



# **Administer and monitor**

## **Amazon FSx for NetApp ONTAP**

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# Table of Contents

- Administer and monitor ..... 1
  - Volume administration ..... 1
  - File system administration ..... 6
  - Storage VM administration ..... 8
  - Data protection administration ..... 11
  - Performance administration ..... 15

# Administer and monitor

## Volume administration

### Enable volume autogrow

Enable volume autogrow to let Workload Factory manage volume capacity for you. You can disable it at any time.

Optionally, you can manually increase the volume capacity of a volume at any time using the [increase volume capacity feature](#).



Volume autogrow isn't supported for iSCSI volumes.

### Before you begin

To enable volume autogrow, you must [associate a link](#). If you don't have an existing link, [create a link](#). To associate a link in the file system, click **Associate link** under **Account name**. Once the link associates, return to this operation.

### Steps

1. Log in to the [Workload Factory console](#)
2. In Storage, select **Go to storage inventory**.
3. In the FSx for ONTAP tab, select the three dots menu of the file system with the volume to update and then select **Manage**.
4. From the file system overview, select the **Volumes** tab.
5. From the Volumes tab, select the three dots menu for the volume you want to modify.
6. Select **Basic actions**, then **Edit volume autogrow**.
7. In the Edit autogrow dialog, enable volume autogrow.
8. Click **Apply**.

### Increase volume capacity

Manually increase the volume capacity of a volume at any time.

Optionally, you can [enable the autogrow feature](#) to let Workload Factory manage volume capacity for you.

### About this task

For an iSCSI LUN, this operation increases the size of the host LUN. After the capacity increases, follow the procedure provided by your host operating system to discover the new size of the LUN and expand the file system of the LUN.

### Before you begin

To increase volume capacity, you must [associate a link](#). If you don't have an existing link, [create a link](#). To associate a link in the file system, click **Associate link** under **Account name**. Once the link associates, return to this operation.

### Steps

1. Log in to the [Workload Factory console](#)
2. In Storage, select **Go to storage inventory**.
3. In the **FSx for ONTAP** tab, select the three dots menu of the file system with the volume to update and then select **Manage**.
4. From the file system overview, select the **Volumes** tab.
5. From the Volumes tab, select the three dots menu of the volume to increase capacity for.
6. Select **Basic actions**, then **Increase volume capacity**.
7. In the Increase volume capacity dialog, provide the following:
  - a. Select a larger size.
  - b. Change the unit if needed.
8. Click **Increase**.

## Edit volume tags

Tags can help you categorize your resources. You can add, edit, and remove volume tags at any time for FSx for ONTAP volumes.

### Steps

1. Log in to the [Workload Factory console](#)
2. In Storage, select **Go to storage inventory**.
3. In the **FSx for ONTAP** tab, select the three dots menu of the file system with the volume to update and then select **Manage**.
4. From the file system overview, select the **Volumes** tab.
5. From the Volumes tab, click the three dots menu for the volume to modify tags for.
6. Select **Basic actions** then **Edit volume tags**.
7. On the Edit volume tags page, add, edit, or remove tags.

The maximum number of tags you can apply to a volume is 50.

8. Click **Apply**.

## Rebalance a volume's capacity

Rebalance the capacity of a volume to avoid imbalances that develop over time.

### About this task

Rebalancing a volume redistributes the capacity when imbalances develop over time due to the addition of new files and file growth. After you manually start the rebalance operation, we select the files and move them automatically and non-disruptively.



Rebalancing a volume is only supported for FlexGroup volumes.

### Before you begin

To rebalance a volume, you must [associate a link](#). If you don't have an existing link, [create a link](#). To associate a link in the file system, click **Associate link** under **Account name**. Once the link associates, return to this

operation.

### Steps

1. Log in to the [Workload Factory console](#)
2. In **Storage**, select **Go to storage inventory**.
3. In the **FSx for ONTAP** tab, select the three dots menu of the file system that contains the volume to rebalance and then select **Manage**.
4. From the file system overview, select the **Volumes** tab.
5. From the Volumes tab, select the three dots menu of the volume to rebalance.
6. Select **Advanced actions**, then **Rebalance volume**.
7. In the Rebalance volume dialog, select **Rebalance**.

