



MICROSOFT AZURE STORSIMPLE 5000/7000 TO 8000 SERIES MIGRATION GUIDE

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Revision History

Release Date	Changes
May 27, 2015	Update 1.0 release
May 29, 2015	Links were updated to reflect Update 1 documentation
September 25, 2015	Feedback, added a note to contact Support to enable migration
August 26, 2016	Review for Update 3 and bug fixes post Update 1
September 6, 2016	Finished capturing all the changes to the doc from the technical review
September 8, 2016	Finalized and published the doc for Update 3 release
October 31, 2017	Updated the guide for Azure portal and the migration tool

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StorSimple 5000/7000 to 8000 Series Migration

Overview

Data migration is the process of moving data from one storage location to another. This entails making an exact copy of an organization's current data from one device to another device—preferably without disrupting or disabling active applications—and then redirecting all input/output (I/O) activity to the new device. There are a variety of circumstances that might cause an organization to undertake a data migration, including:

- Storage technology replacement or upgrade
- Storage consolidation
- Relocation of the datacenter
- Storage equipment maintenance, including workload balancing or other performance-related maintenance.

In the storage consolidation realm, data migration is crucial to storage preparation and ongoing management. For example, a new consolidated storage platform must be brought online and then receive data that is migrated to it from other storage systems before those older systems are decommissioned.

This Microsoft Azure StorSimple release introduces the new migration feature that allows the StorSimple 5000-7000 series customers to migrate their data to StorSimple 8000 series physical device or an 8010/8020 cloud appliance. For a complete list of features in this release, refer to [Release Notes for Update 1](#). For more information on the latest StorSimple release, refer to [Release Notes for Update 5](#).

This migration guide provides a step-by-step walkthrough of the steps required to migrate from a 5000-7000 series legacy device to an 8000 series physical or cloud appliance. This document is intended for information technology (IT) professionals and knowledge workers who are responsible for operating, deploying, and managing StorSimple appliances in the datacenter.

This guide is applicable for both the on-premises 8000 series device as well as the StorSimple Cloud Appliance.



Important

Migration is currently an assisted operation. If you intend to migrate data from your StorSimple 5000-7000 series device to an 8000 series device, you need to schedule migration with Microsoft Support. Microsoft Support will then enable your subscription for migration.

Before you contact Microsoft Support, be sure to review and complete the [Migration prerequisites](#) indicated in the article. For more information, see how to [Open a Support ticket](#).

Migration feature vs. host-side migration

You can move your data using the migration feature or by performing a host-side migration. This section describes the specifics of each method including the pro and cons. Use this information to figure out which method you want to pursue to migrate your data.

The migration feature simulates a disaster recovery (DR) process from 7000/5000 series to 8000 series. This feature allows you to migrate the data from 5000/7000 series format to 8000 series format on Azure. The migration process is initiated using the StorSimple Migration tool. The tool starts the download and the conversion of backup metadata on the 8000 series device and then uses the latest backup to expose the volumes on the device.

	Pros	Cons
1.	The migration process preserves the history of backups that were taken on 5000/7000 series.	When users try to access the data, this migration will download the data from Azure thus incurring data download costs.
2.	No data is migrated on the host side.	The process needs downtime between the start of the backup and latest backup being surfaced on the 8000 series (can be estimated using the migration tool).
3.	This process preserves all the policies, bandwidth templates, encryption, and other settings on 8000 series devices.	User access will bring back only the data accessed by the users and will not rehydrate the entire dataset.
4.	This process requires additional time to convert all the older backups in Azure which is done asynchronously without impacting production	Migration can only be done at a cloud configuration level. Individual volumes in a cloud configuration cannot be migrated separately

A host-side migration allows setting up of 8000 series independently and copying the data from 5000/7000 series device to 8000 series device. This is equivalent to migrating data from one storage device to another. A variety of tools such as Diskboss, robocopy are used to copy the data.

	Pros	Cons
1.	Migration can be approached in a phased manner on a volume-by-volume basis.	Previous backups (taken on 5000/7000 series) will not be available on the 8000 series device.
2.	Allows for consolidation of data into one storage account on Azure.	First backup to the cloud on 8000 series will take a longer time as all the data on 8000 series needs to be backed up to Azure.
3.	Following a successful migration, all the data is local on the appliance. There are no latencies when accessing the data.	Azure storage consumption will increase until the data is deleted from the 5000/7000 device.
4.		If the 7000/5000 series device has a large amount of data, during migration this data needs to be downloaded from azure which will incur costs and latencies related to downloading data from Azure

This guide will focus only on the migration feature from 5000/7000 to 8000 series device. For more information on host-side migration, go to [migration from other storage devices](#).

Supported scenarios for migration

The following table lists the specific scenarios that are supported by this migration feature.

	Scenario	Description	Target device	Targeted use case
1.	Storage device replacement	You can replace your 5000-7000 series device with an 8000 series physical device.	8100/8600 physical device	Managing data growth
2.	Selective migration	One or more user-specified cloud configurations can be migrated from the 5000/7000 series	8100/8600 physical device or 8010/8020 cloud appliance	Managing data growth
3.	Fail over from down/live device	Failover of all the cloud configurations from a down/live 5000/7000 series device	8100/8600 physical device or 8010/8020 cloud appliance	Recovering from an appliance disaster

Supported migration paths and software versions

In general:

- Migration is supported from any legacy device model on 5000-7000 series to any current 8000 series device.
- The source device must be running v2.1.1.518 or higher and the target device must be running Update 5 which maps to 6.3.9600.17845 or later version.

The following table outlines the supported migration paths for the source and target devices.

From source device model	To current target device model	Device type
5020/5020A	8100/8600	Physical appliance
5020/5020A	8010/8020	Cloud appliance
5520	8100/8600	Physical appliance
5520	8010/8020	Cloud appliance
7020/7020A	8100/8600	Physical appliance
7020/7020A	Cloud appliance	Cloud appliance
7520	8100/8600	Physical appliance
7520	8010/8020	Cloud appliance

The following table outlines the supported software versions for migration on source and target devices.

Software version on source device	Software version on target device	Recommended action
v2.1.1.518 or higher	6.3.9600.17845	No action required
v2.1.1.518 or higher	older than 6.3.9600.17845	Upgrade target 8100/8600/8010/8020 device to 6.3.9600.17845 or later
older than v2.1.1.518	6.3.9600.17845	Upgrade legacy 5000/7000 device to v2.1.1.518

Software version on source device	Software version on target device	Recommended action
Older than v2.1.1.518	older than 6.3.9600.17845	Upgrade legacy 5000/7000 device to v2.1.1.518 Upgrade target 8100/8600/8010/8020 device to 6.3.9600.17845 or later

Unsupported scenarios

The following scenarios are not supported for migration:

	You cannot migrate	Comments
1.	You cannot migrate 5000/7000 series running versions prior to v2.1.1.518.	These devices will need to be updated to v2.1.1.518 or higher prior to migration.
2.	You cannot migrate to an 8000 series device running versions prior to 6.3.9600.17845.	The target 8000 series device needs to be updated to 6.3.9600.17845.
3.	Reverse migration from 8000 series to 5000/7000 series is not supported.	Migration is only allowed from 5000/7000 to 8000 series.
4.	When the 5000-7000 series subscription is different from the 8000 series, then the migration is not supported. Open a Support ticket with the Azure subscription team to move your subscriptions.	If there are other services tied to that subscription (other than storage), then all those services will also need to be moved to that subscription.
5.	You cannot migrate individual volumes, you can only migrate on a volume container basis.	
6.	Volume type conversions between the two series is not allowed.	Migration transfers all volume types from the 5000/7000 series to only tiered volumes on the 8000 series.
7.	Volume containers that have volume groups with volumes from other cloud service providers (not Azure).	
8.	Volume containers that have different primary and backup cloud credentials. These credentials can be from different cloud service providers or even different subscriptions for the same service provider.	

Operations not supported on source device during migration

The following operations will not be supported on the source 5000-7000 series device when the migration is in progress:

- deletion or any modification of cloud credentials.
- deletion or any modification of cloud configurations.

- modifications to backups, policies associated with the cloud configurations being migrated.

Limitations on entities being migrated

There are certain limitations on the entities being migrated. The following tables indicate which entities cannot be migrated or can be migrated with caveats.

	You can migrate with caveats	Comments
1.	Volume containers (cloud configurations) that have local snapshots and cloud clones. The volume containers' cloud snapshots will be migrated, but the local snapshots and cloud clones cannot be migrated.	
2.	Volume containers that have volume groups which span across multiple volume containers. These are dependent volume containers that need to be migrated together.	The dependent volume containers are identified when you import the source configuration file. The StorSimple Migration tool automatically selects these volume containers together when the migration is underway.
3.	Volume containers that have recovery buckets. A recovery bucket may exist if you have done a disaster recovery on your source device using the import operation.	Use the merge recovery bucket option in the StorSimple Migration tool to help with recovery bucket consolidation prior to migration.
4.	Entities for which there is no parity between the source and the target device, such as: <ul style="list-style-type: none"> • Backup schedules (default schedule used for migration) • Alert settings • CHAP settings 	Redefine these settings after the migration is complete.

Volume type mapping

The 5000-7000 series have several volume types; however, 8000 series allows only two volume types: Tiered (64 KB dedupe chunk size) and Tiered with Use this volume for less frequently accessed archival data option checked (512 KB dedupe chunk size). The different volume types from 5000/7000 series upon migration will be mapped to either Primary or Archival volume types only. The following table outlines the mapping between the volumes type on source devices and the current device.

	Volume type on 5000/7000 series in Web UI	Volume type on 8000 series in Azure portal
1.	Generic	Tiered
2.	SharePoint database volume	Tiered
3.	SharePoint transaction logs volume	Tiered
4.	SharePoint BLOBS volume	Tiered

	Volume type on 5000/7000 series in Web UI	Volume type on 8000 series in Azure portal
5.	File server volume	Tiered
6.	Cluster quorum volume	Tiered
7.	Archive and backup volume	Tiered
8.	Virtual machine data volume	Tiered
9.	Virtual machine OS volumes	Tiered
10.	Custom volume	Tiered or Tiered with <i>Use this volume for less frequently accessed archival data</i> option checked. The custom volume option has 16 KB – 512 KB fingerprint size. The 512 KB dedupe chunk size is mapped to Tiered for archival and all other sizes are mapped to Tiered.

Terminology mapping

Terminology used in the UI or documentation may be different when referring to 5000-7000 series appliances versus the 8000 series appliances. Use the terminology mapping table below to understand how the various entities map between the two series.

	On 5000-7000 series Web UI	On 8100/8600 physical and 8010/8020 cloud appliances in Azure portal
1.	Cloud configuration	Volume container
2.	Appliance	Device
3.	Cloud credential	Storage account
4.	Access control records	Access control records
5.	Snapshots	Local snapshots
6.	Cloud snapshots	Cloud snapshots
7.	Cloud clone	Does not exist
8.	Volume groups	Does not exist in the UI
9.	Volumes	Volumes
10.	Configuration file	Does not exist
11.	Policies	Backup schedules

Planning for Migration

Data migration is a complex procedure, which requires coordination of activities that may be performed by vendor representatives and multiple IT groups. Activities may need to occur at specific times to minimize service disruption. We recommend that you create a plan to ensure a smooth data migration.

This topic describes the high level flow of migration, operations not supported during migrations, limitations on entities that are being migrated, and the various factors that need to be considered to create a data migration plan to migrate data from your storage system using the migration feature.

Migration at-a-glance

This table summarizes the overall flow for migration, describing the steps required for different phases of migration and the location where these steps need to be performed.



Important

For planning and identifying the relevant information to streamline migration, your setup should meet the [migration prerequisites](#) described later in this document.

Phase	Description	Location	Tasks/Cmdlets used
1	Prepare	5000/7000 device	Step 1: Download the device configuration file
		StorSimple Migration tool	Step 2: Import configuration file Step 3: Merge recovery buckets Step 4: Estimate the migration
2	Migrate (Downtime starts at step 1 in this phase and ends when the latest backup is migrated and brought online.)	5000/7000 device	Step 1: Take volumes offline on host (downtime starts) Step 2: Take volumes offline on source device Step 3: Disable backup policies Step 4: Back up source device by taking a cloud snapshot
		Migration tool	Step 5: Migrate volume containers from source device
		StorSimple Device Manager	Step 6: Verify migrated configuration and restore volumes from backup catalog  Important Do not clone. Step 7: Mount and bring volumes online (downtime ends) Step 8: Modify backup policy
3	Finalize	Migration tool	Step 1: Commit or roll back migration Step 2: Post commit cleanup for cloud clones

Phase	Description	Location	Tasks/Cmdlets used
Post migration	Cleanup	5000/7000 device	Clean up the source device



Important

Plan for downtime on your StorSimple source device during steps 1-7 in the preceding table.

Creating a migration plan

To create your data migration plan, consider the following information:

General considerations

- Develop a schedule for migration.
- Identify any required equipment and resources. Availability of external resources (such as a vendor service representatives) may have an impact on your schedule.
- Identify periods of low user activity and I/O activity, to minimize disruption during the migration.



