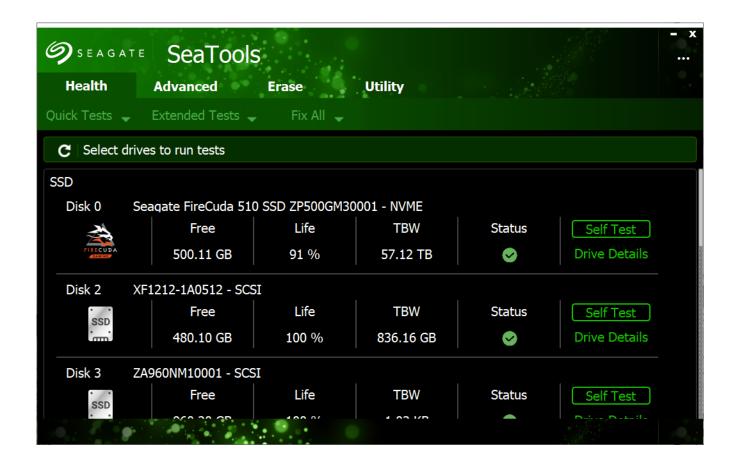


# SeaTools®

# User Guide



## **Revision History**

Version and Date	Description of Changes
Rev B, March 2022	Thorough update of the document based on comprehensive revision of the tool.
Rev A, September 2020	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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# **Seagate Technology Support Services**

For Internal SSD Support, visit: https://www.seagate.com/support/products/

For Compliance, visit here and scroll to the compliance section: https://www.seagate.com/support/downloads/

For Firmware Download and Tools Download for Secure Erase, visit: https://www.seagate.com/support/downloads/

For information regarding online support and services, visit: http://www.seagate.com/contacts/

For information regarding Warranty Support, visit: http://www.seagate.com/support/warranty-and-replacements/

For information regarding data recovery services, visit:

http://www.seagate.com/services-software/seagate-recovery-services/recover/

For Seagate OEM and Distribution partner and Seagate reseller portal, visit: http://www.seagate.com/partners

www.Seagate.com Overview

# 1. Introduction

SeaTools is a graphical user interface (GUI) tool for managing hard drives and SSDs on a system. This document describes how to use SeaTools in the following areas:

- Launching the tool
- Compliance and Support
- Navigating screens and menus
- Common tasks, such as testing, viewing detailed drive status data
- Details for the Health, Advanced, Erase, and Utility features

### 1.1 Overview

SeaTools 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 supports all drives; not all features are supported for non-Seagate drives.

# 1.2 Supported Systems

SeaTools 5.0 supports the following operating systems:

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

### 1.3 Installation

You can install SeaTools on Windows or Linux computers. The procedure is identical for both operating systems, and you can follow the install instructions, step by step.

If you are a Windows user, before installing SeaTools, make sure you are the administrator.

If you are a Linux user, you must be logged in as root, or you can use sudo to turn on root privilege.

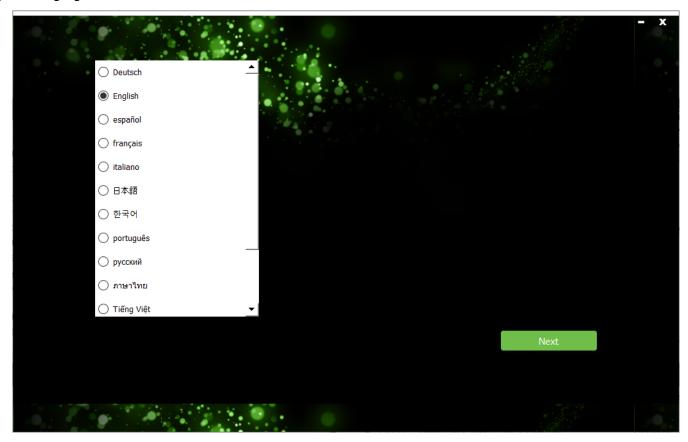
# 1.4 Launching SeaTools

# 1.4.1 SeaTools Basic—Non-Gaming

## 1.4.1.0.1 Language Choice

When SeaTools launches, the tool asks you to choose a language. SeaTools offers 13 language choices (including English). Choose a language and click **Next**.

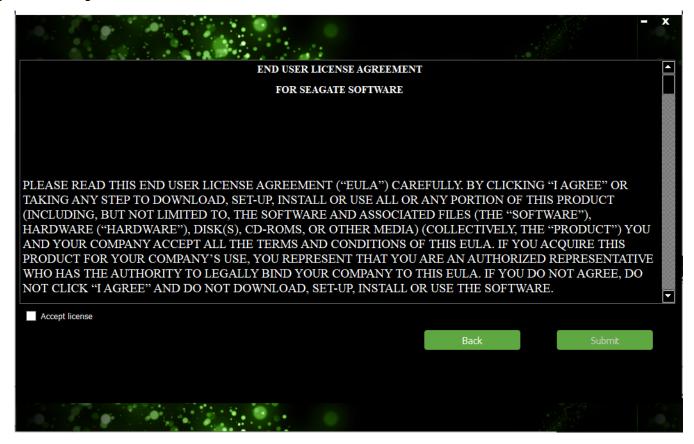
Figure 1 Language Choice.



#### 1.4.1.0.2 License Agreement

After language choice submission, the SeaTools License Agreement appears. Click **Accept License** and click **Submit**. You are now ready join the SeaTools world.

Figure 2 License Agreement.



# 1.4.2 SeaTools—Gaming

## 1.4.2.0.1 Language Choice

As with SeaTools Basic, SeaTools Gaming launches by asking you to choose a language. SeaTools offers 13 language choices (including English). Choose a language and click **Next**.

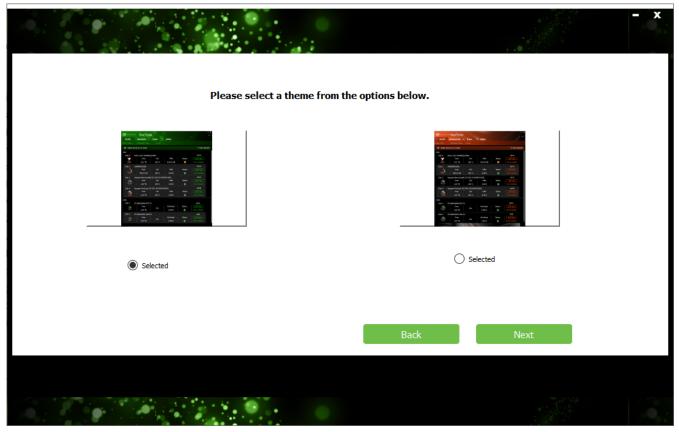
Figure 3 Language Choice.



### 1.4.2.0.2 Theme Choice

After language choice submission, SeaTools Gaming offers a theme choice. Choose a theme and click **Next**.

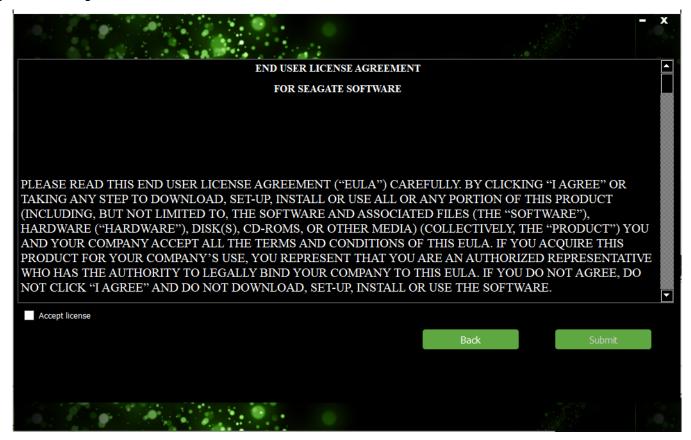
Figure 4 Theme Choice.



