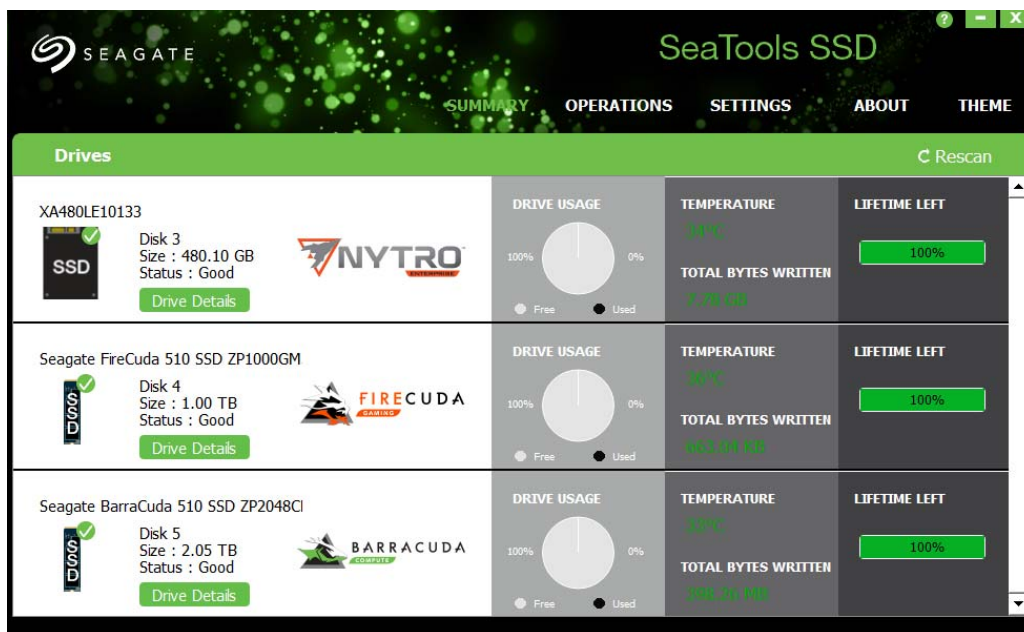


SeaTools™ SSD GUI

User Guide



Revision History

Version and Date	Description of Changes
Rev D, February 2019	Updated document for SeaTools GUI, Rel 4.0. Added Gamer Theme images and NVMe content.
Rev C, January 2019	Updated notes to include all products.
Rev B, July 2018	Added the following feature updates: <ul style="list-style-type: none">■ Section 3.6, Set Tunable Capacity
Rev A, July 2018	First release of the document.

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When referring to drive capacity, one gigabyte, or GB, equals one billion bytes and one terabyte, or TB, equals one trillion bytes. Your computer's operating system may use a different standard of measurement and report a lower capacity. In addition, some of the listed capacity is used for formatting and other functions, and thus will not be available for data storage. Actual quantities will vary based on various factors, including file size, file format, features and application software. Actual data rates may vary depending on operating environment and other factors. The export or re-export of hardware or software containing encryption may be regulated by the U.S. Department of Commerce, Bureau of Industry and Security (for more information, visit www.bis.doc.gov), and controlled for import and use outside of the U.S. Seagate reserves the right to change, without notice, product offerings or specifications.

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1. Introduction

This document describes how to use Seagate's SeaTools™ SSD GUI, Release 4.0, a graphical user interface tool for managing Seagate solid state drives (SSDs) on a system.

1.1 Overview

SeaTools SSD GUI runs on Microsoft Windows and Linux operating systems and provides the following features for managing drives:

- Displays drive information such as model, capacity, disk usage, temperature and lifetime.
- Monitors the health of drives.
- Shows Self-Monitoring Analysis and Reporting Technology (SMART) attribute and identification information.
- Maintains an event log.
- Runs configuration tasks, such as exporting logs.
- Performs firmware updates.

NOTE SeaTools SSD GUI works with all SSDs. For non-Seagate SSDs, some items are not supported.

1.2 Supported Systems

The SeaTools SSD GUI is supported on the following operating systems:

- Windows
 - Windows
 - Windows Server
- Linux
 - Ubuntu
 - RedHat
 - CentOS

1.3 Installation

SeaTools SSD GUI can be installed on Windows or Linux computers. This section shows the Windows installation procedure, but the procedure is identical for both operating systems.

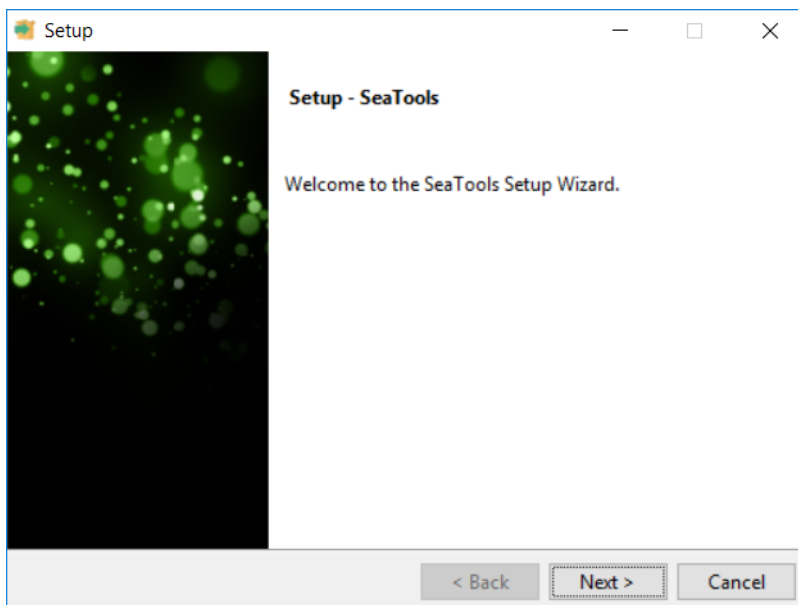
To install SeaTools SSD GUI

1. Run the installation file.
 - For Windows, run **SeaTools_SSD.exe**.
 - For Linux, run **SeaTools_SSD.bin**.

NOTE If the installation program determines that a version of SeaTools SSD GUI is already installed on your system, it prompts you to either remove the program or update it. If you see this prompt, select **Remove** or **Update**.

2. When you see the screen below, click **Next**.

Figure 1 Installation Introduction



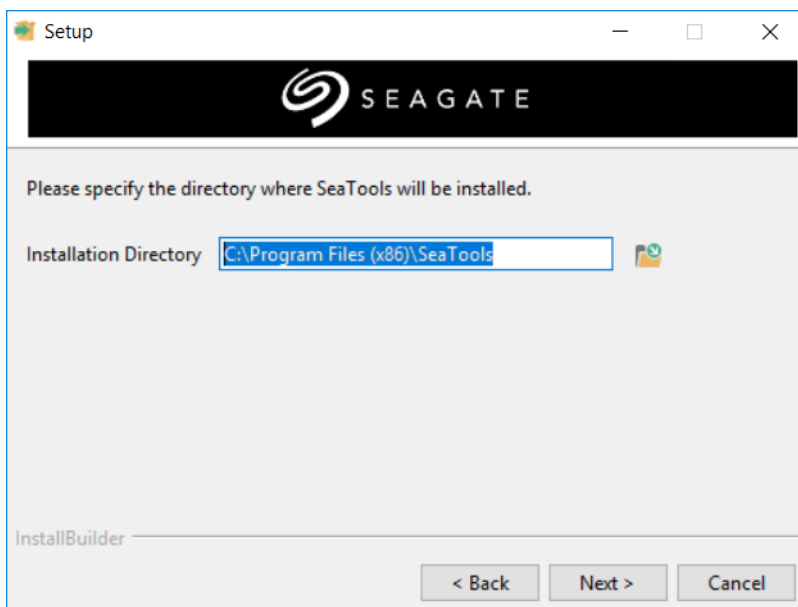
3. Read and accept the user license agreement. Click **Next** when prompted.

Figure 2 Installation License Agreement



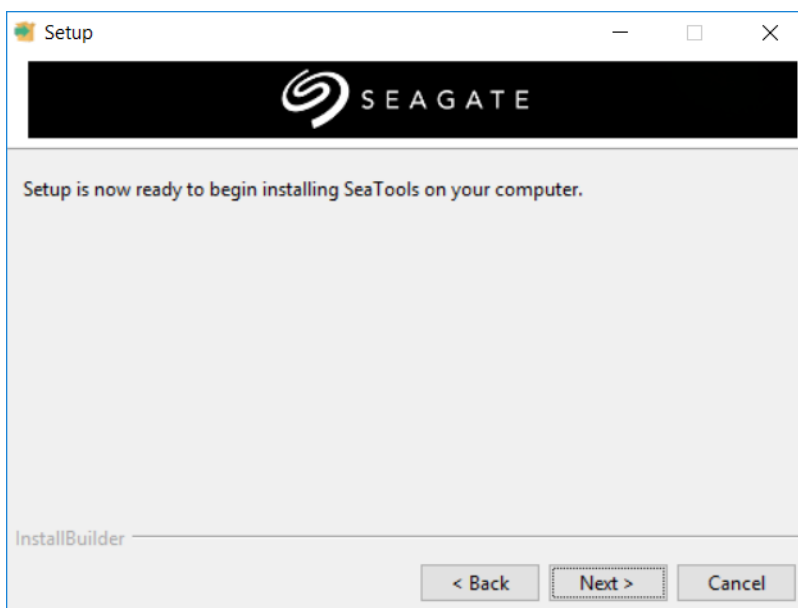
4. When the tool prompts you, provide an installation location:
 - To accept the default installation path, click **Next**.
 - To select a different path, enter the new path in the address bar and click **Next**.

Figure 3 Installation Destination



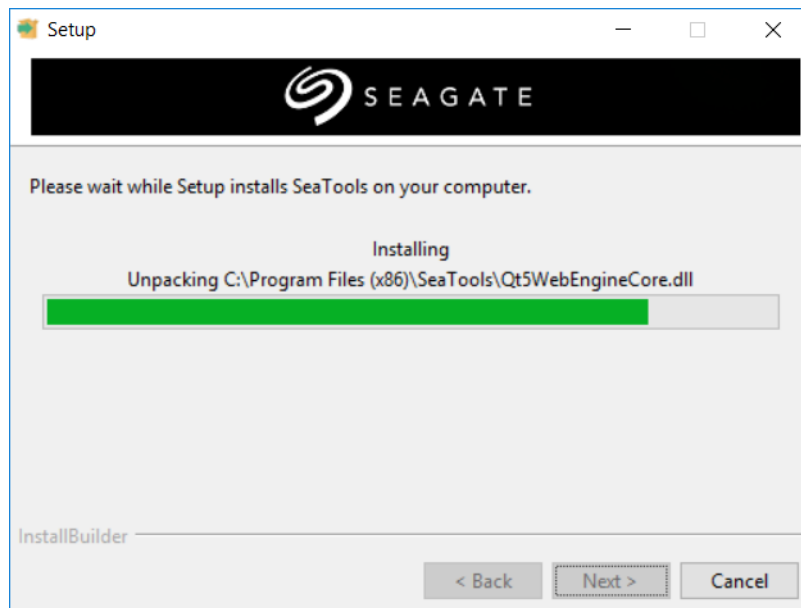
5. When you see the screen shown below, click **Next**.

Figure 4 Installation Ready



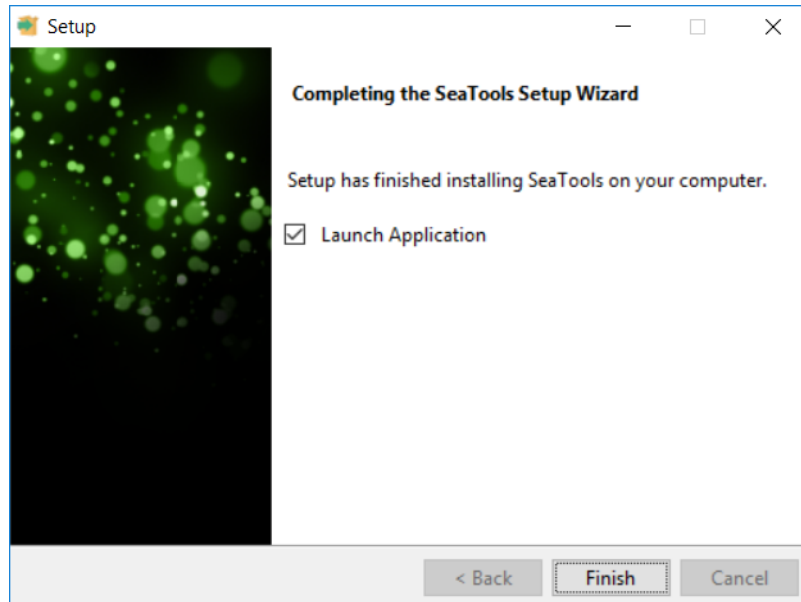
6. The installer shows the following image during the installation process.

Figure 5 Installation



7. Click **Finish** when prompted as shown below. Check **Launch Application** if you want to open the tool.

Figure 6 Installation Procedure Finish



The installation process is complete.

1.4 Usage

After you install the SeaTools SSD GUI, the SeaTools front page launches automatically. The SeaTools SSD GUI page also opens automatically when you reboot your PC.

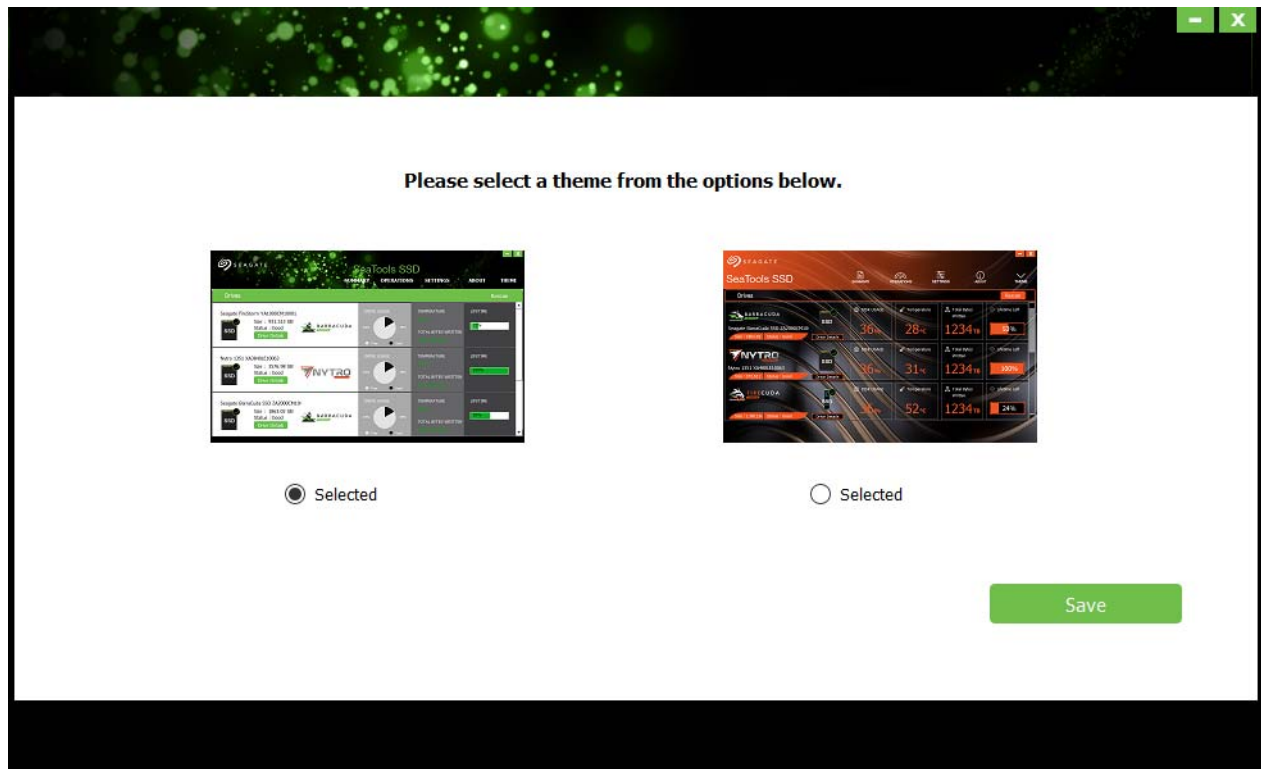
NOTE To monitor your drives, you must have SeaTools SSD GUI open.

2. Navigation

This chapter describes navigation in the tool.

2.1 Themes

For select drives, when the tool opens, the tool asks you to select a design theme.



The default interface for SeaTools SSD GUI uses a green and black theme design. Additional themes, such as the Gamer orange and black theme, are available on select Seagate drives. Tool features are the same in all interfaces.

This document uses the default green and black theme. Sample screen shots for the Gamer interface are shown for reference.

2.2 Summary Page

The SeaTools SSD Summary page includes, drive dashboards, and the navigation bar. The navigation bar appears at the top of every screen, and includes links to: SUMMARY, OPERATIONS, SETTINGS, ABOUT, and THEMES.

Summary information for each installed drive appears across the page, in horizontal dashboards.

Figure 7 Default Summary Page

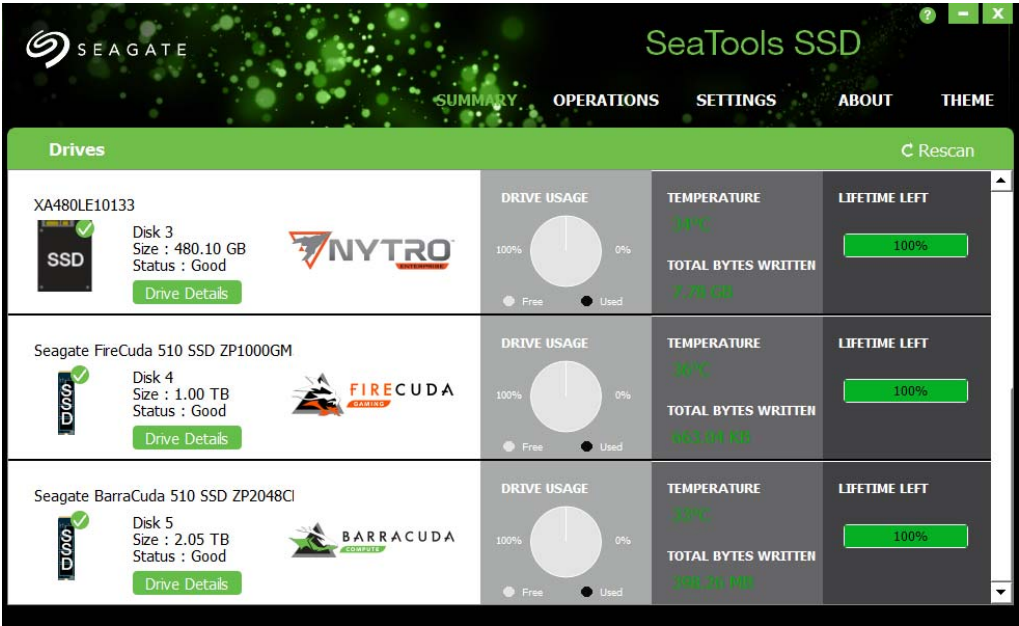


Figure 8 Gamer Summary Screen (available on select Seagate drives)



2.3 Drive Dashboard

The Drive Dashboard, shown below, provides information on the health and state of each installed drive. To see drives that are installed but not yet listed, click **Rescan**.