Important

We recommend that you schedule migration during a downtime maintenance window as the process is disruptive and data would be offline during the migration process.

- As a precaution, ensure that all the data on the existing storage has a recent back up.
- Understand the total length of downtime and communicate it to all the stakeholders.
- Coordinate with application administrators to gracefully shut down the applications so that you have consistent backups.

StorSimple specific considerations

- Identify any required pre-migration configuration changes. These changes are described in the [Migration Prerequisites](#) section.
- Identify the data that needs to be migrated. **The migration is done at a volume container/cloud configuration level.** On a 5000/7000 series, this is referred to as the cloud configuration. Therefore, you should prepare a list of cloud configurations that you wish to migrate.
- For the cloud configurations/volume containers that will be migrated, identify which associated cloud snapshots you would like to retain. The other cloud backups that you do not intend to migrate should then be deleted up from your 5000/7000 series device.
For cloud configurations/volume containers that will be migrated, there are certain limitations. See [limitation on entities being migrated](#).
- Use a cloud snapshot to back up the data on your source device. The time that this step takes depends on the amount of data added to your device since the last backup and could vary from a few hours to days.
- Estimate the migration duration by using the migration tool. For more information, see [Step 2: Estimate the migration \(No downtime\)](#).

- It is important to remember the device capacities when migrating. For instance, it is preferable that you migrate data from a 5520/7520 to an 8600 (both have extended storage via the EBOD).

StorSimple Cloud Appliance considerations

Consider this information prior to migrating data from a 5000-7000 series to an 8010/8020 cloud appliance.

- Review the [security considerations for using a cloud appliance](#).
- The cloud appliance has a provisioning limit of 30 TB/64 TB. You may only be able to perform a selective migration of volume containers from your source device.
- The cloud appliance performance is slow relative to a physical device.
- The cloud appliance should be created in the same geo as that of the storage account associated with the volume containers being migrated from the source device.
- You cannot migrate volume containers that contain storage accounts associated with cloud service providers other than Azure.

Migration Prerequisites

Here you will find the migration prerequisites for your legacy 5000 or 7000 series device and the 8000 series StorSimple device.

Important

Migration from StorSimple 5000/7000 to StorSimple 8000 is by subscription only. Please contact Microsoft Support to enable migration.

For the 5000/7000 series device (source)

Before you begin migration, ensure that:

- You have your 5000 or 7000 series source device; the device can be **live** or **down**.

Important

We recommend that you have serial access to this device throughout the migration process. Should there be any device issues, serial access can help with troubleshooting.

- Your 5000 or 7000 series source device is running software version v2.1.1.518. **Earlier versions are not supported.**
 - To verify the version that your 5000 or 7000 series is running, look at the top-right corner of your Web UI. This should display the software version that your device is running. For migration, your 5000 or 7000 series should be running v2.1.1.518.



- If your live device is not running v2.1.1.518, please upgrade your system to the required minimal version. For detailed instructions, refer to [Upgrade your system to v2.1.1.518](#).
 - If you are running v2.1.1.518, go to web UI to see if there are any notifications for registry restore failures. If registry restore had failed, run registry restore. For more information, go to how to [run registry restore](#).
 - If you have a down device that was not running v2.1.1.518, perform a failover to a replacement device that is running v2.1.1.518. For detailed instructions, refer to [DR of your 5000/7000 series StorSimple device](#).
 - Back up the data for your device by taking a cloud snapshot.
- Check for any other active backup jobs that are running on the source device. This includes the jobs on the StorSimple Data Protection Console host. Wait for the current jobs to complete.

For the 8000 series physical device (target)

Before you begin migration, ensure that:

- Your target 8000 series device is registered and running. For more information, see how to [deploy your StorSimple device with StorSimple Manager service](#).
- Your 8000 series device has the latest StorSimple 8000 Series Update 4 installed and is running 6.3.9600.17845 or later version. If your device does not have the latest updates installed, you will need to install the latest updates before you can proceed with migration. For more information, see how to [install latest update on your 8000 series device](#).
- Your Azure subscription is enabled for migration. If your subscription is not enabled, [contact Microsoft Support](#) to enable your subscription for migration.

For the 8010/8020 cloud appliance (target)

Before you begin migration, ensure:

- Your target cloud appliance is registered and running. For more information, see how to [Deploy and manage StorSimple Cloud Appliance](#).
- Your cloud appliance is running the latest StorSimple 8000 Series Update 5 software version 6.3.9600.17845. If your cloud appliance is not running Update 5, you will need to create a new Update 5 cloud appliance before you can proceed with migration. For more information, see how to [Create a 8010/8020 cloud appliance](#).

For the computer running StorSimple Migration tool

StorSimple Migration tool is a UI-based tool that enables you to migrate data from a StorSimple 5000-7000 series to an 8000 series device.

Prerequisites

To install the StorSimple Migration tool, use a computer that meets the following requirements.

The computer has Internet connectivity and:

- Is running the following operating system
 - Windows 10.
 - Windows Server 2012 R2 (or higher) to install StorSimple Migration tool.
- Has .NET 4.5.2 installed.
- Has a minimum of 5 GB of free space to install and use the tool.



Tip

If your StorSimple device is connected to a Windows Server host, you can install the migration tool on the Windows Server host computer.

To install StorSimple Migration tool

Perform the following steps to install StorSimple Migration tool on your computer.

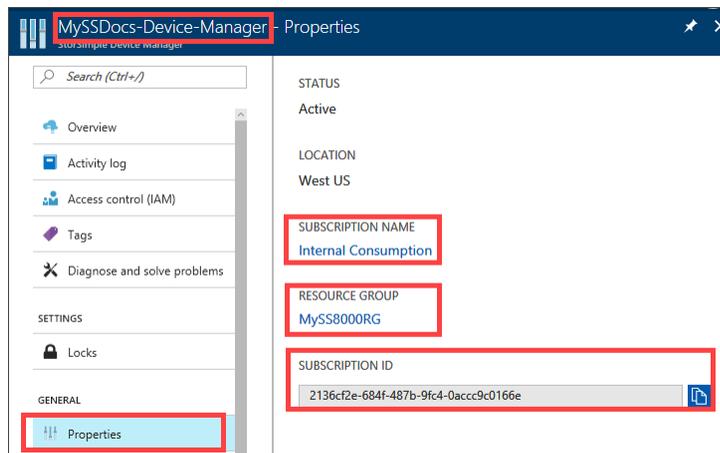
1. Copy the folder *StorSimple8000SeriesMigrationTool* to your Windows computer. Make sure that the drive where the software is copied has sufficient space.

Open the tool config file *StorSimple8000SeriesMigrationTool.exe.config* in the folder. Here is the snippet of the file.

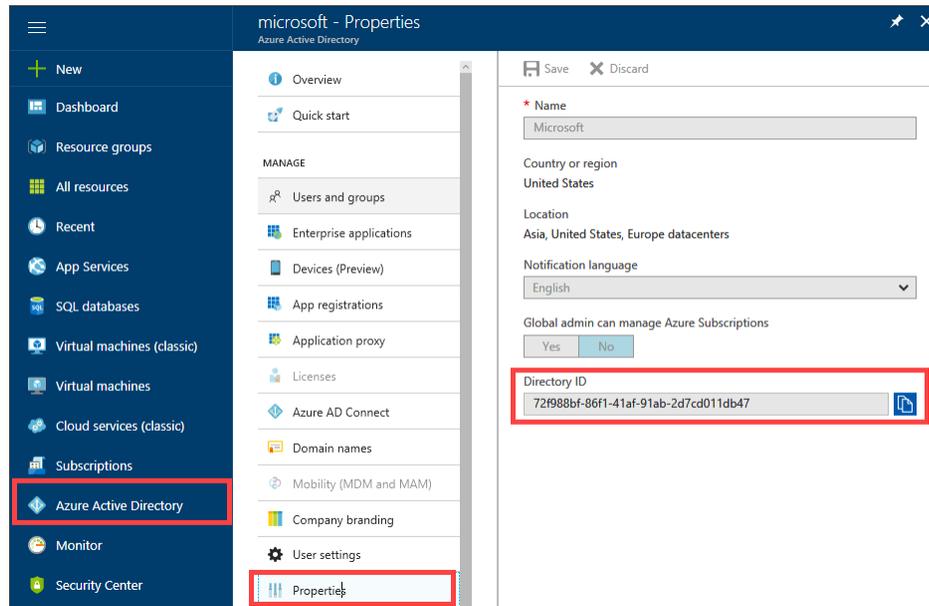
```
<add key="UserName" value="username@xyz.com" />
<add key="SubscriptionName" value="YourSubscriptionName" />
<add key="SubscriptionId" value="YourSubscriptionId" />
<add key="TenantId" value="YourTenantId" />
<add key="ResourceName" value="YourResourceName" />
<add key="ResourceGroupName" value="YourResourceGroupName" />
```

2. Edit the fields highlighted in yellow in the file and replace those with:

- **UserName** – User name to log in to Azure portal.
- **SubscriptionName** and **SubscriptionId** – Name and ID for your Azure subscription. In your StorSimple Device Manager service landing page, under **General**, click **Properties**. Copy the **Subscription name** and **Subscription ID** associated with your service.
- **ResourceName** – Name of your StorSimple Device Manager service in the Azure portal. Also shown under service properties.
- **ResourceGroup** – Name of the resource group associated with your StorSimple Device Manager service in the Azure portal. Also shown under service properties.



- TenantId – Azure Active Directory Tenant ID in Azure portal. Log in to Microsoft Azure as an administrator. In the Microsoft Azure portal, click **Azure Active Directory**. Under **Manage**, click **Properties**. The tenant ID is shown in the **Directory ID** box.



3. Save the changes made to the config file.
4. Run the *StorSimple8000SeriesMigrationTool.exe* to launch the tool. When prompted for credentials, provide the credentials associated with your subscription in Azure portal.
5. The StorSimple Migration tool UI is displayed.

Migrate from a Live 5000/7000 Device to 8000 Series Device

This section describes the step-by-step migration scenario from a live StorSimple 5000/7000 series device to an operational StorSimple 8000 series device.

Phase 1: Prepare

Where

Perform these steps on the StorSimple 5000-7000 series device and the Azure PowerShell computer.

Prerequisites

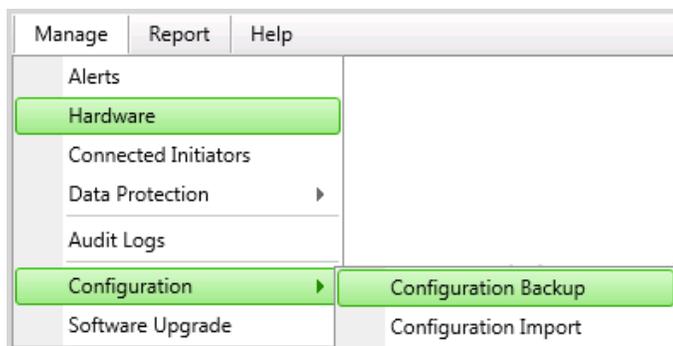
Ensure that you have completed all the prerequisites as detailed in migration prerequisites [for the 5000/7000 series device \(source\)](#).

Step 1: Download the device configuration file

On the 5000/7000 series devices, the configuration related to a device such as cloud credentials, cloud configurations, volume groups and volumes are contained in the device configuration file. This file can be used to recreate the configuration onto a replacement device in the event of a disaster.

To download the device configuration file

1. In the Web UI, go to **Manage > Configuration > Configuration Backup**.

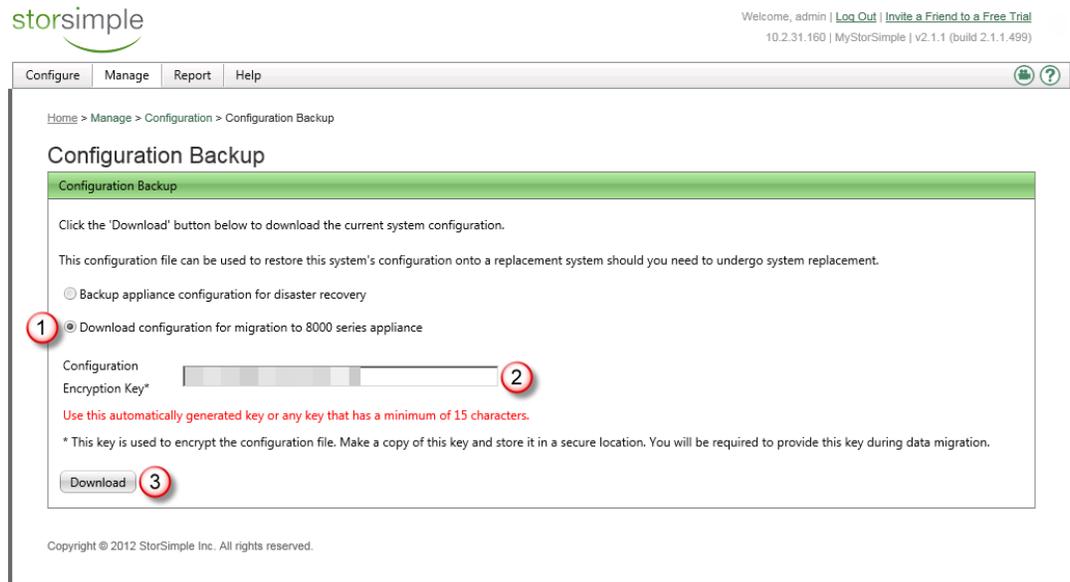


2. In the **Configuration Backup** page:
 - a. Choose option 2 to **Download the appliance configuration file for migration**.
 - b. You will be prompted for an **Encryption Key**. Use the automatically generated key or supply your own 15-character key. Save this key for future use.