#### 1.4.2.0.3 License Agreement

After theme choice, SeaTools Gaming presents the SeaTools License Agreement. Check **Accept License** and click **Submit**. You are now ready join the SeaTools world.

Figure 5 License Agreement.



www.Seagate.com Home Screen

# 2. Navigation

SeaTools opens to the Home Screen..

**NOTE** To monitor your drives, SeaTools must be open. SeaTool does not monitor your

drives in the background after you have exited the tool.

### 2.1 Home Screen

The **SeaTools Home Screen** includes four tabs: **Health, Advanced, Erase, and Utility**. The **Ellipsis** in top right opens to the **Settings** menu.

Each tab includes:

- Menu bar shows access to features,
- Selection bar shows that drives are selected
- **Drive panels** show key parameters for each drive

For more on each tab, see the following sections.

### 2.2 Health Tab

The **Health TAB** includes these features:

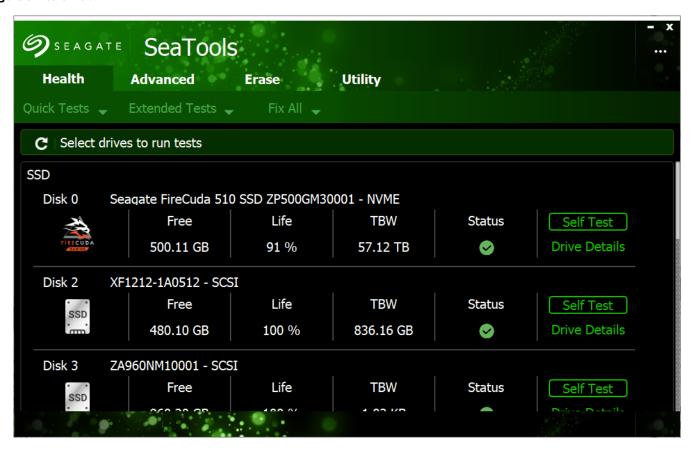
- **MENU BAR** includes these options:
  - Quick Tests
  - Extended Tests
  - Fix All
- SELECTION BAR indicates when drives are selected.
- **DRIVE PANELS** show detailed drive information, a self test and a drive details button

**NOTE** Drive panels are grouped by SSD or HDD.

The figure below shows the **Health Tab** open.

www.Seagate.com Health Tab

Figure 6 Health Tab



www.Seagate.com Advanced Tab

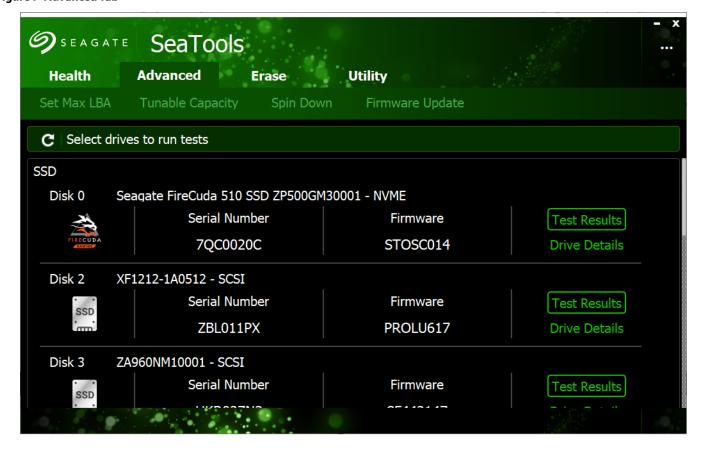
## 2.3 Advanced Tab

The **Advanced Tab** includes these features:

- **MENU BAR** includes these features:
  - Set Max LBA
  - Tunable Capacity
  - Spin Down
  - Firmware Update
- **SELECTION BAR** indicates when drives are selected.
- **DRIVE PANELS** show detailed drive information, test results button, and drive details button.

The figure below shows the **Advanced Tab**.

Figure 7 Advanced Tab



www.Seagate.com Erase Tab

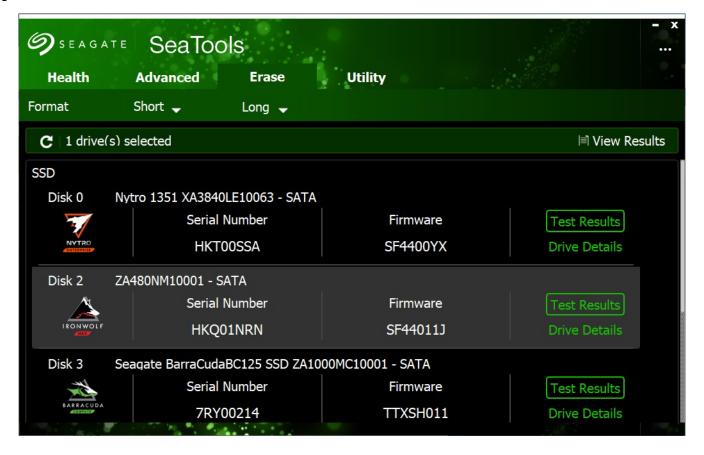
### 2.4 Erase Tab

The **Erase Tab** includes these features:

- **MENU BAR** The menu bar includes these options:
  - Format (Formats the drive and destroys data.)
  - Short Commands
  - Long Commands
- **SELECTION BAR** shows when drives are selected.
- **DRIVE PANELS** show drive details and test results and drive details button.

The following figure shows the **Erase Tab**.

Figure 8 Erase Tab

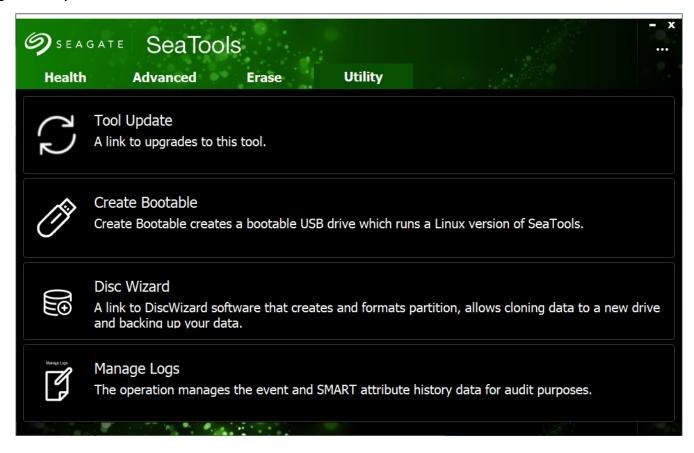


www.Seagate.com Utility Tab

# 2.5 Utility Tab

The following figure shows the **Utility Tab**.

