



# Configure array settings

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# Configure array settings

## Edit storage array name

You can change the storage array name that appears in the title bar of SANtricity System Manager.

### Steps

1. Select **Settings** > **System**.
2. Under **General**, look for the **Name:** field.

If a storage array name has not been defined, this field displays "Unknown."

3. Click the **Edit** (pencil) icon next to the storage array name.

The field becomes editable.

4. Enter a new name.

A name can contain letters, numbers, and the special characters underscore (`_`), dash (`-`), and hash sign (`#`). A name cannot contain spaces. A name can have a maximum length of 30 characters. The name must be unique.

5. Click the **Save** (check mark) icon.



If you want to close the editable field without making changes, click the **Cancel** (X) icon.

### Results

The new name appears in the title bar of SANtricity System Manager.

## Turn on storage array locator lights

To find the physical location of a storage array in a cabinet, you can turn on its locator (LED) lights.

### Steps

1. Select **Settings** > **System**.
2. Under **General**, click **Turn on Storage Array Locator Lights**.

The Turn On Storage Array Locator Lights dialog box opens, and the corresponding storage array's locator lights turn on.

3. When you have physically located the storage array, return to the dialog box and select **Turn Off**.

### Results

The locator lights turn off, and the dialog box closes.

# Synchronize storage array clocks

If Network Time Protocol (NTP) is not enabled, you can manually set the clocks on the controllers so they are synchronized with the management client (the system used to run the browser that accesses System Manager).

## About this task

Synchronization ensures that event time stamps in the event log match time stamps written to the host log files. During the synchronization process, the controllers remain available and operational.



If NTP is enabled in System Manager, do not use this option to synchronize clocks. Instead, NTP automatically synchronizes the clocks with an external host using SNTP (Simple Network Time Protocol).



After synchronization, you might notice that performance statistics are lost or skewed, schedules are impacted (ASUP, snapshots, etc.), and time stamps in log data are skewed. Using NTP avoids this problem.

## Steps

1. Select **Settings > System**.
2. Under **General**, click **Synchronize Storage Array Clocks**.

The Synchronize Storage Array Clocks dialog box opens. It shows the current date and time for the controller(s) and the computer used as the management client.



For simplex storage arrays, only one controller is shown.

3. If the times shown in the dialog box do not match, click **Synchronize**.

## Results

After synchronization is successful, event time stamps are the same for the event log and host logs.

# Save storage array configuration

You can save a storage array's configuration information in a script file to save time setting up additional storage arrays with the same configuration.

## Before you begin

The storage array must not be undergoing any operation that changes its logical configuration settings. Examples of these operations include creating or deleting volumes, downloading controller firmware, assigning or modifying hot spare drives, or adding capacity (drives) to a volume group.

## About this task

Saving the storage array configuration generates a command line interface (CLI) script that contains storage array settings, volume configuration, host configuration, or host-to-volume assignments for a storage array. You can use this generated CLI script to replicate a configuration to another storage array with the exact same hardware configuration.

However, you should not use this generated CLI script for disaster recovery. Instead, to do a system restore,

use the configuration database backup file that you create manually or contact technical support to get this data from the latest Auto-Support data.

This operation *does not* save these settings:

- The life of the battery
- The controller time-of-day
- The nonvolatile static random access memory (NVSRAM) settings
- Any premium features
- The storage array password
- The operating status and states of the hardware components
- The operating status (except Optimal) and states of the volume groups
- Copy services, such as mirroring and volume copy



**Risk of application errors** — Do not use this option if the storage array is undergoing an operation that will change any logical configuration setting. Examples of these operations include creating or deleting volumes, downloading controller firmware, assigning or modifying hot spare drives, or adding capacity (drives) to a volume group.

## Steps

1. Select **Settings > System**.
2. Select **Save Storage Array Configuration**.
3. Select the items of the configuration that you want to save:
  - Storage array settings
  - Volume configuration
  - Host configuration
  - Host-to-volume assignments



If you select the **Host-to-volume assignments** item, the **Volume configuration** item and the **Host configuration** item are also selected by default. You cannot save "Host-to-volume assignments" without also saving "Volume configuration" and "Host configuration."

4. Click **Save**.

The file is saved in the Downloads folder for your browser with the name `storage-array-configuration.cfg`.

## After you finish

To load the saved storage array configuration onto another storage array, use the SANtricity command line interface (SMcli) with the `-f` option to apply the `.cfg` file.



You can also load a storage array configuration to other storage arrays by using the Unified Manager interface (select **Manage > Import Settings**).

# Clear storage array configuration

Use the Clear Configuration operation when you want to delete all the pools, volume groups, volumes, host definitions, and host assignments from the storage array.

## Before you begin

Before clearing the storage array configuration, back up the data.