Figure 9 SSD Summary Dashboard

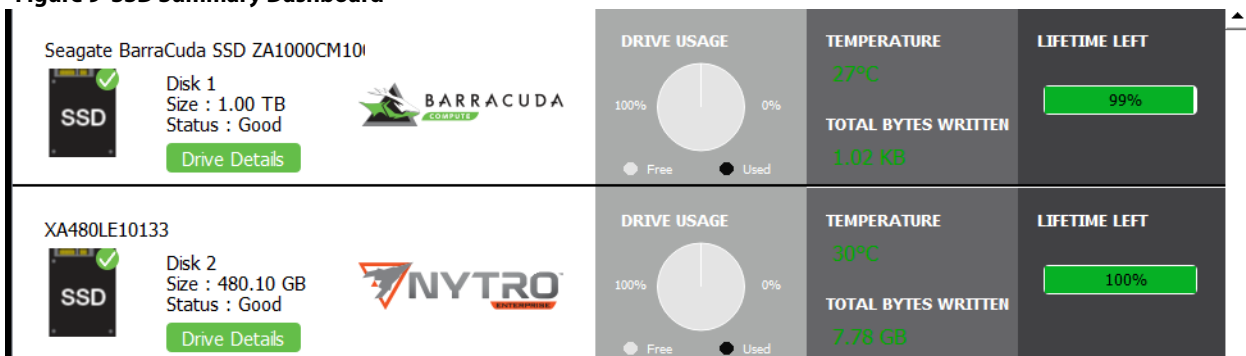
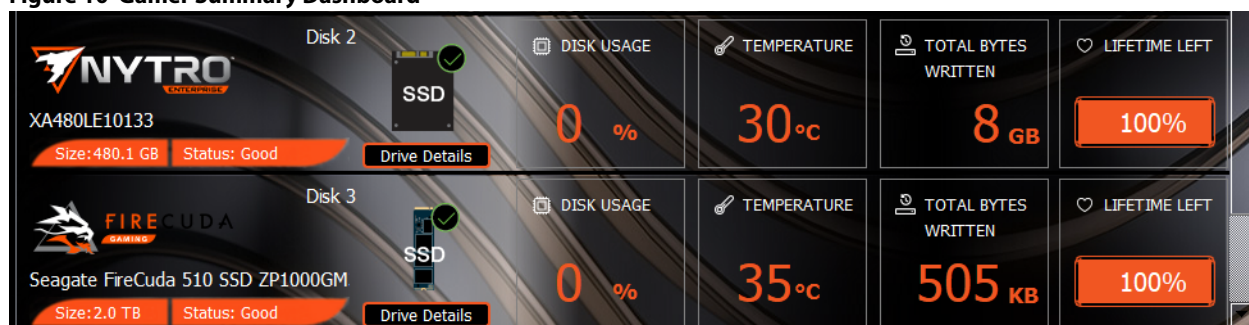


Figure 10 Gamer Summary Dashboard



The GUI shows the following information on the drive dashboard:

- General Information
 - Manufacturer and model
 - Disk number
 - Size (capacity)
 - Status
 - Good
 - Warning
 - Error
- Drive Usage: the percentage of capacity that is used and free.
- Temperature
- Total Bytes Written
- Lifetime Left

This bar shows the percentage of time left in the life expectancy of the selected drive.

NOTE The Drive uses the following factors to determine lifetime left: number of writes, the amount of capacity left, and internal monitoring of the voltage and current needed to write.

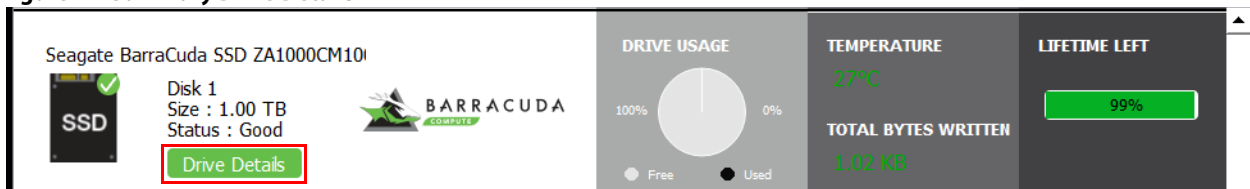
- Drive Details

This button opens a page showing further details for the selected drive.

2.4 Drive Details

To see more information about a selected drive, click the **Drive Details** button shown below.

Figure 11 Summary Drive Details



The Drive Details button opens the Drives panel. The Drives panel allows you to see—and modify—drive settings, such as, interface, SMART, and settings for power and security.

2.5 Drives Panel

The Drives panel appears when you click any **Drive Details** button in the Summary page. This panel shows Details, Interface, SMART, Power, and Security for the selected drive.

2.5.1 Detail

The Detail tab shows Asset and Version information as described below.

Table 1 Detail Tab

Portion	Description
Asset	Provides hardware information about the selected drive, including these properties: <ul style="list-style-type: none"> ■ Description ■ Serial number ■ Model number ■ Drive form factor (if known): For example, 2.5-in, 3.5-in, or 5.25-in ■ Drive firmware version ■ World Wide Name (WWN): A unique number identifies the drive to the OS ■ Used space and free space on the drive
Version	Includes the drive's driver name, driver version, and release date. See the driver information to determine if you need to upgrade a driver.

The Drives panel is shown below with the Details tab selected.

Figure 12 Drives Panel

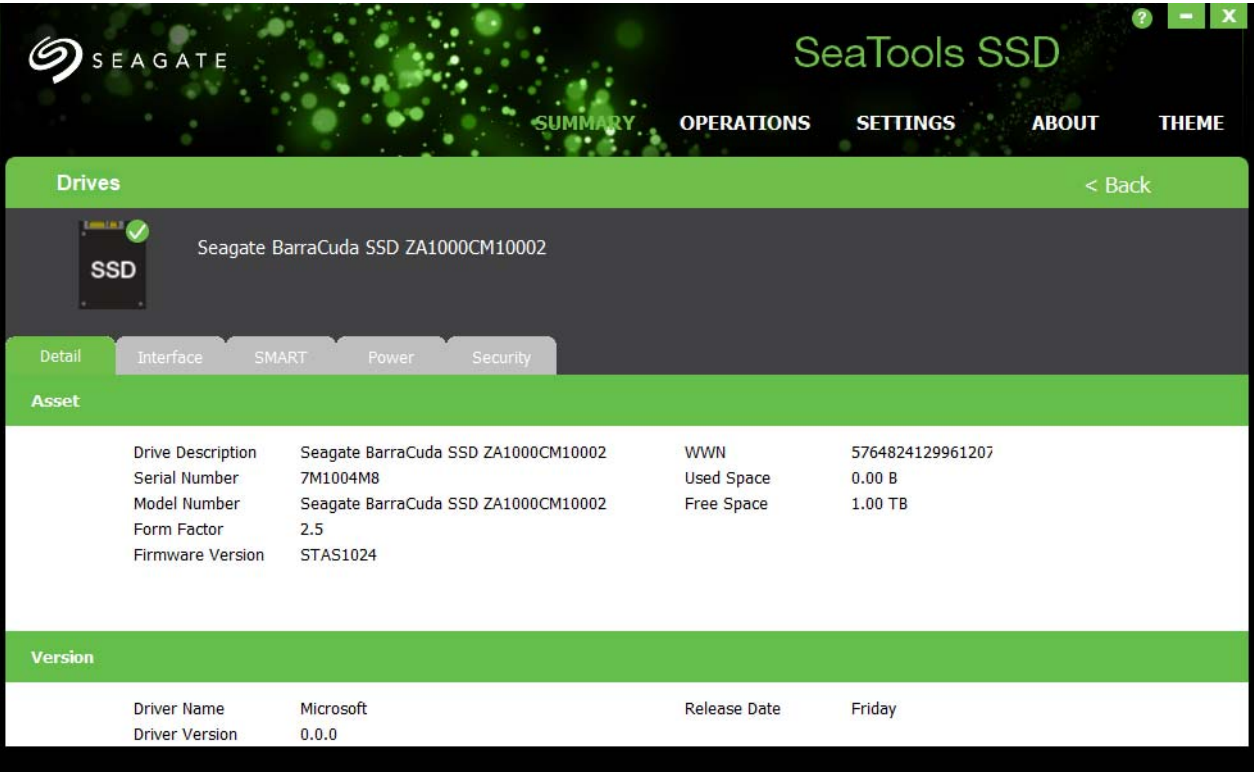
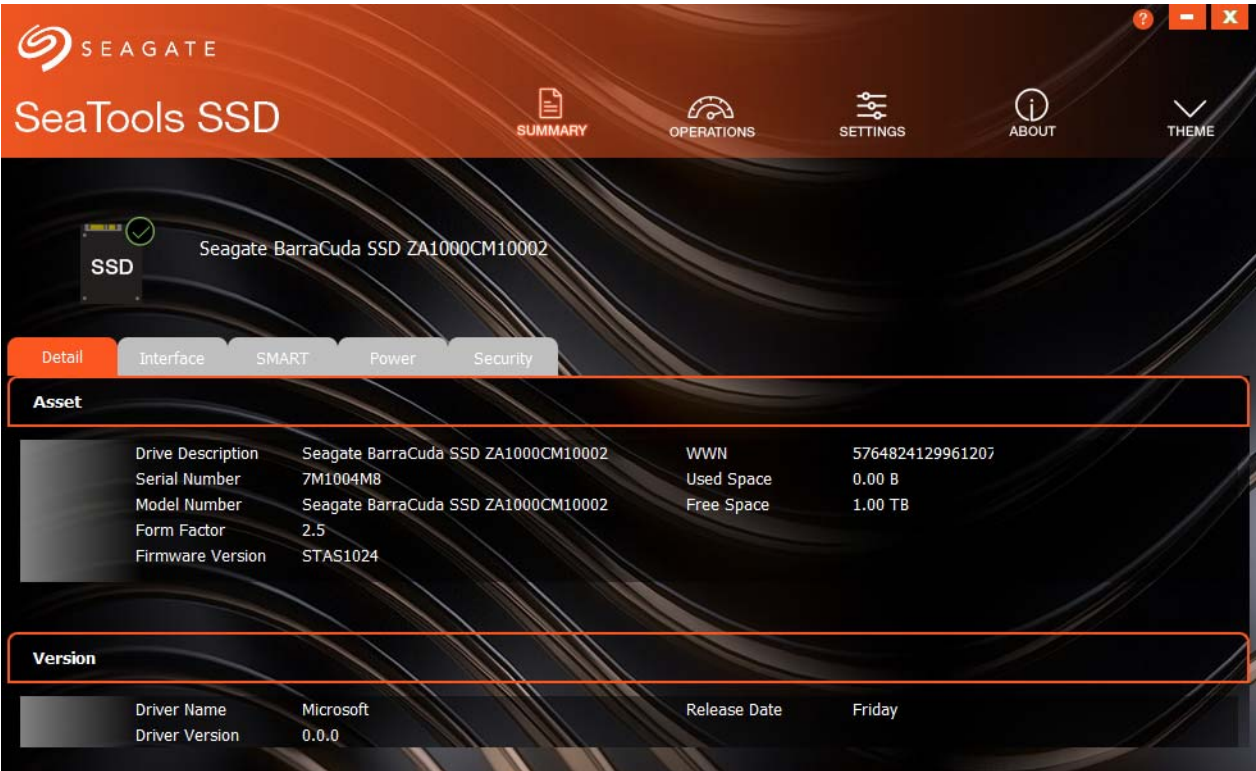


Figure 13 Gamer Drives Panel



2.5.2 Interface Tab—SATA

The Interface tab for SATA provides the following information.

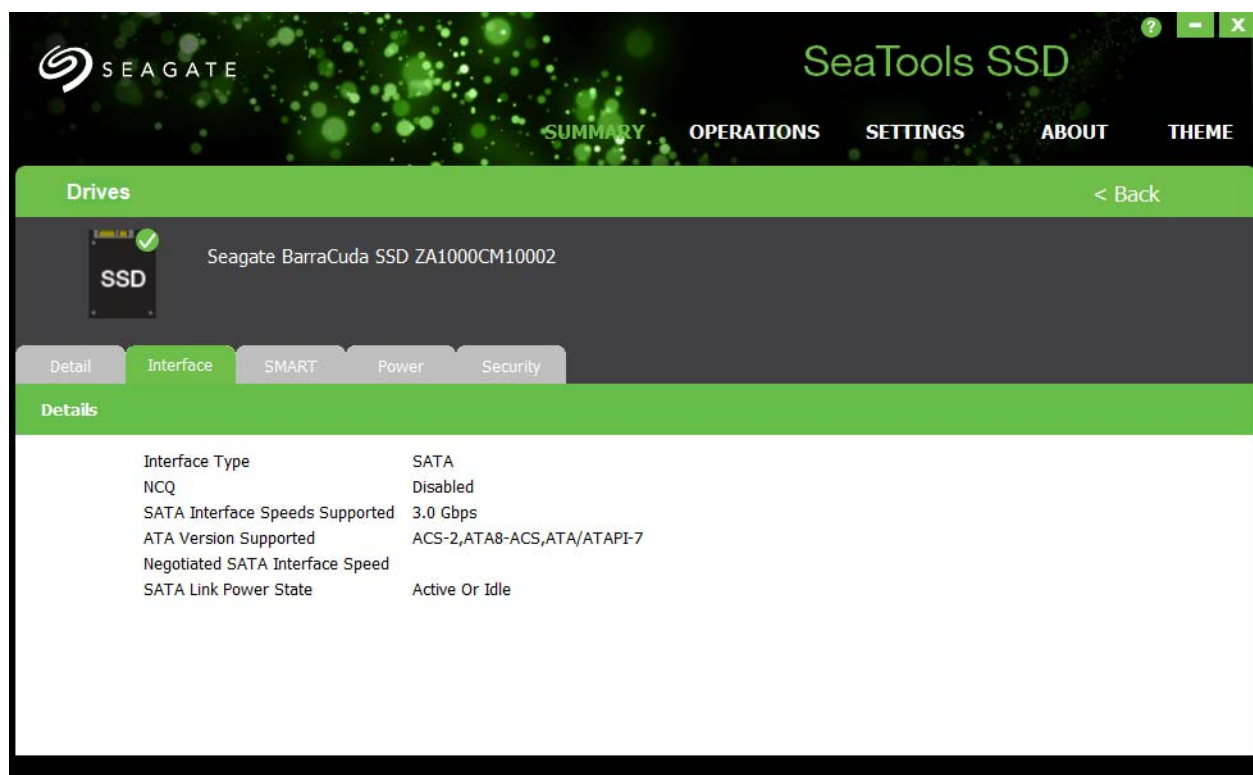
- Interface Type
- Native Command Queuing (NCQ) state
- SATA interface speed supported (Gb/s)
- ATA version supported
- Negotiated SATA interface speed

NOTE A speed slower than 6Gb/s indicates that the host connection is limiting drive performance.

- SATA Link Power State

The following figure shows the Drives panel and the Interface tab for SATA.

Figure 14 Interface Tab SATA



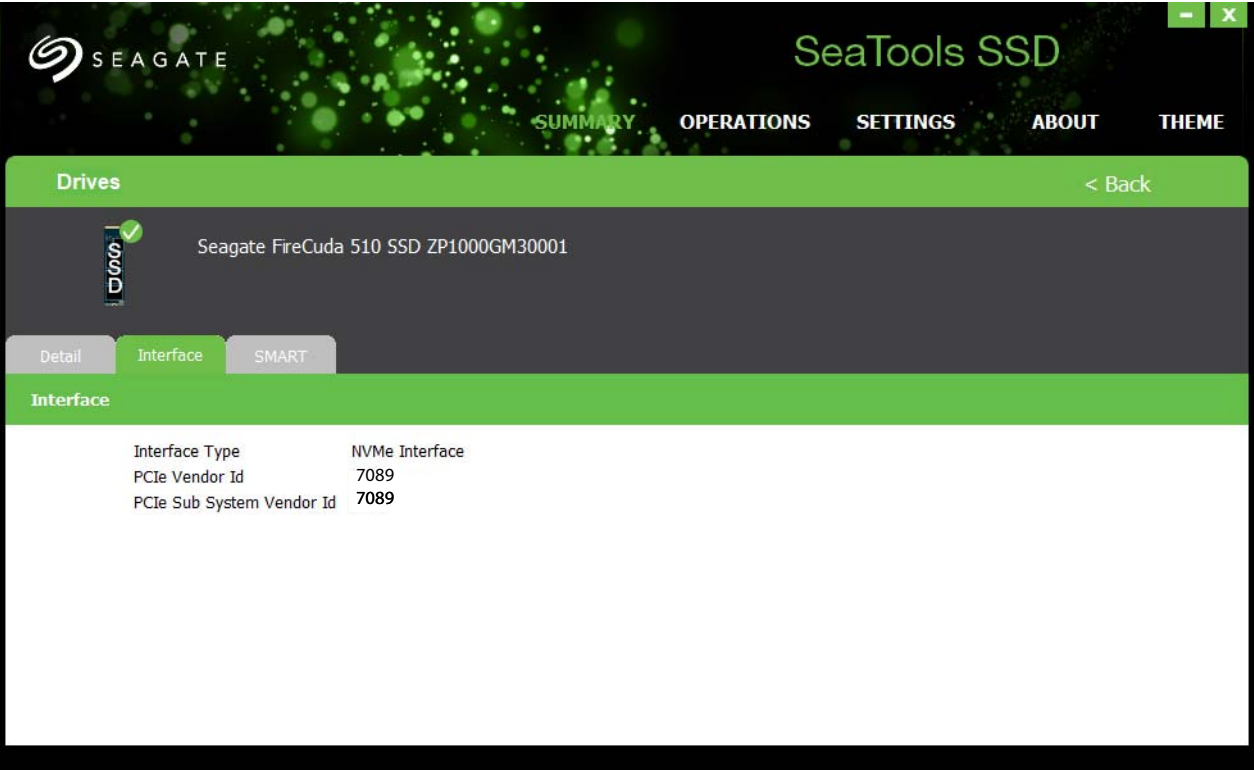
2.5.3 Interface Tab—NVMe

The Interface tab for NVMe provides the following information.