Figure 9 Utility Screen



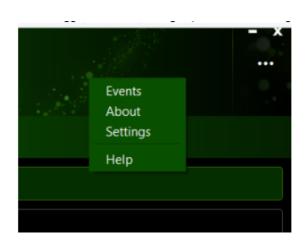
The **Utility Tab** includes these utilities:

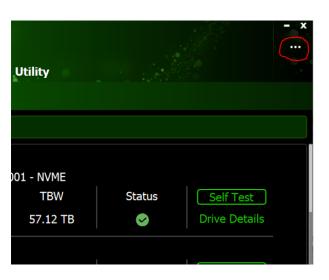
- **Tool Update** updates SeaTools to the latest version.
- Create Bootable creates a bootable USB drive which runs a Linux version of SeaTools.
- **Disc Wizard** links to DiscWizard, a software that creates and formats partitions, allows cloning data to a new drive and allows backing up your data.
- Manage Logs operation manages the event and SMART attribute history data for auditing.

# 2.6 Ellipsis

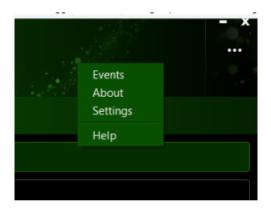
Go to the top right of the tool. You can see three dots, the **Ellipsis**. Click on the **Ellipsis** to open the menu. The **Ellipsis** menu includes **Events**, **About**, **Settings**, and **Help**.

Figure 10 Ellipsis & Menu

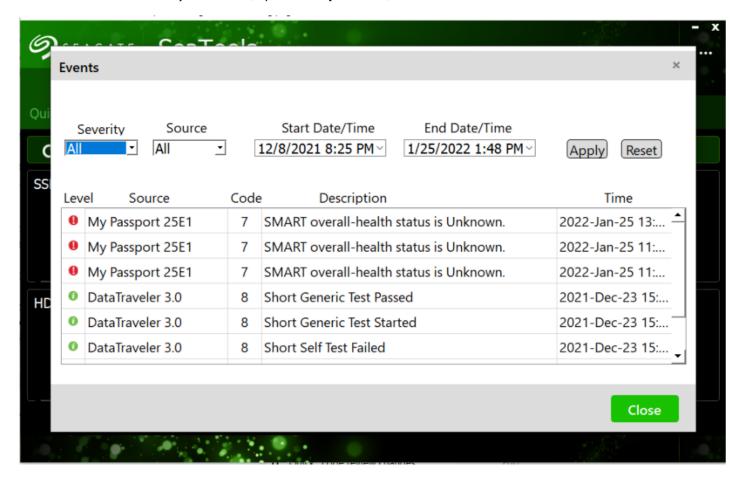




#### 2.6.1 **Events**



To see details of system events, open the **Ellipsis** menu, select Events and see the information below.



### 2.6.2 **About**

To see the version of SeaToos you are running, go to the **Ellipsis Menu** and select **About**.

Figure 11 Ellipsis Menu

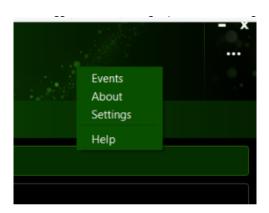


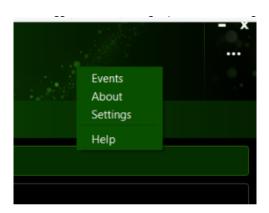
Figure 12 About



# 2.6.3 Settings—General

Go to the **Ellipsis Menu** and select **Settings**.

Figure 13 Ellipsis Menu



Options include:

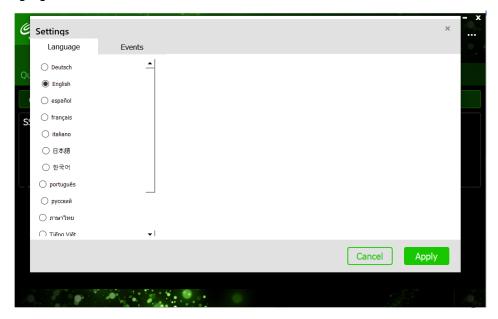
- Language choice
- Events

### 2.6.3.1 Language Choice

To choose a different language, open the **Language** tab in Settings.

SeaTools offers 13 language choices (including English).

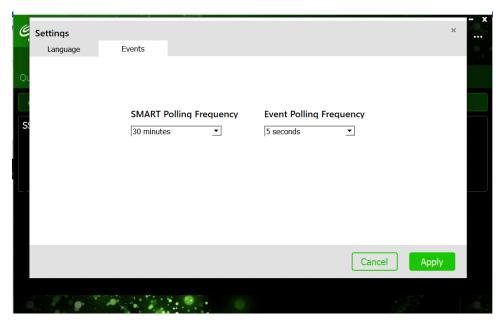
Figure 14 Language Choice.



### 2.6.3.2 Events

Select **Events** to change the frequencies for SMART and Event polling.

Figure 15 Events Polling

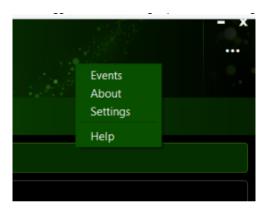


# 2.6.4 Settings—Gaming

See below for the Settings for gaming users. These settings are the same except for themes. Gaming users my choose a different theme for their SeaTools application. See Figure 2.6.4.2, *Theme Choice—Gaming Theme, on page 24*.

First, go to the Ellipsis Menu and select Settings.

Figure 16 Ellipsis Menu



## Options include:

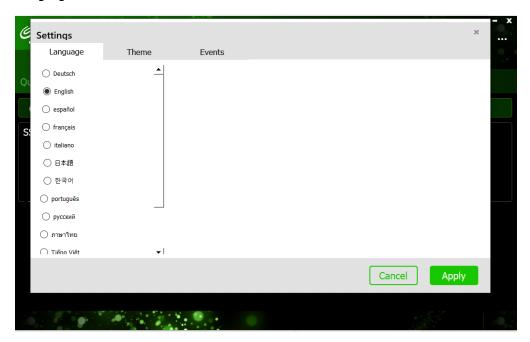
- Language choice
- Theme choice
- Events

## 2.6.4.1 Language Choice

To choose a different language, open the **Language** tab in Settings.

SeaTools offers 13 language choices (including English).

Figure 17 Language Choice.



### 2.6.4.2 Theme Choice— Gaming Theme

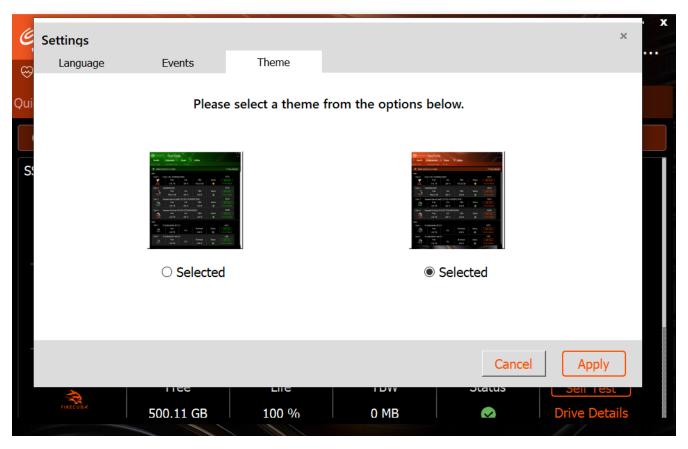
SeaTools launches in the default green theme.

If SeaTools detects a gaming drive in the system, users can switch to the gaming theme after launch. To switch after launch, these users can go to the **Ellipsis** in the top right. Open **Settings**. Select **Themes**. Make your choice.

SeaTools Features are the same in all themes.

The following figure shows the theme choice tab.

