BlueXP user login.

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.

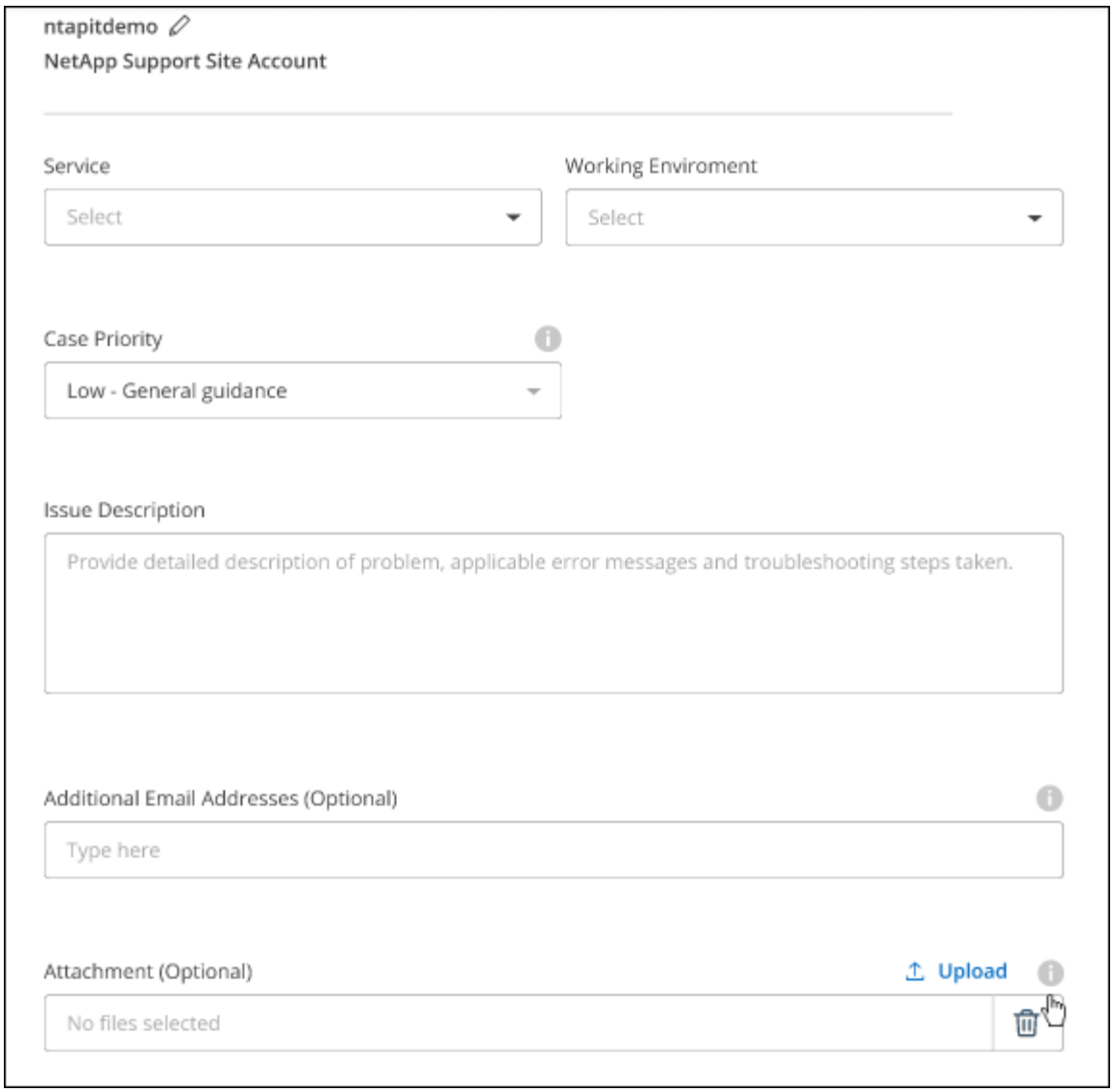
          The list of working environments are within scope of the BlueXP account, workspace, and Connector you have selected in the top banner of the service.

        - **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.



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.

