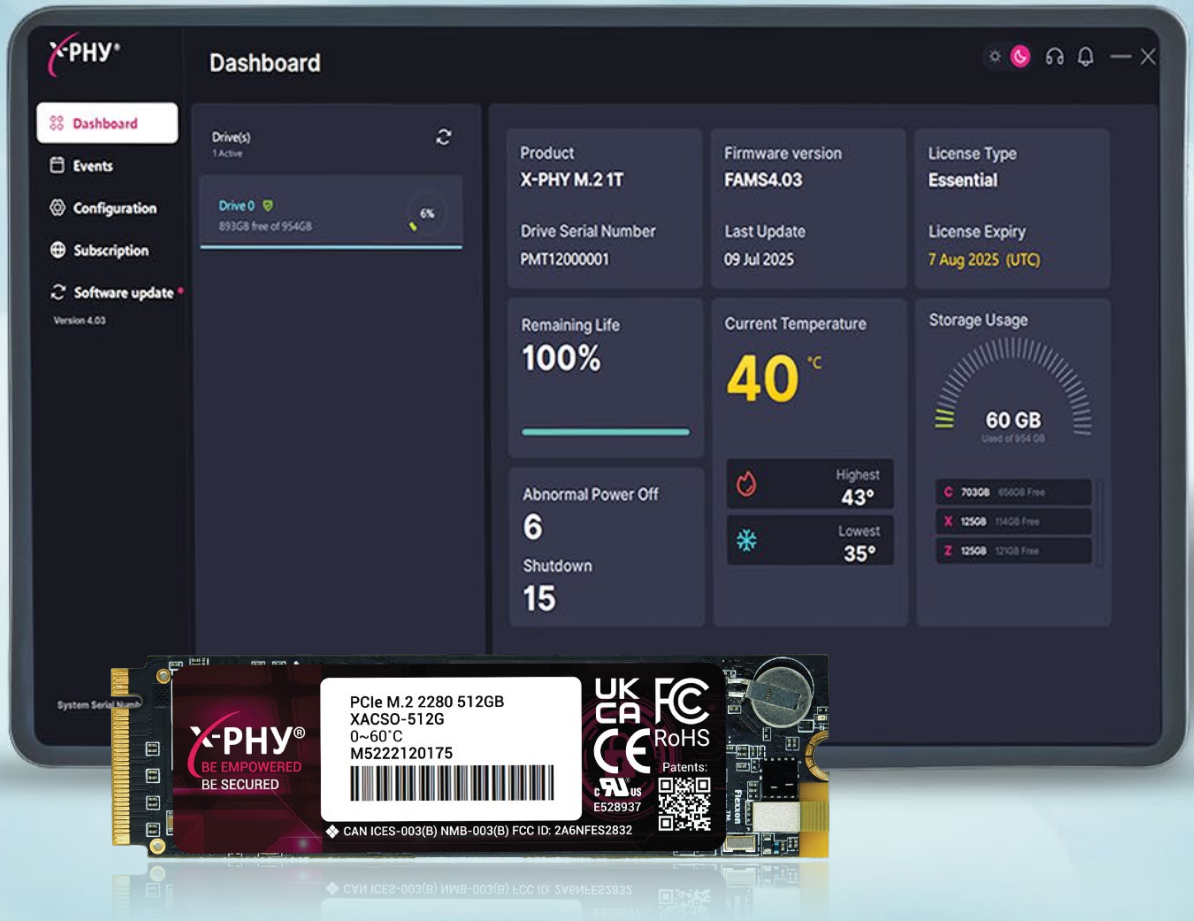
X-PHY®
Hardware Cybersecurity



X-PHY® Guard
PC Application Guide

(version 4.03)

www.x-phy.com

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Safety Precautions

WARNING!

Do not heat, disassemble nor dispose of in fire.

The insulation materials may cause fire, heat generation, leakage or even bursting.

Do not short circuit

If the positive (+) and negative (–) terminals contact any metal, a short circuit may occur. As a result, fire, heat generation, leakage or bursting may occur.

Keep batteries out of children's reach

When storing the batteries, keep the batteries out of reach of children. If a battery is swallowed, consult a physician immediately.

If the battery alkaline liquid leaks into the eyes, do not rub them, rinse your eyes with clean water and consult a physician immediately.

If the battery alkaline liquid leaked and spills onto clothing, to protect from irritation, remove and wash them with clean water immediately.

⚠ CAUTION

*Do not use or expose the batteries to direct sunlight or in areas with high-temperature.

*Avoid exposing the batteries to any form of liquids.

*In case of disposal, insulate between (+) and (-) of battery by using an insulating material. i.e.(Natural fibres, Polystyrene.)

Prerequisites

- Valid email account(s) for X-PHY SSD OTP and X-PHY Members account.
- Stable internet connection.
- Minimum Microsoft Windows 10/11.
- Android/iOS mobile device.

⚠ Ensure the installation is performed in a secure environment. (example: Non-Public Places)

Step 1: Downloading of the application

- Download and Install the X-PHY Guard

X-PHY Guard PC Application (Windows 10/11)

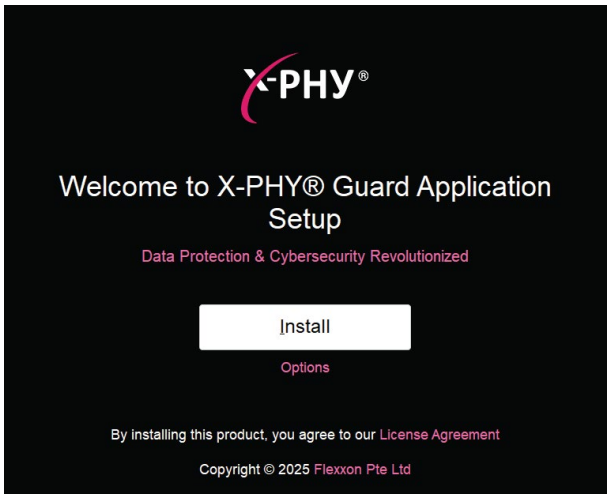
⚠ *Ignore this step if the application is pre-installed, skip to Registration (page 11).*

⚠ ***Ensure you meet the above system requirements before downloading.***
*Please take note that if you have an Antivirus Software installed, it may prompt a notification asking for permission to install the X-PHY Guard. Click on"Allow" to add into whitelist. (*Appendix 1)*

Installation

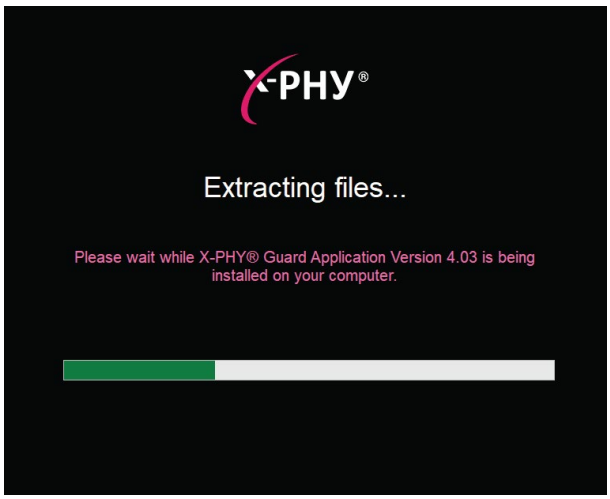
Step 1: Click on the **"Install"** button

(Note: click '**Options**' for more choices if required, but it is highly recommended to use the default settings.)

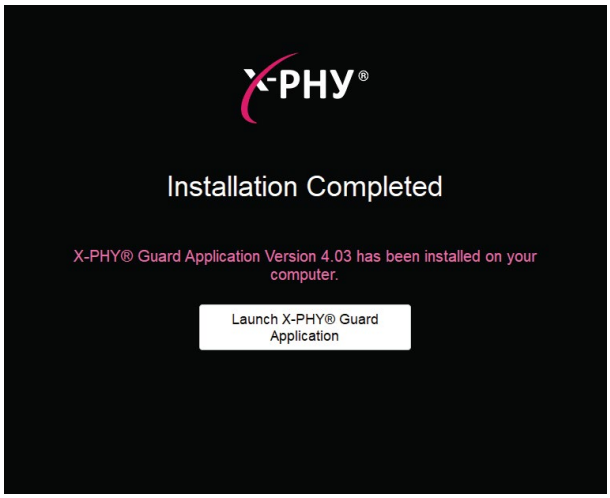


Refer to Appendix 1 on troubleshooting with installation with an antivirus software

Step 2: Wait for installation to complete.

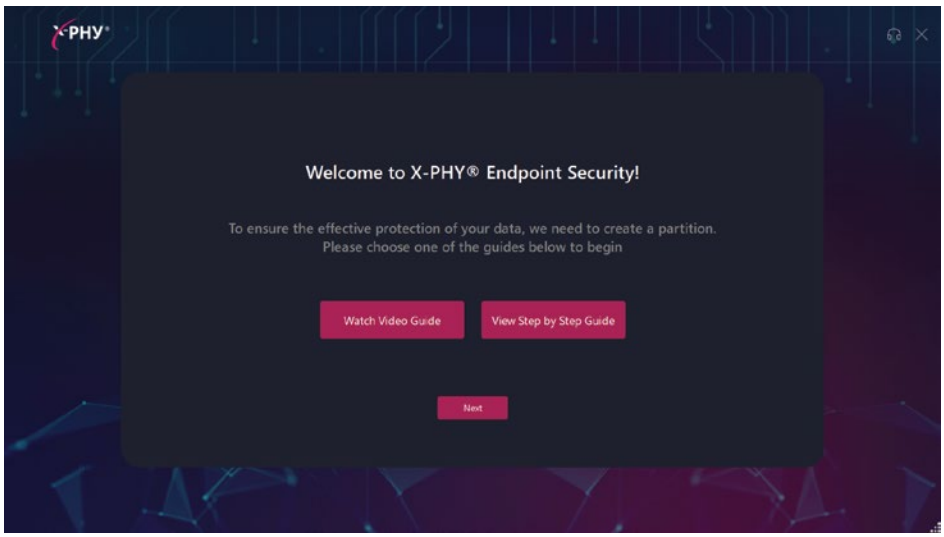


Step 3: Click Launch **X-PHY Guard** to proceed.