Copy your encryption key and store it in a secure location. You will be required to provide this key on the Azure PowerShell interface during migration.

- c. Click **Download**. This will cause your appliance to package the entire system configuration into an encrypted backup file. The file contains information such as cloud credentials, cloud configuration, ACRs, CHAP - all the settings that may be needed to recreate this configuration on a replacement system. The file is encrypted using AES-256 bit encryption.



3. Copy the configuration file (it should be a .sse file) on the computer that has StorSimple Migration tool installed on it.



The next step is performed on the Azure PowerShell client connected to the Azure subscription under which your StorSimple Manager service is running.

Step 2: Import configuration file in migration tool

The configuration file on the 5000/7000 series device contains all the configuration related to the device, such as cloud credentials, volume groups. This file can be used to recreate the configuration on a replacement device in the event of a disaster.

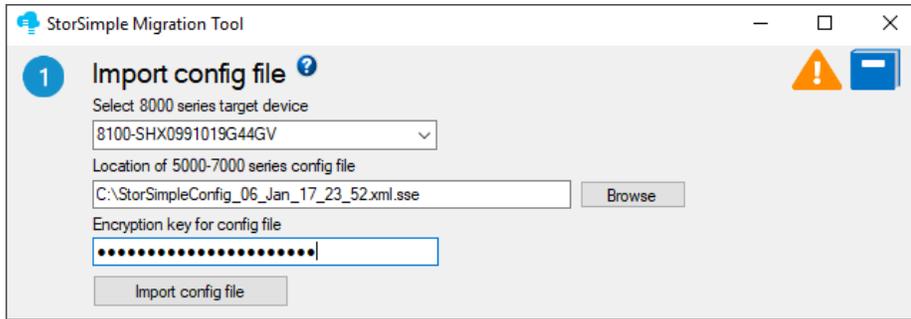
The migration tool uploads the device configuration file from your source 5000/7000 series device and the encryption key (provided when you downloaded the source device config file) as input, interprets the *xml* file, and then converts it to information that the StorSimple Device Manager service can interpret.

To import the configuration file in migration tool

1. Launch the StorSimple Migration tool. Wait a few minutes for the tool to initialize. Once the tool is initialized (the notification will go away), under **Select 8000 series target device**, from the dropdown list,

select a target 8000 series device connected with your service where you will migrate all the data will from the 5000-7000 series device.

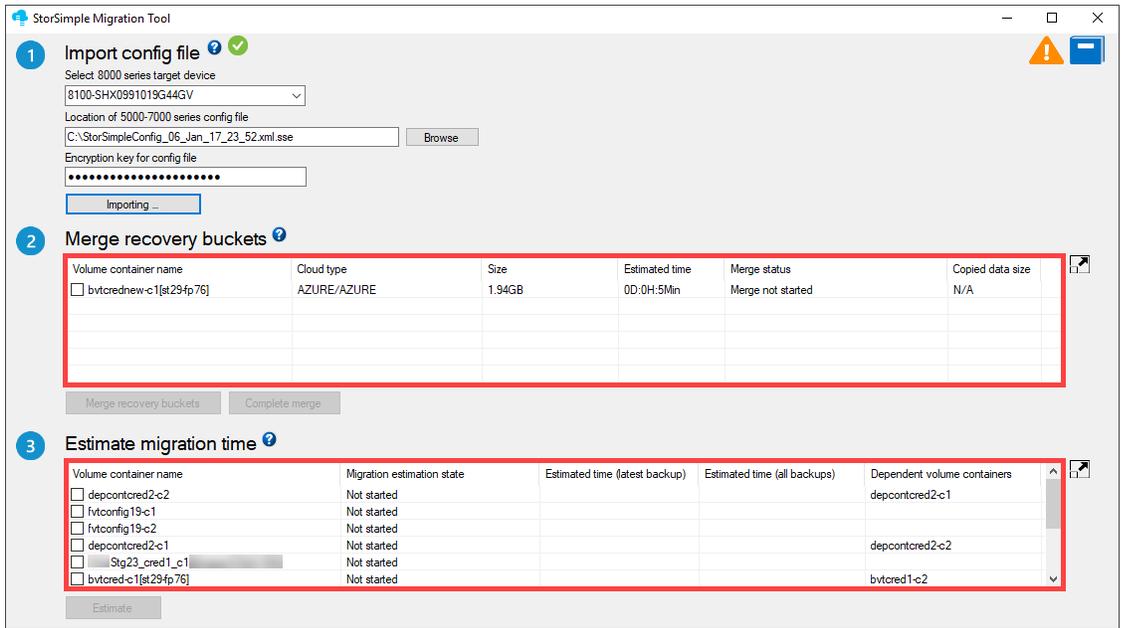
2. Under **Location of 5000-7000 series config file**, browse to and specify the path to the config file from the legacy 5000-7000 series device.
3. Under **Encryption key for config file**, specify the encryption key that was provided when the configuration file was downloaded from the source device. This encryption key is then used to decrypt the device config file by the migration tool.
4. Click **Import config file** to start the import.



 **Note**

- Importing the appliance configuration may take several minutes depending upon the amount of configuration data.
- Once the import is completed, you are notified. Make a note of the legacy config ID (CTRL+C to copy from the dialog) from the notification popup. This information is useful if you run into any issues with the computer running the migration tool.
- If there are any blocked volume containers, then you will receive an alert. See more information on [how to check the alerts](#).

Once the import is complete, the tool outputs the volume containers that are available for migration, and volume containers in the recovery buckets, if any.



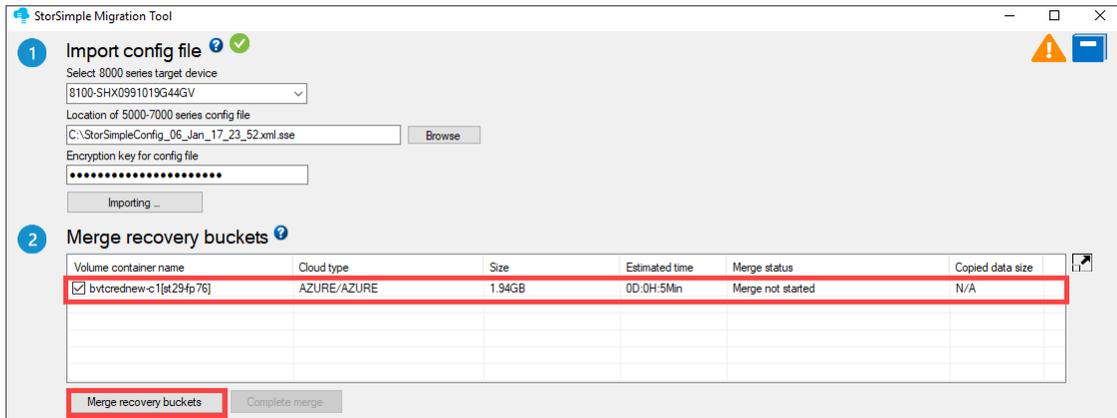
Step 3: Merge recovery buckets

Skip this step if your volume containers do not have recovery buckets. A recovery bucket may exist if you have done a disaster recovery on your source device using the import operation. The merge operation will transfer the fingerprints of the data in the recovery bucket to the primary bucket.

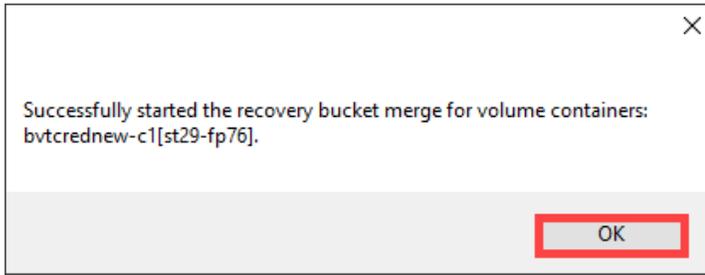
If recovery buckets exist, then the tabular list displays the volume containers associated with the recovery buckets.

To merge recovery buckets

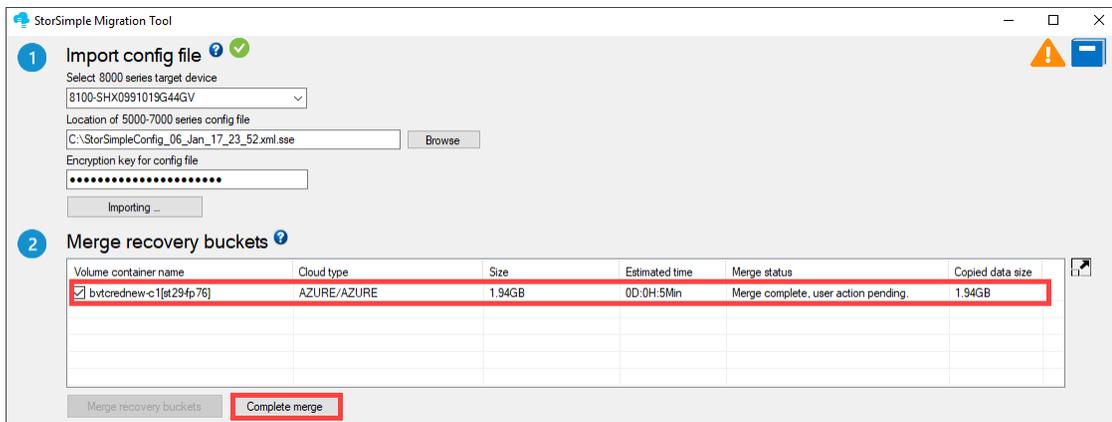
1. To start the merge, select the volume container in the list, and click **Merge recovery buckets**.



2. A notification pops up indicating that the merge has started.

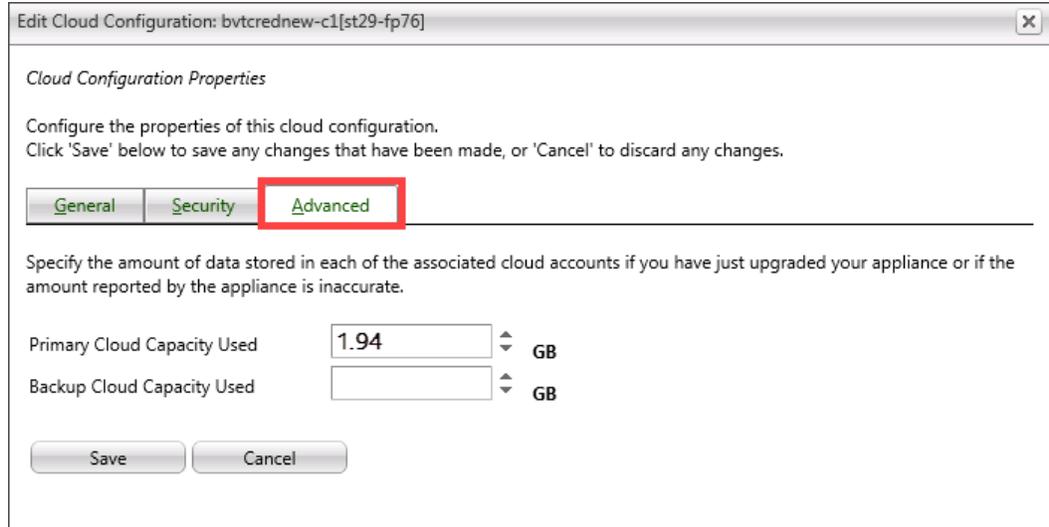


3. The status of the merge is displayed in the list in the **Merge status** column against the selected volume container. Once the status is **Merge complete, pending user action**, click **Complete merge**.



4. From the preceding table, make a note of the **Copied data size** for your volume containers. For multiple containers, you need to copy copied data for each containers.
5. A dialog pops up informing you of steps that need to be performed on your StorSimple 5000/7000 series device.
 - a. You need to perform a registry restore on your source device. This will update the metadata in the appliance. For more information, go to [restore a backup registry](#).