## Change the tiering policy of a volume

Change the tiering policy to automatically re-allocate data from the high-performance primary storage tier to the secondary capacity pool storage tier.

### About this task

You can change the tiering policy of a volume at any time. The tiering policy is defined per volume.

Deciding where your data is stored has implications for your cost savings.

FSx for ONTAP has two tiers for storing volume data:

- **SSD storage tier:** This primary storage tier is for the data you access most frequently, also known as *hot* data. Storing data in the primary storage tier is more expensive than in the secondary storage tier.
- **Capacity pool storage tier:** This secondary storage tier is for archived data or infrequently accessed data, also known as *cold* data.

Refer to [Managing storage capacity](#) in AWS for FSx for NetApp ONTAP documentation for more information about storage tiers.

### Before you begin

Review the four available tiering policies before you change the tiering policy.

- **Auto:** Tiers all cold data which includes user data and snapshots to the capacity pool storage tier for a specific time period.
- **Snapshot only:** Tiers only snapshot data to the capacity pool storage tier.
- **None:** Keeps all your volume's data on the primary storage tier.
- **All:** Marks all user data and snapshot data as cold and stores it in the capacity pool storage tier.

Note that some tiering policies have an associated minimum cooling period which sets the time, or *cooling days*, that user data in a volume must remain inactive for the data to be considered "cold" and moved to the capacity pool storage tier. The cooling period starts when data is written to the disk.

### Steps

1. Log in to the [Workload Factory console](#)
2. In Storage, select **Go to storage inventory**.

3. In the **FSx for ONTAP** tab, select the three dots menu of the file system with the volume to update and then select **Manage**.
4. From the file system overview, select the **Volumes** tab.
5. From the Volumes tab, click the three dots menu of the volume to change the tiering policy for.
6. Select **Advanced actions**, then **Change tiering policy**.
7. On the Change tiering policy page, select one of the following tiering policies:
  - **Auto**: Enter the number of cooling days.
  - **Snapshot only**: Enter the number of cooling days.
  - **None**
  - **All**
8. Click **Apply**.

## Change the NFS export policy for a volume

Change the NFS export policy for a volume that uses NFSv3 or NFSv4.1 protocol types.

### About this task

Changing a volume's export policy involves adding export policy rules which detail client specifications, access control, super user access, and NFS version. You can add more than one export policy and prioritize them.

### Before you begin

Determine the client specifications for the export policy rules. Valid values for the client specification are as follows:

- IP addresses
- IP addresses with subnet masks
- IP addresses with a network mask
- A netgroup name preceded by the "@" character
- A domain name preceded by a period "."
- Host names

### Steps

1. Log in to the [Workload Factory console](#)
2. In Storage, select **Go to storage inventory**.
3. In the **FSx for ONTAP** tab, select the three dots menu of the file system with the volume to update and then select **Manage**.
4. From the file system overview, select the **Volumes** tab.
5. From the Volumes tab, click the three dots menu for the volume to change the NFS export policy for.
6. Select **Advanced actions**, then **Edit NFS export policy**.
7. On the Edit NFS export policy page, provide the following:
  - a. **Access control**: Select **Custom export policy** or **Existing export policy**.

Alternatively, you can select **No access to the volume**.

- b. **Export policy name:** Optionally, enter a name for the export policy.
  - c. **Add export policy rule:** Provide the following details and rank the policies starting with #1 as the priority rule:
    - i. **Client specification:** Separate multiple values with commas.
    - ii. **Access control:** Select **Read/Write**, **Read only**, or **No access** from the dropdown menu.
    - iii. **Super user access:** Select **Yes** or **No**.
    - iv. **NFS version:** Select **All**, **NFSv3**, or **NFSv4**.
8. Click **Apply**.

## Change the CIFS share for a volume

Changing a volume's CIFS share involves determining the users and groups to give access to and the type of access to give them.

### Before you begin

Determine the users or groups to give access to and the type of access to give them.

### Steps

1. Log in to the [Workload Factory console](#)
2. In Storage, select **Go to storage inventory**.
3. In the **FSx for ONTAP** tab, select the three dots menu of the file system with the volume to update and then select **Manage**.
4. From the file system overview, select the **Volumes** tab.
5. From the Volumes tab, click the three dots menu of the volume to change the SMB share for.
6. Select **Advanced actions**, then **Edit CIFS share**.
7. On the Edit CIFS share page, provide the following:
  - a. **Users or groups:** Enter valid users and groups. Separate each entry by a semi-colon “;”.
  - b. **Permissions:** Select **Full control**, **Read/Write**, **Read**, or **No access**.
8. Click **Apply**.