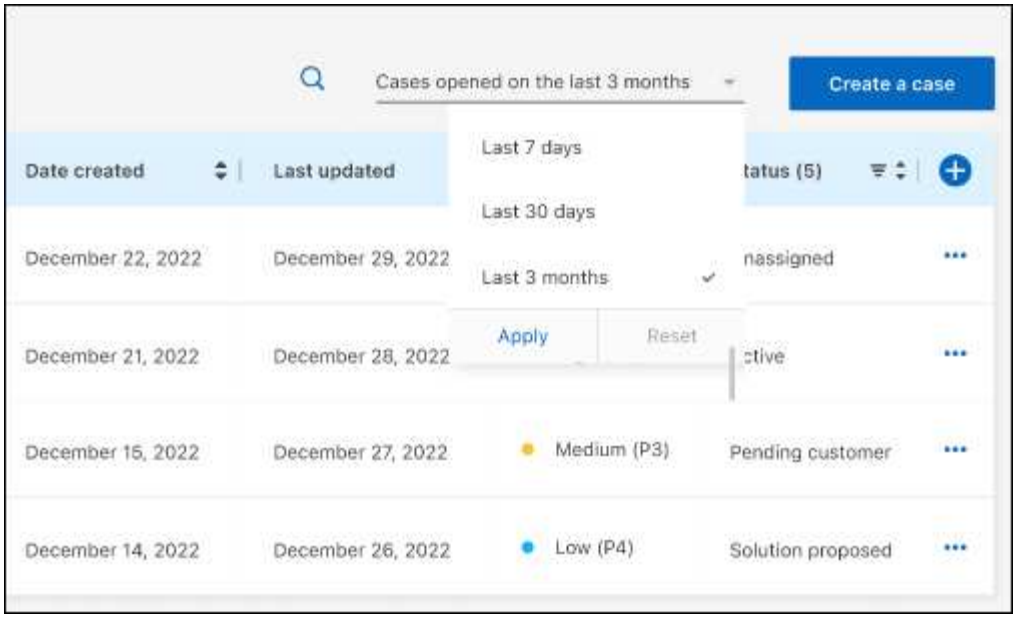
  The results in the table reflect the cases related to the view that you selected.
- You can add or remove columns of interest and you can filter the contents of columns like Priority and Status. Other columns provide just sorting capabilities.

  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.

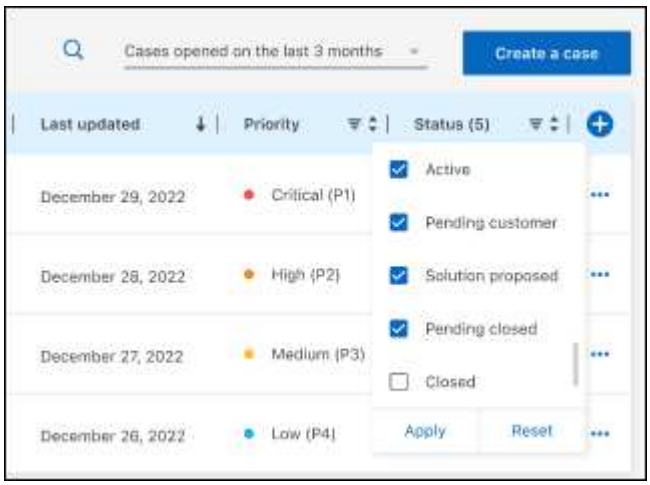
Steps

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

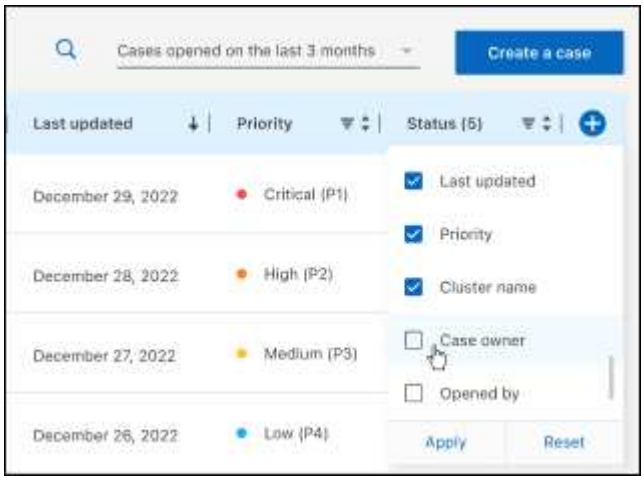
   The **Case management** page shows open cases related to the NSS account that is associated with your BlueXP user account. This is the same NSS account that appears at the top of the **NSS management** page.
3. Optionally modify the information that displays in the table:
   - Under **Organization's 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.

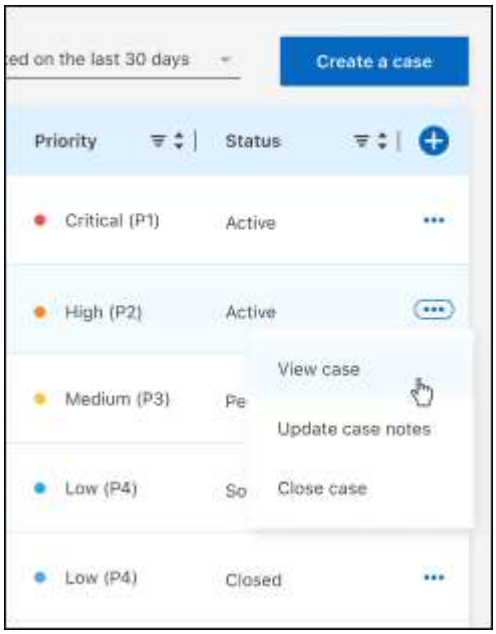


4. Manage an existing case by selecting ••• and selecting one of the available options:

   - **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**.



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