- b. You also need to modify the cloud configurations on your source device. During the recovery bucket merge, the data from the recovery bucket has copied into the primary bucket. The primary bucket consumption increases by the copied data size. Go to **Edit cloud configuration**

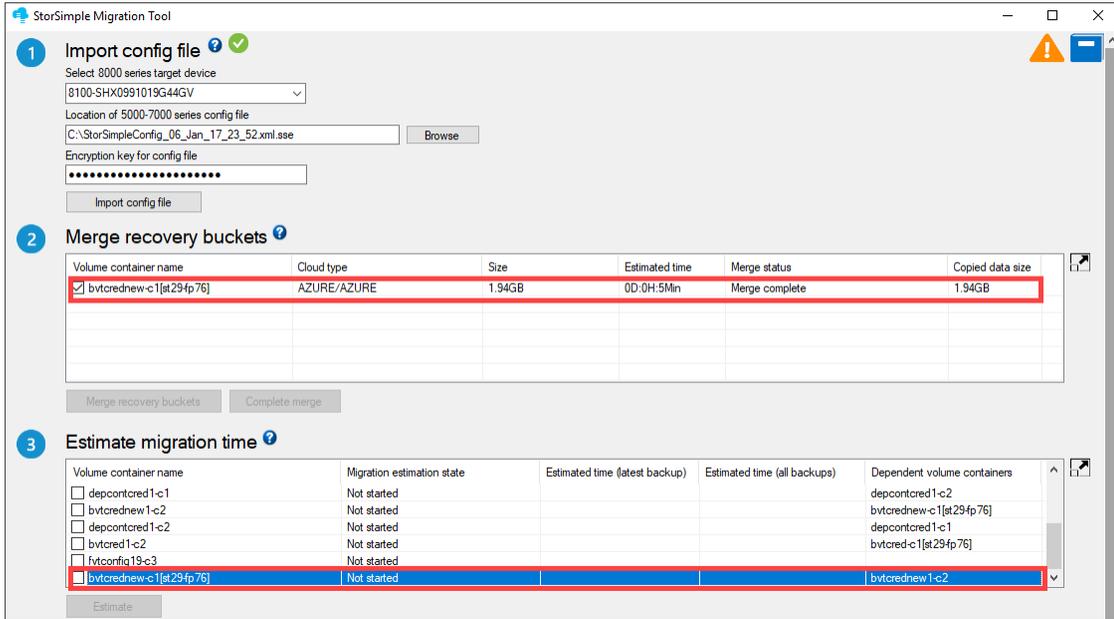


and then click **Advanced**. Add the **Copied data size** value to the **Primary cloud capacity used**.

- c. Check the boxes for the options in the **Post recovery bucket merge** dialog and click **Complete recovery bucket merge**.



This should complete the recovery bucket merge as shown by the **Merge status**. The recovery bucket is also added to the list of volume containers used to **Estimate migration time**.



Step 4: Estimate the migration

The next step in the process is to estimate the duration of migration. This operation estimates the duration and validates the specified or all the volume containers that need to be migrated.

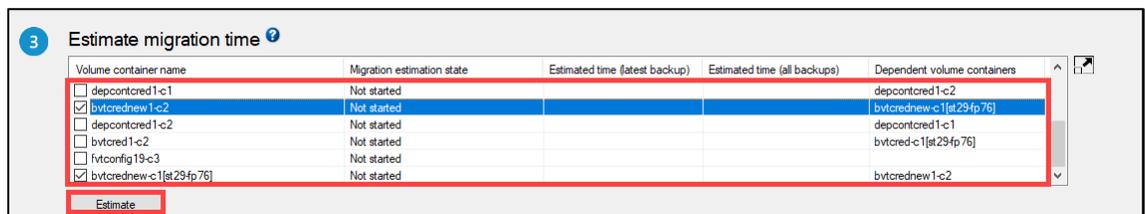
Important

The estimates provided are not exact and are calculated based on following assumptions:

- Bandwidth throttling is not enabled. If bandwidth throttling is enabled for the volume containers that are being migrated, then the estimates will be off, and the total time will increase proportionately.
- Total network bandwidth is available for migration and there is no other cloud traffic. This may not be true. We recommend that as a best practice, migration should be performed in off-peak hours such as weekends or nights. Estimation assumes that the total network bandwidth is 80 Mbps.

To estimate the migration plan

1. Select volume containers that you want to migrate and click **Estimate migration time**.



The estimation process may take minutes to days depending upon the data on the system.

- Once the estimation is complete, you can see the time required to migrate each selected volume container is populated in the **Estimated time (all backups)**. The volume containers for which the time is estimated also become available under **Migrate your backups** section.

The screenshot shows two sections of the migration tool interface:

3 Estimate migration time

Volume container name	Migration estimation state	Estimated time (latest backup)	Estimated time (all backups)	Dependent volume containers
<input type="checkbox"/> deprecrcd1-c1	Not started			deprecrcd1-c2
<input checked="" type="checkbox"/> bvtcrednew1-c2	Complete	00:15:00	01:30:00	bvtcrednew-c1[at29fp76]
<input type="checkbox"/> deprecrcd1-c2	Not started			deprecrcd1-c1
<input type="checkbox"/> bvtcred1-c2	Not started			bvtcred-c1[at29fp76]
<input type="checkbox"/> fvtconfig19-c3	Not started			
<input checked="" type="checkbox"/> bvtcrednew-c1[at29fp76]	Complete	00:15:00	01:30:00	bvtcrednew1-c2

4 Migrate your backups

Volume container name	Migration state	Percent	Policy	Created on	Status
<input type="checkbox"/> bvtcrednew1-c2	Not started	0			
<input type="checkbox"/> deprecrcd2-c2	Not started	0			
<input type="checkbox"/> bvtcrednew-c1[at29fp76]	Not started	0			
<input type="checkbox"/> deprecrcd2-c1	Not started	0			

For the specified volume containers for migration, the following parameters should be noted:

- Estimated Time (latest backup)** - Total time for the latest backup associated with the volume container(s) being migrated to be completely translated and show up in the backup catalog for the StorSimple 8000 series. The translation continues for the remaining backups associated with volume container(s) being migrated. When the latest backup becomes available, you can start with the restore.
- Estimated Time (all backups)** - Total time for all the backups associated with the volume container(s) being migrated to be completely translated and show up in the backup catalog for the StorSimple 8000 series.

Important

We estimate the migration using an average network speed of 80 Mbps for downloading metadata. You do not have an option to calculate using a different bandwidth.

Once the estimate for the time required to migrate is complete, you are done with Phase 1.

Phase 2: Migrate

Migration is performed at the volume container level on the 8000 series. When the volume containers are migrated from the 5000-7000 series device, only the ownership of the volume containers is transferred from the source (in this case 5000/7000 series) device to the target (8000 series) device.

Where

Perform these steps on StorSimple 5000-7000 series device and Migration tool.

Prerequisites

- Ensure that Phase 1 has successfully completed prior to beginning this phase.



Important

Phase 2 involves downtime.

Step 1: Take volumes offline on the host server (downtime starts)

To take the volumes offline on the host server connected to your StorSimple source device

1. Sign into the Web UI with credentials at this URL: <https://<ip-address of 5000 or 7000 device>>
Replace <ip_address of 5000 or 7000 series device> with the IP address of your source device's management interface. If you do not know the IP address of your management interface, use a serial cable in conjunction with the `Setup` command. For detailed instructions, refer to the [Device Quick Start Guide](#).
2. Identify the volumes that will be migrated based on the volume groups in your cloud configurations in the migration planning checklist.
 - a. To identify the volumes, navigate to **Configure > Volumes**.
 - b. In the tabular list of volumes, filter by a cloud configuration that you want to migrate.

The screenshot shows the StorSimple web interface. At the top, there's a navigation bar with 'Configure', 'Manage', 'Report', and 'Help'. Below that, the breadcrumb 'Home > Configure > Volumes' is visible. The main heading is 'Volumes', followed by a brief instruction: 'Configure the volumes that you wish to expose to the network, and associate the volume with the appropriate cloud storage account. You must first configure cloud configurations using Configure > Cloud Configurations before you can create volumes.'

The 'Volumes' table has the following data:

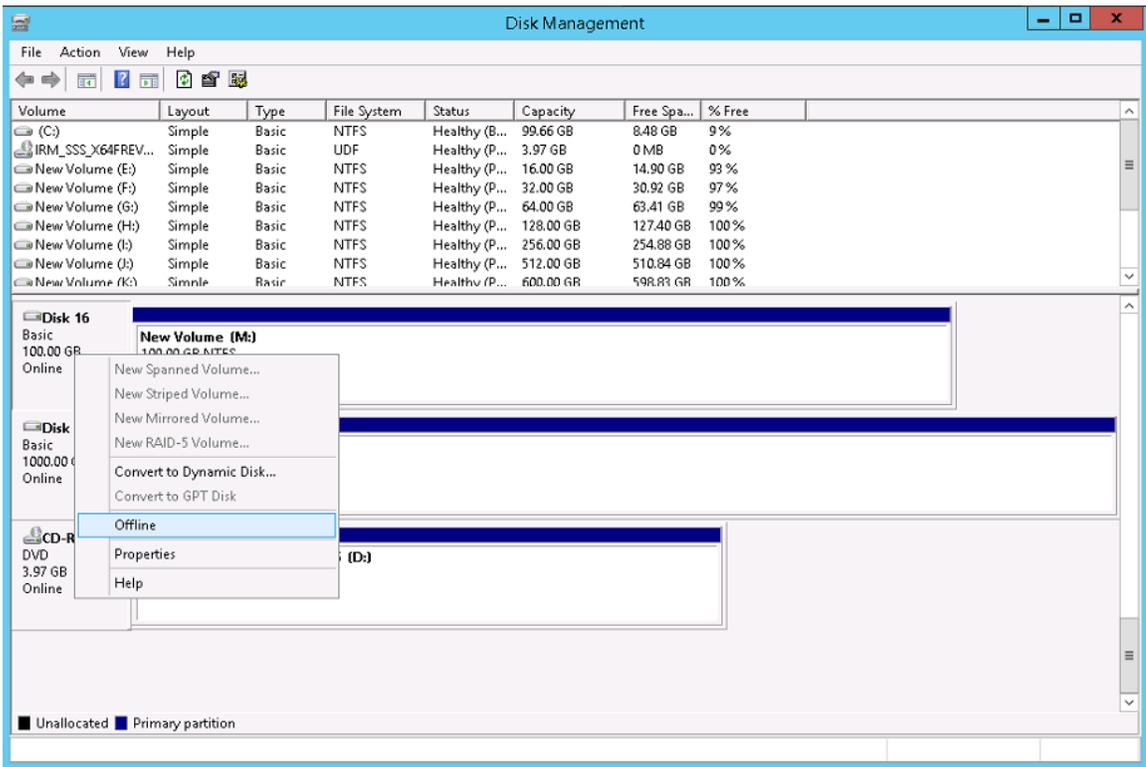
Name	Cloud	Online	Capacity	Access Type	ACR	Application
bvtcrednew-c1-v2-restore	bvtcrednew-c1[st29-fp76]	✓	2 GB	Read-Write	acr11	Generic Volume
bvtcrednew1-c2-v2	bvtcrednew1-c2	✓	3 GB	Read-Write	acr11	Generic Volume
bvtcrednew1-c2-v1	bvtcrednew1-c2	✓	3 GB	Read-Write	acr11	Generic Volume
bvtcrednew-c1-v1-restore	bvtcrednew-c1[st29-fp76]	✓	2 GB	Read-Write	acr11	Generic Volume

At the bottom of the table, there is a '+ Create Volume' button and a 'Refresh' button.

- c. The list of volumes associated with cloud configuration will be presented. For each of these volumes, identify and make a note of:
 - The LUN ID number
 - The associated ACR

You will need the LUN ID number to identify the appropriate volumes to take offline on the host server. You will need the ACRs once the migrated backups have restored the volumes, which then need to be reassigned with the ACRs.
3. Take the volumes identified in previous step offline on the host server. This eliminates any potential risk of data corruption on the volume. To take a volume offline, for a device connected to Windows Server host (2012 or 2012 R2), perform the following steps on the host:
 - a. On your Windows host, press **Windows Logo key + X**, and then click **Run**.
 - b. In the **Run** dialog box, type **Diskmgmt.msc**. Click **OK**, and the **Disk Management** dialog box will appear. The right pane will show the volumes on your host.
 - c. In the **Disk Management** window, the mounted volumes will appear.

- d. Right-click the discovered volume (click the disk name), and then click **Offline**.



4. For detailed steps on VMware or Linux hosts, refer to the instructions for your specific host operating system.

 **Important**

If you have volume groups that span across multiple cloud configurations, then all the volumes associated with those cloud configurations must be taken offline.

Step 2: Take volumes offline on the source device (downtime)

To take the volumes offline on your source device

1. Go to **Configure > Volumes**. Identify the volumes that were taken offline on your StorSimple host. You will now need to take those volumes offline on your StorSimple device.

 **Important**

If you have volume groups that span across multiple cloud configurations, then all the volumes associated with those cloud configurations must be taken offline.

2. To take a volume offline on the device, you will need to edit that volume from the list of volumes presented on the **Volumes** page. To edit a configured volume, click **Edit** icon found on the left side of the tabular list on the same row as the volume you wish to edit. This will display the **Volume Properties** dialog box.