## Delete a volume

You can delete a volume in your FSx for ONTAP file system at any time. This operation is irreversible.

### Before you begin

Consider the following before deleting a volume:

- **Local snapshots:** All snapshots associated with this FSx for ONTAP file system will be permanently deleted.
- **FSx for ONTAP backup:** FSx for ONTAP backup copies will remain and you can still use them.
- **Replication relationships:** We recommend that you [delete any existing replication relationships](#) for this volume before deleting the volume so that no broken relationships remain.

### Steps

1. Log in to the [Workload Factory console](#)
2. In Storage, select **Go to storage inventory**.
3. In the **FSx for ONTAP** tab, select the three dots menu of the file system with the volume to delete and then select **Manage**.
4. From the file system overview, select the **Volumes** tab.
5. From the Volumes tab, select the three dots menu of the volume to delete.
6. Select **Basic actions** then **Delete volume**.
7. In the Delete volume dialog, do the following:
  - a. Optionally, click **Back up the volume** to back up the volume before deletion.

The backup will remain in the file system until you manually delete it.
  - b. Click **Continue**.
  - c. Type “delete” to delete the volume.
  - d. Click **Delete**.

## File system administration

### Increase file system capacity

Manually increase the SSD storage capacity of an FSx for ONTAP file system when the amount of used SSD storage capacity exceeds a threshold that you specify.

Alternatively, you can [enable the automatic capacity management feature](#) so Workload Factory manages file system capacity for you.

#### About this task

Increasing file system capacity impacts IOPS for your FSx for ONTAP file system.

When you automatically [provision IOPS](#) for a file system, IOPS increases by 3 IOPS with every 1 GiB increase in SSD capacity.

When you [provision IOPS](#) manually, you may need to increase your IOPS allocation to support the increased file system capacity.

For SSD storage capacity limits, refer to [Quotas](#) in AWS FSx for NetApp ONTAP documentation.

#### Before you begin

To increase capacity for a file system, you must first [disable automatic capacity management](#).

#### Steps

1. Log in to the the Workload Factory console.
2. In Storage, click **Go to Storage inventory**.
3. In the **FSx for ONTAP** tab, click the three dots menu of the file system to increase capacity for.
4. Select **Manage**.
5. Under Information, click the pencil icon next to **Capacity distribution**. The pencil icon appears next to the drop down arrow when the mouse hovers over the **Capacity distribution** row.



6. In the SSD storage size dialog, enter a number for **Provisioned capacity**.
7. Select the unit for the provisioned capacity.
8. Click **Apply**.

## Enable automatic capacity management for a file system

Enabling this feature lets Workload Factory automatically add incremental storage to an FSx for ONTAP file system as capacity needs change over time.

### About this task

Only one account can manage this feature.

The maximum amount of SSD storage capacity for all FSx for ONTAP file systems is 524,288 GiB. To request a quota increase, refer to [Quotas](#) in AWS FSx for NetApp ONTAP documentation.

### Before you begin

You must have credentials with *Automate* permissions in Workload Factory to complete this task.

### Steps

1. Log in to the the Workload Factory console.
2. In Storage, select **Go to Storage inventory**.
3. In the **FSx for ONTAP** tab, click the three dots menu of the file system to enable automatic capacity management for.
4. Select **Manage**.
5. Under Information, click the pencil icon next to **Automatic capacity management**. The pencil icon appears next to the drop down arrow when the mouse hovers over the **Automatic capacity management** row.
6. In the **Automatic capacity management** dialog, provide the following:
  - a. **Credentials**: Select credentials with *Automate* permissions from the dropdown menu.
  - b. Click the enable button to **Enable automatic capacity management**.  
  
Alternatively, disable the feature. If you need to increase file system capacity, you must first disable automatic capacity management.
  - c. **Capacity threshold**: Enter the maximum size for the FSx for ONTAP file system.
  - d. **Capacity increase increments**: Enter the percentage to increase capacity incrementally.
7. Click **Apply**.