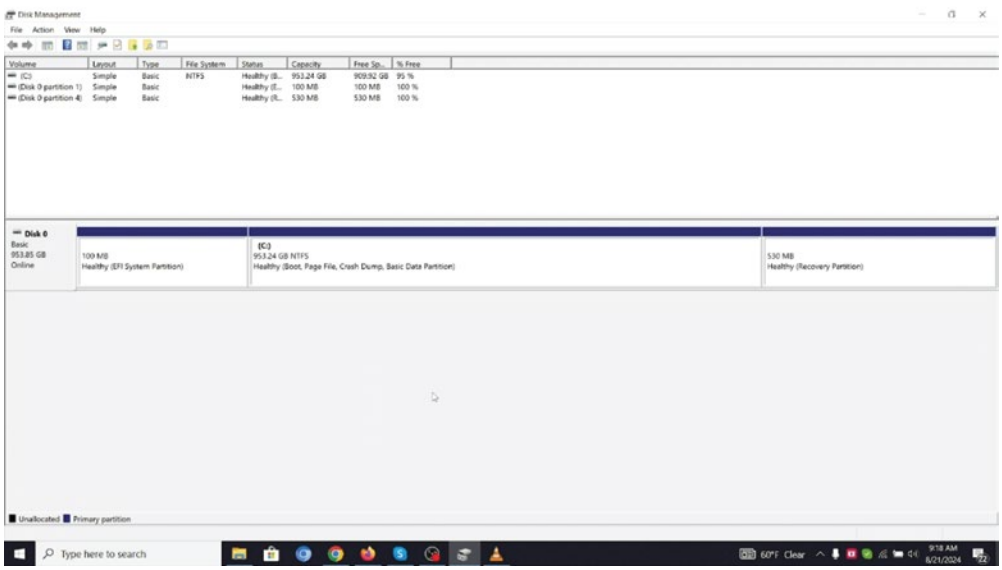
Partition Creation

- When X-PHY Guard PC Application starts up, follow the step by step instructions to create a new partition.



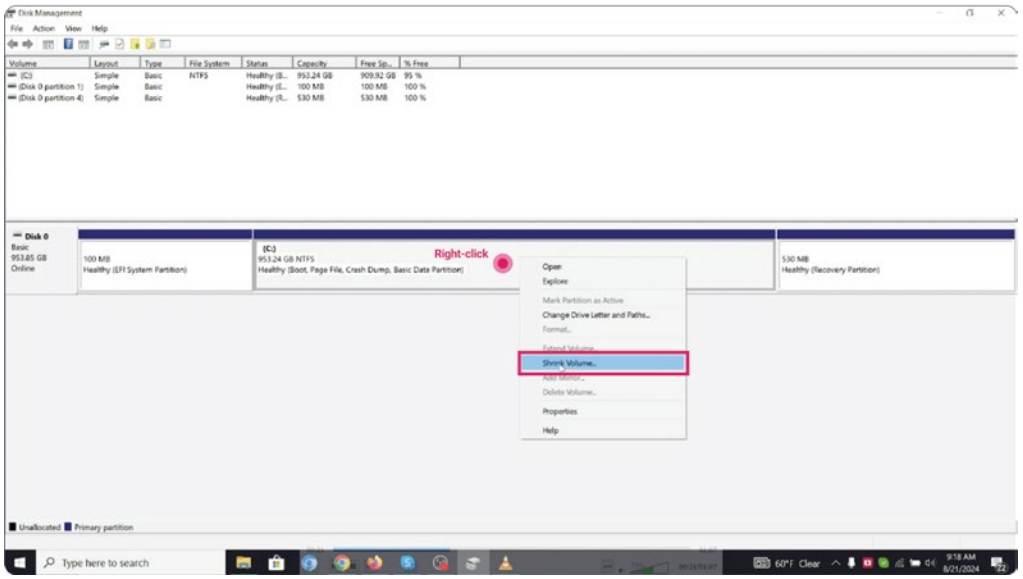
Step 1: Open Disk Management

- Press **Windows + X** or right click on the window icon and select Disk Management from the menu.
- In the Disk Management window, you will see a list of all the drives connected to your computer.

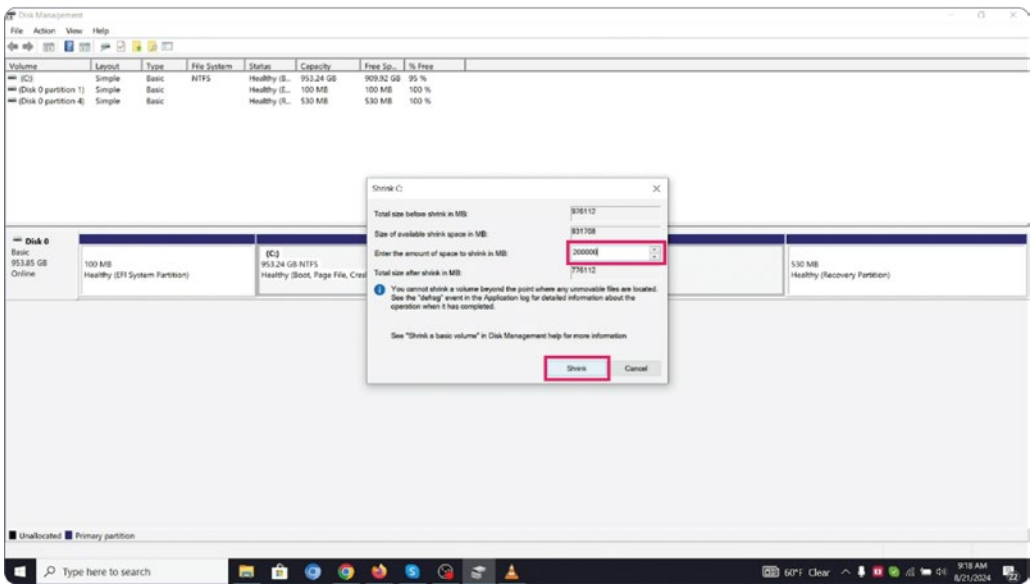


Step 2: Shrink an Existing Volume

- Identify the drive where you want to create a new partition.
- Right-click on the drive and select Shrink Volume.

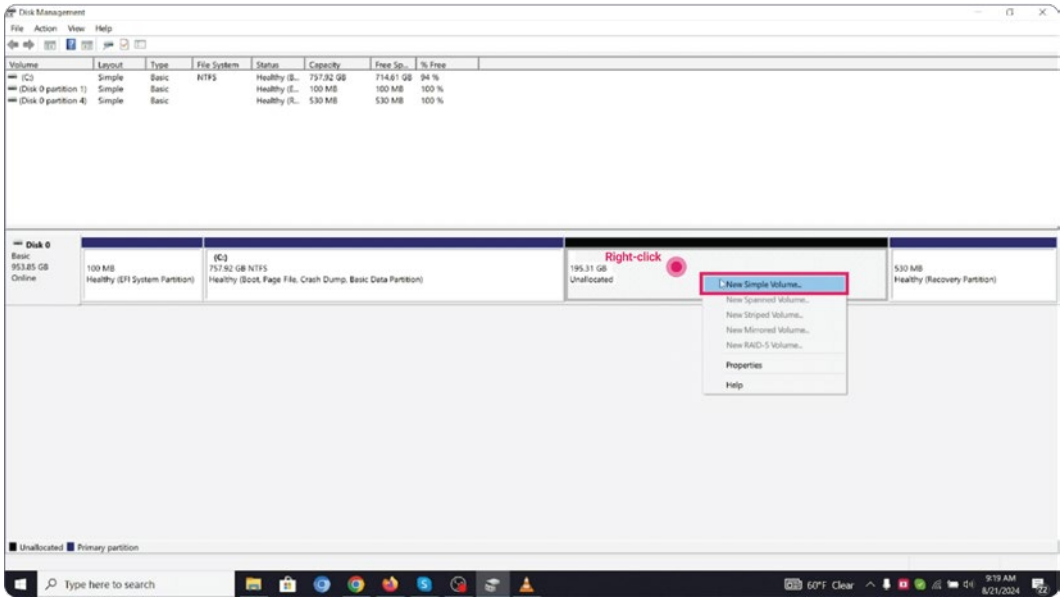


- Enter the amount of space you want to allocate for the new partition and click Shrink. This will create unallocated space on the drive.