## About this task

There are two Clear Storage Array Configuration options:

- **Volume** — Typically, you might use the Volume option to reconfigure a test storage array as a production storage array. For example, you might configure a storage array for testing, and then, when you are done testing, remove the test configuration and set up the storage array for a production environment.
- **Storage Array** — Typically, you might use the Storage Array option to move a storage array to another department or group. For example, you might be using a storage array in Engineering, and now Engineering is getting a new storage array, so you want to move the current storage array to Administration where it will be reconfigured.

The Storage Array option deletes some additional settings.

	Volume	Storage Array
Deactivates ARVM	X	X
Deletes pools and volume groups	X	X
Deletes volumes	X	X
Deletes hosts and host clusters	X	X
Deletes host assignments	X	X
Deletes storage array name		X
Resets storage array cache settings to default		X



**Risk of data loss** — This operation deletes all data from your storage array. (It does not do a secure erase.) You cannot cancel this operation after it starts. Perform this operation only when instructed to do so by technical support.

## Steps

1. Select **Settings > System**.
2. Select **Clear Storage Array Configuration**.
3. In the drop-down list, select either **Volume** or **Storage Array**.
4. **Optional:** If you want to save the configuration (not the data), use the links in the dialog box.

5. Confirm that you want to perform the operation.

## Results

- The current configuration is deleted, destroying all existing data on the storage array.
- All drives are unassigned.

# Change cache settings for the storage array

For all volumes in the storage array, you can adjust the cache memory settings for flushing and block size.

## About this task

Cache memory is an area of temporary volatile storage on the controller, which has a faster access time than the drive media. To tune cache performance, you can adjust the following settings:

Cache setting	Description
Start demand cache flushing	Start demand cache flushing specifies the percentage of unwritten data in the cache that triggers a cache flush (write to disk). By default, cache flushing starts when unwritten data reaches 80% capacity. A higher percentage is a good choice for environments with primarily write operations, so new write requests can be processed by cache without having to go to the disk. Lower settings are better in environments where the I/O is erratic (with data bursts), so that the system flushes cache frequently between data bursts. However, a start percentage lower than 80% may cause decreased performance.
Cache block size	The cache block size determines the maximum size of each cache block, which is an organizational unit for cache management. By default, the block size is 32 KiB. The system allows the cache block size to be 4, 8, 16, or 32 KiBs. Applications use different block sizes, which have an impact on storage performance. A smaller size is a good choice for file systems or database applications. A larger size is ideal for applications that generate sequential I/O, such as multimedia.

## Steps

1. Select **Settings > System**.
2. Scroll down to **Additional Settings**, and then click **Change Cache Settings**.

The Change Cache Settings dialog box opens.

3. Adjust the following values:
  - **Start demand cache flushing** — Choose a percentage that is appropriate for the I/O used in your environment. If you choose a value lower than 80%, you may notice decreased performance.
  - **Cache block size** — Choose a size that is appropriate for your applications.
4. Click **Save**.

# Set automatic load balancing

The Automatic Load Balancing feature ensures that incoming I/O traffic from the hosts is

dynamically managed and balanced across both controllers. This feature is enabled by default, but you can disable it from System Manager.

### About this task

When Automatic Load Balancing is enabled, it performs the following functions:

- Automatically monitors and balances controller resource utilization.
- Automatically adjusts volume controller ownership when needed, thereby optimizing I/O bandwidth between the hosts and the storage array.

You might want to disable Automatic Load Balancing on your storage array for the following reasons:

- You do not want to automatically change a particular volume's controller ownership to balance workload.
- You are operating in a highly tuned environment where load distribution is purposefully set up to achieve a specific distribution between the controllers.

### Steps

1. Select **Settings > System**.
2. Scroll down to **Additional Settings**, and then click **Enable/Disable Automatic Load Balancing**.

The text below this option indicates whether the feature is currently enabled or disabled.

A confirmation dialog box opens.

3. Confirm by clicking **Yes** to continue.

By selecting this option, you toggle the feature between enabled/disabled.



If this feature is moved from disabled to enabled, the Host Connectivity Reporting feature is automatically enabled as well.

## Enable or disable legacy management interface

You can enable or disable the legacy management interface (SYMBOL), which is a method of communication between the storage array and the management client.

### About this task

By default, the legacy management interface is on. If you disable it, the storage array and management client will use a more secure method of communication (REST API over https); however, certain tools and tasks might be affected if it is disabled.



For the EF600 storage system, this feature is disabled by default.

The setting affects operations as follows:

- **On** (default) — Required setting for configuring mirroring with the CLI and some other tools, such as the OCI adapter.
- **Off** — Required setting to enforce confidentiality in communications between the storage array and the management client, and to access external tools. Recommended setting when configuring a Directory Server (LDAP).



## Steps

1. Select **Settings** > **System**.
2. Scroll down to **Additional Settings**, and then click **Change Management Interface**.
3. In the dialog box, click **Yes** to continue.

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