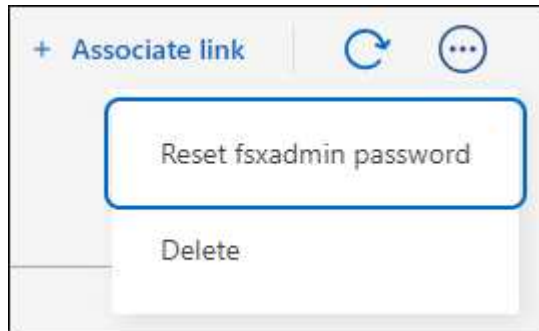
## Reset the fsxadmin password

Reset the fsxadmin password when needed.

### Steps

1. Log in to the the Workload Factory console.
2. In Storage, select **Go to Storage inventory**.
3. In the **FSx for ONTAP** tab, click the three dots menu of the file system to reset the fsxadmin password for and then select **Manage**.

4. From the file system overview, click the three dots menu.



5. Select **Reset fsxadmin password**.
6. In the Reset fsxadmin password dialog, enter a new fsxadmin password and re-enter it to confirm.
7. Click **Apply**.

## Delete a file system

To delete a file system, you must first delete any volumes, storage VMs, or replication relationships associated with the file system.

### Steps

1. Log in to the [Workload Factory console](#)
2. In Storage, select **Go to storage inventory**.
3. In the **FSx for ONTAP** tab, click the three dots menu of the FSx for ONTAP file system you want to delete.
4. Select **Manage**.
5. In the **Overview** tab, click the three dots menu.
6. Click **Delete**.
7. In the Delete FSx for ONTAP file system dialog, enter the name of the FSx for ONTAP file system to delete.
8. Click **Delete**.

## Storage VM administration

### Replicate a storage VM to another FSx for ONTAP file system

Replicating a storage VM to another FSx for ONTAP file system provides a protective layer of data access in case of data loss. This operation replicates all volumes in one storage VM to another FSx for ONTAP file system.

### Before you begin

To replicate a storage VM to another FSx for ONTAP file system, you must [associate a link](#). If you don't have an existing link, [create a link](#). To associate a link in the file system, click **Associate link** under **Account name**. Once the link associates, return to this operation.

### Steps

1. Log in to the [Workload Factory console](#)

2. In Storage, select **Go to storage inventory**.
3. In the **FSx for ONTAP** tab, select the three dots menu of the file system with the storage VM to replicate and then select **Manage**.
4. From the file system overview, select the **Storage VMs** tab.
5. From the Storage VMs tab, select the three dots menu of the storage VM to replicate an SVM for.
6. Select **Replicate storage VM**.
7. On the Create replication page, under Replication target, provide the following:
  - a. **FSx for ONTAP file system**: Select credentials, region, and FSx for ONTAP file system name for the target FSx for ONTAP file system.
  - b. **Storage VM name**: Select the storage VM from the dropdown menu.
  - c. **Volume name**: The target volume name is generated automatically with the following format `{OriginalVolumeName}_copy`.
  - d. **Tiering policy**: Select the tiering policy for the data stored in the target volume.

*Auto* is the default tiering policy when creating a volume using the Workload Factory FSx for ONTAP user interface. For more information about volume tiering policies, refer to [Volume storage capacity](#) in AWS FSx for NetApp ONTAP documentation.

- e. **Max transfer rate**: Select **Limited** and enter the max transfer limit in MB/s. Alternatively, select **Unlimited**.

Without a limit, network and application performance may decline. Alternatively, we recommend an unlimited transfer rate for FSx for ONTAP file systems for critical workloads, for example, those that are used primarily for disaster recovery.

8. Under Replication settings, provide the following:
  - a. **Replication interval**: Select the frequency that snapshots are transferred from the source volume to the target volume.
  - b. **Long-term retention**: Optionally, enable snapshots for long-term retention.

If you enable long-term retention, then select an existing policy or create a new policy to define the snapshots to replicate and the number to retain.

- i. For **Choose an existing policy**, select an existing policy from the dropdown menu.
- ii. For **Create a new policy**, provide the following:
  - A. **Policy name**: Enter a policy name.
  - B. **Snapshot policies**: In the table, select the snapshot policy frequency and the number of copies to retain. You can select more than one snapshot policy.