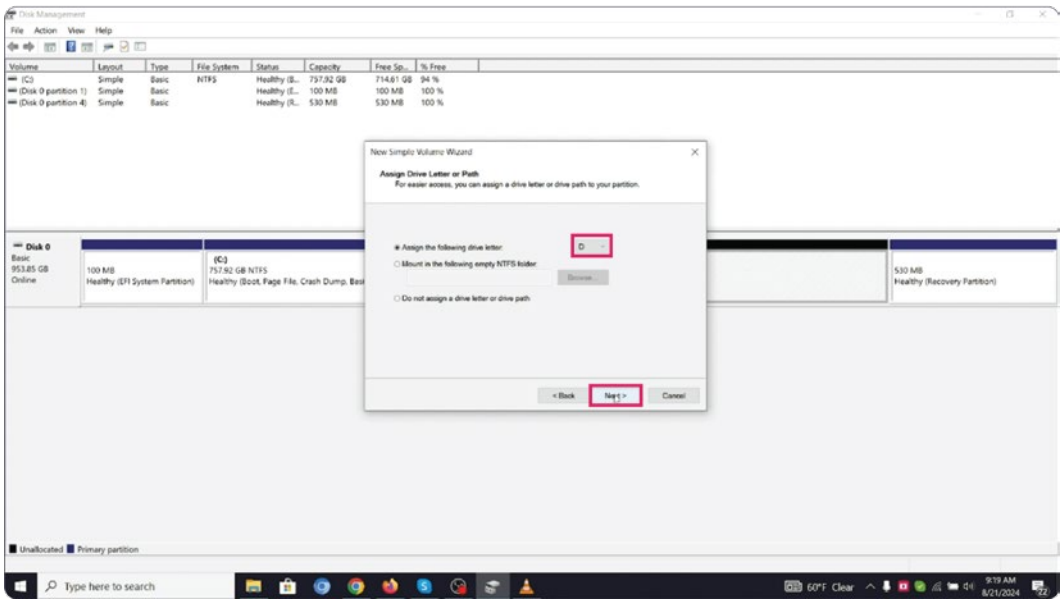


Step 3: Create A New Partition

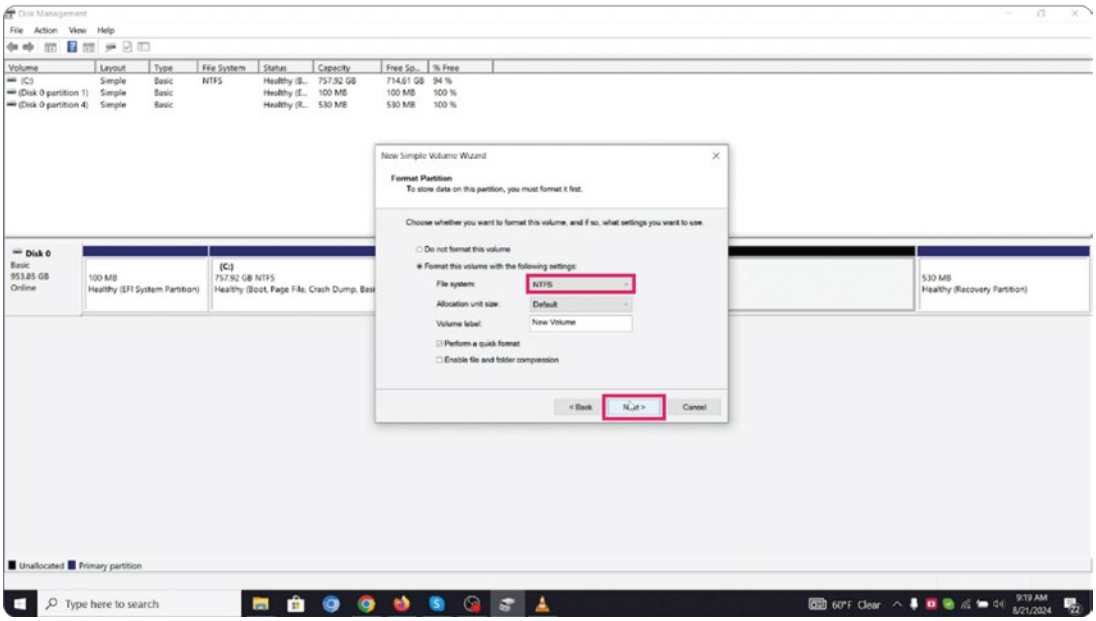
• Right-click on the unallocated space and select New Simple Volume.



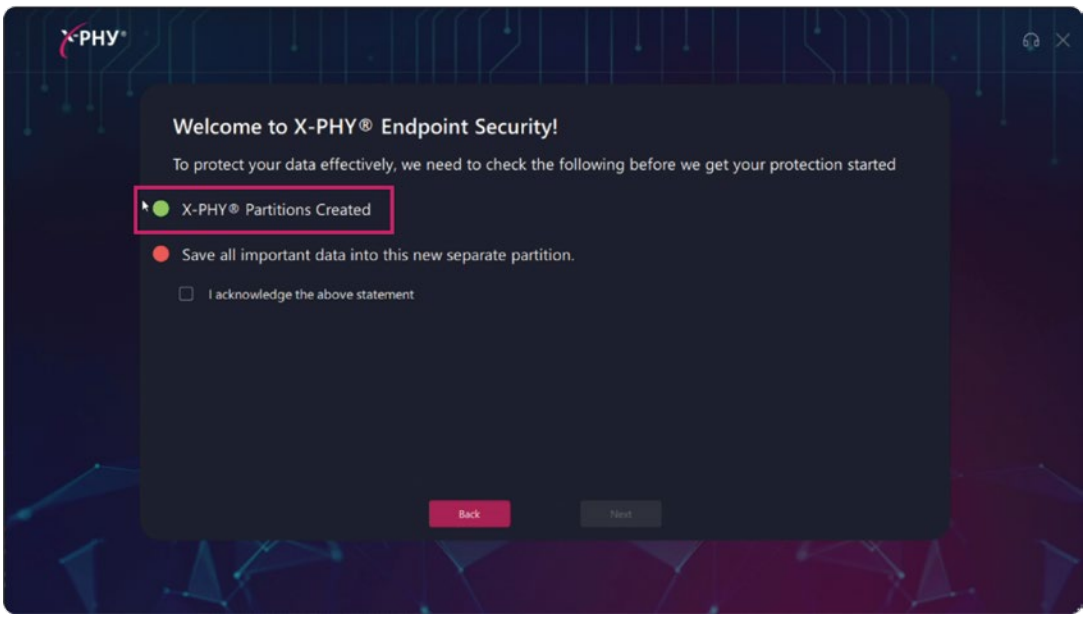
• Follow the prompts in the New Simple Volume Wizard. Assign a drive letter.



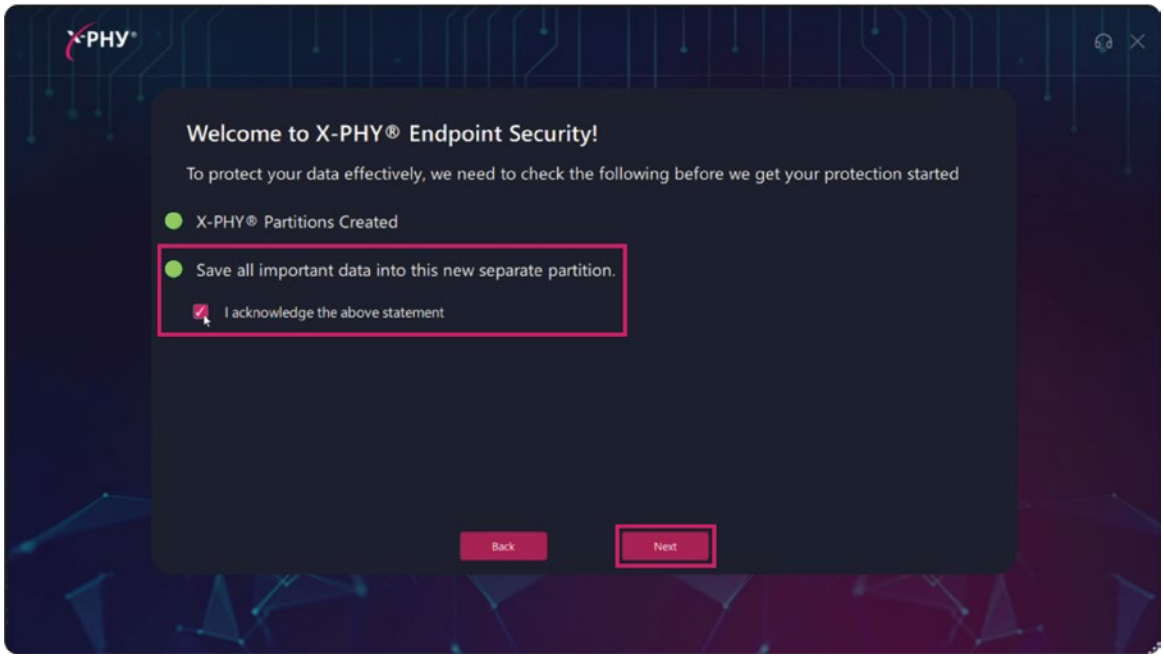
- Format the partition with the NTFS file system.
- Optionally, label the partition (e.g., "X-PHY Secure").



- Go back to the "X-PHY Guard PC Application" to continue. Once new partitions are successfully created, the indicator will turn green.



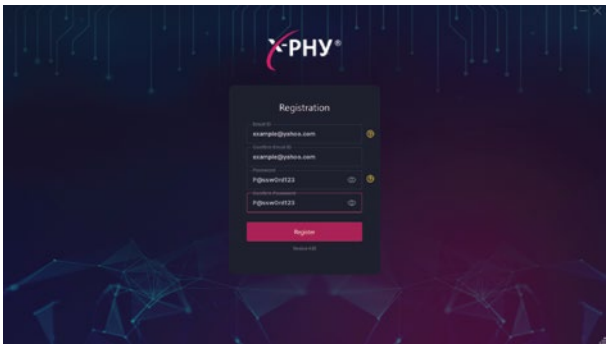
- Tick "I acknowledge the above statement" to complete the checklist. Click "Next" to proceed.



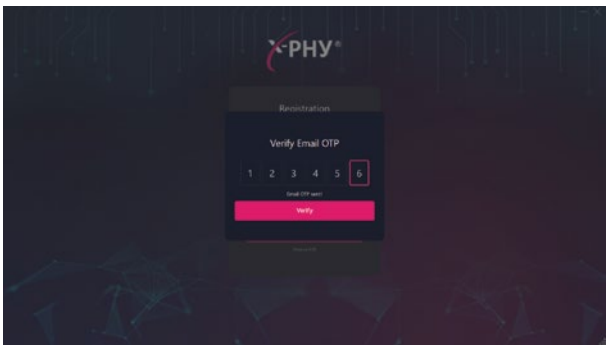
Registration

Step 1: Type in your desired email address and password to register

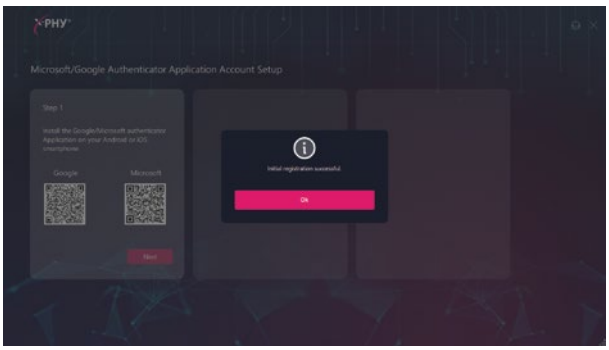
Note: Click on the tooltip for more information to meet the password criteria



Step 2: After successful verification of Email ID, a "**Verify Email OTP**" A window will pop up. Check your **registered email address** for the OTP.