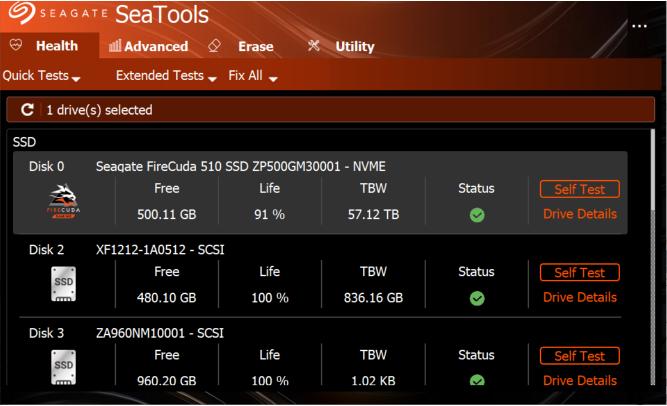
Figure 18 Theme Choice.



#### 2.6.4.3 Example—Gaming Theme

Here is an example of the gaming theme main screen open at the Health tab. The gaming drive (FireCuda) is selected here.

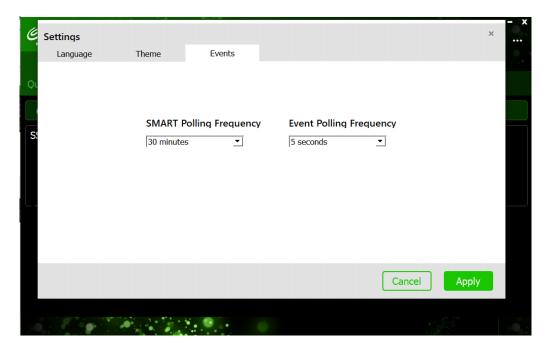
Figure 19 Gaming Theme—Main Screen.



#### 2.6.4.4 Events

Select **Events** to change the frequencies for SMART and Event polling.

Figure 20 Events Polling



# 2.6.5 Help

Select **Help** to go to the SeaTools User Guide.

Figure 21 SeaTools User Guide



www.Seagate.com Drive Details

# 3. Common Tasks

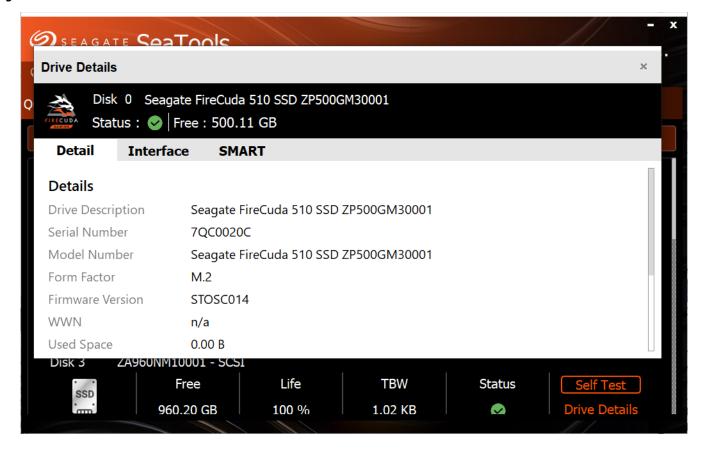
#### 3.1 Drive Details

The **Drive Details** pop up shows information about the drive. Drive information is different depending on the interface of the drive.

- NVMe drives provide three types of information: Detail, Interface, and SMART.
- SATA drives provide five types of information: Detail, Interface, SMART, Power, and Security
- SAS drives provide four types of information: Detail, Power, Interface, and Security

The figures below show Drive Details screens for each drive type.

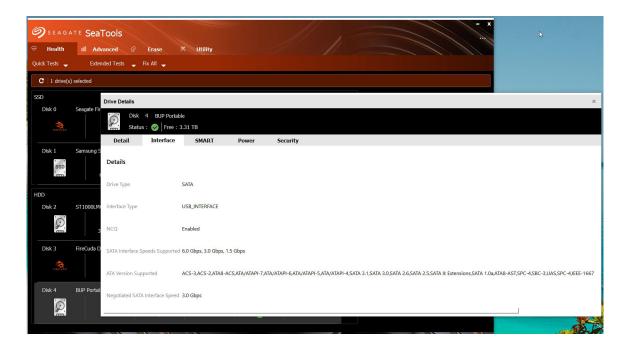
Figure 22 Details for NVMe drive



www.Seagate.com Drive Details

The figure below shows **Interface** details for a SATA drive connected through USB. Note the detail window stretches wide to accommodate the long ATA version number.

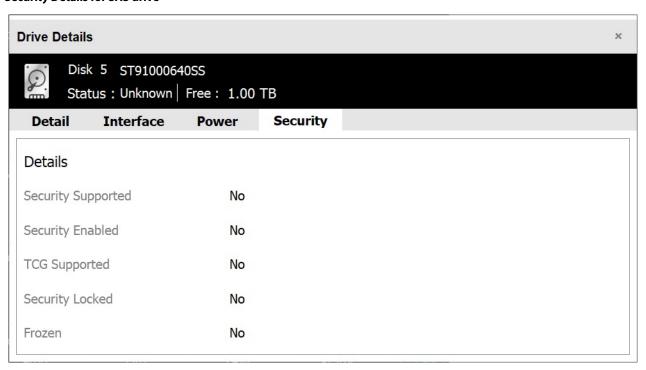
Figure 23 Interface Details for SATA USB



The figure below shows **Security** information for a SAS drive.

www.Seagate.com Drive Details

Figure 24 Security Details for SAS drive



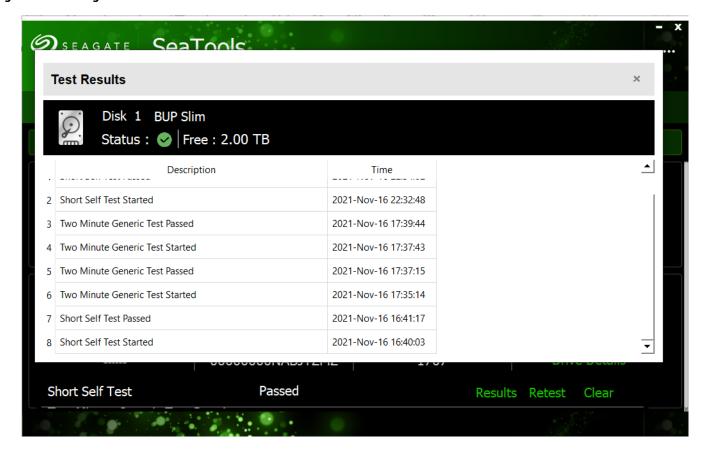
www.Seagate.com Test Results Button

# 3.2 Test Results Button

Clicking the **Test Results Button** in the **Advanced** and **Erase** tabs opens a table showing test results for the selected drive.

The figure below shows Test Results for Disk 1.

**Figure 25 Checking Test Results** 



www.Seagate.com Tests

# 4. Health Tab

SeaTools monitors drive status and performance in the following **Health Tab** features:

- MENU BAR includes test options: shown below in Section Table 1 Tests.
- SELECTION BAR shows when drives are selected.
- DRIVE PANELS show:
  - drive name
  - disk number
  - free space
  - life remaining
  - total bytes written (TBW)
  - status
  - Buttons
    - Self test starts the short self test and opens the test progress bar.
    - Drive details opens drive information windows

**NOTE** Drive panels are grouped in SSDs or HDDs.

#### 4.1 Tests

From the **Health Tab**, you can perform the following tests.