9. Click **Create**.

## Result

All volumes within the storage VM are replicated to the target file system.

## Configure and update Active Directory for a storage VM

Configure and update Active Directory for a storage VM in an FSx for ONTAP file system.

## About this task

The same steps apply for configuring and updating Active Directory for a storage VM.

### Steps

1. Log in to the [Workload Factory console](#)
2. In Storage, select **Go to storage inventory**.
3. In the **FSx for ONTAP** tab, select the three dots menu of the file system with the storage VM to update and then select **Manage**.
4. From the file system overview, select the **Storage VMs** tab.
5. From the Storage VMs tab, select the three dots menu of the storage VM to configure Active Directory for.
6. Select **Manage AD configuration**.
7. On the Manage AD configuration page, provide the following:
  - a. **Active Directory domain to join**: Enter the fully qualified domain name (FQDN) of your Active Directory.
  - b. **DNS IP addresses**: Enter up to three IP addresses separated by commas.
  - c. **SMB server NetBIOS name**: Enter the SMB server NetBIOS name of the Active Directory computer object to create for your storage VM. This is the name of this SVM in Active Directory.
  - d. **User name**: Enter the user name of the service account in your existing Active Directory.

Do not include a domain prefix or suffix. For `EXAMPLE\ADMIN`, use `ADMIN`.

- e. **Password**: Enter the password for the service account.
- f. **Organization unit (OU)**: Enter the organization unit.

The OU is the distinguished path name of the organizational unit to which you want to join your file system.

- g. **Delegated administrators group**: Optionally, enter the delegated file system administrators group.

The deleted administrators group is the name of the group in your Active Directory that can administer your file system.

If you are using AWS Managed Microsoft AD, you must specify a group such as AWS Delegated FSx Administrators, AWS Delegated Administrators, or a custom group with delegated permissions to the OU.

If you are joining to a self-managed AD, use the name of the group in your AD. The default group is `Domain Admins`.

8. Click **Apply**.

## Edit storage VM tags

Tags can help you categorize your resources. You can add, edit, and remove tags for a storage VM at any time.

### Steps

1. Log in to the [Workload Factory console](#)

2. In Storage, select **Go to storage inventory**.
3. In the **FSx for ONTAP** tab, select the three dots menu of the file system with the storage VM to update and then select **Manage**.
4. From the file system overview, select the **Storage VMs** tab.
5. From the Storage VMs tab, select the three dots menu of the storage VM to edit tags for.
6. Select **Edit storage VM tags**.
7. On the Edit storage VM tags page, add, edit, or remove tags.

The maximum number of tags you can apply to a storage VM is 50.

8. Click **Apply**.

## Delete a storage VM

Delete a storage VM (SVM) that you no longer require from an FSx for ONTAP file system configuration.

### Before you begin

Review the following before you delete a storage VM:

- Make sure that no applications are accessing the data in the SVM.
- Delete all non-root volumes attached to the SVM.

### Steps

1. Log in to the [Workload Factory console](#)
2. In Storage, select **Go to storage inventory**.
3. In the **FSx for ONTAP** tab, click the three dots menu of the file system to update and then select **Manage**.
4. From the file system overview, select the **Storage VMs** tab.
5. In the Storage VMs tab, select the three dots menu of the storage VM to configure Active Directory for.
6. Select **Delete storage VM**.
7. In the Delete storage VM dialog, type “delete” to delete the storage VM.
8. Click **Delete**.

## Data protection administration

### Update FSx for ONTAP backup schedule

Update the FSx for ONTAP backup schedule when needed.

### Steps

1. Log in to the [Workload Factory console](#)
2. In Storage, click **Go to Storage inventory**.
3. In the **FSx for ONTAP** tab, click the three dots menu of the file system to update the backup schedule for and then select **Manage**.

4. Under Information, click the pencil icon next to **FSx for ONTAP backup**. The pencil icon appears next to the dropdown arrow when the mouse hovers over the **FSx for ONTAP backup** row.
5. In the **FSx for ONTAP backup** dialog, provide the following:
  - a. **Daily automatic backups**: Enable or disable the feature. If you disable the feature, click **Apply**. If you enable the feature, complete the following steps.
  - b. **Automatic backup retention period**: Enter the number of days to retain automatic backups.
  - c. **Daily automatic backup window**: Select either **No preference** (a daily backup start time is selected for you) or **Select start time for daily backups** and specify a start time.
  - d. **Weekly maintenance window**: Select either **No preference** (a weekly maintenance window start time is selected for you) or **Select start time for 30-minute weekly maintenance window** and specify a start time.
6. Click **Apply**.