- In the **General** tab, uncheck the **Online** checkbox. This would cause your volume to go offline.

Volume Properties (Serial Number SS-VOL-3159170d-e8d9-48d6-a367-3502425af6b1)

From this page, manage the properties of this volume. Click 'Save' below to save any changes that have been made, or 'Cancel' to not apply any changes to this volume.

General Security

Name: bvtcrednew1-c2-v1

Type: Generic Volume

Cloud Configuration: bvtcrednew1-c2

Access Type: Read-Write

Capacity: 3 GB (Maximum value: 65536 GB)

Online:

Enable Monitoring: ?

Save Cancel

- Repeat this step for all the volumes in the cloud configuration that you took offline on the host. To verify that all volumes are offline, navigate to **Configure > Volumes**. Filter the volume list by cloud configuration that you intend to migrate. In the filtered list, the **Online** column will have no green checks, indicating that the volumes are offline.

storsimple

Welcome, admin | [Log Out](#) | [Invite a Friend to a Free Trial](#)
10.2.25.125 | st25-fp75 | v2.1.1 (build 2.1.1.548)

Configure Manage Report Help

Home > Configure > Volumes

Volumes

Configure the volumes that you wish to expose to the network, and associate the volume with the appropriate cloud storage account. You must first configure cloud configurations using Configure > Cloud Configurations before you can create volumes.

Volumes						
Name	Cloud	Online	Capacity	Access Type	ACR	Application
Filters: <input type="text"/>	All	All	No Filter	All	<input type="text"/>	All
bvtcrednew-c1-v2-restore	bvtcrednew-c1[st29-fp76]		2 GB	Read-Write	acr11	Generic Volume
bvtcrednew1-c2-v2	bvtcrednew1-c2		3 GB	Read-Write	acr11	Generic Volume
bvtcrednew1-c2-v1	bvtcrednew1-c2		3 GB	Read-Write	acr11	Generic Volume
bvtcrednew-c1-v1-restore	bvtcrednew-c1[st29-fp76]		2 GB	Read-Write	acr11	Generic Volume

[+ Create Volume](#) [Refresh](#)

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Step 3: Disable backup policies on source device (downtime)

You should disable backup policies associated with all the cloud configurations that you intend to migrate.

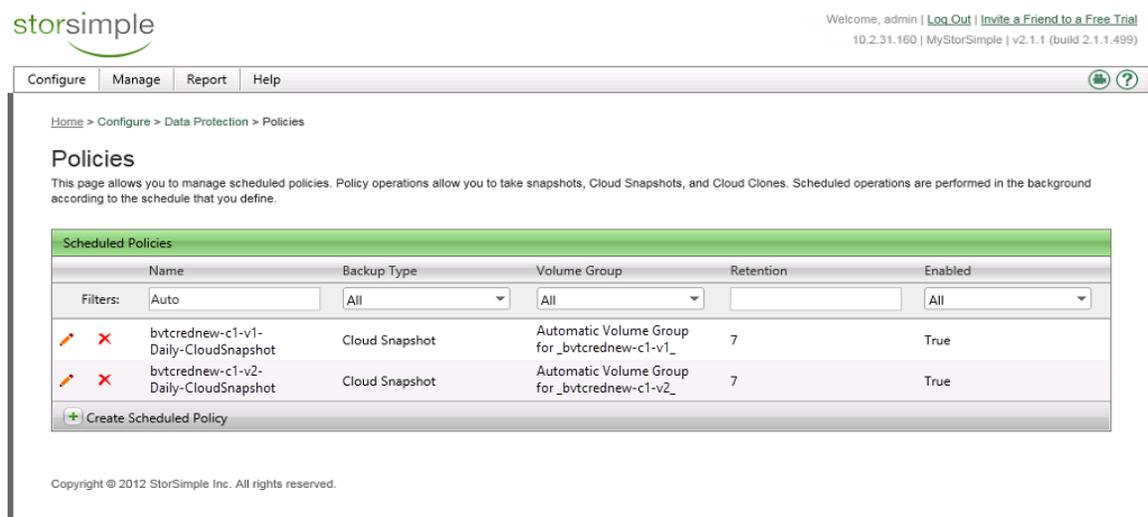
To disable the backup policies

1. Identify the volume groups associated with the cloud configuration that you intend to migrate. Go to **Configure > Data Protection > Volume Groups**. You can see a tabular list of all the volume groups present on your device. Make a note of all the volume groups associated with the cloud configuration that you want to migrate.
2. Identify the policies associated with the volume groups identified in the previous step. Navigate to **Configure > Data Protection > Policies**. In the **Policies** page, you can see a tabular list of all the scheduled policies on the device. Identify the policies that you will need to disable.

Note

The automated daily policies should also be disabled. These will not show up when you filter by volume groups.

3. To modify a policy, click on the pencil icon . In the **Edit Scheduled Policy** dialog, click **General**. Clear the **Enable** field. This should disable the policy.
4. Repeat the step 3 for all the policies associated with volume groups in the cloud configurations that you intend to migrate. To verify that a policy has been disabled, in the tabular list on the **Policies** page, the **Enabled** column should be **False** for all the policies associated with volume groups in the cloud configuration that is being migrated.



The screenshot shows the StorSimple web interface. At the top, there is a navigation bar with 'Configure', 'Manage', 'Report', and 'Help' tabs. The main content area is titled 'Policies' and includes a breadcrumb trail: 'Home > Configure > Data Protection > Policies'. Below the title, there is a brief description: 'This page allows you to manage scheduled policies. Policy operations allow you to take snapshots, Cloud Snapshots, and Cloud Clones. Scheduled operations are performed in the background according to the schedule that you define.' A table titled 'Scheduled Policies' is displayed with the following columns: Name, Backup Type, Volume Group, Retention, and Enabled. The table contains two rows of policies, both with 'Enabled' set to 'True'. Below the table is a '+ Create Scheduled Policy' button. The footer of the page reads 'Copyright © 2012 StorSimple Inc. All rights reserved.'

Name	Backup Type	Volume Group	Retention	Enabled
bvtcrednew-c1-v1-Daily-CloudSnapshot	Cloud Snapshot	Automatic Volume Group for _bvtcrednew-c1-v1_	7	True
bvtcrednew-c1-v2-Daily-CloudSnapshot	Cloud Snapshot	Automatic Volume Group for _bvtcrednew-c1-v2_	7	True

Step 4: Back up source device data by taking a Cloud Snapshot (downtime)

Use a cloud snapshot to back up the data on your source device.

To back up the data

1. Start with the list of volume groups that you will need to back up.
2. Back up each volume group manually by using the [Take backup option](#).

3. Repeat this for all the volume groups within the cloud configuration identified for migration.

You cannot proceed to the next step until all the backups are complete. After the backups are complete, note down the backup names. Go to **Manage > Data Protection > Backups** to view the backup names. These backups will be later used to restore data.

Step 5: Migrate selected volume container(s) from source device (downtime)

The following actions will happen in this step:

- Ownership transfer of volume containers from the source to the target device.
- In the StorSimple Device Manager service, creation of storage account, bandwidth settings, and ACRs associated with the volume containers, based on the existing settings on the source device.
- Creation of backup policies (excluding the schedules) to the target device.
- Backup metadata translation to the 8000 series format. As the metadata is translated, the backups become available.
- Latest backups are prioritized and made available first.
- You can restore with the latest backup while the migration is still converting the older backups.

The time taken for this process was estimated as described in [Step 4: Estimate the migration](#).

To migrate the selected volume containers

1. Under **Migrate your backups**, select the volume containers to migrate and click **Migrate**.

If the selected volume containers have volume groups that span across multiple volume containers, then all the related volume containers must be failed over together. If you select one of the dependent containers, the corresponding containers in the set are also selected and are migrated together.

StorSimple Migration Tool

1 Import config file

Select 8000 series target device
8100-SHX0991019G44GV

Location of 5000-7000 series config file
C:\StorSimpleConfig_06_Jan_17_23_52.xml.sse

Encryption key for config file
.....

2 Merge recovery buckets

Volume container name	Cloud type	Size	Estimated time	Merge status	Copied data size
<input checked="" type="checkbox"/> bvtcrednew-c1[st29fp76]	AZURE/AZURE	1.94GB	00:0H:5Min	Merge complete	1.94GB

3 Estimate migration time

Volume container name	Migration estimation state	Estimated time (latest backup)	Estimated time (all backups)	Dependent volume containers
<input type="checkbox"/> depcontcred1-c1	Not started			depcontcred1-c2
<input checked="" type="checkbox"/> bvtcrednew1-c2	Complete	00:15:00	00:15:00	bvtcrednew-c1[st29fp76]
<input type="checkbox"/> depcontcred1-c2	Not started			depcontcred1-c1
<input type="checkbox"/> bvtcred1-c2	Not started			bvtcred-c1[st29fp76]
<input type="checkbox"/> fvtconfig19-c3	Not started			
<input checked="" type="checkbox"/> bvtcrednew-c1[st29fp76]	Complete	00:15:00	00:15:00	bvtcrednew1-c2

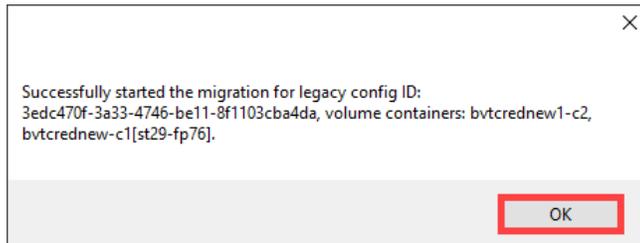
4 Migrate your backups

Volume container name	Migration state	Percent
<input checked="" type="checkbox"/> bvtcrednew1-c2	Not started	0
<input type="checkbox"/> depcontcred1-c2	Not started	0
<input checked="" type="checkbox"/> bvtcrednew-c1[st29fp76]	Not started	0
<input type="checkbox"/> depcontcred2-c1	Not started	0

Backup Sets

Policy	Created on	Status

2. A notification pops up indicating that the migration has successfully started.



Important

During the migration process, do not delete the volume containers on StorSimple Device Manager for 8000 series or on the 5000/7000 series web UI.

- The latest backups show up in the backup sets once translated. Once the migration is complete, the **Migration state** shows as **Complete** and **Percent** is **100**. The backup sets associated with the backups are also populated in the corresponding table. Only a limited numbers of backups (30) are displayed at any

time in the migration tool. The Azure portal will display all the backups. The **Commit or roll back migrated backups** table is also populated.

For the migrated volume containers:

- The schedules are not migrated. The schedule from the legacy appliance is replaced on the target device by a default daily schedule that begins a day later.
- The policies from the legacy appliance are attached to the migrated volume containers. On the target device, the policies have the same name as that on the source device and are disabled.
- The ACRs from the source device are also recreated on the target. Only the Initiator name and IQN are used, if there is any other information associated with source ACRs such as CHAP user, it is ignored.

Step 6: Verify migrated configuration and restore volumes from backup catalog (downtime)

Verify migrated volume containers in the Azure portal

Use the Azure portal to verify that the volume containers were successfully migrated.

To verify that the volume containers were migrated

- Open the Azure portal on your target 8000 series device.
- On your StorSimple Device Manager service blade, click **Devices**. In the list of devices, click your target device and go to **Manage > Volume Containers**.

3. In the list of volume containers, ensure that the volume containers that you migrated from the source device are present.

NAME	VOLUMES	CLOUD STORAGE	BANDWIDTH SETTING	STORAGE ACCOUNT
bvtcrednew1-c2	0	4.74 GB	Default	ssqafpmig
bvtcrednew-cl[st29-fp76]	0	4.74 GB	Default	ssqafpmig

 **Note**

The migrated volume containers have the legacy names and have no volumes.

4. Verify bandwidth settings associated with the volume containers. Only the bandwidth settings are migrated from the QoS templates; the schedules are not migrated. You will need to modify these settings if you need the schedules.

Verify migrated backups, backup policies, and ACRs in the Azure portal

Use the Azure portal to verify that the migrated backups are present on the target device.

To verify that the migrated backups are present

1. Go to your StorSimple Device Manager service. Select the device and then go to **Manage > Backup catalog**.
2. Filter by the appropriate time range.

 **Note**

Backups are migrated with the timestamp from the source device. Therefore, your search query should include the appropriate time range based on the duration in which the backups were created.

- In the list of backup sets displayed, verify that the migrated backup sets from the source device are present.

Backup catalog
8100-SHX0991019G44GV

Time range: Past year
Devices: 8100-SHX0991019G44GV
Filter by: Backup policy
Backup policy: All

Apply Reset

The query returned 3 items.

Filter items...