Step 3: If an activated license is detected, the initial registration is completed. Click **"Ok"** to proceed.

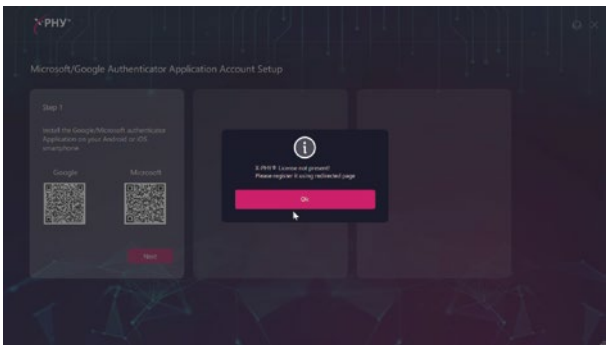


Subscription License Activation

If you have not activated the subscription license on your X-PHY SSD by adding it to an X-PHY Members account yet, you will have to ***activate*** it at this stage.

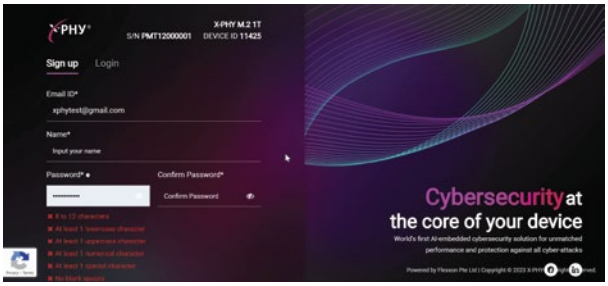
If you already have a registered subscription license account, you may refer to the ***Subscription License Portal*** section for more details.

Step 1: You will be prompted to visit the X-PHY Members page in your browser, where you can sign up for a new account or log in to an existing one to register your X-PHY SSD. Click "**Ok**" to proceed.



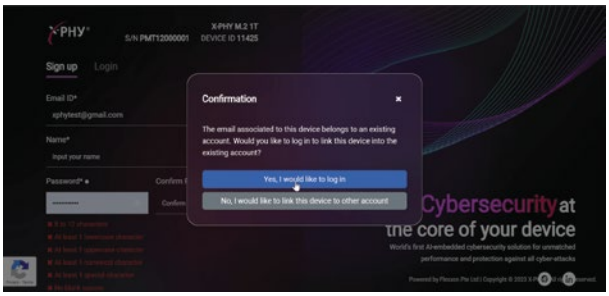
Step 2: Sign up for a new account. If you already have an existing account you may login to it.

Sign up now

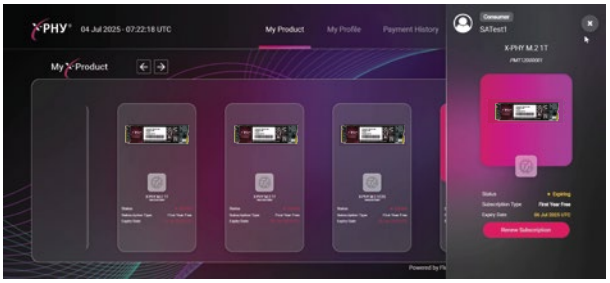


> ***Reminder:*** *X-PHY subscription licenses are non-transferable between X-PHY Member accounts!*

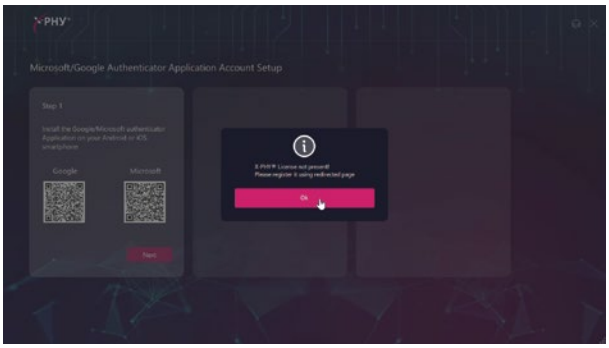
For users with existing accounts:
You may receive this prompt if the email registered to the X-PHY SSD is associated with an existing X-PHY Members account.



Step 3: The details of the newly-added X-PHY SSD will be automatically shown.



Step 4: Head back to the X-PHY Guard PC application to complete the license registration. Click "**Ok**" to proceed.



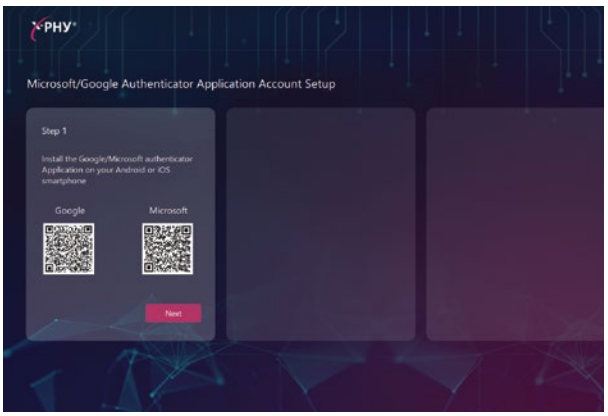
Microsoft/Google Authenticator Registration

If you already have Google/MS Authenticator installed, please skip this page

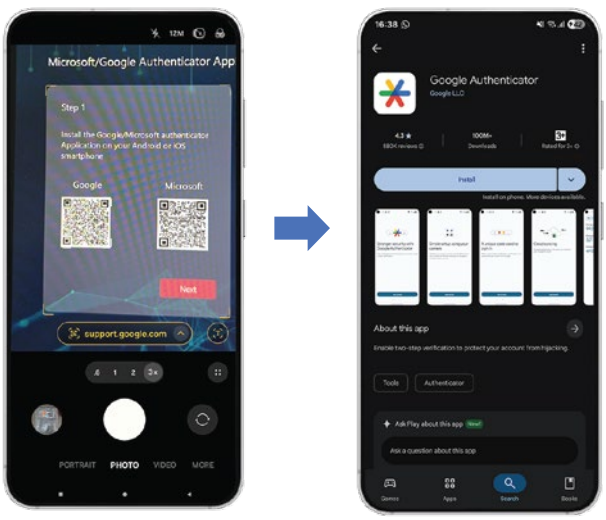
A smartphone is required for this section.

Step 1: Use your phone to scan the QR on Authenticator App Registration page

*(*Note: Android and iOS versions are both available)*



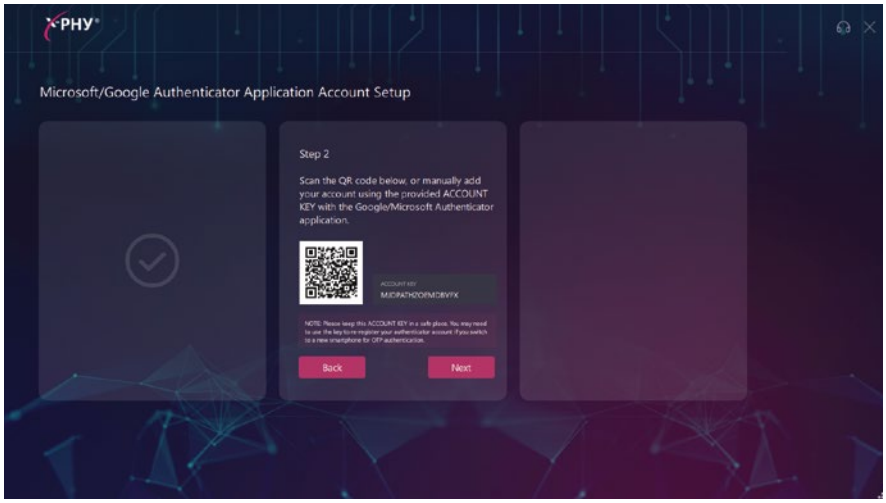
Step 2: After installed, click on the "**Next**" button.



Images used are for illustration purposes only, actual may vary.

Trouble downloading Authenticator app? Encountered an error? Please refer to the Troubleshooting Menu

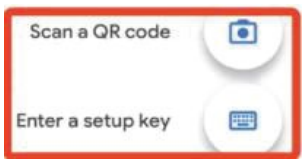
Step 3: Open your installed Authenticator App to add Register Key.