## Enable and edit snapshots for long-term retention

Enable snapshots for long-term retention lets you replicate specific snapshots for long-term disaster recovery.

Long-term retention enables business services to continue operating even through a complete site failure, supporting applications to fail over transparently using a secondary copy.

The same steps apply for enabling and editing snapshots for long-term retention.

### Steps

1. Log in to the [Workload Factory console](#)
2. In Storage, select **Go to storage inventory**.
3. In the **FSx for ONTAP** tab, click the three dots menu of the file system to update and then select **Manage**.
4. From the file system overview, select the **Replication relationships** tab.
5. In the Replication relationships tab, click the three dots menu of the replication relationship schedule to change.
6. Select **Edit long-term retention**.
7. In the Edit long-term retention dialog, enable or disable snapshots for long-term retention.
8. If you select to disable snapshots for long-term retention, click **Apply** to complete this operation.
9. If you select to enable snapshots for long-term retention, choose between selecting an existing policy or creating a new policy.
  - a. For an existing policy, select an existing policy from the dropdown menu.
  - b. To create a new policy, provide the following:
    - i. **Policy name**: Enter a policy name.
    - ii. **Snapshot policies**: Select one or more snapshot policies.
    - iii. **Copies to retain**: Enter the number of snapshot copies to retain on the target file system.
10. Click **Apply**.

## Reverse a replication relationship

Reverse a replication relationship so that the target volume becomes the source volume.

After you stop replication and make changes to the target volume, you can replicate those changes back to the source volume. This process is common in a disaster recovery scenario in which you operate on the target volume for a while and want to switch roles of the volumes.

### About this task

When you reverse and resume a replication, it switches the source and target roles of your volumes; the target volume becomes the new source volume, and the source volume becomes the new target volume. The reverse operation also overwrites the contents of the new target volume with the contents of the new source volume. If you reverse a replication twice, the original replication direction re-establishes.



Any data written to the original source volume between the last data replication and the time that the source volume is disabled is not preserved.

### Before you begin

Make sure that you know the current and future roles of your source and target volumes because changes on the new target volume are overwritten with the new source volume. If used incorrectly, you can experience unintended data loss.

### Steps

1. Log in to the [Workload Factory console](#)
2. In Storage, select **Go to storage inventory**.
3. In the **FSx for ONTAP** tab, click the three dots menu of the file system to update and then select **Manage**.
4. From the file system overview, select the **Replication relationships** tab.
5. In the Replication relationships tab, click the three dots menu of the replication relationship to reverse.
6. Select **Reverse relationship**.
7. In the Reverse relationship dialog, click **Reverse**.

## Change the replication schedule of a source volume

Change the replication schedule of the source volume in a replication relationship.

Choose how frequently snapshots from the source volume are transferred to the replicated volume to match your required point objectives (RPOs).

### Steps

1. Log in to the [Workload Factory console](#)
2. In Storage, select **Go to storage inventory**.
3. In the **FSx for ONTAP** tab, click the three dots menu of the file system to update and then select **Manage**.
4. From the file system overview, select the **Replication relationships** tab.
5. In the Replication relationships tab, click the three dots menu of the replication relationship schedule to change.
6. Select **Edit replication interval**.
7. In the Edit replication interval dialog, select the frequency of snapshot transfer from the source volume. You

may select between the following frequencies:

- Every 5 minutes
- Hourly
- Every 8 hours
- Daily
- Weekly

8. Click **Apply**.

## Limit the max transfer rate of a replication relationship

Limit the max transfer rate of a replication relationship. An unlimited transfer rate might negatively impact the performance of other applications and your network.

### About this task

Limiting the max transfer rate is optional but recommended. Without a limit, network and application performance may decline.

Alternatively, we recommend an unlimited transfer rate for FSx for ONTAP file systems for critical workloads, for example, those that are used primarily for disaster recovery.

### Before you begin

Consider how much bandwidth to allocate for replication.