- Interface Type
- PCIe Vendor ID
- SATA interface speed supported (Gb/s)
- PCIe Sub System Vendor ID

The following figure shows the Drives panel and the Interface tab for NVMe.

Figure 15 Interface Tab NVMe



2.5.4 SMART Tab—SATA

The SMART tab displays information about Self-Monitoring, Analysis, and Reporting Technology (SMART) attributes for the selected drive. The Drives panel with the SMART tab SATA selected is shown below.

Click **Export SMART** to create a simple CSV file containing the SMART values of the selected drive.

Figure 16 SMART Tab SATA

ID	Attribute	State	Normalized	Worst	Threshold	Raw
0x1	UECC Error count	OK	100	100	50	0
0x9	Power On Hours	OK	100	100	0	453
0xc	Drive Power Cycle Count	OK	100	100	0	97
0x10	Spare Blocks Available	OK	100	100	0	94
0x11	Remaining Spare Blocks	OK	100	100	0	94
0xa8	Sata Phy Error Count	OK	100	100	0	0
0xaa	Bad Block Count	OK	100	100	10	460

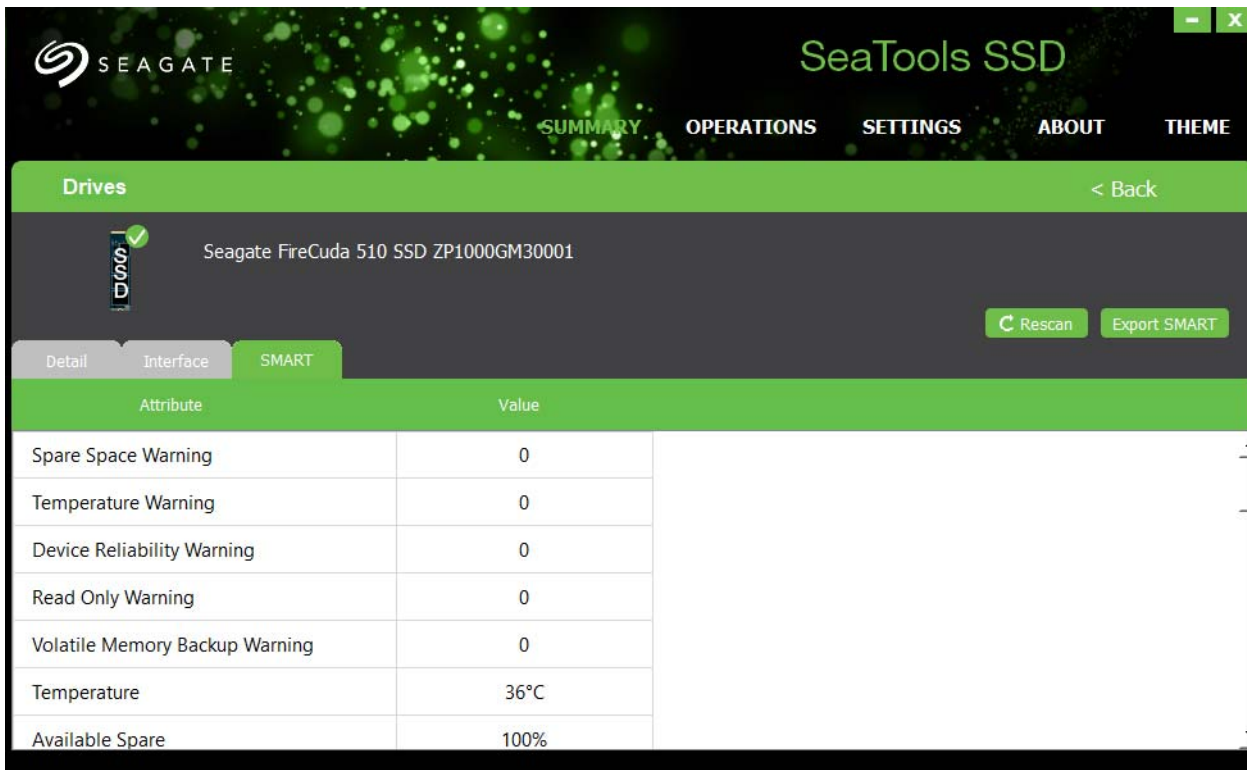
2.5.5 SMART Tab—NVMe

The SMART tab for NVMe displays attribute values for the selected drive. The SMART monitoring system detects and reports indicators of drive reliability to anticipate disk failures. SMART warns you about possible disk failure so you have time to back up your data.

Click **Export SMART** to create a simple CSV file containing the SMART values of the selected drive.

The Drives panel with the SMART tab NVMe selected is shown below.

Figure 17 SMART Tab NVMe



The screenshot shows the SeaTools SSD application window. The top navigation bar includes the Seagate logo, the title "SeaTools SSD", and tabs for SUMMARY, OPERATIONS, SETTINGS, ABOUT, and THEME. The "Drives" section is active, showing a list of drives. The selected drive is "Seagate FireCuda 510 SSD ZP1000GM30001". Below the drive name, there are tabs for Detail, Interface, and SMART. The SMART tab is selected, displaying a table of SMART attributes and their values. To the right of the table are buttons for "Rescan" and "Export SMART".

Attribute	Value
Spare Space Warning	0
Temperature Warning	0
Device Reliability Warning	0
Read Only Warning	0
Volatile Memory Backup Warning	0
Temperature	36°C
Available Spare	100%

2.5.6 Power Tab—SATA Only

The Power tab shows information on the power state and power capabilities of the selected drive. This tab lists the current power state for the selected drive and the total hours that the drive has been powered on. The tab indicates the types of power management that the drive supports and which types are currently enabled. The following table describes the different power-management features.

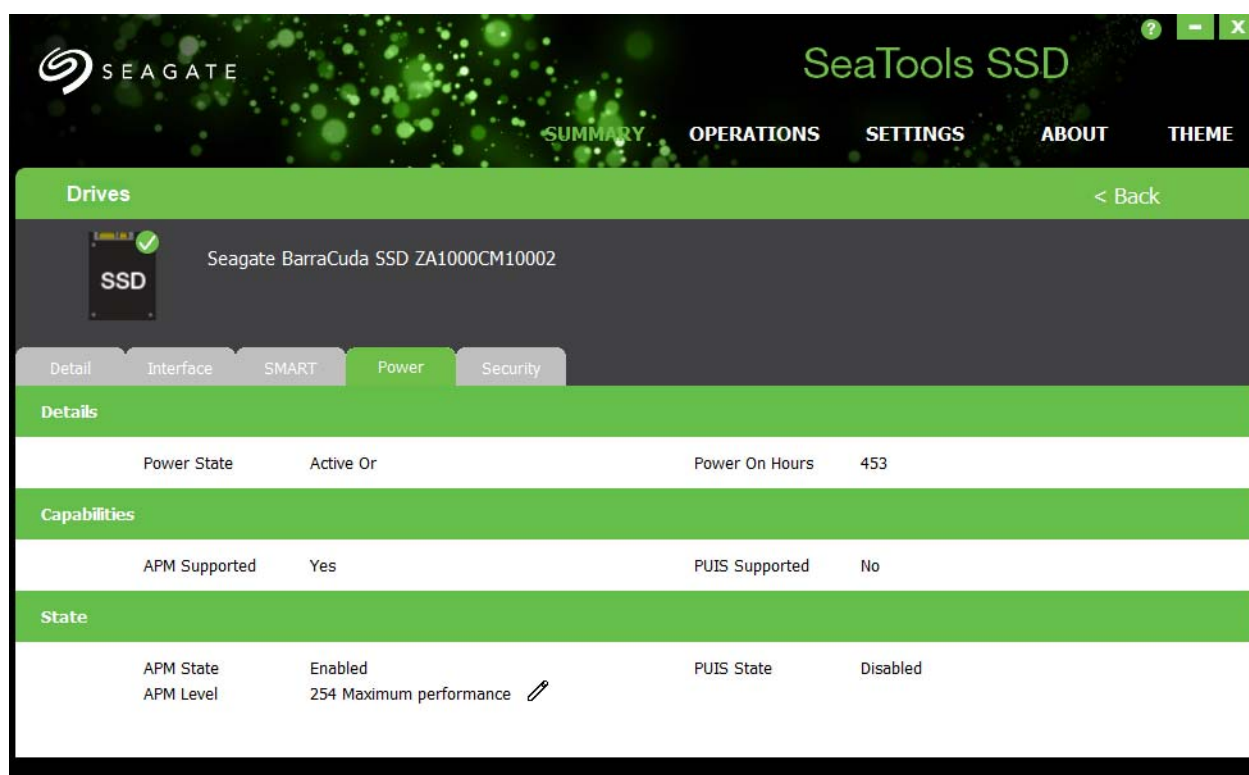
Table 2 Power Management Features

Feature	Description
APM	Advanced power management. The APM state value indicates whether advanced power management is enabled. To edit the APM level, click the pencil icon.
HIPM	Host-initiated power management
DIPM	Device-initiated power management
PUIS	Power-up in standby

NOTE You can change the APM level, using the pencil icon.

The Drives panel is shown below with the Power tab selected.

Figure 18 Power Tab



2.5.7 Security Tab—SATA

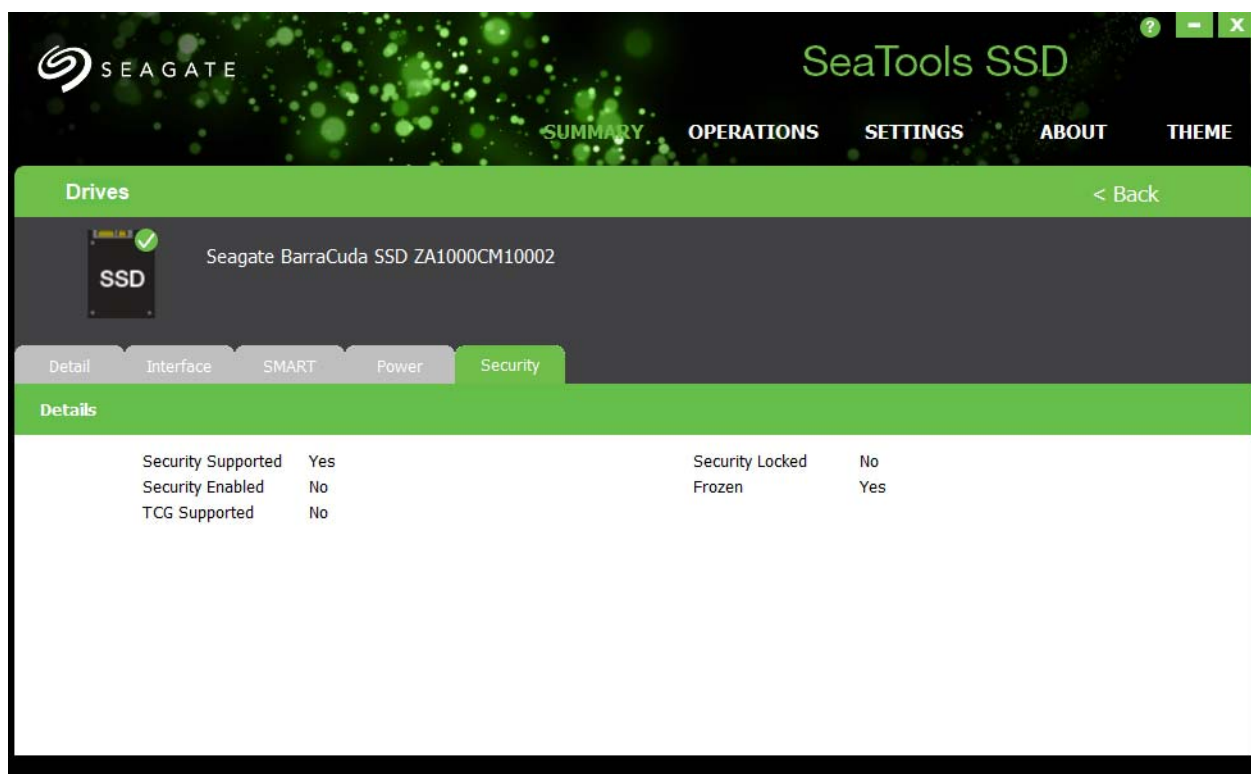
The Security tab SATA describes the password security features of the selected drive. The following table describes the security feature indicators on the Security tab.

Table 3 Security Feature Indicators

Indicator	Description
Security Supported	Indicates if the drive firmware supports User password and Recovery password.
Security Enabled	Indicates if you have created passwords for this drive.
TCG Supported	Indicates if the Trusted Computing Group (TCG) is supported. TCG is a set of SATA commands that control the passwords and security on the drive.
Security Locked	Indicates if the drive is currently locked and needs to be unlocked with the password.
Frozen	Indicates a drive has frozen because too many wrong passwords were entered, or because of a Windows SATA command during power cycle. When a drive is frozen, you cannot unlock it, set a password, or clear a password.

The Drives panel with Security tab SATA selected is shown below.

Figure 19 Security Tab



2.6 Operations Page

The Operations page allows you to update firmware, clone a drive, run diagnostics, and manage logs on a drive. The following table describes the functions on the Operations page.

Table 4 Operations

Operation	Description
Firmware Update	Updates the firmware on the selected drive with the latest version from the manufacturer. See Section 3.4.1 Firmware Update for more information.
DiscWizard - Clone software	Seagate's DiscWizard cloning software website allows you to create and format partitions; transfer and back up data on a new drive. Your computer must connect to the Internet to use this feature.
Run Diagnostics	Runs online diagnostics that test the health and condition of the selected SSD. See Section 3.3 Operations—Diagnostics & Support for more information.
Manage Logs	Exports the information in the SMART and Event logs or clears the logs. See Section 3.3 Operations—Diagnostics & Support for more information.
Set Tunable Capacity	Allows user to change between Performance Optimized and Capacity Optimized modes. NOTE This feature is available only on select Seagate drives. If this feature is not available on your drive, this feature is grayed out.

The following figure shows the SeaTools SSD GUI Operations page.

Figure 20 Operations Page

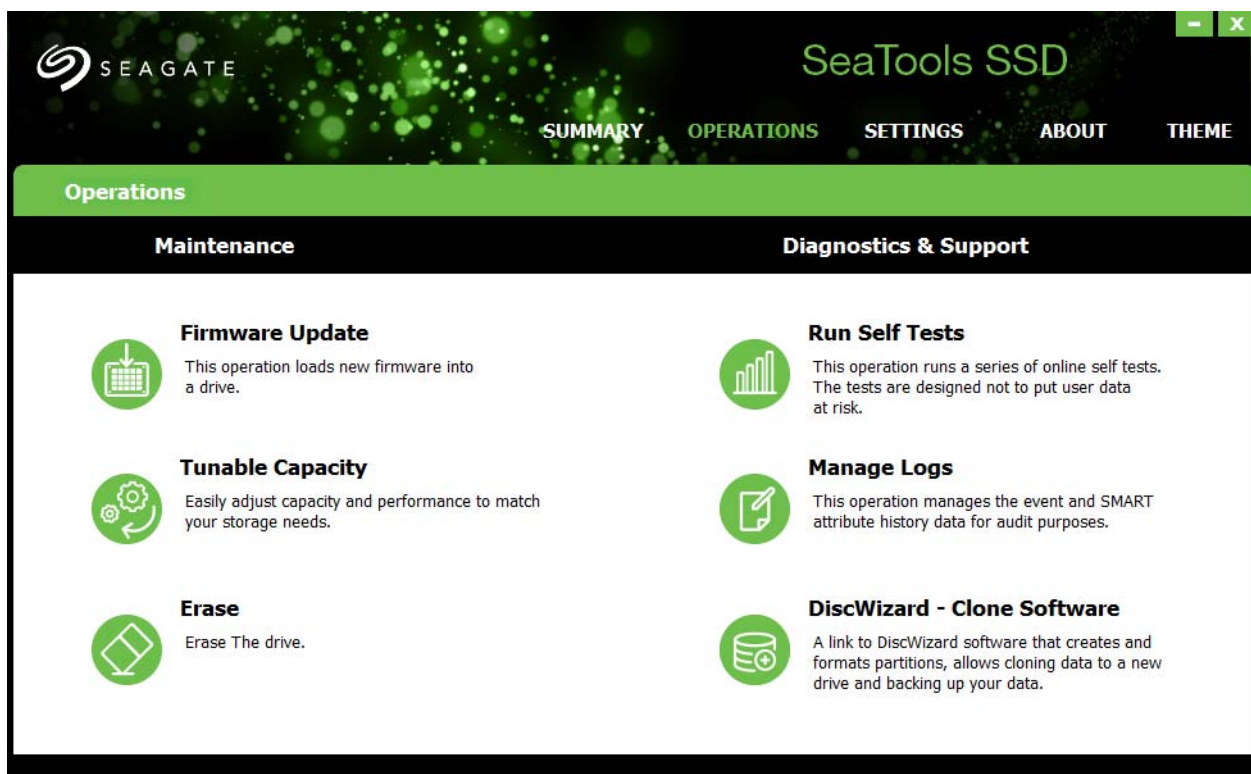


Figure 21 Gamer Operations Page



2.7 Settings and Events Page

You can set the frequency of SMART polling and Event polling on the Settings and Events page. SeaTools SSD GUI logs an event when it performs an action or recognizes a change in status. You can see these events on the Settings and Events page.

You can filter events using the parameters outlined below.