#### **Table 1 Tests**

Test	Description
Short Self Test	Tests all aspects of the drive. Does not test the flash media. Completes in 60 seconds or less.
Short Generic Test	Performs random read tests on random blocks of the media.
Long Drive Self Test	Tests all aspects of the drive. Performs limited testing of the drive media blocks. Completes in several minutes depending on drive.
Long Generic Test	Performs read and write test on all blocks of the flash media.
2-minute Generic Test	Performs read and write tests on random blocks of the media. Completes in two minutes.
Fix All Short	Back up your data. Fix All reads data blocks; repairs and replaces bad blocks. Recovery results can vary. Fix All short is a fast test, completing in minutes.
Fix All Long	Back up your data. Defrags the full disk. Reads and writes all data blocks; finds and replaces bad blocks. Recovery results can vary. This test can take as long at 1 hour per TB, and cannot be interrupted.

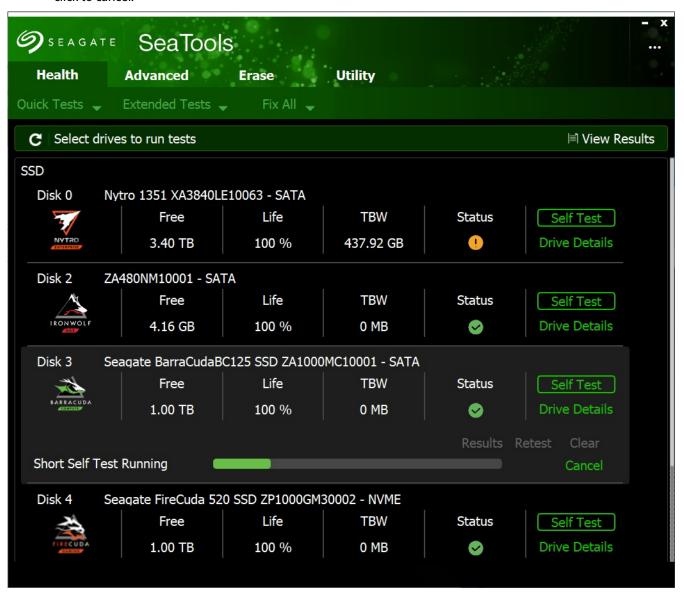
**NOTE** 

You can perform tests on more than one drive at a time. During testing, you can open Drive Details to see drive information.

www.Seagate.com Self Test

### 4.2 Self Test

To run **Self Test**, click the **Self Test** button. The green progress bar opens to say: **Short Self Test Running**. You can click to cancel.



After test completion, you can click Results, Retest, and Clear.

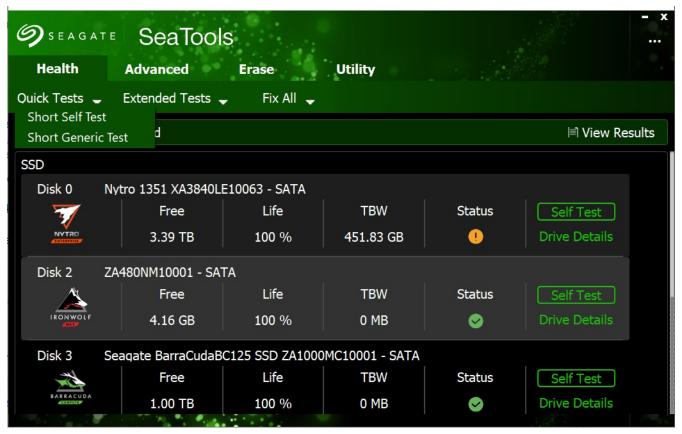


www.Seagate.com Quick Tests

# 4.3 Quick Tests

The **Quick Tests** menu includes the **Short Self Test** and the **Short Generic Test**. The figure below shows the **Quick Tests** menu.

Figure 26 Quick Tests

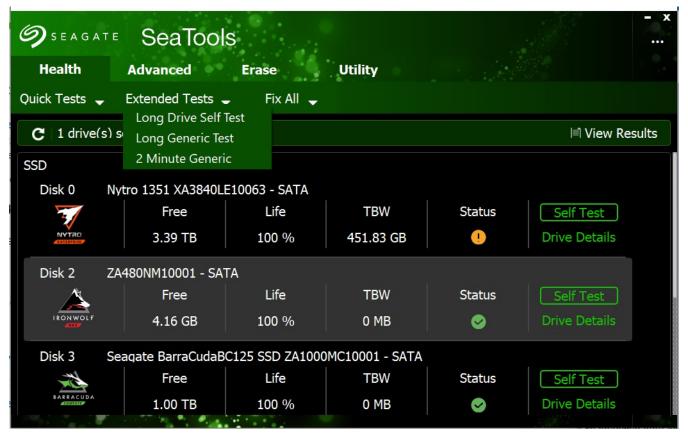


www.Seagate.com Extended Tests

# 4.4 Extended Tests

**Extended tests** include the **Long Drive Self Test**, the **Long Generic Test**, and the **2 Minute Generic Test**. The figure below shows the **Health Tab** with the **Extended Tests** menu open.

Figure 27 Extended Tests.



www.Seagate.com Long Self Test

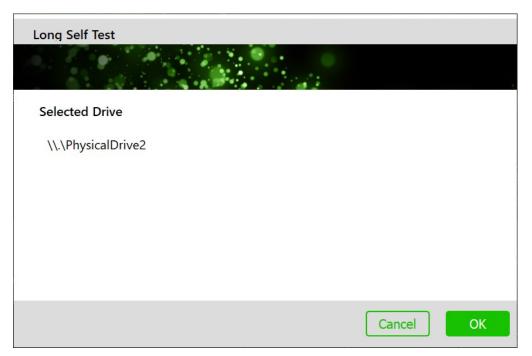
# 4.5 Long Self Test

The **Long Self Test** tests all aspects of the drive. Performs limited testing of the drive media blocks. Completes in several minutes depending on the drive.

To run this test:

- 1. Select the drive or drives.
- 2. Select **Long Self Test** from the **Extended Tests** menu. A dialog opens.
- 3. Click **OK**.

Figure 28 Long Self Test

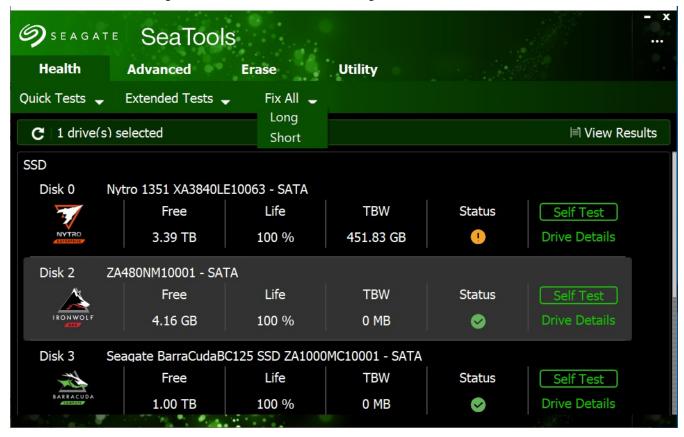


- 4. After you click **OK**, the progress bar for the selected drive (or drives) opens in the drive panel on the **Health Tab**.
- 5. After the test completes, the progress bars read "Test completed successfully." Click **Results**, **Retest**, or **Clear** for further action.

www.Seagate.com Fix All

### 4.6 Fix All

Fix All includes Long and Short fixes for the drives. The figure below shows the Health Tab, Fix all menu.



www.Seagate.com Advanced Tab Menu

## 5. Advanced

From the **Advanced Tab** menu, you can perform **Set Max LBA, Tunable Capacity, Spin Down**, and **Firmware Update**.