NAME	TYPE	SIZE	CREATED ON	VOLUM...	INITIATED
▼ bvtcrednew-vg1 (st29-fp76)	Cloud snapshot	10 GB	1/6/2017 15:42:21	4	Manually
bvtcrednew-c1-v2-restore	Tiered	2 GB			
bvtcrednew1-c2-v2	Tiered	3 GB			
bvtcrednew1-c2-v1	Tiered	3 GB			
bvtcrednew-c1-v1-restore	Tiered	2 GB			
▼ bvtcrednew-vg1 (st29-fp76)	Cloud snapshot	10 GB	1/6/2017 15:19:55	4	Manually
bvtcrednew-c1-v2-restore	Tiered	2 GB			
bvtcrednew1-c2-v2	Tiered	3 GB			
bvtcrednew1-c2-v1	Tiered	3 GB			
bvtcrednew-c1-v1-restore	Tiered	2 GB			
▼ bvtcrednew-vg1 (st29-fp76)	Cloud snapshot	4 GB	1/6/2017 13:33:25	2	Manually
bvtcrednew-c1-v1	Tiered	2 GB			
bvtcrednew-c1-v2	Tiered	2 GB			

- Check if the backup you took prior to migration is available. Once the latest backup is available, you can proceed to restore. The older backups will continue to migrate.

To verify that the migrated backup policies are present

- Go to your StorSimple Device Manager service. Select the device and then go to **Manage > Backup policies**.
- In the list of backup policies displayed, verify that the migrated backup policies from the source device are present and are disabled.

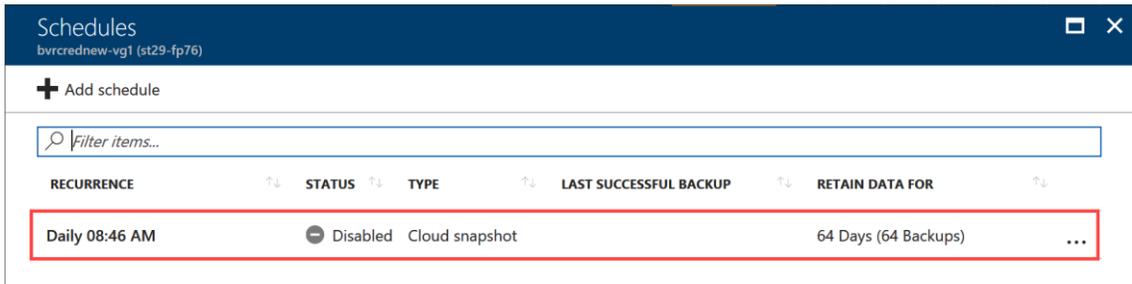
Backup policy
8100-SHX0991019G44GV

+ Add policy

Filter items...

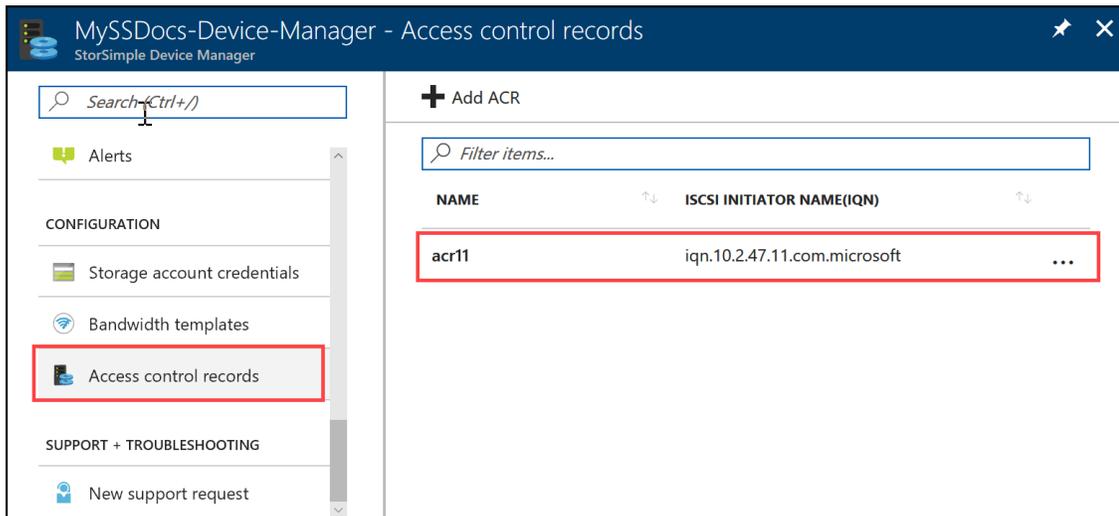
NAME	LAST SUCCESSFUL BACKUP	NEXT BACKUP	VOLUMES	SCHEDU...
bvtcrednew-vg1 (st29-fp76)	1/6/2017 15:42:21		0	1

- The schedules are not migrated. A default schedule is created that starts a day later. Click the backup policy to view the attached schedule.



To verify that the ACRs are recreated

- Go to your StorSimple Device Manager service. Go to **Configuration > Access control records**.
- In the list of ACRs displayed, verify that the ACRs from the source device are recreated. Only the ACR name and IQN are imported from the source device. If there is any other information associated with source ACRs such as CHAP user, it is ignored.



Restore volumes from backup catalog

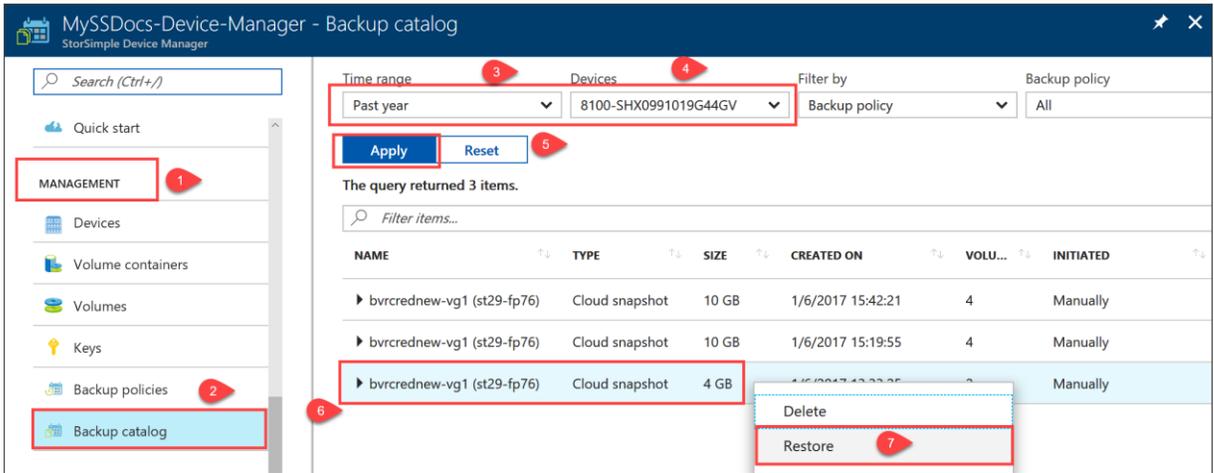
Note

Use the restore option, do not use the clone option.

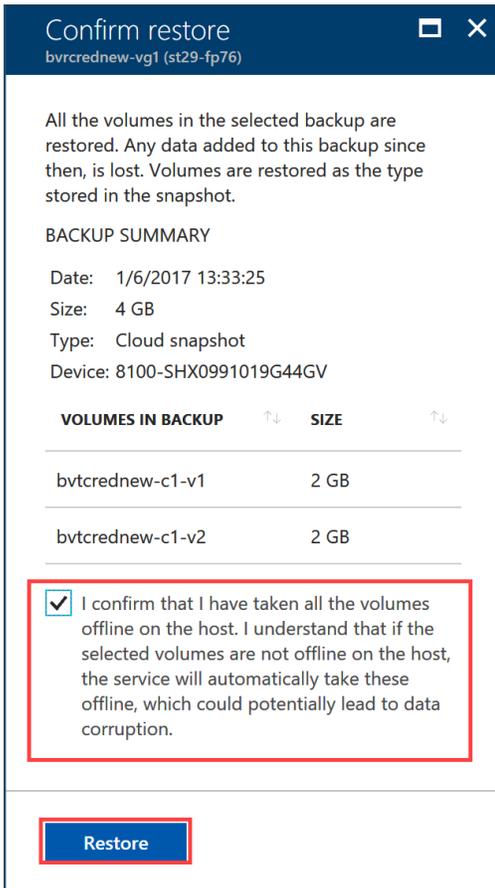
To restore volumes from a migrated backup set

- Go to StorSimple Device Manager service. Click **Backup catalog** and select the appropriate time-range (based on the timestamp associated with the backup on the legacy device) and the device. Click Apply.
- Select the backup set.

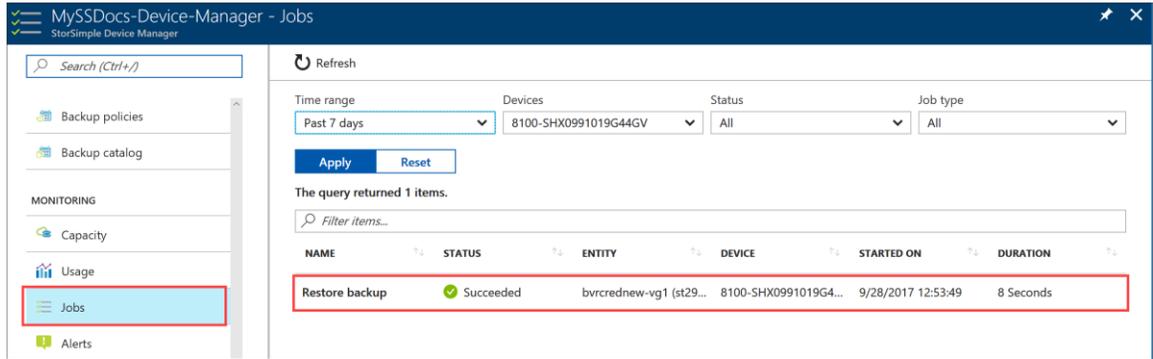
3. Right-click and select **Restore**.



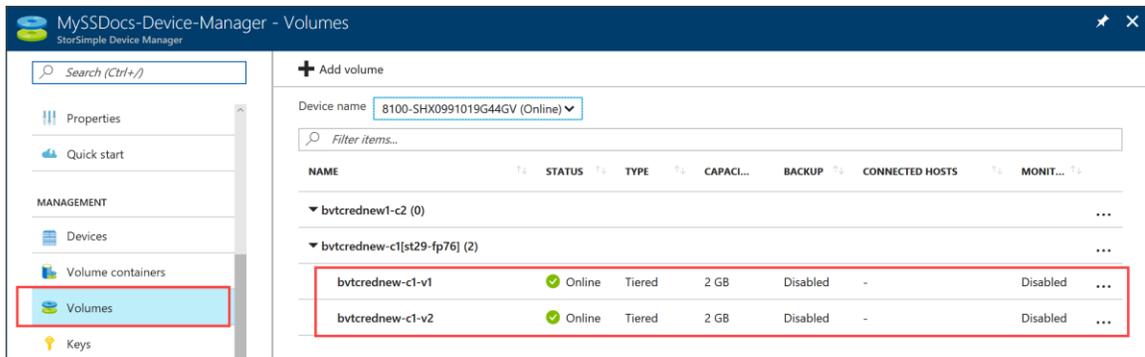
4. You are prompted for confirmation. Review the restore information, ensure that the volumes are offline on the host and click **Restore**.



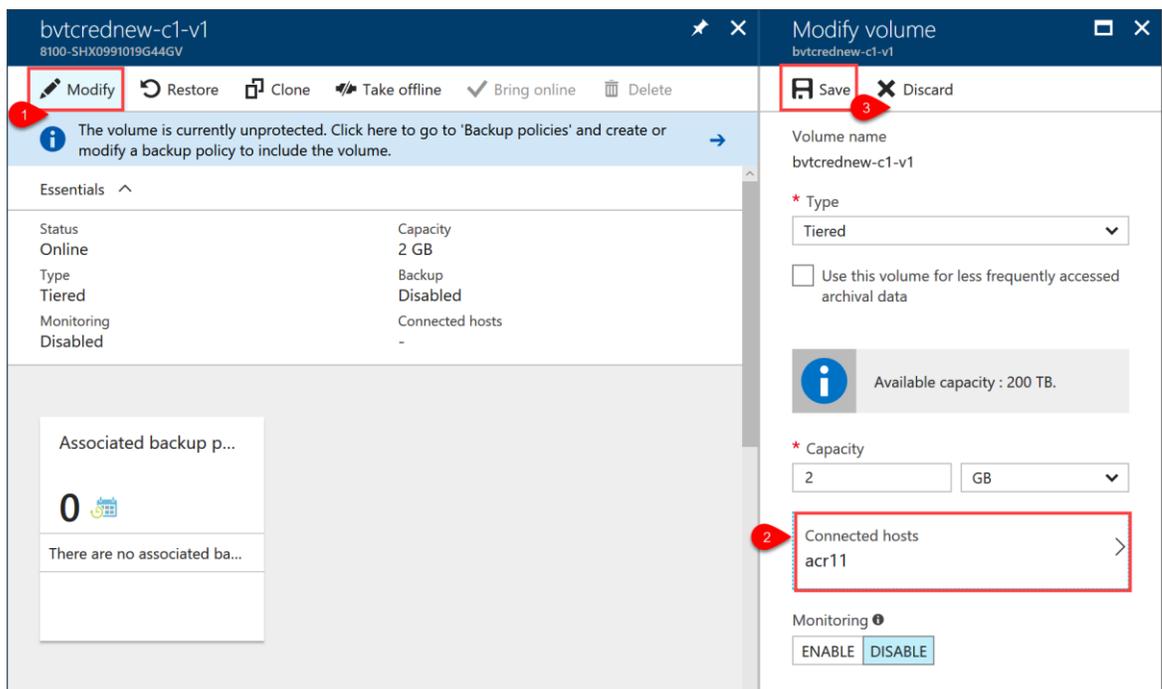
- This initiates a restore job that you can view by accessing **Jobs**.