Table 5 Event Filters

Filter	Description
Severity	The classes of severity are defined as follows: <ul style="list-style-type: none">■ Information—For information purposes only. No action needed.■ Warning—Investigate in case of problems with the drive.■ Critical—Must take action. Indicates impaired drive function or drive failure.
Source	The event source can be a drive or it can be the host system.
Start date and time	Defines the start of the event filter time period.
End date and time	Defines the end of the event filter time period.

Click **Apply**, when you have chosen all your filtering parameters.

The following figure shows the SeaTools SSD GUI Settings and Events page.

Figure 22 Settings and Events Page

SeaTools SSD

SUMMARY OPERATIONS **SETTINGS** ABOUT THEME

Settings

SMART Polling Frequency: 1 hr
Event Polling Frequency: 30 min

Events

Severity: Info Source: All Start Date: All End Date: Now Start Time: All End Time: Now
Apply Reset

Level	Source	Code	Description	Time
i	XA480LE10133	25	SMART self Test completed successfully.	2019-Jan-30 11:52:12
i	XA480LE10133	32	SMART self Test in Progress.	2019-Jan-30 11:51:10
i	XA480LE10133	25	SMART self Test completed successfully.	2019-Jan-30 11:49:40

Figure 23 Gamer Settings and Events Page

SeaTools SSD

SUMMARY OPERATIONS **SETTINGS** ABOUT THEME

Settings

SMART Polling Frequency: 1 hr
Event Polling Frequency: 30 min

Events

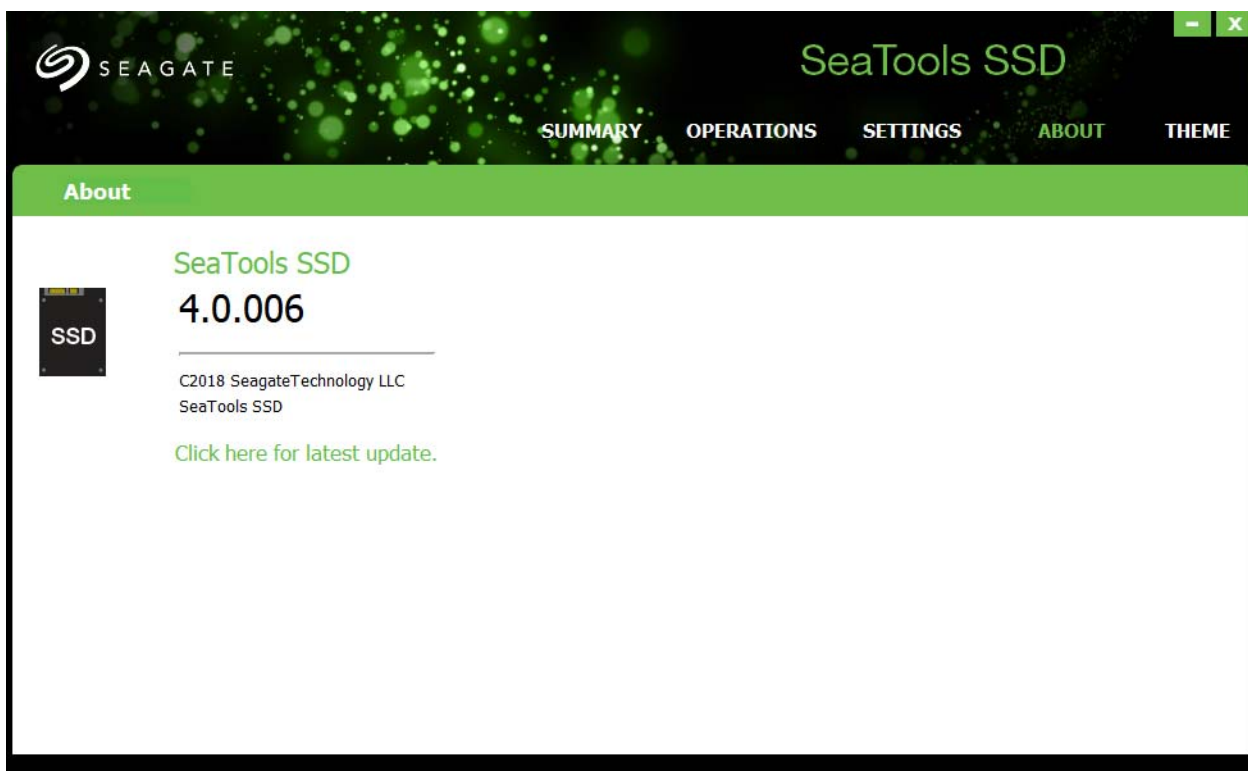
Severity: Info Source: All Start Date: All End Date: Now Start Time: All End Time: Now
Apply Reset

Level	Source	Code	Description	Time
i	XA480LE10133	34	Sanitize completed successfully.	2019-Jan-31 11:18:58
i	XA480LE10133	8	Device security state has changed to SEC1.	2019-Jan-31 11:18:58
i	XA480LE10133	35	Sanitize in Progress.	2019-Jan-31 11:17:39

2.8 About Page

The About page reports the version of the SeaTools SSD GUI tool, as well as a link to the latest tool update. The About page is shown below.

Figure 24 About Page



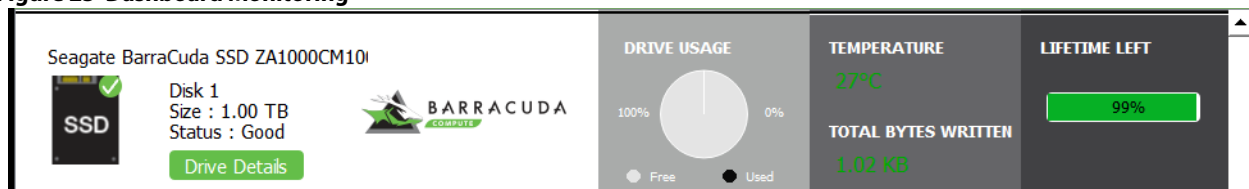
3. Common Tasks

This chapter describes common tasks for monitoring drive health, diagnosing problems, and updating drivers and firmware.

3.1 Monitor Overall Health

The SeaTools SSD GUI dashboard allows you to monitor the overall health of your installed drives. The dashboard for a BarraCuda drive is shown below.

Figure 25 Dashboard Monitoring



To check status of a selected drive:

1. Go to the Summary page (see [Section 2.2, Summary Page](#)).
2. See the dashboard of the drive you want to check.
 - The left pane of the dashboard shows the general status of the drive.
 - A green check mark on the drive icon indicates good drive status.
 - A red X indicates a problem—click the **Drive Details** button for further information about any problems.
 - See the Temperature pane to determine if the drive is operating at an acceptable temperature. If the drive temperature appears in red, this indicates that the operating temperature is too high and you must check the drive to ensure its air circulation is not blocked.
 - See the Lifetime Left pane of the drive to see how much time is left before this drive reaches the end of its life span.

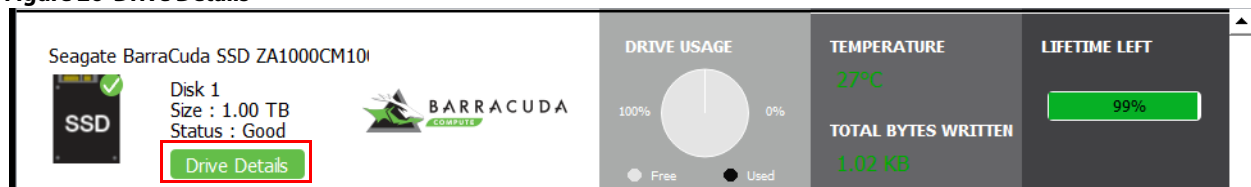
3.2 Monitoring SMART Attributes

SeaTools SSD GUI allows you to monitor SMART attributes (for more information, see [Section 2.5.4, SMART Tab—SATA](#), and [Section 2.5.5, SMART Tab—NVMe](#), for more detailed troubleshooting information).

To monitor SMART attributes for possible problems with a drive

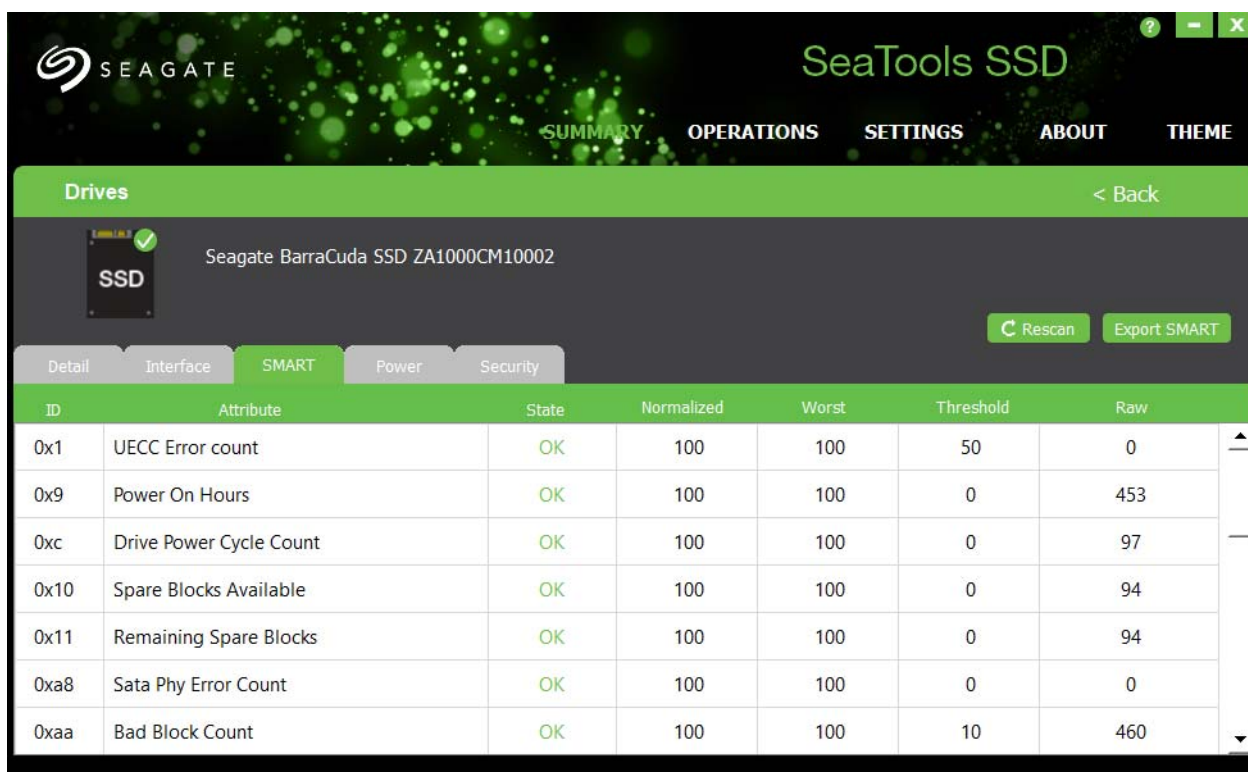
1. Go to the Summary page→Dashboard of the selected drive→Far left information pane for the drive.
2. Click **Drive Details**, as shown in the figure below.

Figure 26 Drive Details



3. The Drives panel opens.
 4. Go to the SMART tab.
 5. See the State indicator for each attribute.
- Each SMART attribute includes a State indicator, as shown in the figure below.

Figure 27 SMART Tab State Indicators



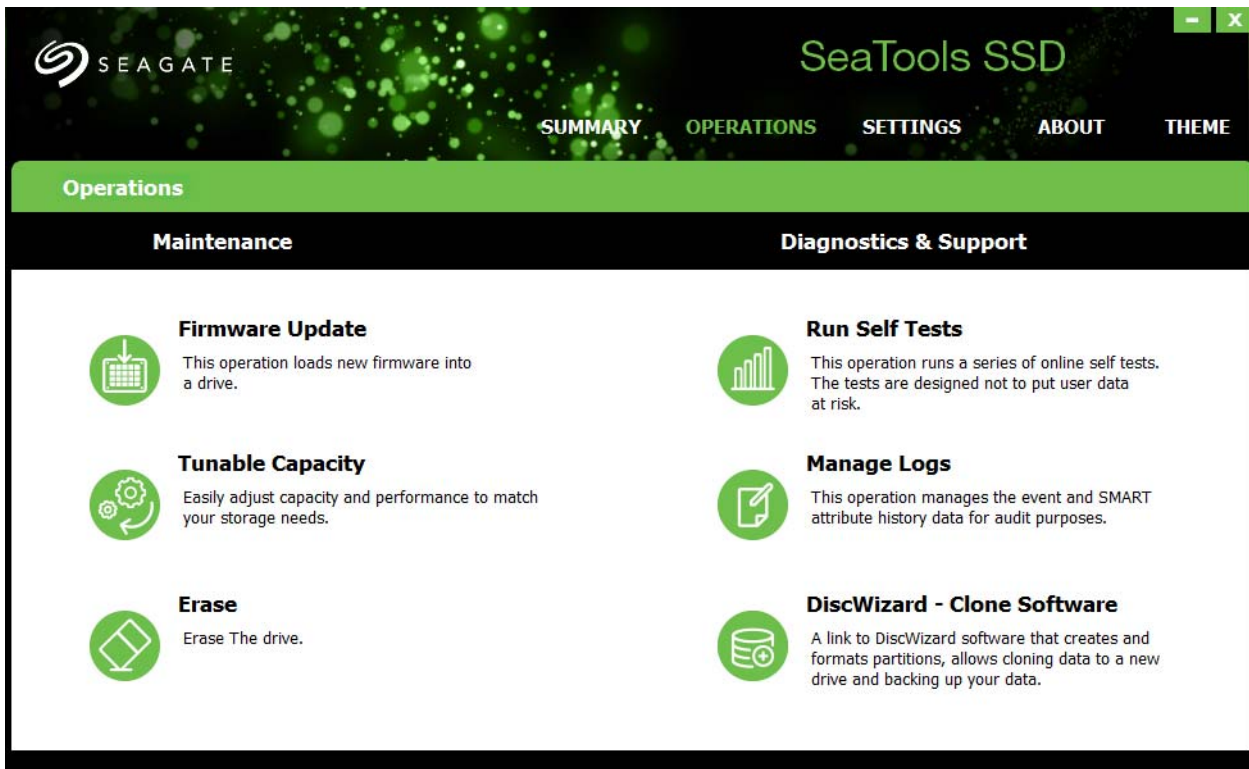
If all the values in the State column of the SMART attributes are OK, your drive is running normally and is not in danger of failing. If any state indicator is red, this indicates a problem, and you must back up your data immediately.

3.3 Operations—Diagnostics & Support

The **Diagnostics & Support** section of the **Operations** page allows you to perform the following on your installed drives:

- **Run Self Tests**
- **Manage Logs**
- **Create Support Logs.**

Figure 28 Operations Page



3.3.1 Run Self Tests

You can perform the following tests with SeaTools SSD GUI.

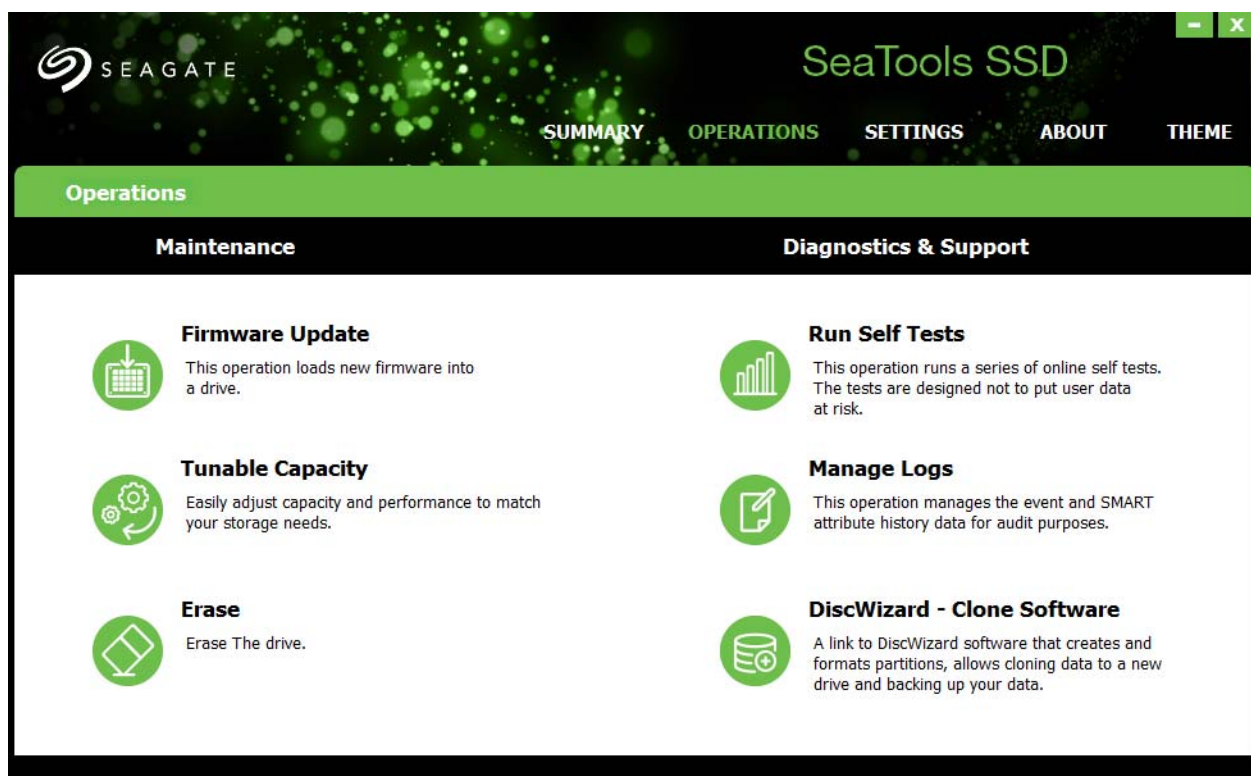
Table 6 Types of Self Tests

Type	Description
Short	Performs a quick scan on randomly selected logical bus addresses (LBAs) on the selected drive. Does not test the flash media. It must be completed in 60 seconds or less.
Extended	Performs a thorough scan of all LBAs of the selected drive. Also performs limited testing of the flash media.