**NOTE** All advanced operations can delete data on the drive.

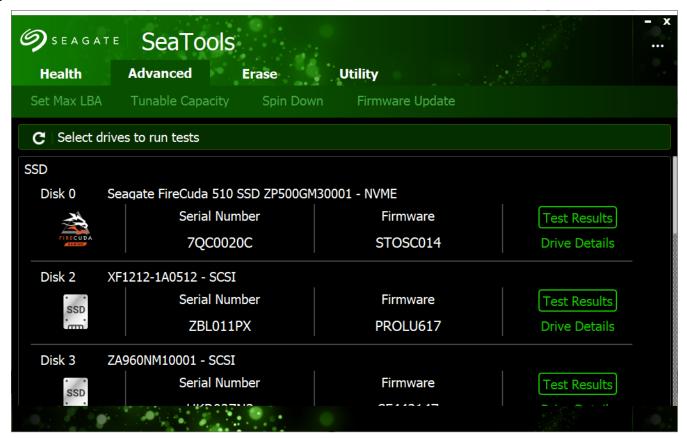
**Table 2 Advanced Operations** 

Operation	Description		
Set Max LBA	With Set Max LBA the user can make the drive smaller by reserving some blocks.		
Tunable Capacity	With Tunable Capacity, the user can set the number of over-provisioning blocks to optimize for performance or for capacity. This feature is supported only in select drives.		
Spindown	Spindown puts the drive into low power mode. After Spindown, the drive takes a few seconds to respond to new read/write requests.		
Firmware Update	Updates drive firmware.		

### 5.1 Advanced Tab Menu

The figure below shows the **Advanced Tab** menu open.

Figure 29 Advanced Tab Menu



www.Seagate.com Set Max LBA

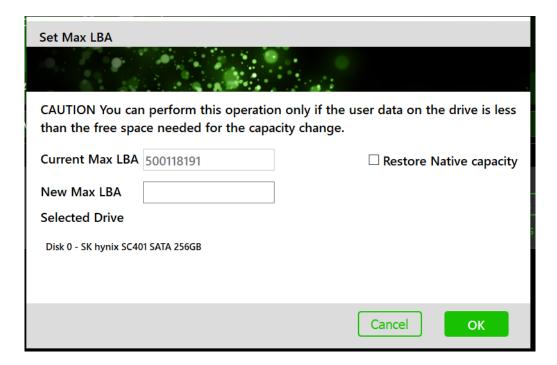
### 5.2 Set Max LBA

**Set Max LBA can** make the drive smaller by reserving some blocks.

To Set Max LBA:

- 1. Select the drive.
- 2. Select **Set Max LBA** from the **Advanced** menu. The window below opens.
- 3. Enter the new Max LBA.
- 4. Click **OK**.

Figure 30 Set Max LBA



**NOTE** This operation is supported on select drives.

www.Seagate.com Set Tunable Capacity

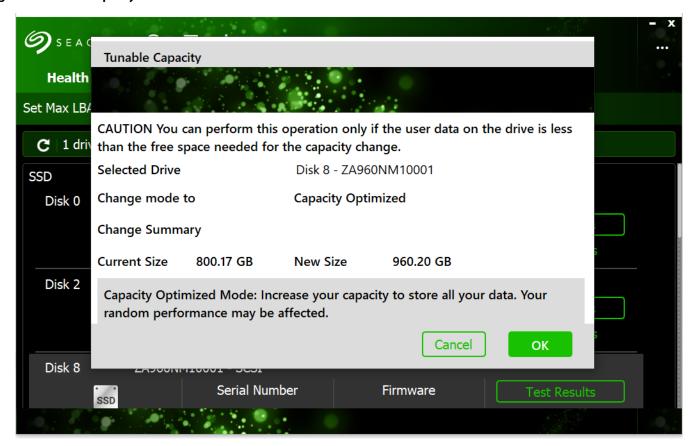
# 5.3 Set Tunable Capacity

Tunable Capacity allows the user to change the over-provisioning of the SSD, optimizing for performance or for capacity.

To Set Tunable Capacity:

- 1. Select the drive.
- 2. Select **Tunable Capacity** from the Advanced menu bar. The overlay window below opens.
- 3. Click OK to change mode from Capacity Optimized to Performance Optimized, or from Performance Optimized to Capacity Optimized.

Figure 31 Tunable Capacity

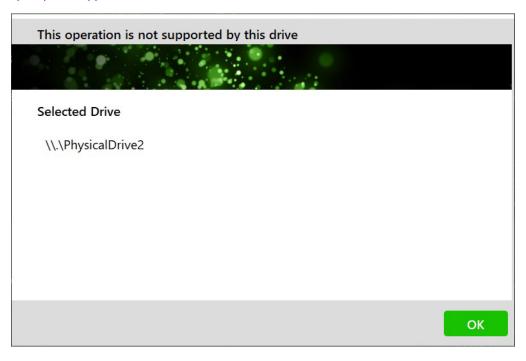


**NOTE** This operation is only supported on select SSDs.

www.Seagate.com Set Tunable Capacity

If Tunable Capacity is not supported you will see the notice below.

**Figure 32 Tunable Capacity Not Supported** 



www.Seagate.com Spindown

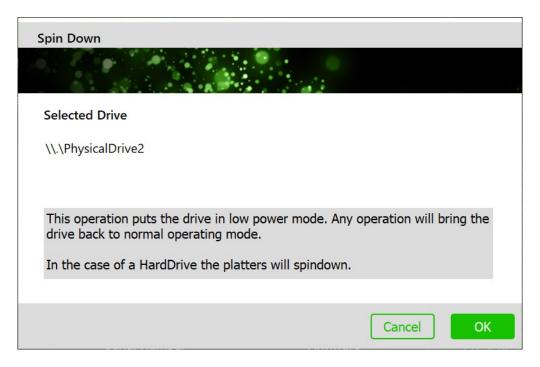
# 5.4 Spindown

**Spindown** puts the drive into lower power mode. After ending **Spindown**, the drive takes a few seconds to respond to new read/write requests.

To put the drive into **Spindown**:

- 1. Select the drive.
- 2. Select **Spindown** from the Advanced menu bar. The window below opens.
- 3. Click **OK**. The drive is now in the lower power mode.

Figure 33 Spindown



www.Seagate.com Firmware Update

## 5.5 Firmware Update

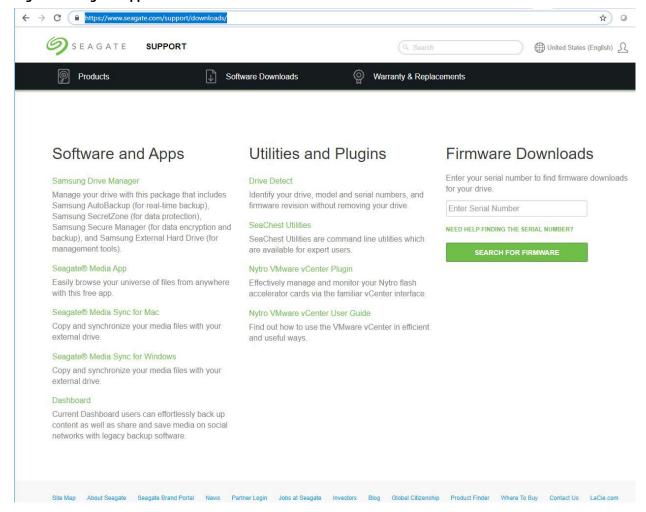
To update the drive firmware, first copy the drive serial number from the **Advanced Tab**.