Important Note: *if the "**Back**" button is clicked on this stage, it will return back to previous Authenticator App Registration page. A brand new QR Register Key will be generated after the "**Next**" button is clicked.*

Step 4: Click the "**+**" button and select "Scan a QR code" option, use the camera to scan the QR code. Click "Next" once completed.

a



b



c

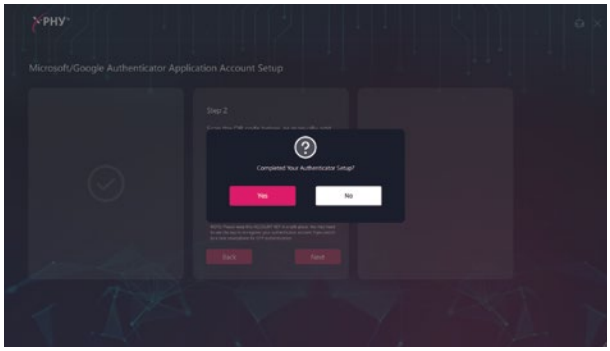


Note: Images are for illustration purposes only

Step 5: Confirmation of registration of the secret key

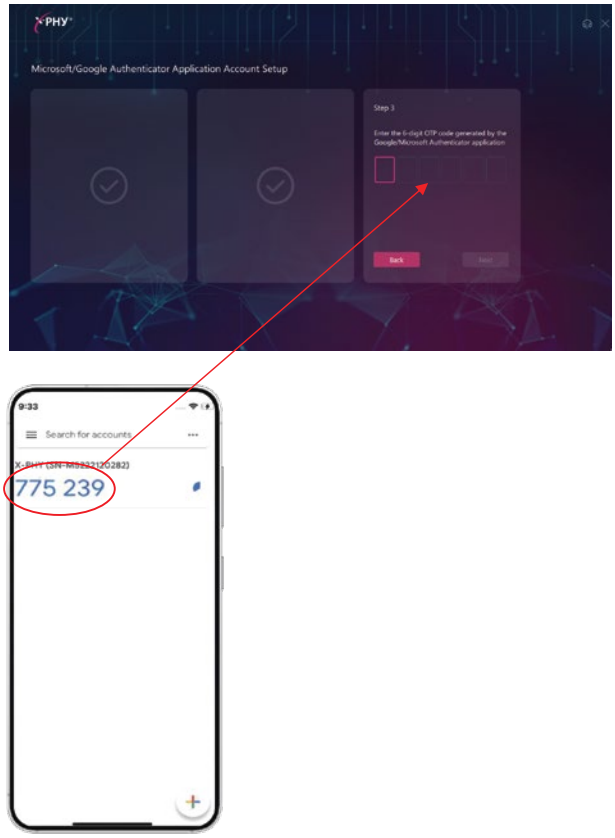
A confirmation window prompt “Completed Your Authenticator Setup?” will pop-up. Click on “Yes” to Completed Your Authenticator Setup?

Note: *if “No” is selected, refer to Step 3.*



Step 6: Verification of the OTP

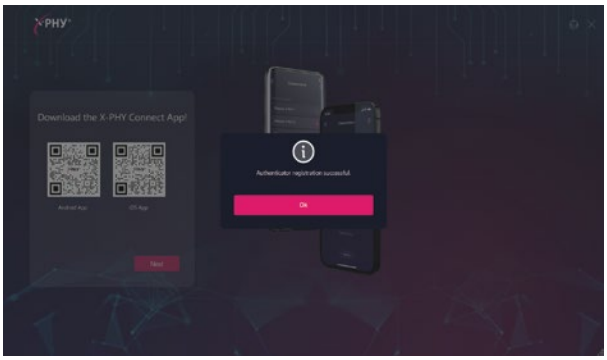
Open your installed Authenticator App, enter the OTP key into the field here and click “**Next**”.



Please take note that an OTP will be regenerated every 30 seconds.

Step 7: Completion of the OTP registration.

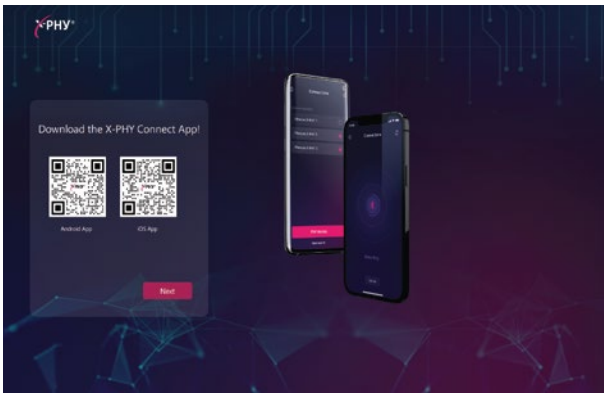
After Authenticator App registration completed, a "**Authenticator registration successful.**" prompt will be pop-up.



Step 8: Install the X-PHY Guard Mobile Application.

Use your phone to scan the QR to "**Download X-PHY® Guard App**".

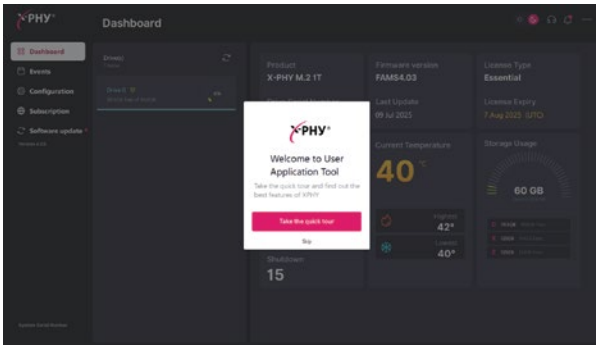
(Note: Android and iOS versions are available.)



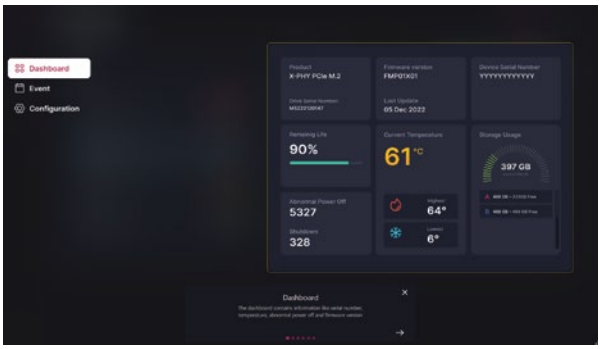
***Note:** For the detailed X-PHY Connect mobile application guide please refer to Appendix 4.*

Quick Tour of the Application

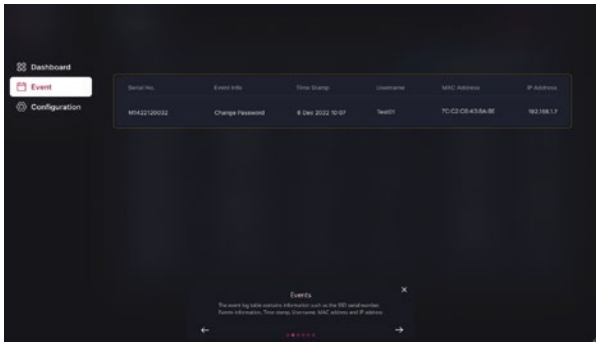
Click on “**Take the quick tour**” to begin the tour of the **X-PHY Guard**, or click “Skip” to directly go to Dashboard. (skip to page 21)



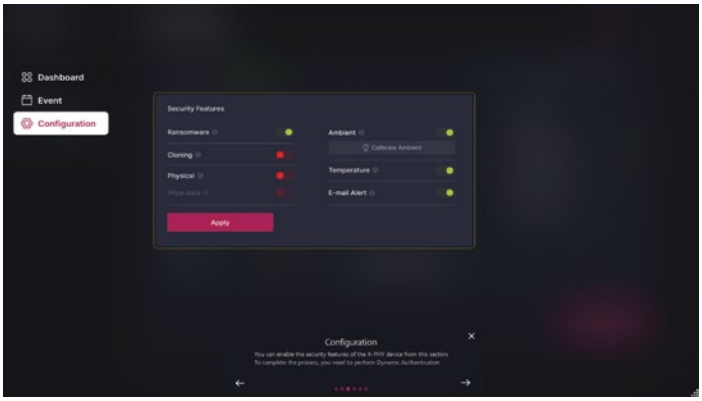
Dashboard page shows the Current Temperature, Remaining Life, Drive Storage Capacity and many more.



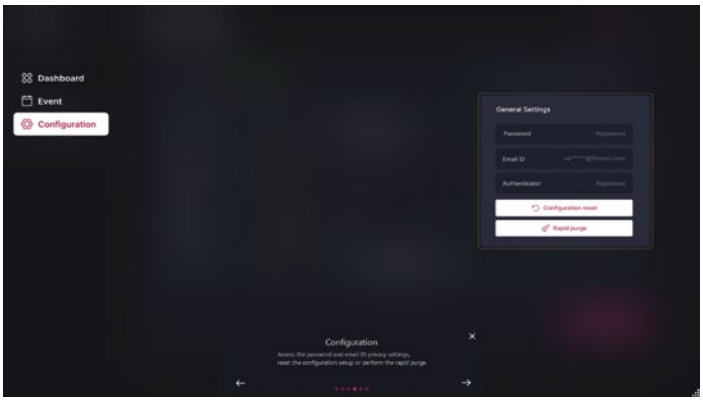
Event page shows the Event Info, Username and Time Stampas forensic trail.



Configuration page left panel shows the **Security Features** and types of protections. Please enable protection based on your requirement.



Configuration page right panel **General Settings** such as Password Status, Email ID and Authenticator status. You can change them when necessary.



Software Update button located at the bottom left of the **X-PHY Guard.** It updates to the latest version whenever an update* is available.



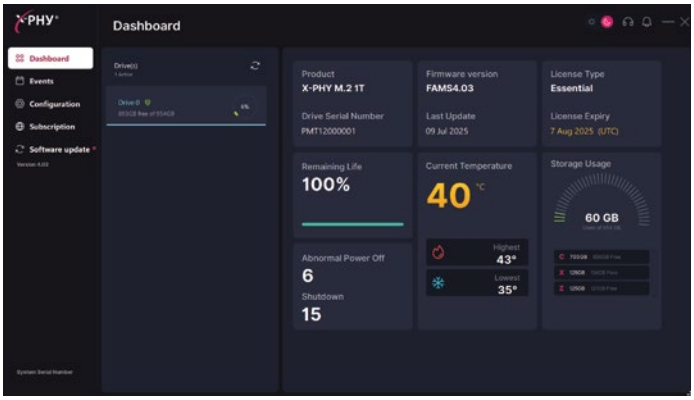
Quick Link Bar located at top right of the X-PHY **Guard.** It shows features such as change of Light and Dark theme, Contact Us, Minimize and Close buttons.