To perform a self test:

1. Go to the **Operations** page→**Diagnostics & Support**→**Run Self Tests**

Figure 29 Operations Page.



2. Select a drive to test when the following page opens.

Figure 30 Self Test Select Drive

Self Test

1 2 3 4

Select a Drive

<input type="radio"/>	Nytro 1351 XA3840LE10063
<input type="radio"/>	Seagate BarraCuda SSD ZA1000CM10002
<input type="radio"/>	XA480LE10133
<input type="radio"/>	Seagate FireCuda 510 SSD ZP1000GM30001 (Not Supported)
<input type="radio"/>	Seagate BarraCuda 510 SSD ZP2048CM30041 (Not Supported)

Cancel Next

3. Click **Next**.
4. Select a test when the following page opens.

Figure 31 Self Test Type Select

Self Test

1 2 3 4

Select Diagnostic Type

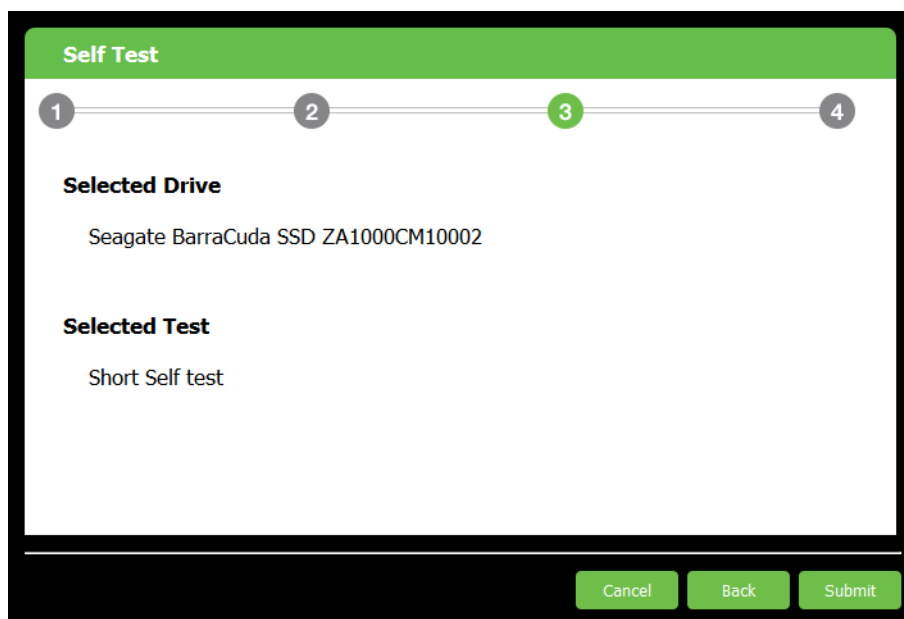
☐ Short Self Test

☐ Extended Self Test

Cancel Back Next

5. Click **Next**.
6. Click **Submit** to confirm the selection when the following page opens.

Figure 32 Self Test Confirm



The image shows a 'Self Test' confirmation window. At the top, a green header bar contains the text 'Self Test'. Below this is a progress bar with four numbered steps: 1, 2, 3, and 4. Step 3 is highlighted with a green circle, indicating the current step. The main content area is white and contains two sections: 'Selected Drive' with the text 'Seagate BarraCuda SSD ZA1000CM10002' and 'Selected Test' with the text 'Short Self test'. At the bottom right, there are three green buttons: 'Cancel', 'Back', and 'Submit'.

Self Test

1 2 3 4

Selected Drive

Seagate BarraCuda SSD ZA1000CM10002

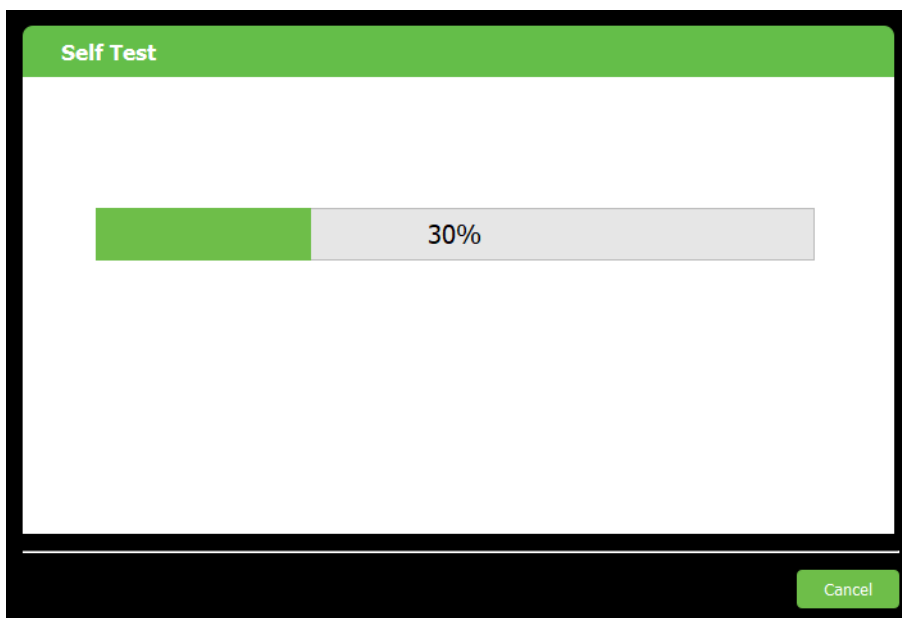
Selected Test

Short Self test

Cancel Back Submit

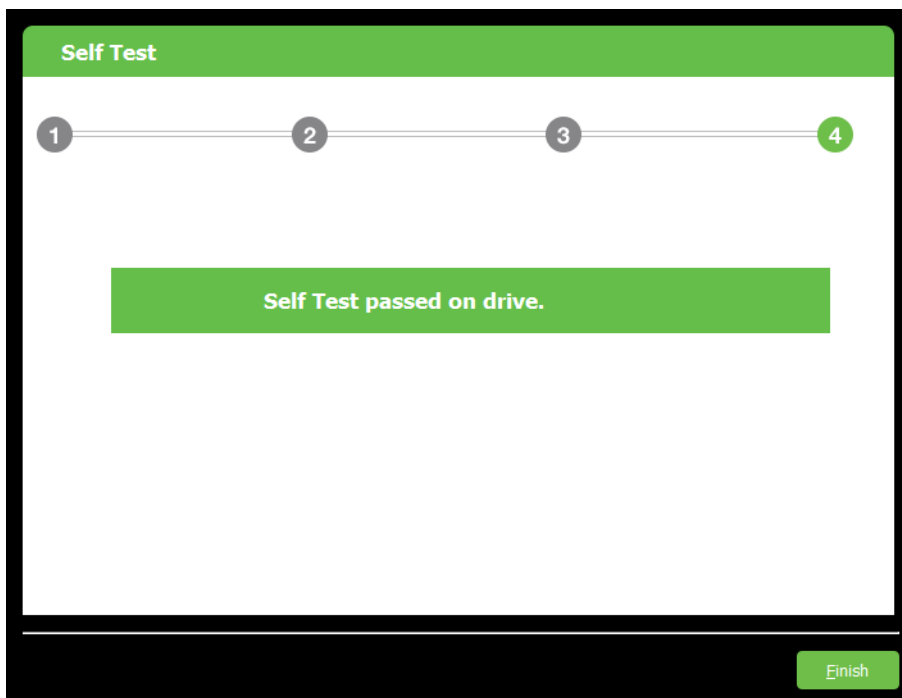
The following page shows the progress of the operation.

Figure 33 Self Test Progress



7. Click **Finish** when the following page opens, confirming that the self test is complete.

Figure 34 Self Test Complete

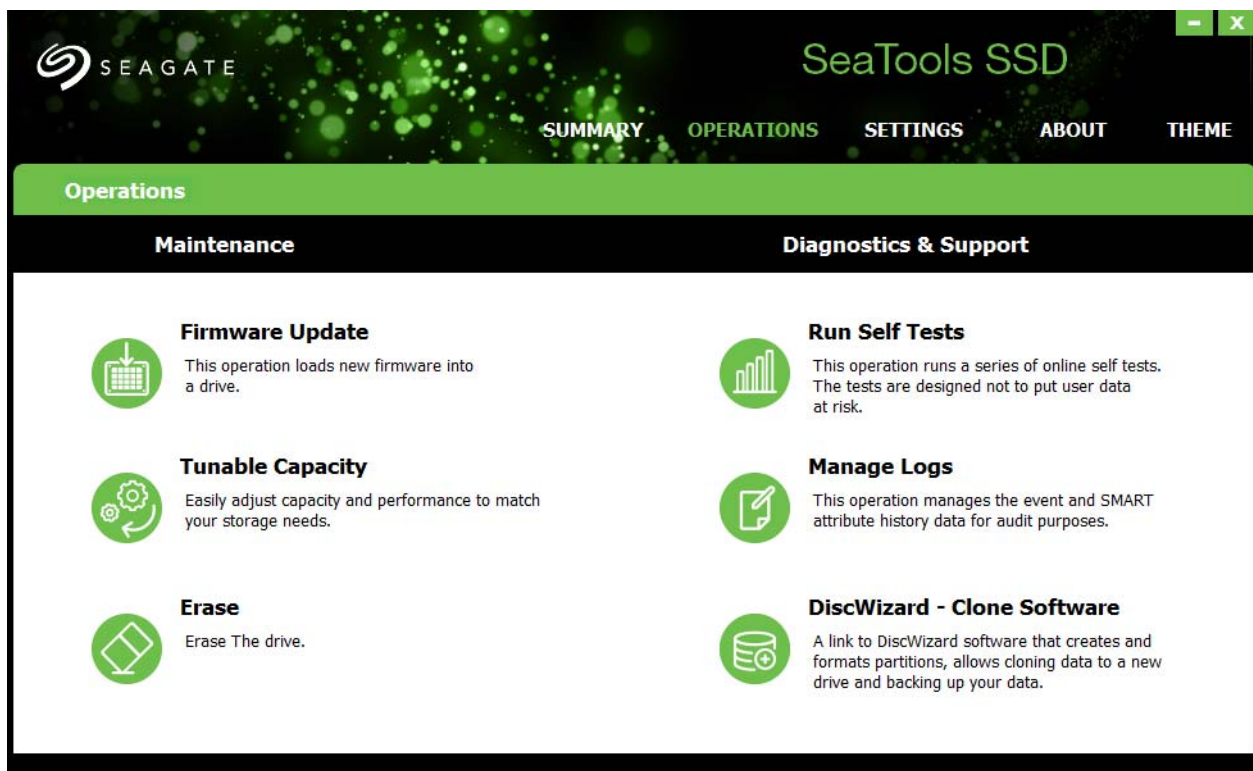


3.3.2 Manage Logs

You can export and clear logs from your installed drives.

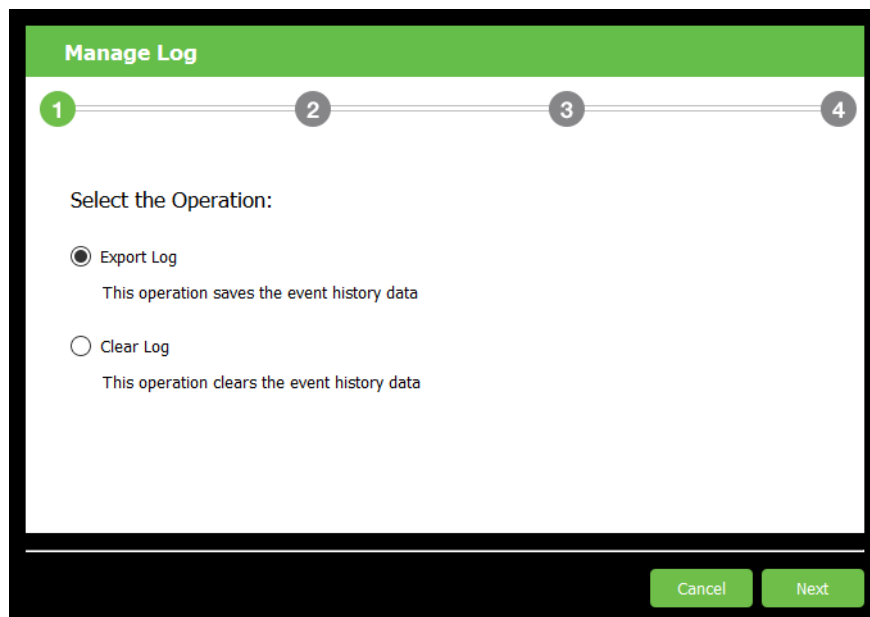
1. Go to the **Operations** page→**Diagnostics & Support**→**Manage Logs**

Figure 35 Operations Page



2. When the following page opens, select **Export Log**.

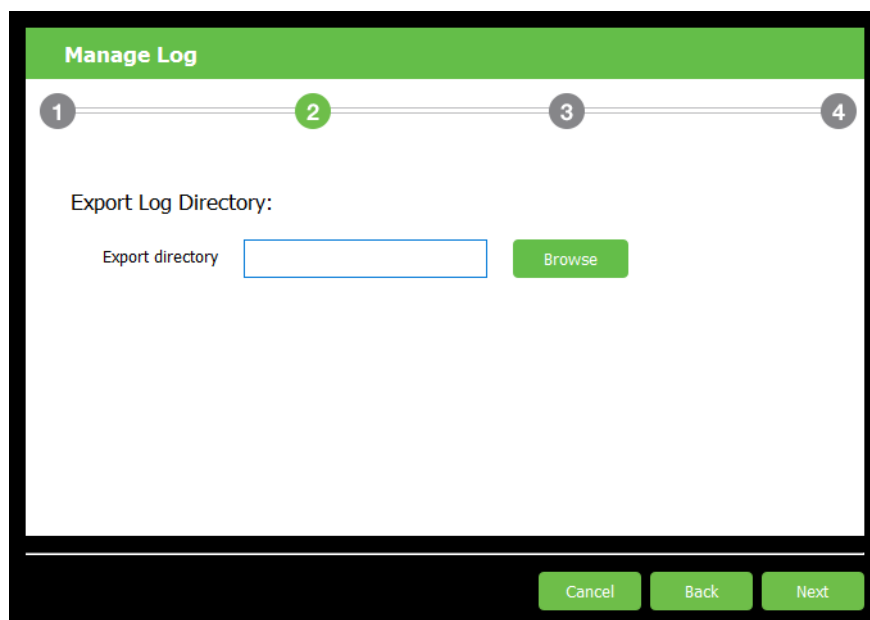
Figure 36 Manage Logs—Export



The screenshot shows a window titled "Manage Log" with a green header bar. Below the header is a progress bar with four steps: 1 (highlighted in green), 2, 3, and 4. The main content area is titled "Select the Operation:" and contains two radio button options. The first option, "Export Log", is selected and has a description: "This operation saves the event history data". The second option, "Clear Log", is unselected and has a description: "This operation clears the event history data". At the bottom right of the window are two green buttons: "Cancel" and "Next".

3. When the following page opens, enter the directory where you want to save your logs and the type of logs you want to save, and click **Next**.

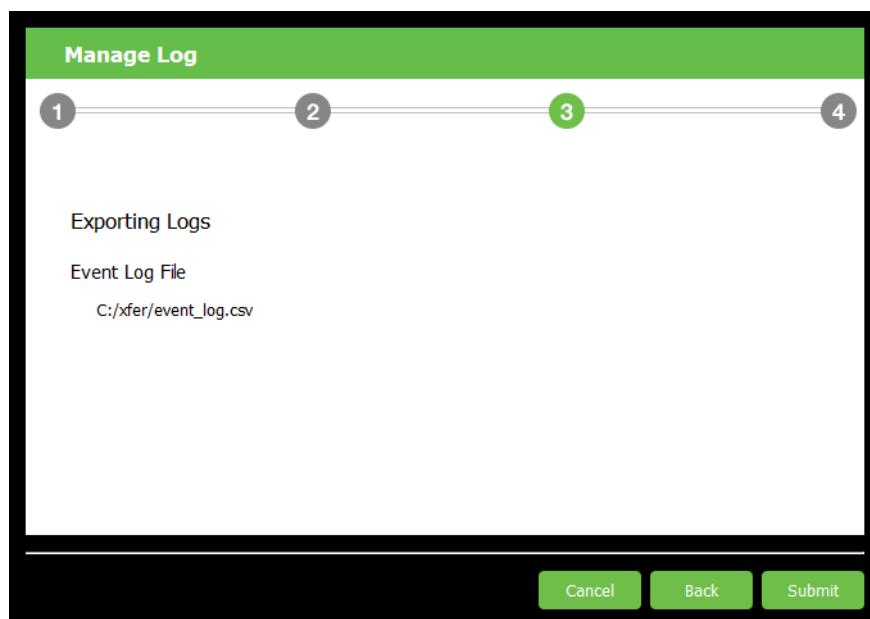
Figure 37 Export Logs Directory and Type



The screenshot shows the same "Manage Log" window, but now step 2 is highlighted in green. The main content area is titled "Export Log Directory:" and contains a text input field labeled "Export directory" and a green "Browse" button. At the bottom right of the window are three green buttons: "Cancel", "Back", and "Next".

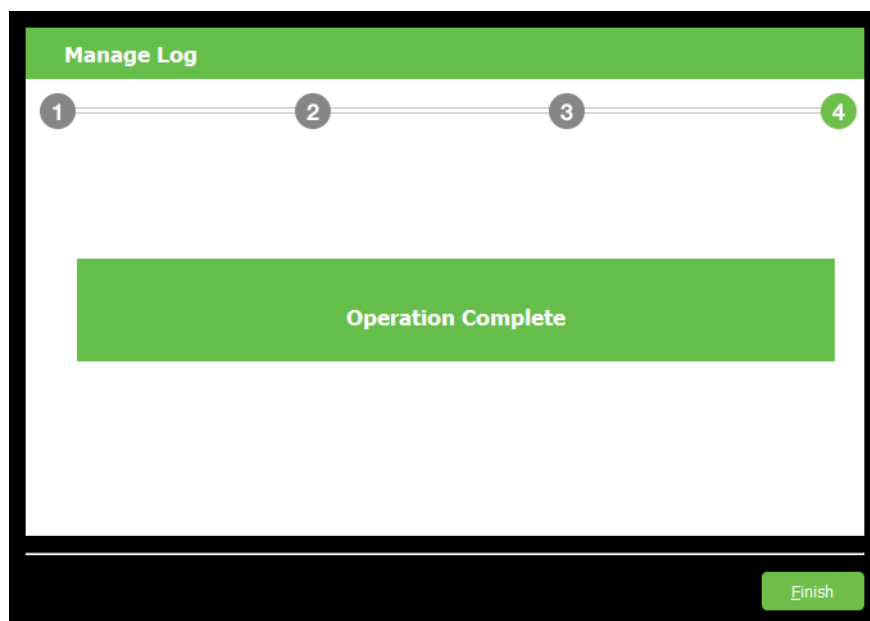
4. When the following page opens, click **Submit** to confirm your command.