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

https://www.seagate.com/support/downloads/#firmware

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

Figure 34 Seagate Support Website for Firmware Check and Download



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

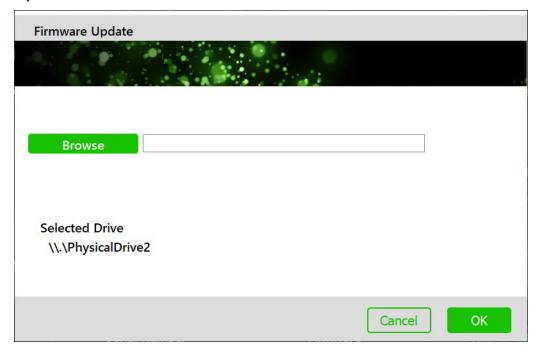
www.Seagate.com Firmware Update

### To update your drive 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. Select the drive to update.
- 3. Open the Advanced Tab.
- 4. Click **Firmware Update** from the menu.
- 5. Browse for the firmware file.
- 6. Click **OK**.

Figure 35 Firmware Update



**NOTE** You can only update firmware for one drive at a time.

# 6. Erase

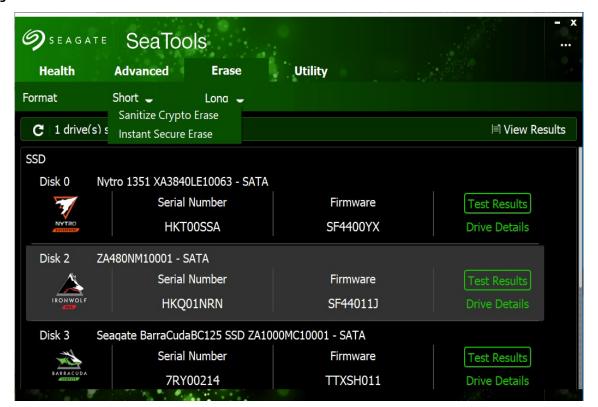
From the Erase Screen menu, you can use the commands below to erase all data on the drive.

**Table 3 Erase commands** 

Format		Drive rewrites meta data on media. This destroys user data. Cannot be stopped or reversed.		
SHORT	Sanitize Crypto Erase	Changes the data encryption key. Cannot be stopped or reversed.		
	Instant Secure Erase	Changes the (TCG Opal) PSID and changes the data encryption key.		
LONG	Sanitize Overwrite	Erases a drive by writing all blocks with progress monitoring.		
		NOTE After you start this command, you cannot system.	ot stop it even if you restart the	
	Simple Overwrite	Erases a drive by writing all blocks in the background with no progress monitoring.		
		NOTE After you start this command, you can s	top it.	
	Write Same Erase	This host command erases a drive by writing the same data to all blocks. You can stop this command before completion.		
		NOTE Not supported in Windows. Supported in	n Linux only.	

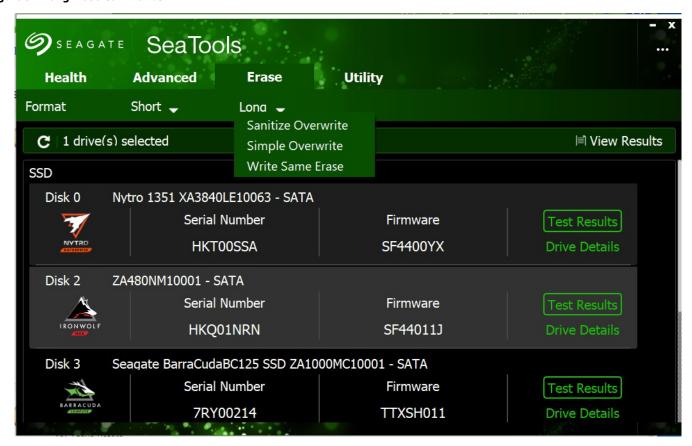
The figure below shows the **Short Erase** menu.

Figure 36 Short Erase Menu



www.Seagate.com Erase Commands Process

**Figure 37 Long Erase Commands** 



### **6.1** Erase Commands Process

All Erase commands follow the same process as shown in Section 6.1.1 Simple Overwrite.

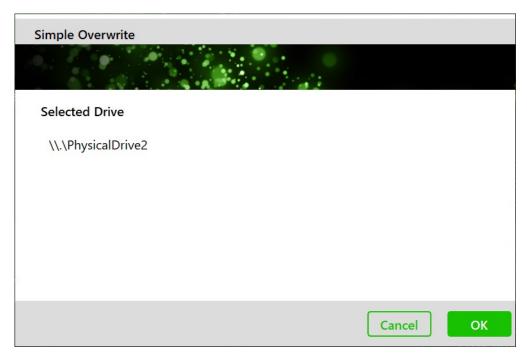
## **6.1.1** Simple Overwrite

Simple Overwrite is a long erase command. To run the Simple Overwrite command, follow these steps.

- 1. Select **Simple Overwrite** from the **Long** menu.
- 2. The pop up shown below opens.
- 3. Click **OK**.

www.Seagate.com Erase Commands Process

Figure 38 Simple Overwrite



4. When the pop up goes away, return to the drive test panel.

**NOTE** There is no progress bar for this erase command. The progress goes from Zero to Finished.

5. When the test is complete, the message **Simple Overwrite Finished** displays in the drive panel.

www.Seagate.com Utility Menu

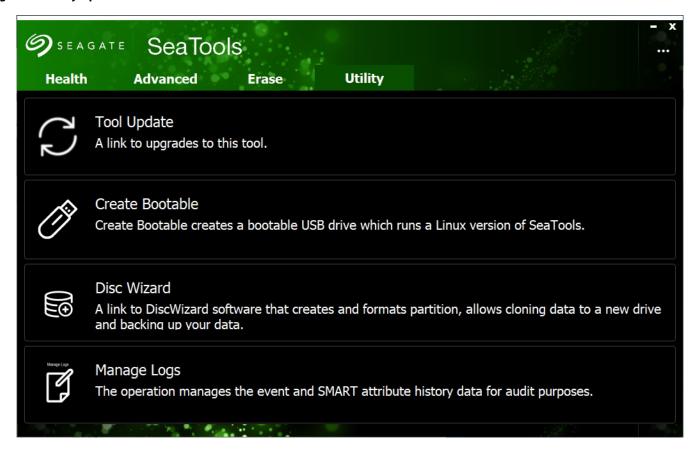
# 7. Utility

From the **Utility Tab**, you can perform operations that maintain the SeaTools GUI.

# 7.1 Utility Menu

The figure below shows the **Utility** options.