Introduction to X-PHY Guard PC Application

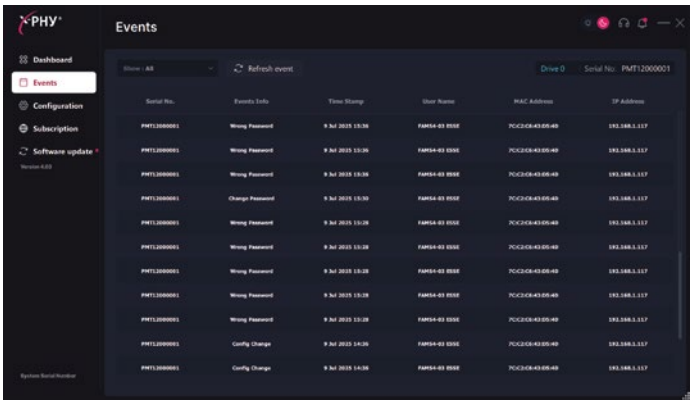
Dashboard

Dashboard displays general disk information, including number of partitions, free space, used space, product name, serial number, firmware version, and etc.



Event

The event page contains the history of events stored in the firmware of the X-PHY SSD to serve as an audit trail. The event log table contains information, such as the Serial Number, Event Info, Time Stamp, Username, MAC address and IP Address.



The X-PHY SSD license type will also be displayed on the dashboard based on the purchase version: Lite / Essential / Premium. The license status is color-coded: **blue** for active (over 30 days), **yellow** for expiring (under 30 days, including the 2-day default), and **red** for expired (beyond the expiry date).



Configuration

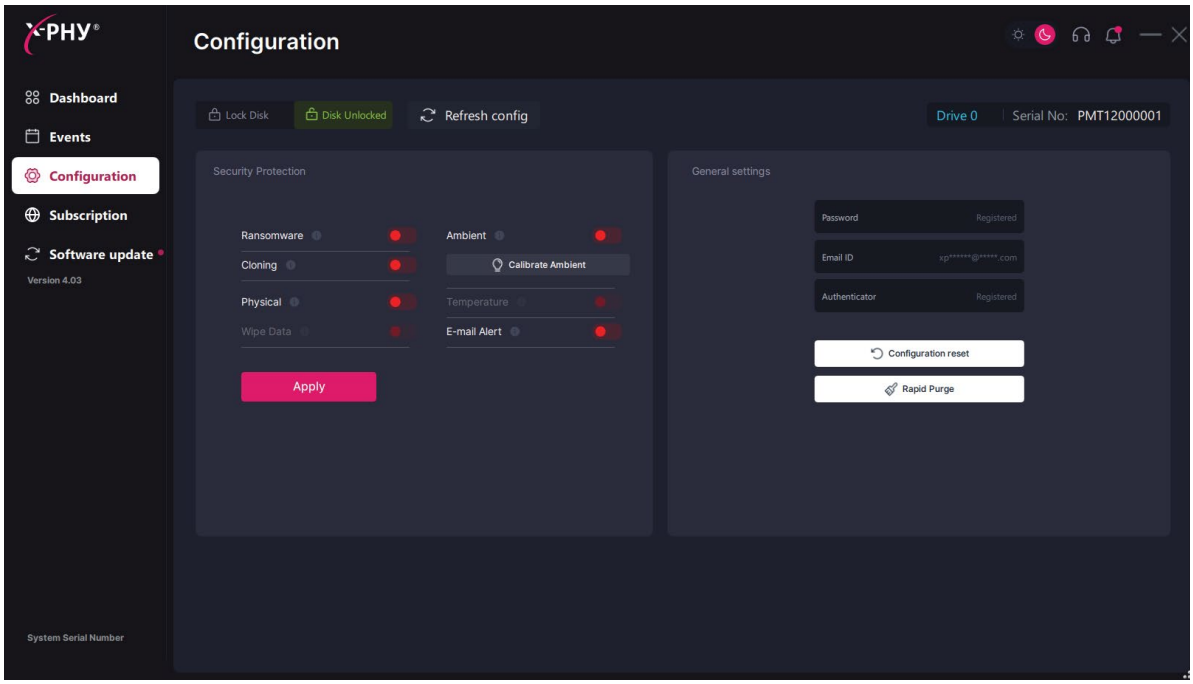
The configuration page has two sections: **Security features** and **General settings**

Security Features

It is recommended to turn on the main security features in this section to ensure that the device is totally protected.

- The main security features include ransomware, cloning, temperature, physical, ambient, email alert.

> *If Wipe data function is enabled, the data on the drive will be completely wiped out in the event that the X-PHY SSD detects a physical disconnect.*



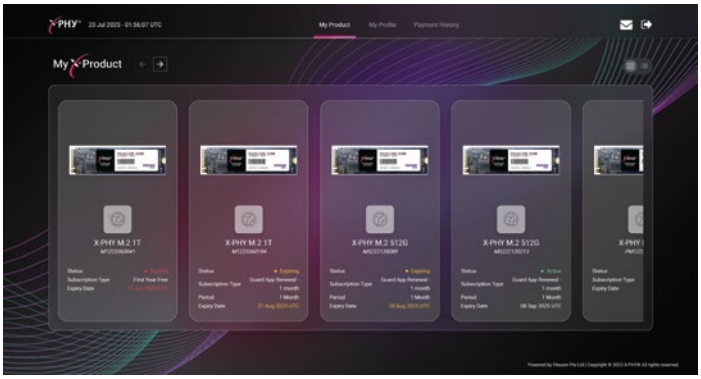
Note: For more information about all the security features, please refer to Appendix 7.

Subscription License Portal

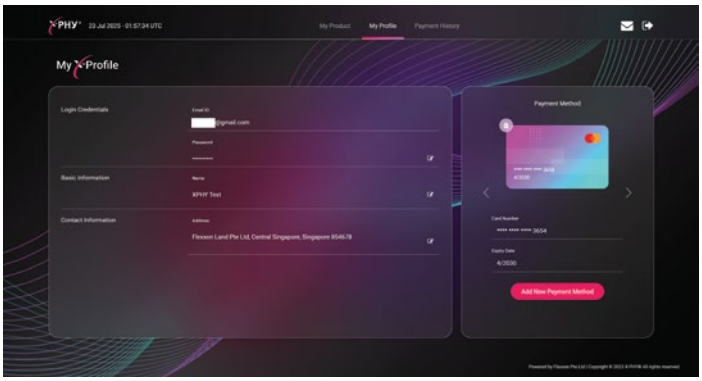
If you do not have a **subscription license activated**, you may refer to the ***Subscription License Activation*** section for more details.

Portal Tab

The **My Product** tab in the X-PHY Members Portal allows you to view all the X-PHY SSDs under the current account.

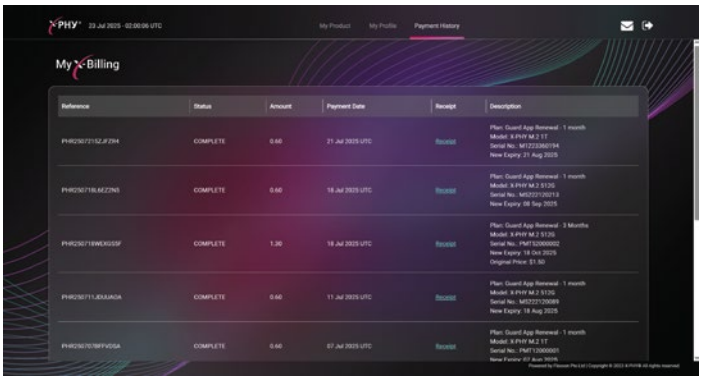


The **My Profile** tab shows the Login Credentials, Basic Information, Contact Information and Payment Method.

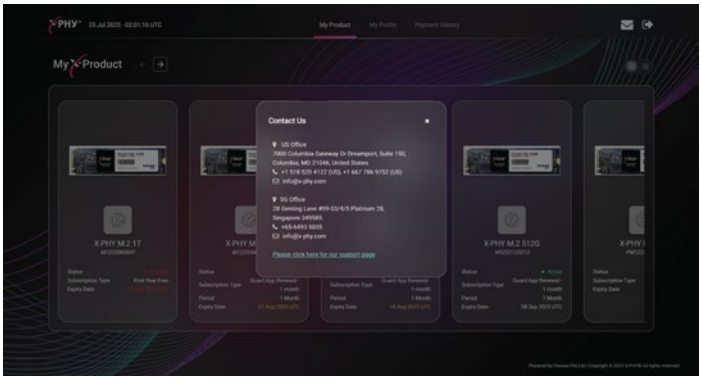


The **Payment History** tab shows the billing information history for all X-PHY SSDs registered under this account profile, including the Reference number, Payment status, Amount paid, Payment Date, Receipt and Product Description.

(Note: An electronic copy of the receipt is downloadable by clicking on the link provided.)



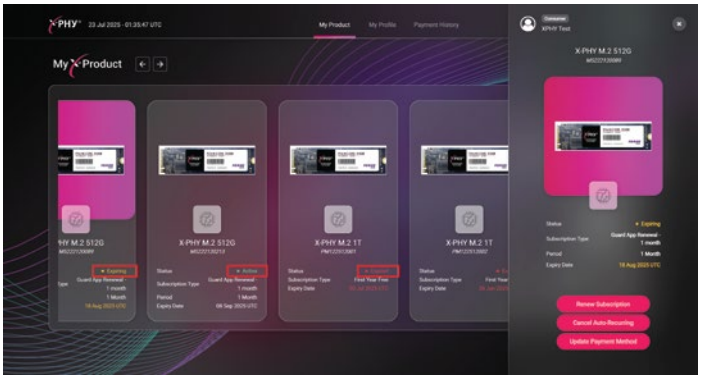
The **Contact Us** tab shows the contact information details for both the United States and Singapore offices.