Figure 38 Export Logs Operation Confirmation



5. Click **Finish** when the following page opens to indicate that the operation is complete.

Figure 39 Export Logs Operation Complete



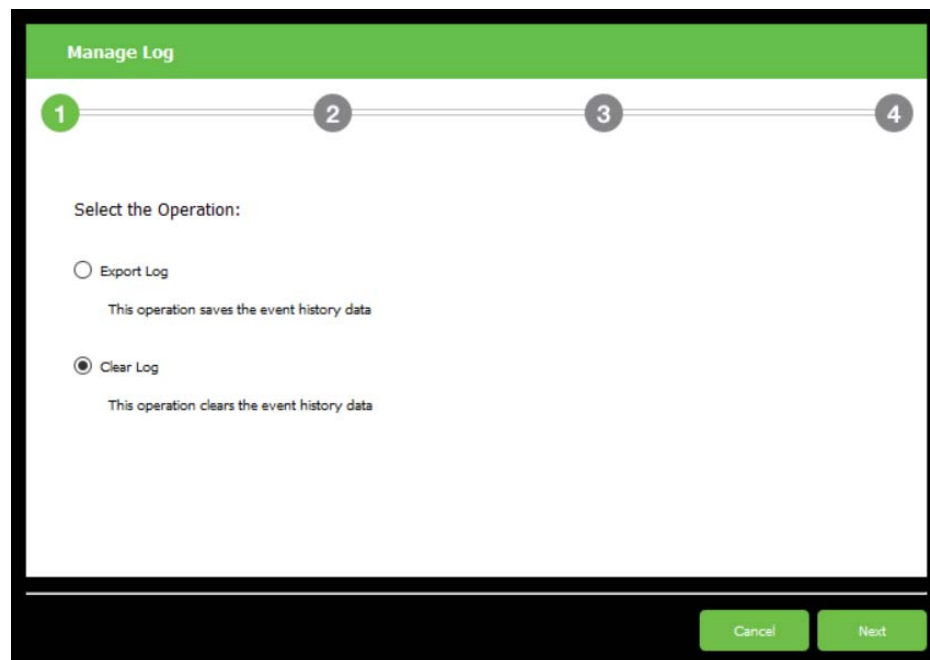
3.3.2.1 Clear Logs

When you no longer need log data, you can clear your data from the SMART logs and Event logs. Event logs contain information about any event that SeaTools SSD GUI tracks.

To clear Event logs:

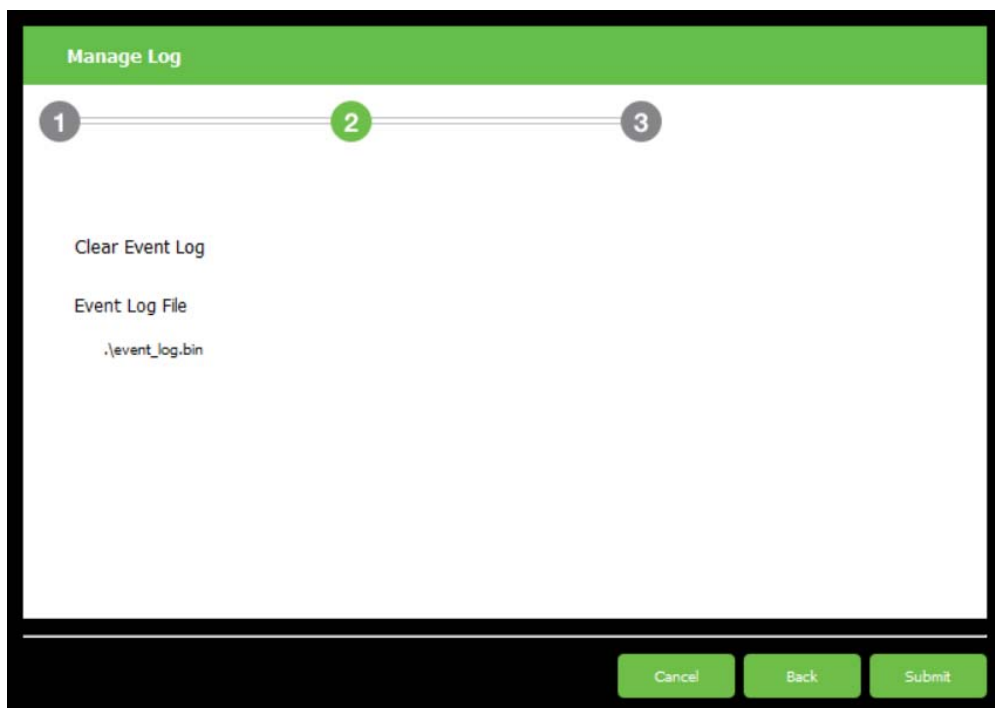
1. Go to the Operations page→Manage Logs.
2. When the following page opens, select Clear logs and click **Next**.

Figure 40 Clear Logs Operation Selection



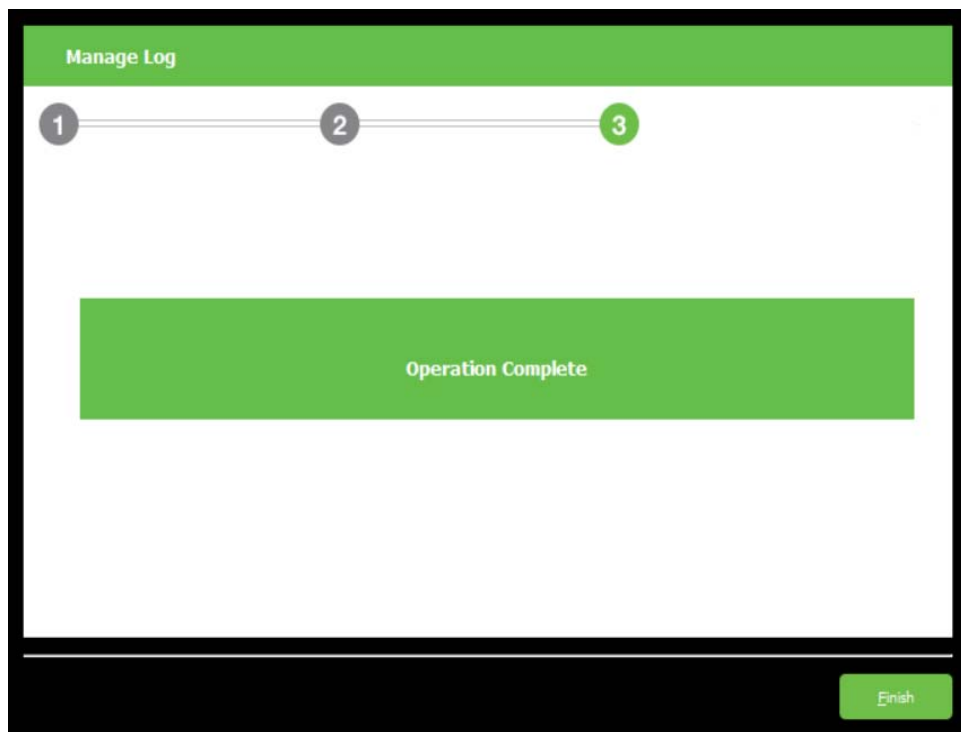
3. When the following page opens, click **Submit** to confirm your choices.

Figure 41 Clear Logs Confirmation



4. Click **Finish** when the following page opens to indicate that the operation is complete.

Figure 42 Clear Logs Operation Complete

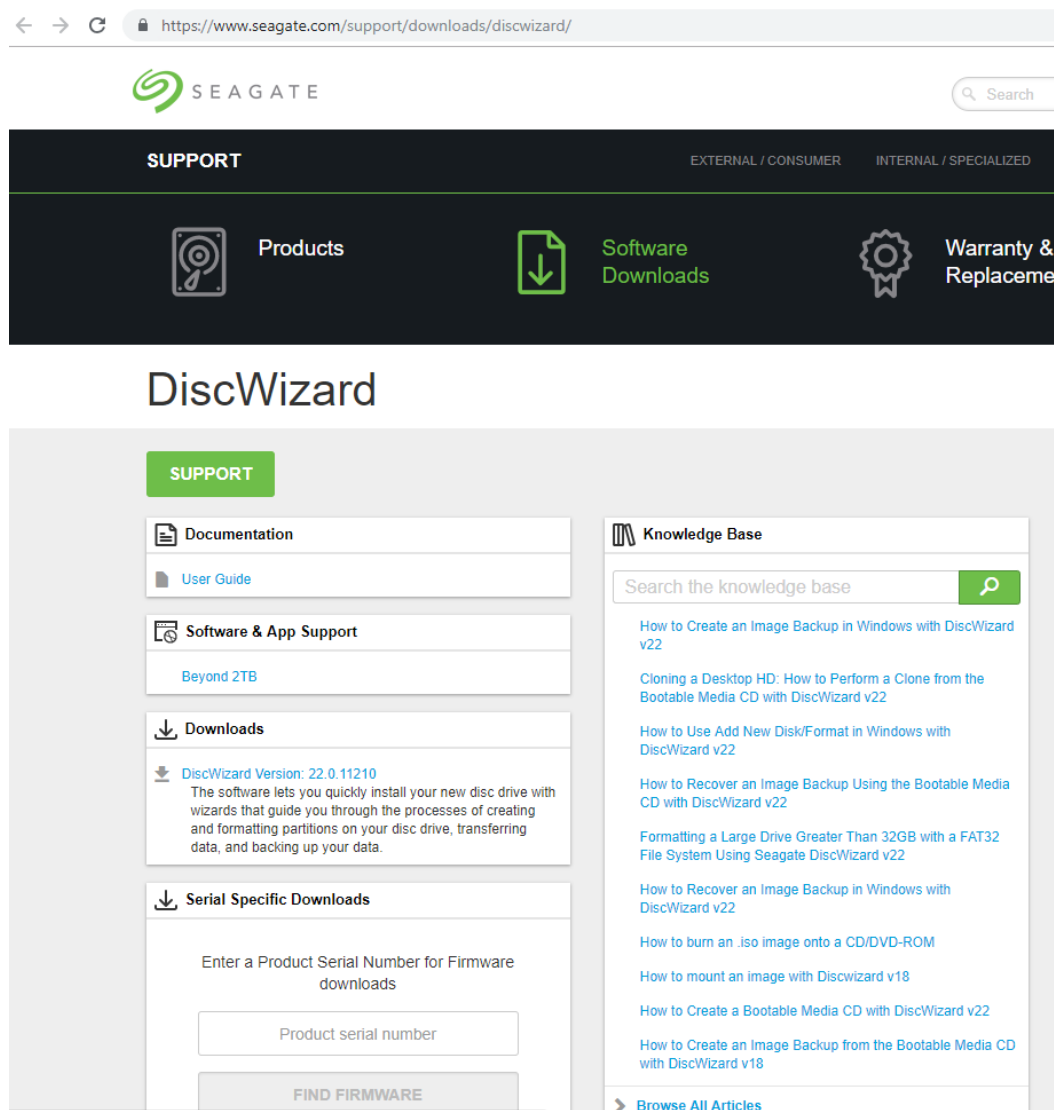


3.3.3 DiscWizard—Clone Software

This feature links you to the Seagate Support website shown below. Here you can download DiscWizard and get articles on cloning software.

NOTE If you have DiscWizard already installed on your computer, you may use that. You can use this link to verify you have the latest version.

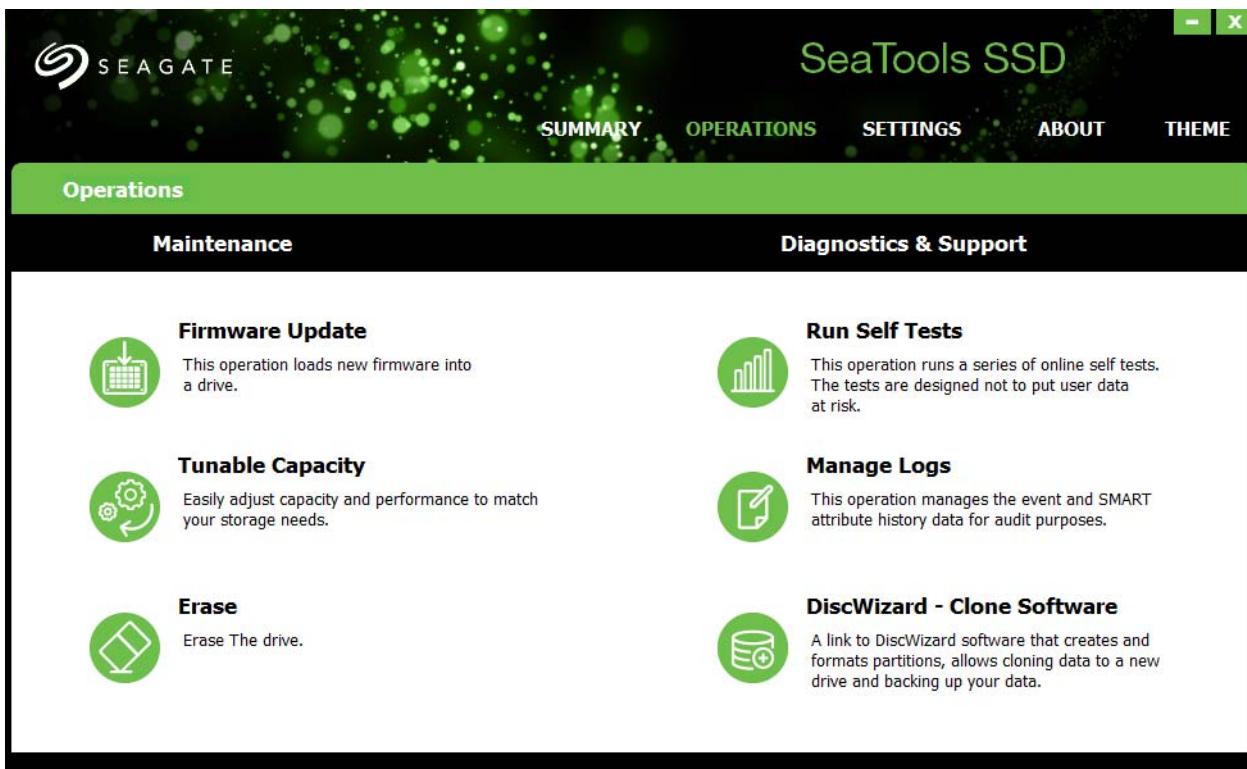
Figure 43 Seagate Support Page for DiskWizard



3.4 Operations—Maintenance

In the **Maintenance** section of the **Operations** page you can manage **Firmware Update**, **Tunable Capacity**, and **Erase** functions.

Figure 44 Operations Page



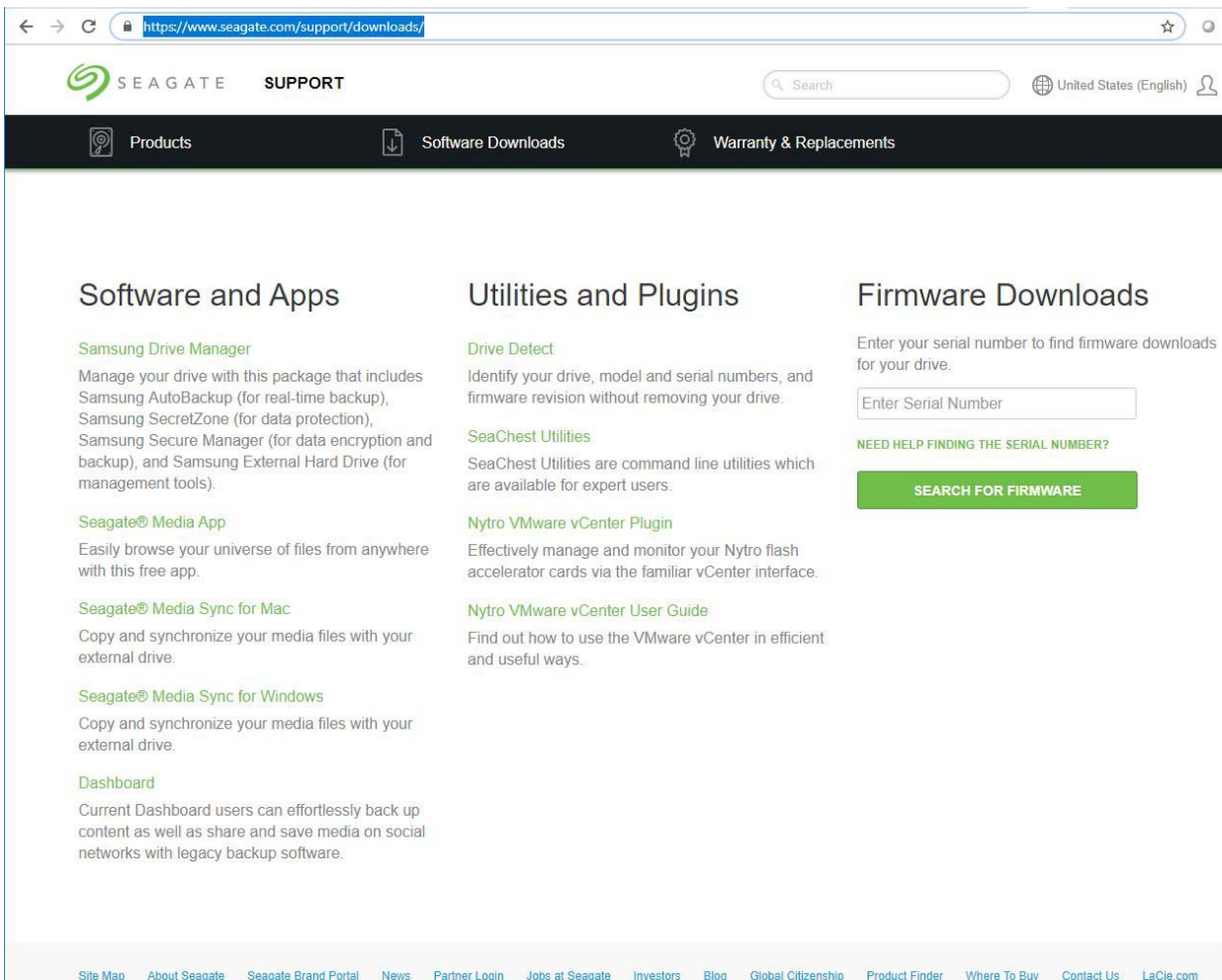
3.4.1 Firmware Update

First check if your drive needs a firmware update. Go to the Seagate Support Downloads website:

<https://www.seagate.com/support/downloads/>

1. Scroll down to see Firmware Downloads.
2. Enter your product serial number.
3. Click the button, **SEARCH FOR FIRMWARE**.