**Figure 39 Utility Options** 



www.Seagate.com Tool Update

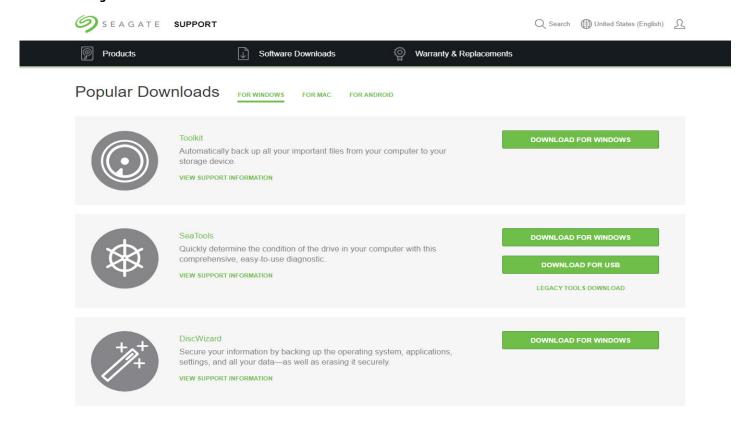
## 7.2 Tool Update

To get the latest version of SeaTools, click **Tool Update** on the Utility Screen.

Tool Update takes you to this Screen: https://www.seagate.com/support/downloads/

Here you can click on the correct button for your operating system.

### Figure 40 SeaTools GUI Downloads

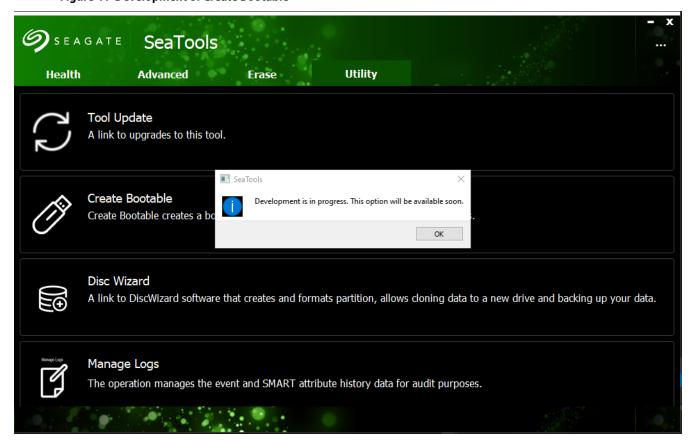


www.Seagate.com Create Bootable

### 7.3 Create Bootable

**NOTE** The **Create Bootable** feature is in progress and will be available soon.

**Figure 41 Development of Create Bootable** 



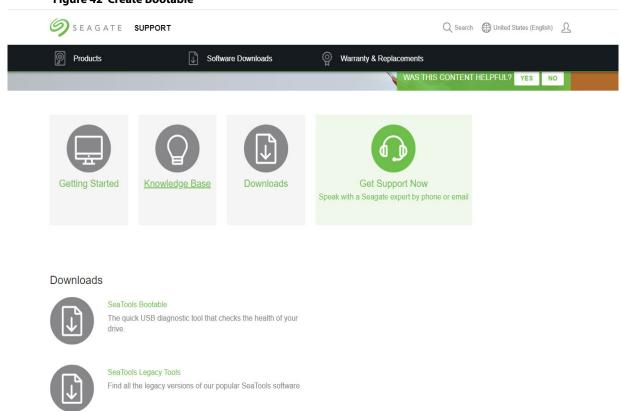
To create a bootable Linux version of SeaTools, click **Create Bootable** on the Utility Screen.

This takes you to the following Screen: https://www.seagate.com/support/downloads/seatools/

Click **SeaTools Bootable** and follow the instructions.

www.Seagate.com Create Bootable

### Figure 42 Create Bootable



www.Seagate.com DiscWizard

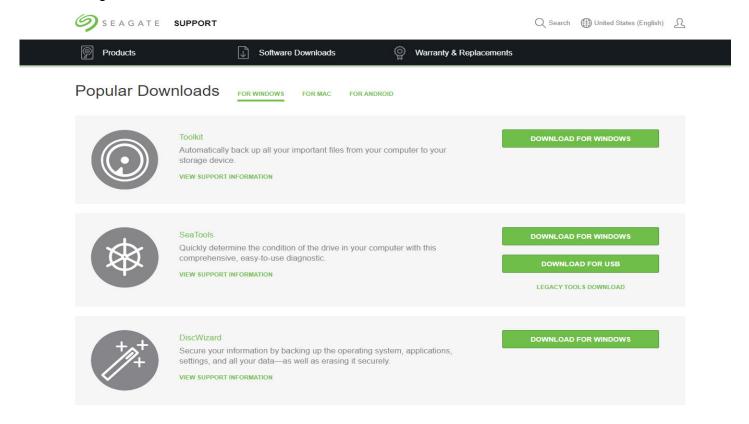
### 7.4 DiscWizard

To download DiscWizard, click **DiscWizard** on the Utility Screen.

**DiscWizard** takes you to this Screen: https://www.seagate.com/support/downloads/

Click the **DOWNLOAD FOR WINDOWS** button to get DiscWizard.

#### Figure 43 DiscWizard Downloads



www.Seagate.com Manage Logs

# 7.5 Manage Logs

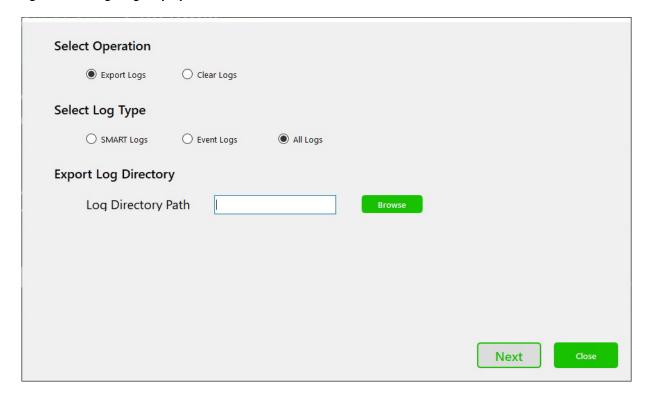
SeaTools allows you to export or clear logs.

To Manage Logs, click **Manage Logs** on the Utility Screen.

The pop up shown below opens. From here you can export or clear logs. The **Manage Logs** pop up opens with **Export Logs** selected. You can export logs from here, or you can select the **Clear Logs** radial button to clear event or SMART logs.

To export logs, select type of Log and choose the Export Log Directory.

Figure 44 Manage Logs Pop Ups

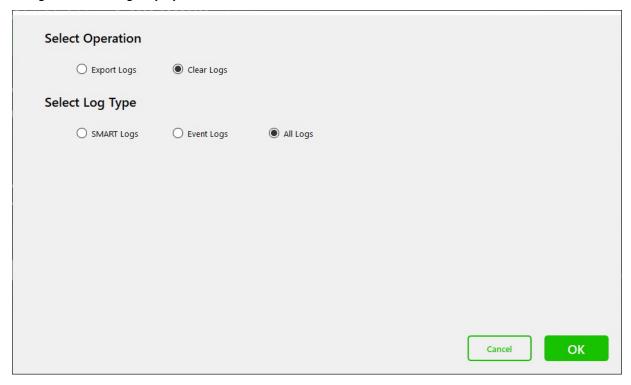


www.Seagate.com Manage Logs

# 7.5.1 Clear Logs

To Clear Logs, select the Clear Logs button. The **Clear Logs** pop up appears. Select the type of logs you want to clear.

Figure 45 Clear Logs Pop Ups





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