### Steps

1. Log in to the [Workload Factory console](#)
2. In Storage, select **Go to storage inventory**.
3. In the **FSx for ONTAP** tab, click the three dots menu of the file system to update and then select **Manage**.
4. From the file system overview, select the **Replication relationships** tab.
5. In the Replication relationships tab, click the three dots menu of the replication relationship to limit the max transfer rate for.
6. Select **Edit max transfer rate**.
7. In the Edit max transfer rate dialog, select **Limited** and enter the max transfer limit in MB/s.

Alternatively, select **Unlimited**.

8. Click **Apply**.

## Update snapshot data in a replication relationship

A replication relationship has a set replication schedule, but you can manually update snapshot data transferred between source and target volumes when needed.

### Steps

1. Log in to the [Workload Factory console](#)
2. In Storage, select **Go to storage inventory**.
3. In the **FSx for ONTAP** tab, click the three dots menu of the file system to update and then select **Manage**.



4. From the file system overview, select the **Replication relationships** tab.
5. In the Replication relationships tab, click the three dots menu of the replication relationship to update.
6. Select **Update now**.
7. In the Update dialog, click **Update now**.

## Stop a replication relationship

When you stop a replication, scheduled replication updates from the source volume to the target volume pause. The target volume transitions from read-only to read-write.

### Steps

1. Log in to the [Workload Factory console](#)
2. In Storage, select **Go to storage inventory**.
3. In the **FSx for ONTAP** tab, click the three dots menu of the file system to update and then select **Manage**.
4. From the file system overview, select the **Replication relationships** tab.
5. In the Replication relationships tab, click the three dots menu of the replication relationship to stop.
6. Select **Break**.
7. In the Break replication dialog, select **Break**.

The replication status of the volume changes to **Broken**. The target volume becomes writable.

## Delete a replication relationship

When you delete a replication relationship, it removes the replication relationship between the source and target volume. After the replication relationship deletes, both volumes continue to exist independently with the current data they contain.

When you delete a replication relationship, FSx for ONTAP also deletes the common replication snapshots of the source and target volume.

### Steps

1. Log in to the [Workload Factory console](#)
2. In Storage, select **Go to storage inventory**.
3. In the **FSx for ONTAP** tab, click the three dots menu of the file system to update and then select **Manage**.
4. From the file system overview, select the **Replication relationships** tab.
5. In the Replication relationships tab, click the three dots menu of the replication relationship to delete.
6. Select **Delete**.
7. In the Delete relationship dialog, click **Delete**.

# Performance administration

## Provision SSD IOPS for an FSx for ONTAP file system

Automatically provision or manually provision SSD IOPS for an FSx for ONTAP file

system.

### About this task

You can enable automatic SSD IOPS provisioning for an FSx file system or manually provision IOPS.

Automatic provisioned IOPS are calculated as 3 IOPS per GiB.

If you manually provision IOPS, you may need to increase IOPS before you can [increase file system capacity](#).

For IOPS limits, refer to [Quotas](#) in AWS FSx for NetApp ONTAP documentation.

### Steps

1. Log in to the the Workload Factory console.
2. In Storage, click **Go to Storage inventory**.
3. In the **FSx for ONTAP** tab, click the three dots menu of the file system to provision IOPS for and then select **Manage**.
4. Under Information, click the pencil icon next to **IOPS allocation**. The pencil icon appears next to the dropdown arrow when the mouse hovers over the **IOPS allocation** row.
5. In the Provisioned IOPS dialog, select **Automatic** or **User provisioned**.
6. If you select **User provisioned**, enter the **IOPS value**.
7. Click **Apply**.

## Update throughput capacity for a file system

Update throughput capacity for an FSx for ONTAP file system as needed.

For throughput capacity limits, refer to [Quotas](#) in AWS FSx for NetApp ONTAP documentation.

### Steps

1. Log in to the the Workload Factory console.
2. In Storage, click **Go to Storage inventory**.
3. In the **FSx for ONTAP** tab, click the three dots menu of the file system to update throughput capacity for and then select **Manage**.
4. Under Information, click the pencil icon next to **Throughput capacity**. The pencil icon appears next to the drop down arrow when the mouse hovers over the **Throughput capacity** row.
5. In the Throughput capacity dialog, select the throughput capacity you need.
6. Click **Apply**.

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