Figure 45 Seagate Support Website for Firmware Check and Download



If your drive firmware is not up to date, follow the steps below.

To update your SSD firmware:

1. Download the required version of the drive's firmware file and save it to a drive other than the one you want to update.
2. Go to the Operations page→Firmware Update
3. Select the drive to update when the following page opens.

Figure 46 Firmware Update, Select a Drive

Firmware Update

1 2 3 4

Select a Drive

<input type="radio"/>	Nytro 1351 XA3840LE10063
<input checked="" type="radio"/>	Seagate BarraCuda SSD ZA1000CM10002
<input type="radio"/>	XA480LE10133
<input type="radio"/>	Seagate FireCuda 510 SSD ZP1000GM30001
<input type="radio"/>	Seagate BarraCuda 510 SSD ZP2048CM30041

Cancel Next

4. Click **Next**.
5. Note the warning when the following page opens, and click **Browse** to select the firmware file for your drive.

NOTE Back up your data before updating your firmware.

Figure 47 Firmware Update Select Firmware File

The screenshot shows a window titled "Firmware Update" with a progress bar at the top indicating four steps. Step 2 is highlighted in green. Below the progress bar is an orange warning box with the text: "If Firmware Update is interrupted, this can render your computer unusable. Connect your computer to power before Firmware Update." Below the warning box is the section "Select firmware file" which contains a text input field with the path "C:/xfer/C45200244.mfb" and a green "Browse" button. Below this is a message: "Verified firmware image successfully. Click Next to proceed." At the bottom right are three buttons: "Cancel", "Back", and "Next".

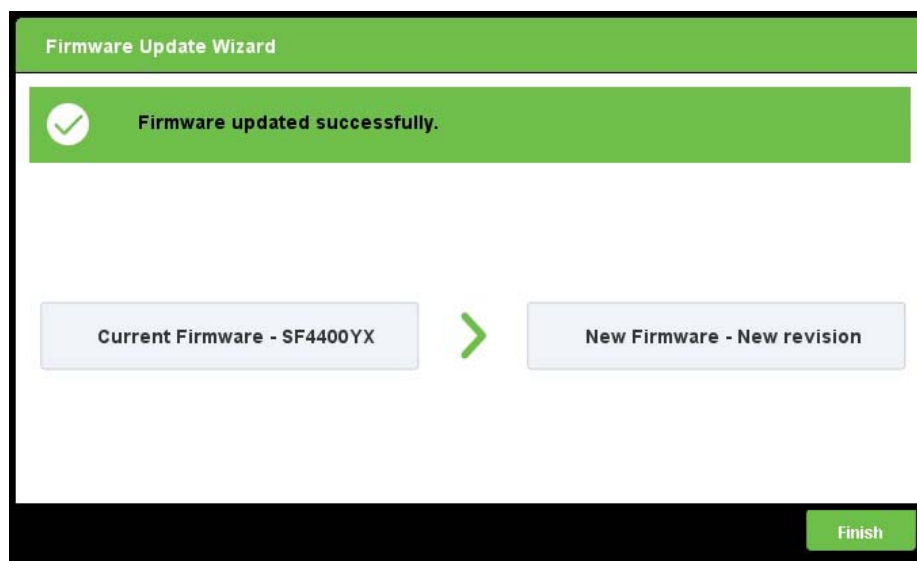
6. The following page appears asking you to confirm the firmware Click **Submit**.

Figure 48 Firmware Update Confirm

The screenshot shows a window titled "Firmware Update" with a progress bar at the top indicating four steps. Step 3 is highlighted in green. Below the progress bar is the section "Selected Drive" which displays "Seagate BarraCuda SSD ZA1000CM10002". Below this is an orange warning box with the text: "Firmware Update can result in data loss. Backup your data before performing Firmware Update." Below the warning box are two boxes: "Current Version - STAS1024" and "New Firmware - New revision", separated by a green right-pointing arrow. At the bottom right are three buttons: "Cancel", "Back", and "Submit".

7. Click **Finish** when the following page appears, confirming that the Firmware Update is complete.

Figure 49 Firmware Update Complete



3.5 Set Tunable Capacity

SeaTools SSD GUI allows you to set tunable capacity. This feature allows you to change drive mode between Performance-Optimized and Capacity-Optimized.

Performance-Optimized mode reserves a percentage of the physical flash space. This reserved space (called Over Provisioning) enables the drive to increase speed and reduce wear on the rest of the flash. The cost is less user capacity.

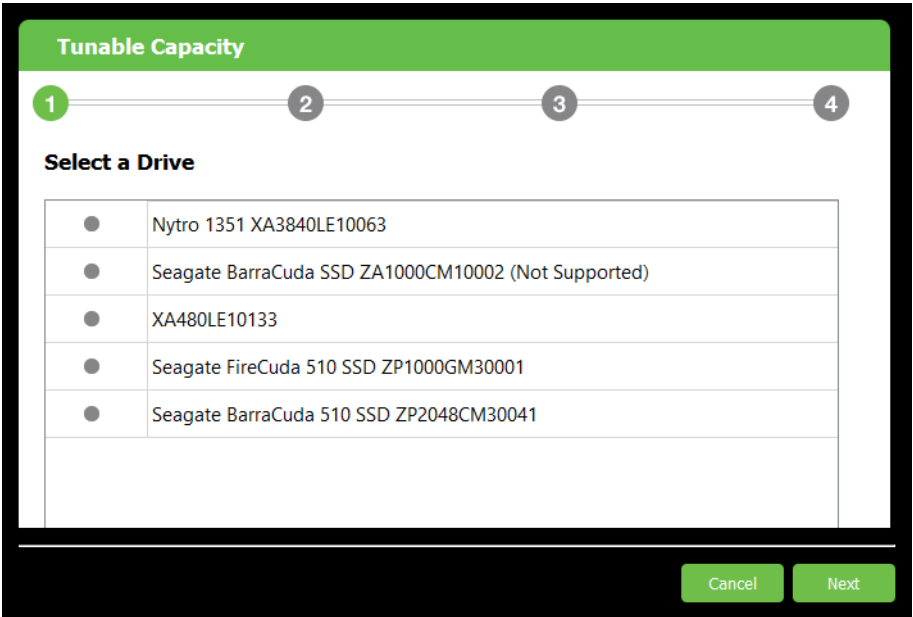
NOTE Changing to performance mode is possible only when the user data on the drive is less than the free space needed for performance mode.

Capacity-Optimized mode releases some of this reserved space (Over Provisioning). You can use this capacity to store user data. When the drive becomes full, random write performance may be affected.

NOTE This command works only for some Seagate drives. If this feature is grayed out, it does not work for your drive.

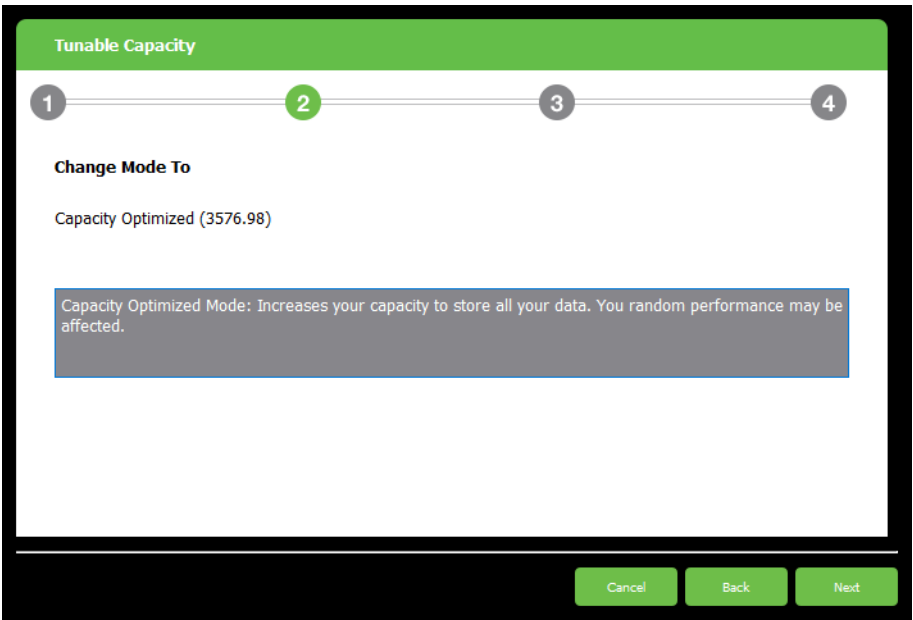
1. Go to the Operations page→Set Tunable Capacity,
2. When the following page opens, select a drive and click **Next**.

Figure 50 Set Tunable Capacity, Select a Drive



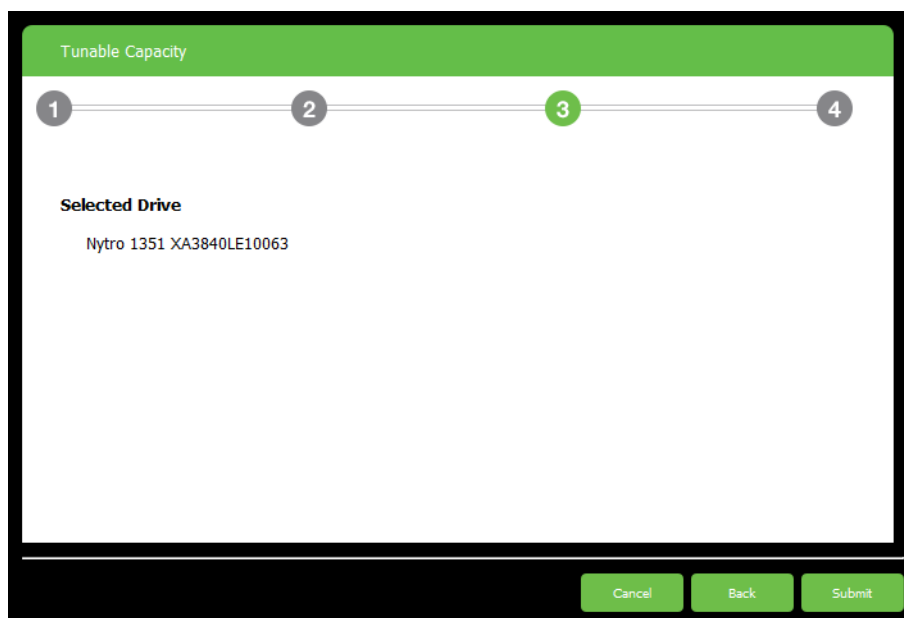
3. Click **Next** when the following page opens, indicating the Change Mode option available.

Figure 51 Set Tunable Capacity—Change Mode



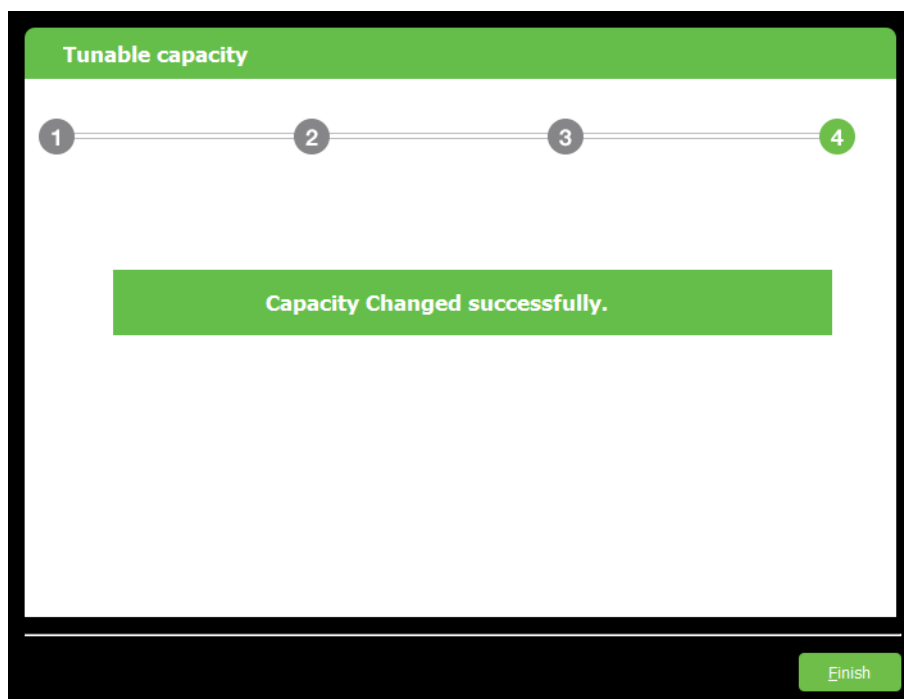
- Click **Submit** when the following page opens, to confirm the selection.

Figure 52 Set Tunable Capacity—Confirm



- Click **Close** when the following page opens to indicate that the operation is complete.

Figure 53 Set Tunable Capacity Complete

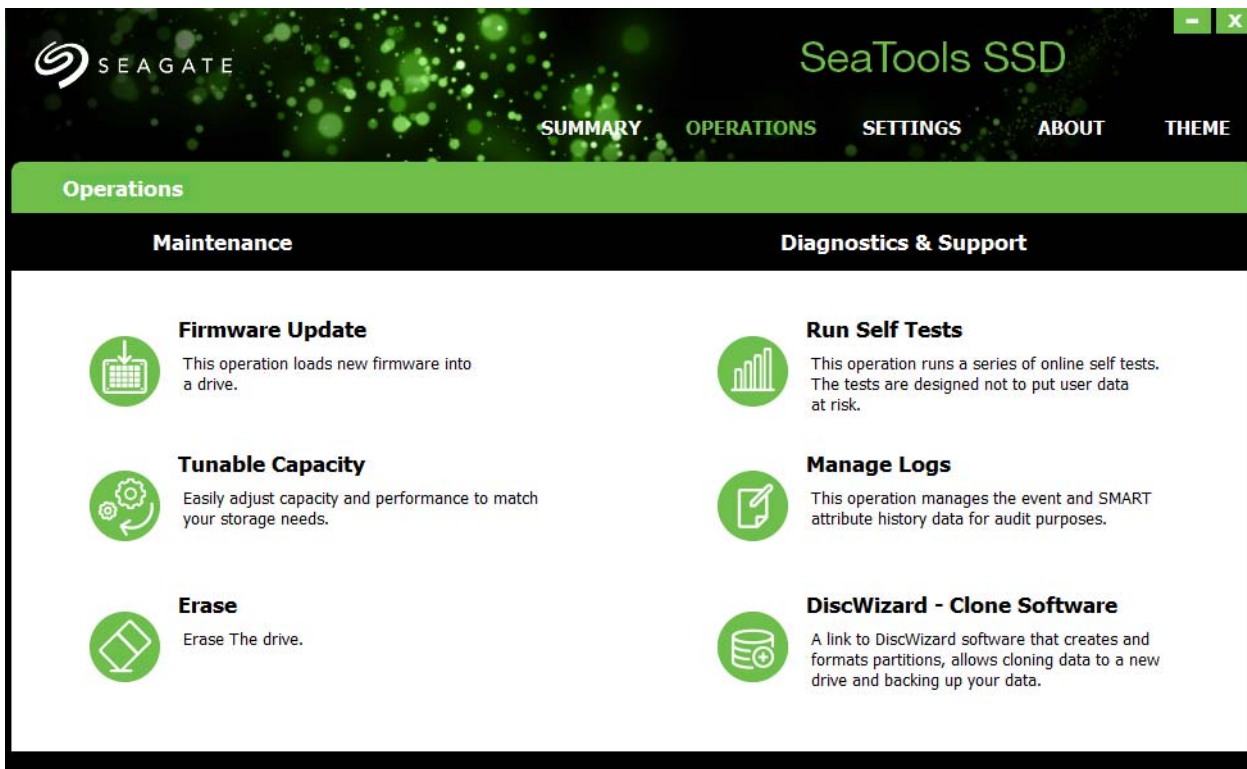


3.6 Erase

To erase a drive:

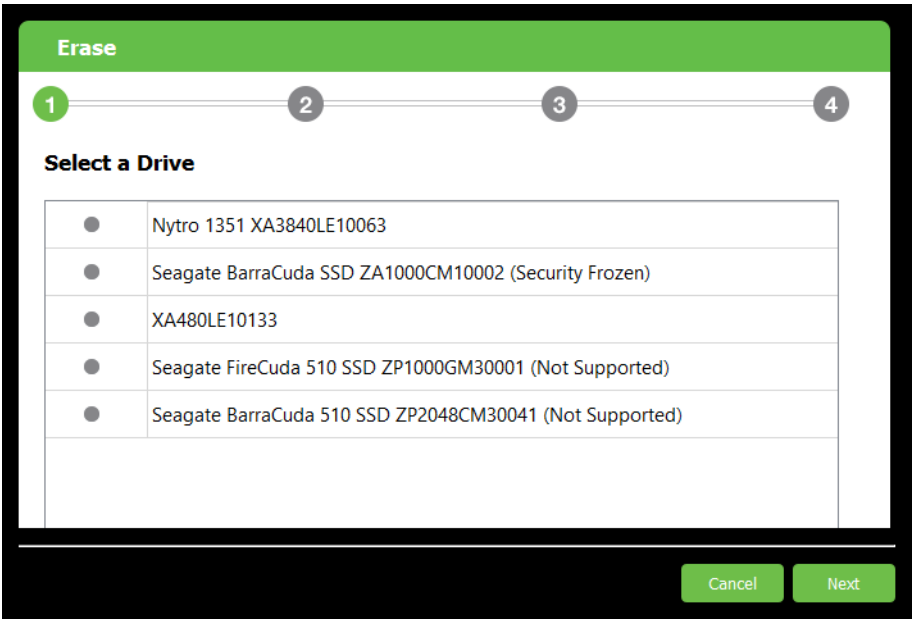
1. Go to the Operations Page, and click **Erase**.