Subscription Management

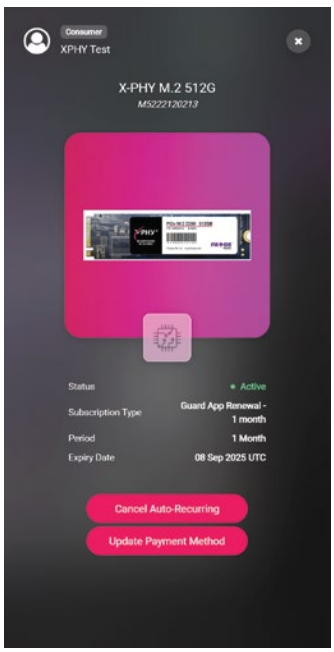
The My Product page displays various drive details:
(First-year subscription is free)

- Product status
  - **Active**/ **Expiring**/ **Expired**
- Expiry date
- Subscription renewal



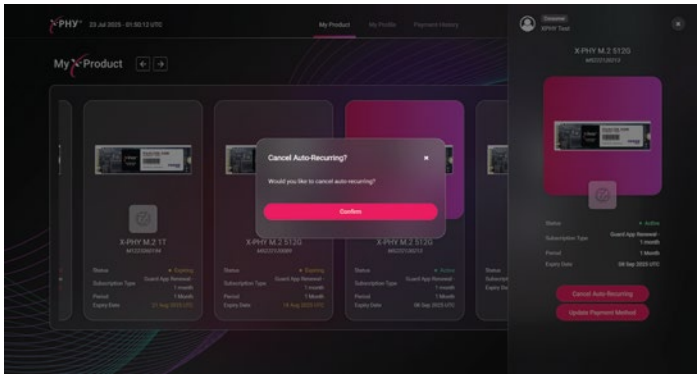
After a product is renewed, the product details will include the "Cancel Auto-Recurring" and **"Update Payment Method"** buttons.

If the product has expired, the product details will display the **"Renew Subscription"** button.



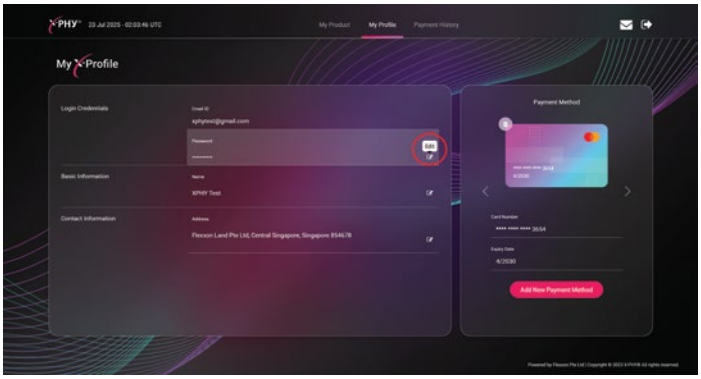


Upon clicking on **"Cancel Auto-Recurring"**, a confirmation pop-up window will appear.

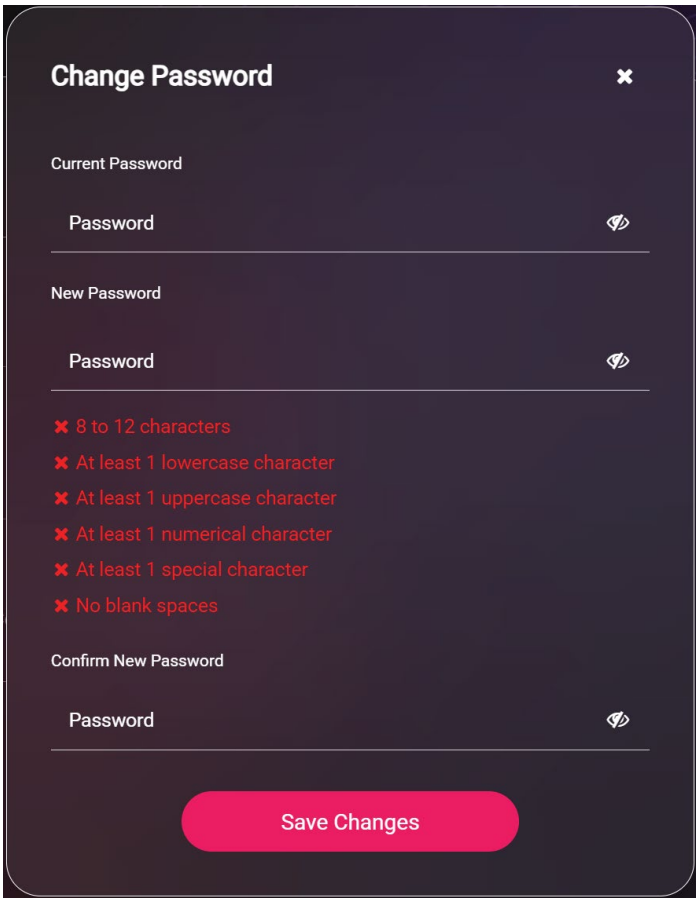


Update Profile Details

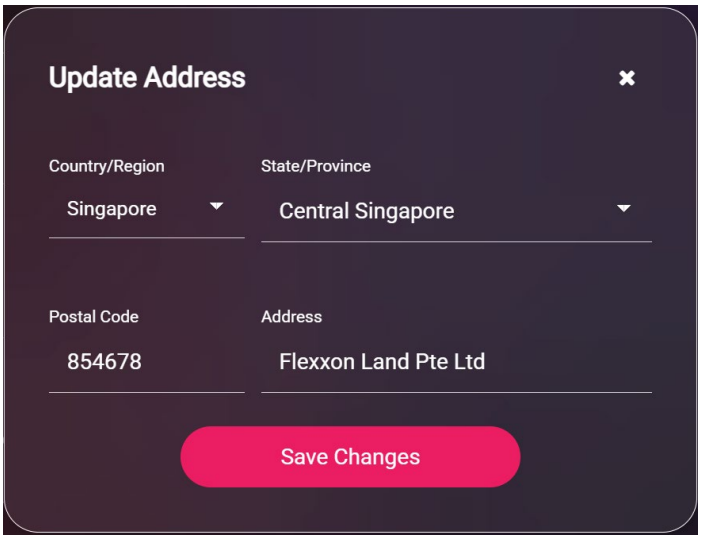
The My Profile page allows users to view and update their personal information by editing individual fields.



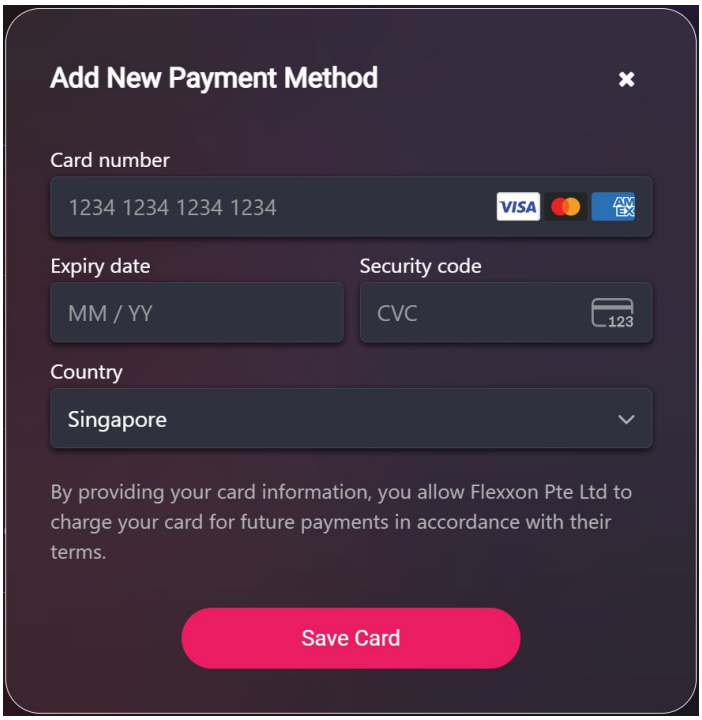
Changing the registered password will require the current and new password. Certain password criteria are required to be followed.



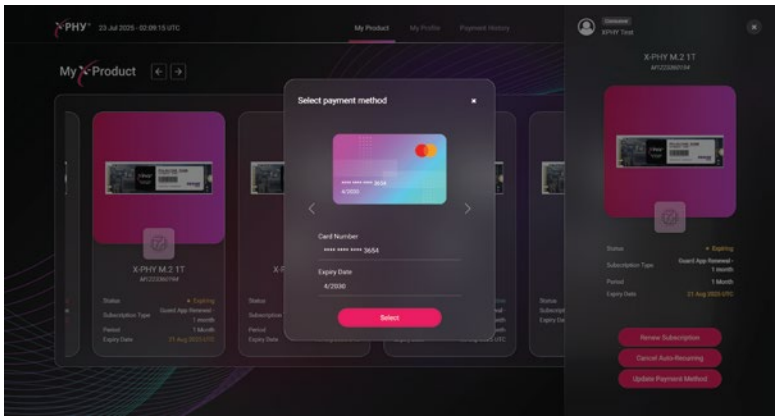
To edit current contact information, users are able to change their country/ region, state/province, postal code, and address.



To add a new payment method, users are required to fill in the new card number, expiration date, security code (CVC), and country.

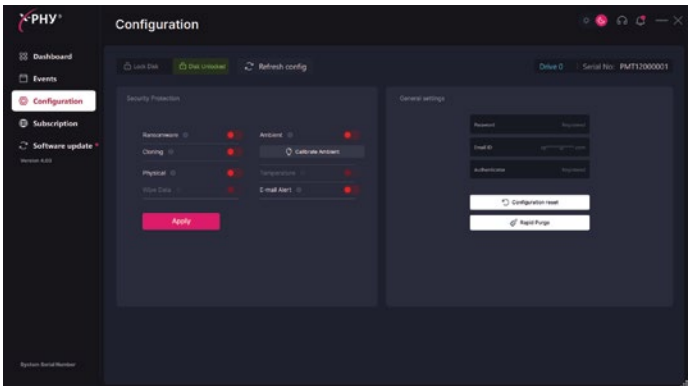


After adding a new payment method, users can select their preferred billing option and payment method to be used for subscription renewal, from the list of previously registered plans.