- After the restore is complete, verify the ACRs associated with the volumes in the migrated volume containers. By default, the restored volumes show up with no access.



- Modify the volumes, associate with appropriate ACRs, and save the changes. The ACRs are migrated from the legacy device and are available to associate with the volumes.





Important

Do not attempt a volume conversion from tiered to locally pinned volume, at this time. Any volume conversion should be done after the migration is committed.

Step 7: Mount and bring volumes online (downtime ends)

After the volumes are restored, the next step is to mount and bring the volumes online on the host server.

If you are running Windows Server as an initiator for volumes on the StorSimple device, perform the steps below to mount and bring volumes online. For other operating systems, refer to host operating system-specific documentation.

To mount and bring volumes online

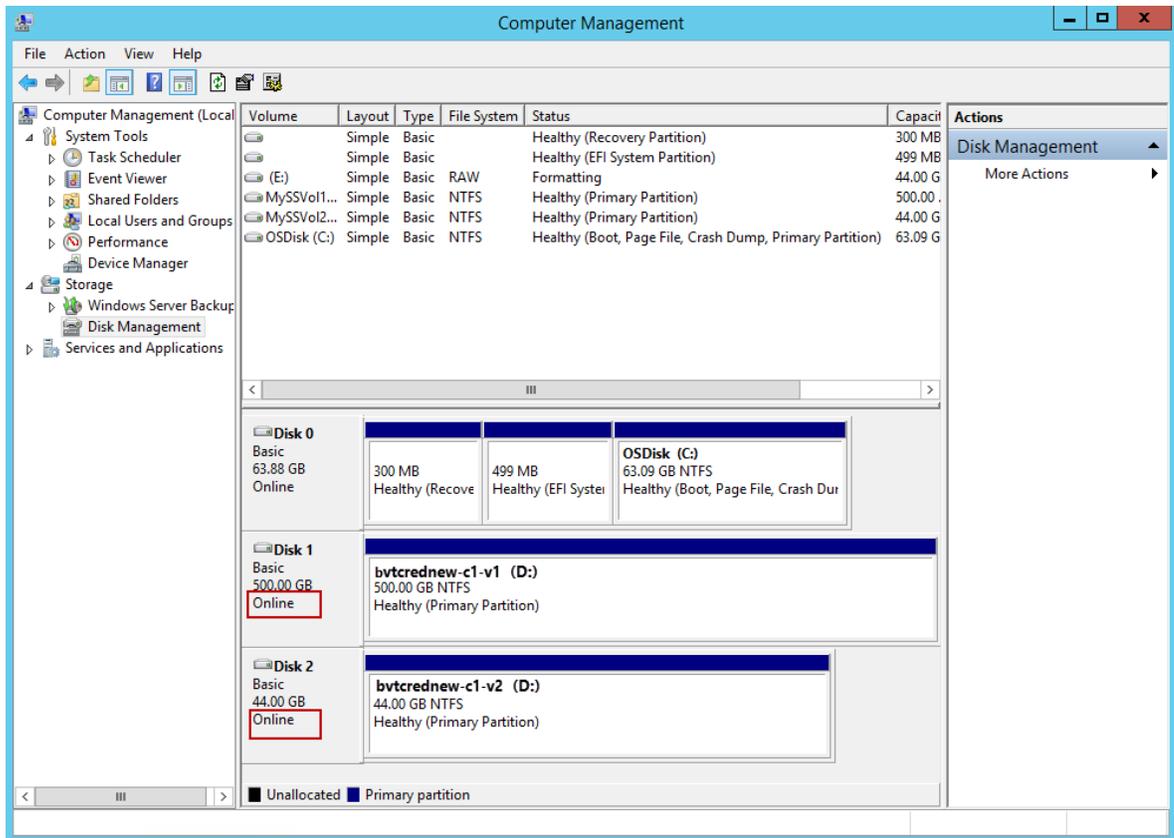
1. Start the Microsoft iSCSI initiator.
2. In the **iSCSI Initiator Properties** window, perform the following steps:
 - a. On the **Discovery** tab, click **Discover Portal**.
 - b. In the **Discover Target Portal** dialog box, supply the **IP address** of your iSCSI-enabled network interface for your 8000 series device.
 - c. Click **OK**.
3. On the **Targets** tab of the **iSCSI Initiator Properties** window, locate the **Discovered targets**. The device status should appear as **Inactive**. Select the target device and click **Connect**.
4. After the device is connected, the status should change to **Connected**.



Note

For more information about using the Microsoft iSCSI initiator, see [Installing and Configuring Microsoft iSCSI Initiator](#)

5. On your Windows host, press **Windows Logo key + X**, and then click **Run**.
6. In the **Run** dialog box, type **Diskmgmt.msc**. Click **OK**, and the **Disk Management** dialog box will appear. The right pane will show the volumes on your host. In the **Disk Management** window, the mounted volumes will appear as shown in the following illustration.
7. Right-click the discovered volume (click the disk name), and then click **Online**.
8. Repeat the above process for all the volumes.

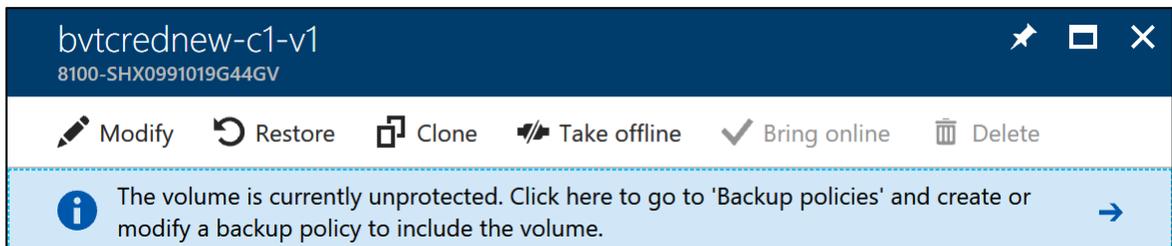


9. Verify access to the data.

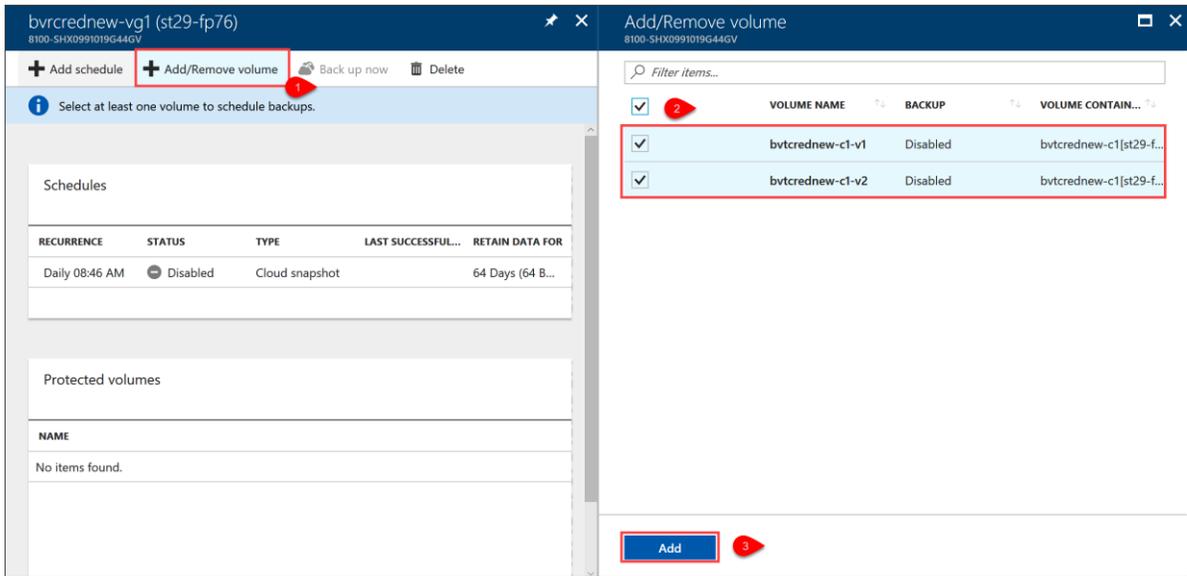
Step 8: Modify backup policy

Perform the following steps to modify the migrated backup policies.

1. The volumes from the restored backup sets are unprotected and you see a banner notification to the effect.



2. Add the restored volumes to the migrated backup policy.



3. The migration was done with a default schedule, you may also want to edit the schedule.

This completes Phase 2 of the migration.

Phase 3: Finalize

Where

Perform these steps on the computer running the StorSimple Migration tool.

Prerequisites

- Ensure that all the steps in Phase 2 have successfully completed prior to beginning this phase.

Step 1: Commit or roll back migration of selected volume container(s)

In this step, you can confirm a successful migration and commit it. You also have the option to roll back if there were any errors in the migration. After migration, until you run a commit or rollback, there will be duplicate sets of metadata in the cloud: one in the legacy format and another in the current format.

When you commit the migration, the legacy metadata is deleted. Similarly, if you roll back the migration, all the newly created objects are cleaned up and ownership of volume container is transferred back to the source device.

The following operations cannot be performed while the migration is uncommitted:

- You cannot add cloned volumes belonging to migrated volume containers to some other volume groups.
- You cannot add volumes created on 8000 series to migrated volume containers.
- You cannot create volume groups with volumes from migrated volume containers.

- For a migrated backup that is not committed, do not create a clone on a different device.



Important

- If your volume groups are spanning across more than one volume container, then all the dependent volume containers are committed or rolled back together.
- You should only commit the migration when you are fully assured that there are no issues with the migrated data.
- Commit, rollback, and post commit clean up – all these operations can take a long time (hours to days) depending upon the amount of data involved.

To commit migration

1. Select the containers that you want to commit. Click **Commit**.

Volume container name	Commit or rollback state	Percent
<input checked="" type="checkbox"/> bvtcrednew1-c2	Not started	0
<input checked="" type="checkbox"/> bvtcrednew-c1[st29-fp76]	Not started	0

2. A notification pops up indicating that the commit operation has started.

Started commit for legacy config ID: 3edc470f-3a33-4746-be11-8f1103cba4da, volume containers: bvtcrednew1-c2, bvtcrednew-c1[st29-fp76].

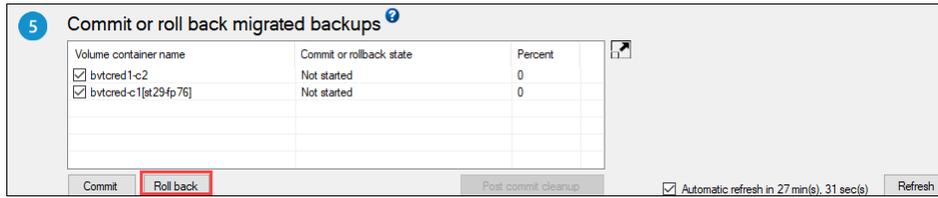
3. Once the commit is complete, the Commit or rollback state will indicate that.

Volume container name	Migration state	Percent
<input checked="" type="checkbox"/> bvtcrednew1-c2	Complete	100
<input type="checkbox"/> depcntcred2-c2	Not started	0
<input checked="" type="checkbox"/> bvtcrednew-c1[st29-fp76]	Complete	100
<input type="checkbox"/> depcntcred2-c1	Not started	0

Volume container name	Commit or rollback state	Percent
<input checked="" type="checkbox"/> bvtcrednew1-c2	Commit complete, cleanup pending.	100
<input checked="" type="checkbox"/> bvtcrednew-c1[st29-fp76]	Commit complete, cleanup pending.	100

To roll back migration

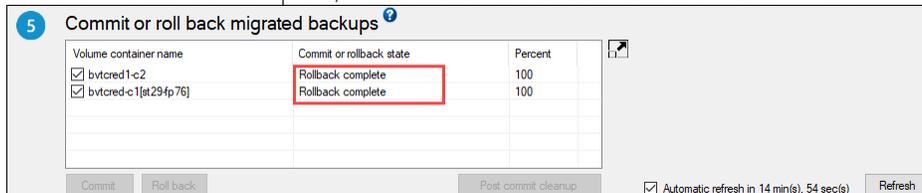
1. Select the containers that you want to roll back. Click **Roll back**.