Figure 54 Operations Page



2. Select a drive when following page opens.

Figure 55 Erase—Select Drive



3. Click **Next**.
- The following table defines the Erase options supported by SeaTools SSD GUI. Any options not supported by your drive will be grayed out.

Table 7 Erase Options

Erase Option	Description
Crypto Sanitize	This operation is the same as Crypto Erase. Sanitize performs the operation in parts. The user can monitor progress and prevent the operating system from timing out. Crypto means there's an encryption engine in the drive. When you perform a Crypto erase, you change the cryptography key (like changing a password).
Block Sanitize	Block means overwrite. This command overwrites the drive. Sanitize means the drive performs the operation in parts (by page) one command erases one part.
Overwrite Sanitize	Various government agencies have written definitions of how they want data destroyed. The user must pick the algorithm defined by the appropriate agency to overwrite the data.
Secure Erase	Is the same as block sanitize, except the drive performs the erase with only one command.
Secure Erase (Enhanced)	Is the same as crypto sanitize, except the drive performs the erase with only one command.

4. Select an Erase option when the following page opens.

Figure 56 Select Erase Type

The screenshot shows a window titled "Erase" with a progress bar at the top indicating four steps. Step 2, "Select Erase Type", is the active step. Below the title bar, there are five radio button options: "Crypto Sanitize", "Block Sanitize", "Overwrite Sanitize", "Secure Erase", and "Secure Erase (Enhanced)". At the bottom of the window, there are three buttons: "Cancel", "Back", and "Next".

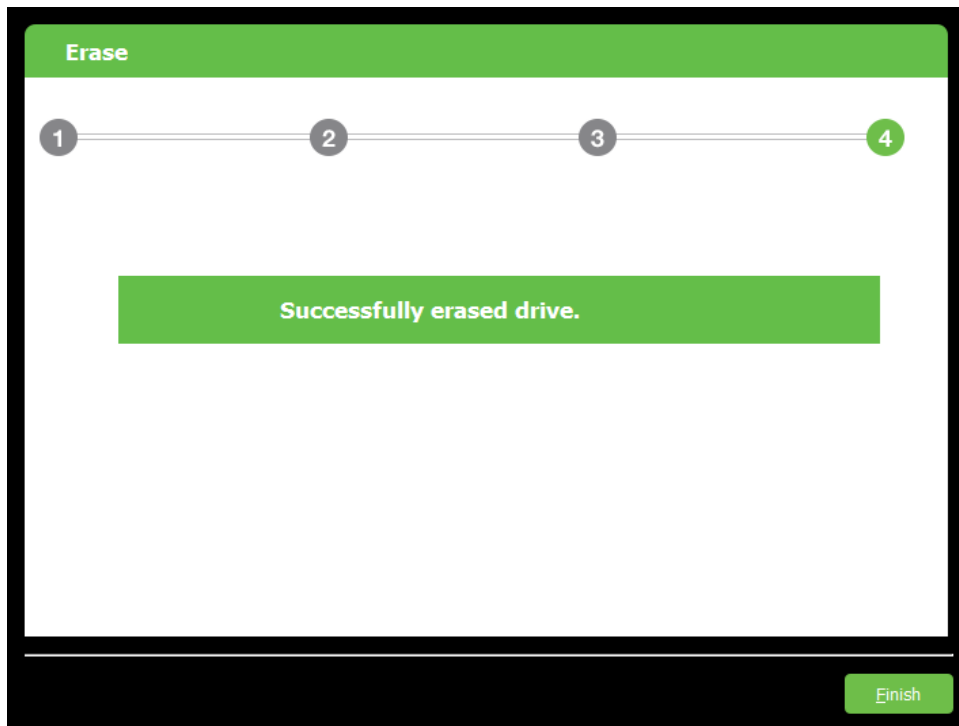
5. Click **Next**.
6. The following page opens asking you to confirm your selection.

Figure 57 Erase—Confirm

The screenshot shows the same "Erase" window, but now at Step 3, "Erase—Confirm". The progress bar shows Step 3 is active. The main area displays the "Selected Drive" as "XA480LE10133" and the "Selected Operation" as "Crypto Sanitize". At the bottom, the buttons are "Cancel", "Back", and "Submit".

7. Click **Submit..**
8. The following page reports the successful Erase.

Figure 58 Erase—Successful



3.7 Drive Erase in Windows Using USB Boot Drive

If you have a Windows operating system (OS) and a single-drive system, you cannot erase your drive using SeaTools SSD GUI. The Windows OS does not allow that.

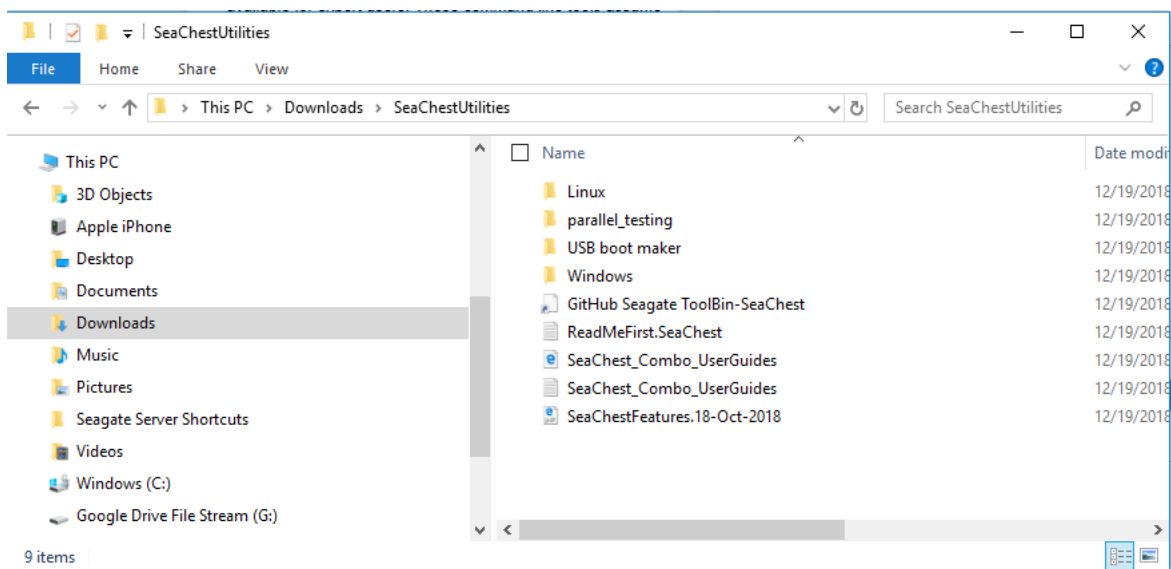
In this case, Seagate offers a bootable version of SeaChest (a CLI utility) which allows you to erase your drive from a USB drive.

To erase your drive in this way, you must first install SeaChest on a USB drive. Follow the instructions below.

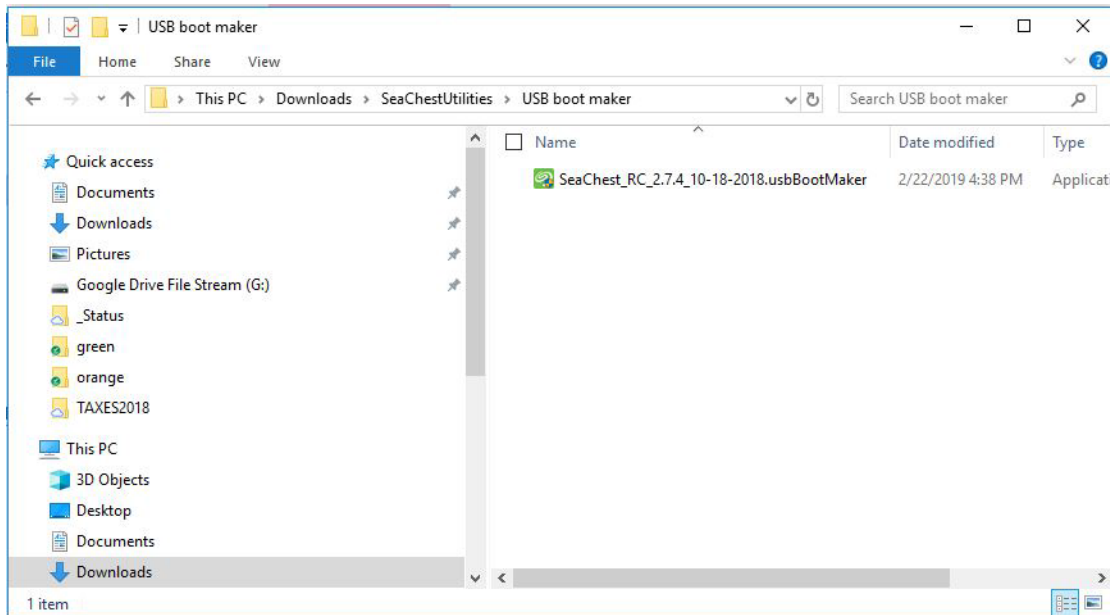
3.7.1 Create a SeaChest USB Boot Drive

First download the SeaChest utility to your system.

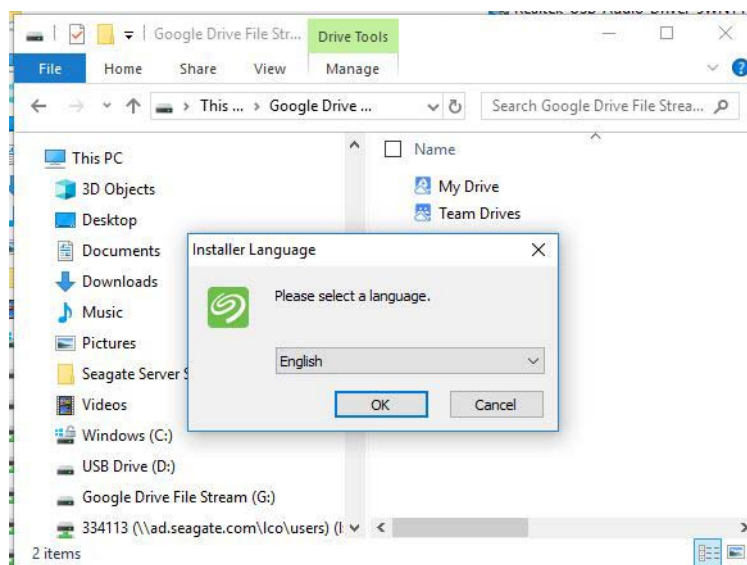
1. Go to the SeaChest Utilities support page on the Seagate website:
<https://www.seagate.com/support/software/seachest/>
2. Download SeaChest Utilities. The zip file downloads to your computer.
3. Right-click on the zip and Extract All. You should see the files shown below.



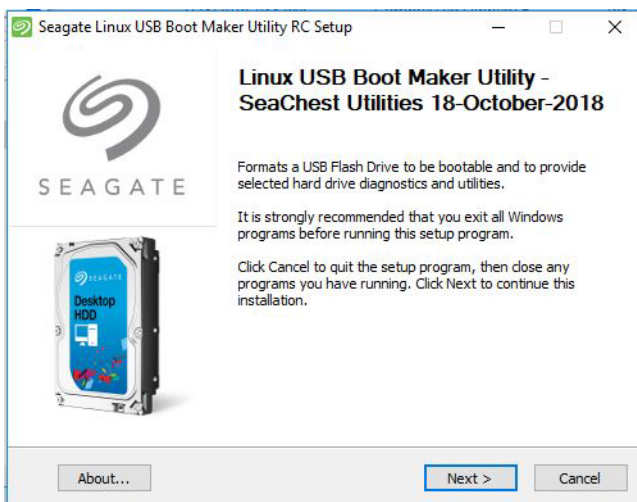
4. Open the folder called USB boot maker..



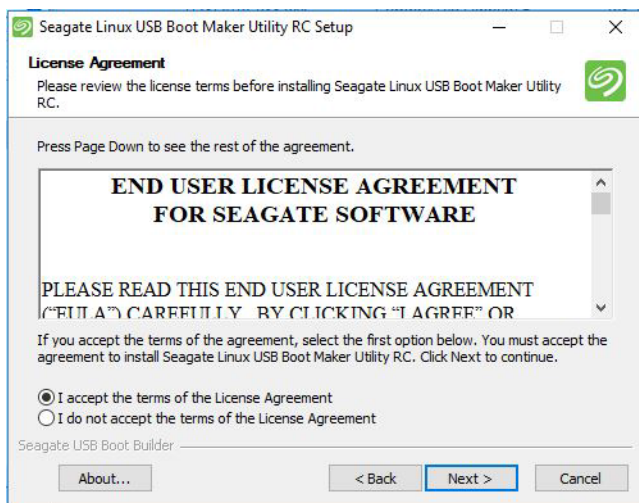
5. Double-click file SeaChest_RC_X.X.X_XX-XX-XXXX.usbBootMaker to run the utility.
6. Select language as shown below. Click **OK**.



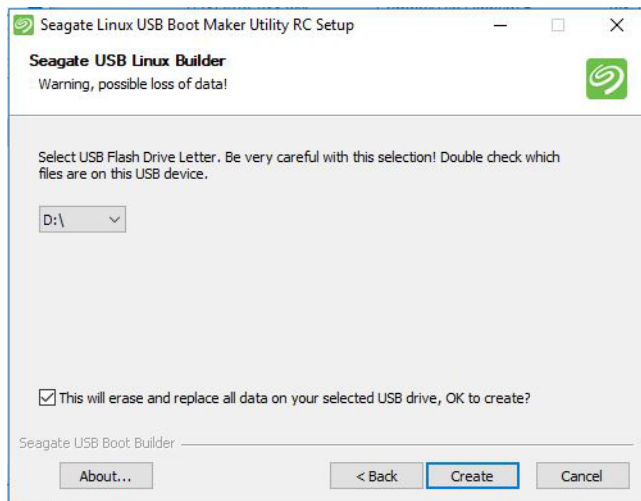
7. The window below opens. Click **Next**.



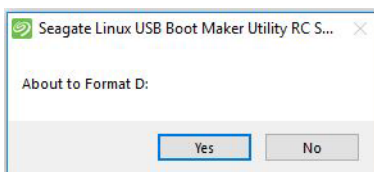
8. Accept the license agreement. Click **Next**.



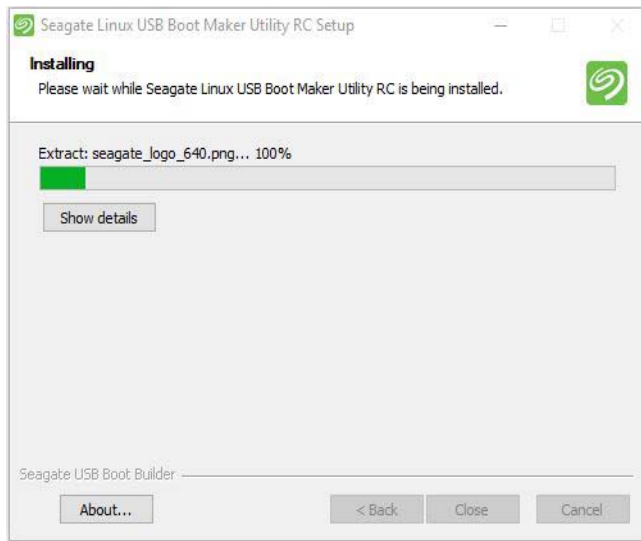
9. Select the USB Flash Drive letter. If you understand that all data on the USB flash drive will be erased, then check the checkbox for the erase data warning. Click **Create**.



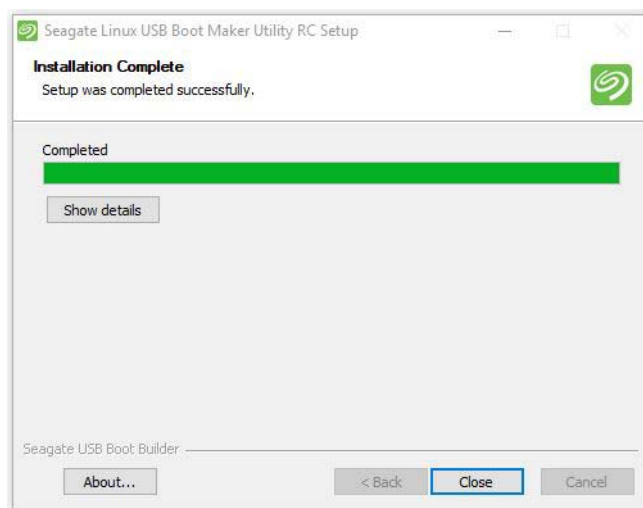
10. Click **Yes** as shown below.



11. Wait while the utility copies the files to the USB flash drive as shown below.



12. When installation is complete, click **Close**.



Now the SeaChest USB installation is complete, you can boot from your USB drive and run SeaChest to erase your drive. Follow the instructions in the next section to erase your drive in this way.

3.7.2 Erase from Bootable USB Drive

1. Plug the USB drive into your computer.
2. Restart the computer.
3. When the computer restarts, you must go to Boot Options. Here, select your SeaChest USB drive .
4. After startup, you will see a Linux prompt, a > sign with a flashing cursor.

5. At the > prompt, type:
`SeaChest_Erase --scan`

NOTE Your drive has a unique device handle which looks like this: `/dev/sgx` where x is a number. For example, `/dev/sg1` or `/dev/sg0`. You must find the handle for your drive and use this handle in the next steps.

6. At the > prompt, type the following all on one line (with one space after poll):
`SeaChest_Erase -d /dev/sgx --sanitize blockerase --poll
--confirm-I-understand-this-command-will-erase-all-data-on-the-drive`
7. SeaChest now erases your drive. A completion statement appears and the command prompt returns.

NOTE If you type `SeaChest_Erase -d /dev/sgx --sanitize info`, you can see the complete list of erase options. For example, Crypto Erase is also available for use with self-encrypting drives.



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