2. A notification pops up indicating that the rollback operation has started.



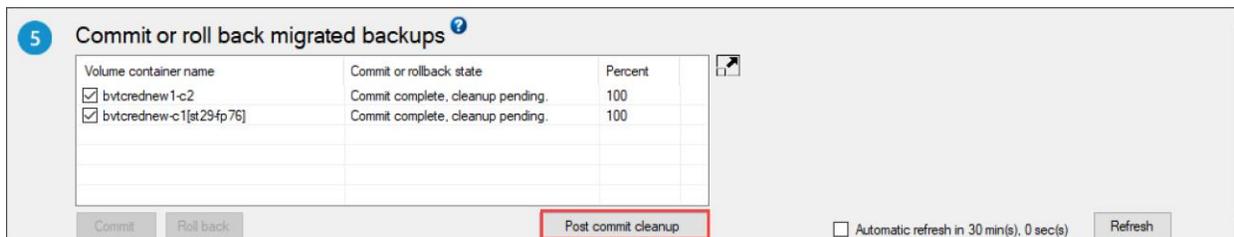
3. Once the rollback is complete, the **Commit or rollback state** will indicate that.



This completes the migration from a live 5000 or 7000 series device to an 8000 series device.

Step 2: Post commit clean up

Perform this step only if you have cloud clones in the migrated volume container. Click **Post commit cleanup** after you the commit the migration. This option is enabled only if your dataset contained cloud clones. The post



commit cleanup deletes fingerprints associated during the cloud clone creation in the backup bucket.

Cleanup

A final cleanup of your legacy device is recommended once the migration is committed.

Important:

We recommend that you delete the following from your legacy device:

- Migrated volume containers.
- Related entities, such as volume groups, bandwidth templates, and alert settings for the volume containers that were migrated.

If you continue to write or take backups to migrated volume containers on the source device, then it may potentially result in data corruption.

Migrate from a down 5000/7000 device to 8000 series device

When you have a down 5000 or 7000 series device, you will need to failover from the down device to a replacement 5000-7000 series device that is running v2.1.1.518.

To migrate from a down 5000/7000 series device to 8000 series device

1. Procure a replacement 5000/7000 series device. Perform failover from the down device on to the replacement system. For detailed instructions, see [Disaster recovery for your StorSimple 5000-7000 series appliance](#) to perform this failover.
2. Depending on the software version that your down device was running, the next steps may be different.
 - If the down device was running v2.1.1.518, you can go to Step 3.
 - If the down device was running a version prior to v2.1.1.518, then after you have performed DR, you will need to engage Microsoft Support to run the Recovery Bucket tool to consolidate all the data in your primary bucket.
3. All the remaining steps are identical to those in [Migrate from a live 5000/7000 device to 8000 series device](#).

Migrate from a live 5000/7000 device to 8010/8020 cloud appliance

Ensure that you have completely reviewed the [StorSimple cloud appliance considerations](#) for migration prior to migrating to a cloud appliance.

Follow the steps in [Migrate from a live 5000/7000 device to 8000 series device](#).

Migrate from a down 5000/7000 device to 8010/8020 cloud appliance

Ensure that you have completely reviewed the [StorSimple cloud appliance considerations](#) for migration prior to migrating to a cloud appliance.

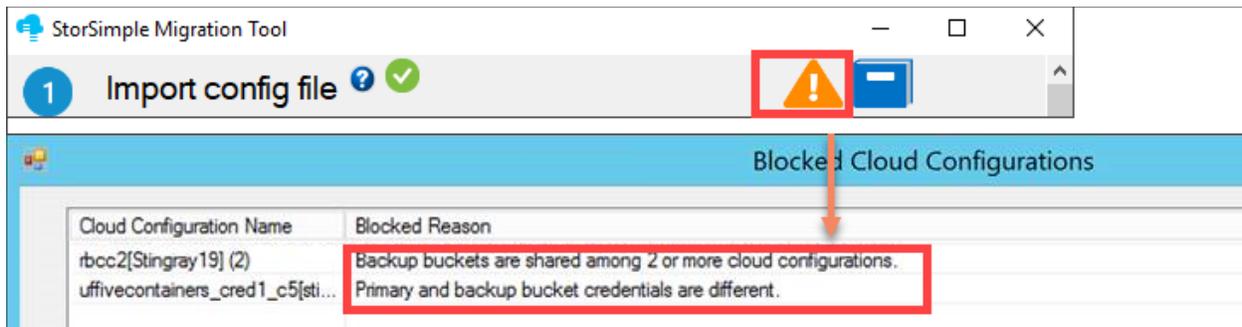
To migrate from a down 5000/7000 series device to 8010/8020 series device

1. Procure a replacement 5000/7000 series device. Perform failover from the down device to the replacement system. For detailed instructions, see [Disaster recovery for your StorSimple 5000-7000 series appliance](#) to perform this failover.
2. Depending on the software version your down device was running, the next steps may be different.
 - If the down device was running v2.1.1.518, you can go to Step 3.
 - If the down device was running a version prior to v2.1.1.518, then after you have performed DR, you will need to engage Microsoft Support to run the Recovery Bucket tool to consolidate all the data in your primary bucket.
3. All the remaining steps will now be identical to those in [Migrate from a live 5000/7000 device to 8000 series device](#)

Troubleshoot migration

Use alerts

Alerts raised during migration are indicative of any unsupported scenarios. If the volume containers to be migrated have an unsupported configuration, an alert is raised. Click the **Alert** icon in the tool UI to view the alerts associated with the blocked configuration.

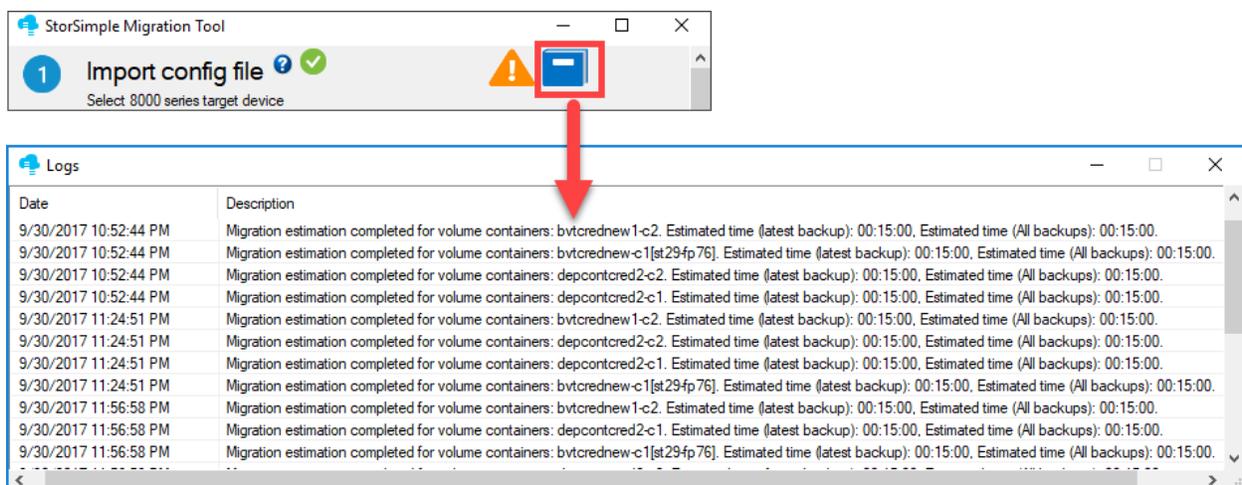


Use logs

You can access two different set of log files – one through the migration tool UI, and the other in a folder where the migration tool executable resides.

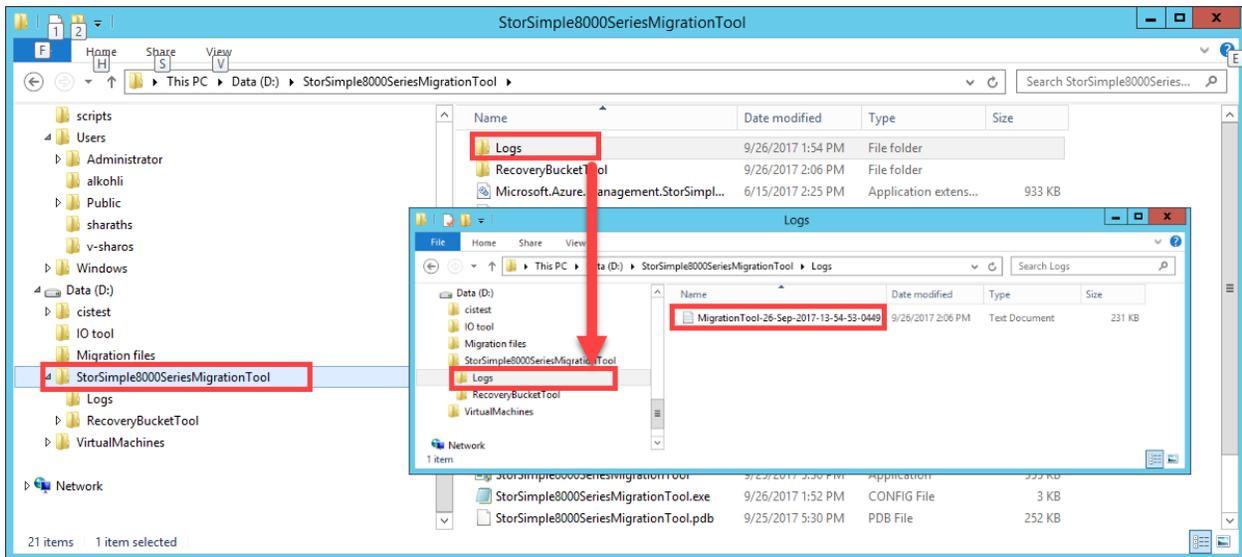
Log files accessed via the migration tool UI

This is a parsed version of logs. The overall flow of migration UI along with error messages is captured in this log.

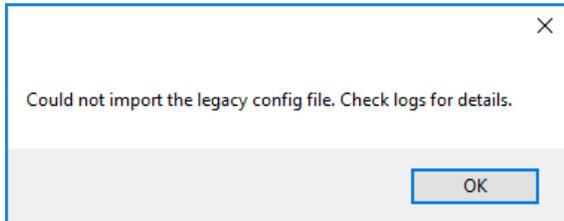


Log folder in the directory where the tool is installed

These are verbose logs. Any time you encounter an issue that needs clarification, we recommend that you navigate to the Logs folder in the directory where the tool is installed and browse through the log file. The log file names are appended with the date, so you can pick the appropriate log.

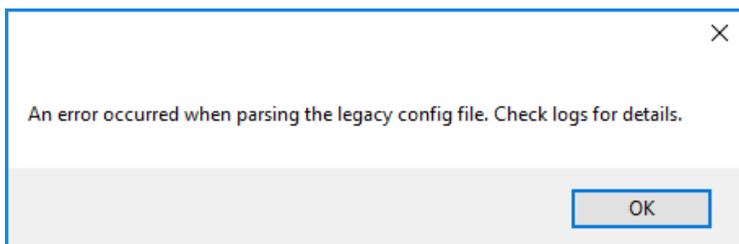


Error: Could not import the legacy config file. Check logs for details.



This error may appear if your subscription is not enabled for migration. Access the migration logs in the install folder and search for this string "CisMigrationNotAllowed". If this exists in the file, then you need to contact Microsoft Support to enable your subscription for migration.

Error: An error occurred when parsing the legacy config file. Check logs for details.



This error may appear when the encryption key provided with the config file is incorrect. Verify that you have the correct key for the specified config file and then retry the import operation.

Cloud connectivity errors during migration of volume containers

If the cloud connectivity is dropped during the migration of volume containers, the device will retry cloud calls for 4 hours. After that, you will see an error to the effect that migration has failed although some backups may be successfully translated by this point. The successfully translated backups will show up on the 8000 series backup catalog and can be restored. Once the cloud connectivity is restored, you will need to run migrate volume containers again. The translation process will continue from where it stopped in the previous attempt.

Outage scenarios

If the 5000-7000 series device goes down during migration

If the above happens, you can use the latest available backup from the legacy device to migrate your data to an 8000 series device. For more information, see [Migrate from a down 5000/7000 device to 8000 series device](#).

If the 8000 series device goes down during migration

If the above happens, contact Microsoft Support for next steps.

If the 8000 series device goes down after you have finished migration, but before the migration is committed or rolled back

If the above happens, contact Microsoft Support for next steps.

If the 8000 series device goes down after you have finished migration and committed or rolled back

if your 8000 series device goes down, and you had committed or rolled back, you can proceed with DR on another 8000 series device. For more information, see how to [fail over to another device](#).

See also

- [Software Patch Upgrade Guide v2.1.1.518](#)
- [StorSimple Appliance Patch Release Notes v2.1.1.518](#)
- [StorSimple 8000 Series Update 5 Release Notes](#)
- [Install Update 5 on your StorSimple 8000 series device](#)