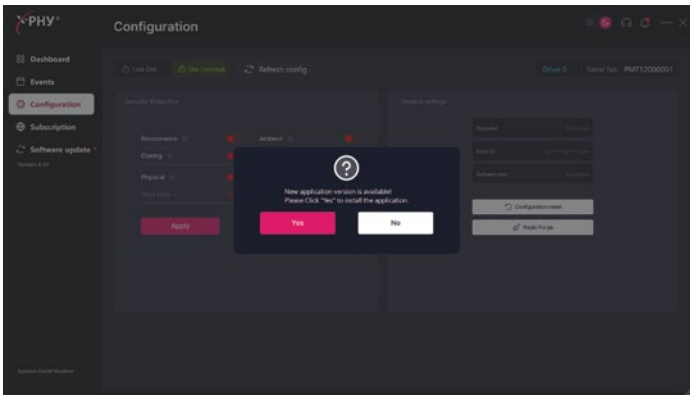


Software Updates

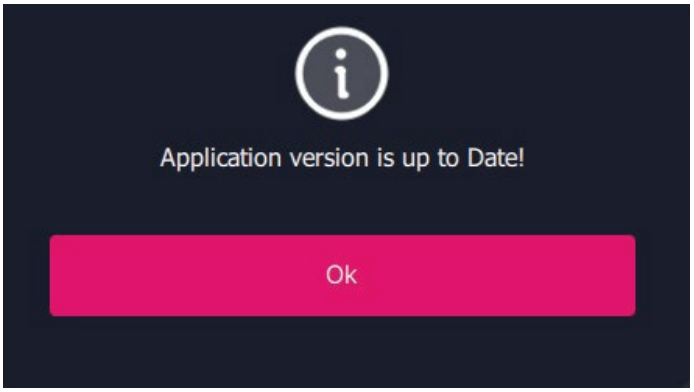
In the event where there is a software update for the X-PHY Guard PC application. to the **“Software Update”** button as shown.



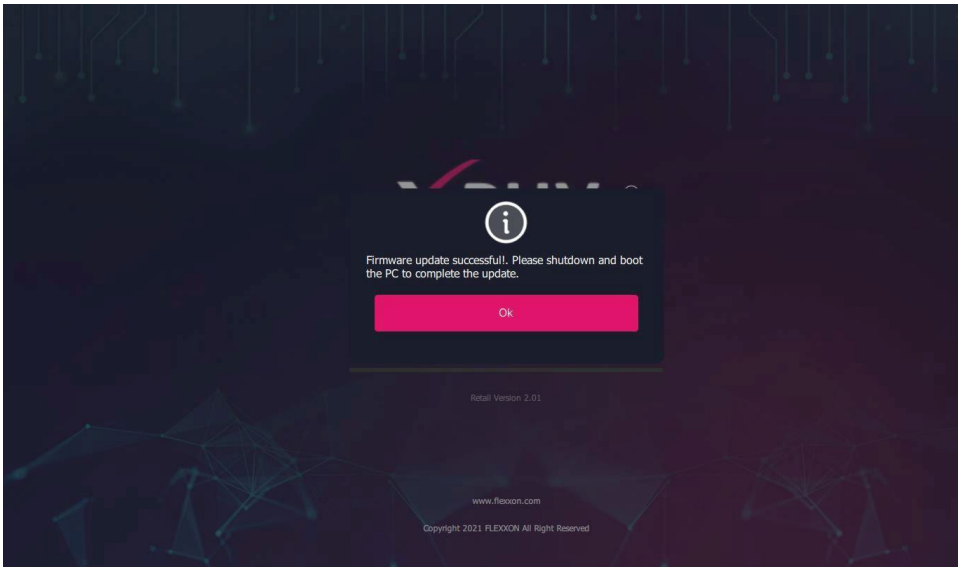
Click on the **“Software Update”** button. A pop up message “New Application version is available! Please Click “**Yes**” to install the application.” will be prompted. Click on “**Yes**” to install the new application.



In the scenario where there is no software update, a pop up message “**Application version is up to date!**” will be prompted upon clicking the “**Software Update**” button.



Firmware Updates

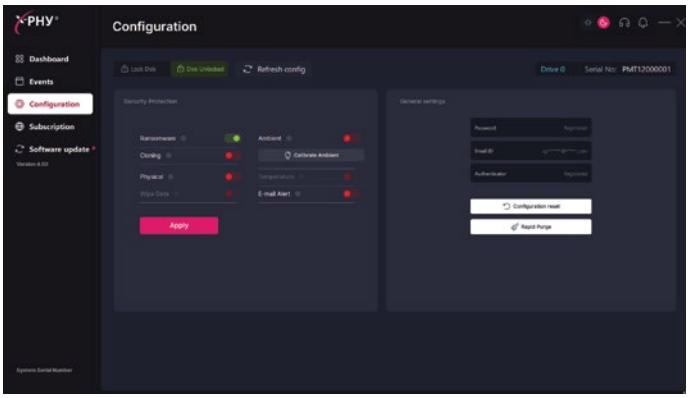


- If a new firmware update is available for the newly installed X-PHY Guard version, it will automatically flash the drive.
- After a successful firmware update, a message will appear in X-PHY Guard stating: **“Firmware update successful. Please shut down and boot the PC to complete the update.”**
- To complete the firmware update, please shut down and power on your PC. This step is mandatory.

Enabling Security Feature(s)

Step 1: Enable a security feature.

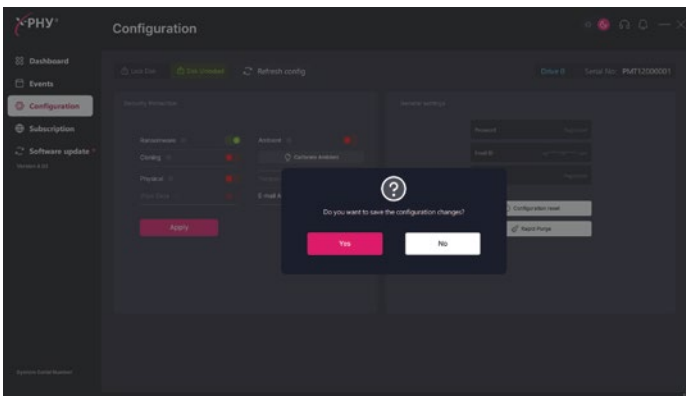
Ensure that at least one security feature is turned on to proceed.



For illustration purposes, the Ransomware protection feature is turned on.

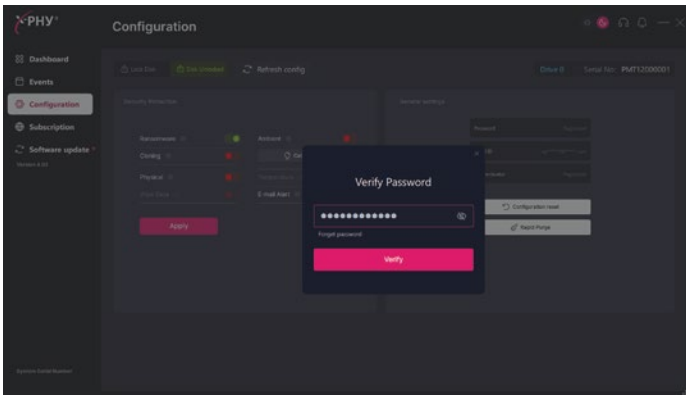
Step 2: Confirm the configuration change

A pop-up window will appear to save the new configuration changes. Click on "**Yes**" to proceed.



Step 3: Enter the Password

Enter the correct password that has been registered with the X-PHY.

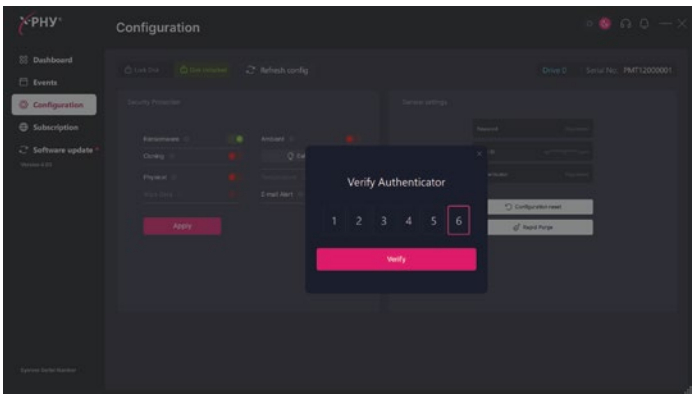


Note: If you forget your password, please refer to Appendix 6A

Google/Microsoft Authenticator is required for this section

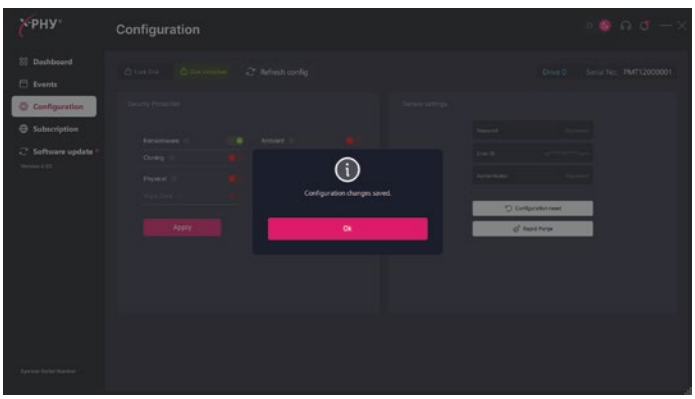
Step 4: Enter the six digit OTP

Ensure that the correct OTP has been entered from Google /Microsoft Authenticator. Click on the “**verify**” button.



Step 5: Successfully enabled Security Feature.

When the correct OTP has been verified, a pop up message “**Configuration changes saved.**” will pop-up together with the Windows notification. Click on the “Ok” button to complete.

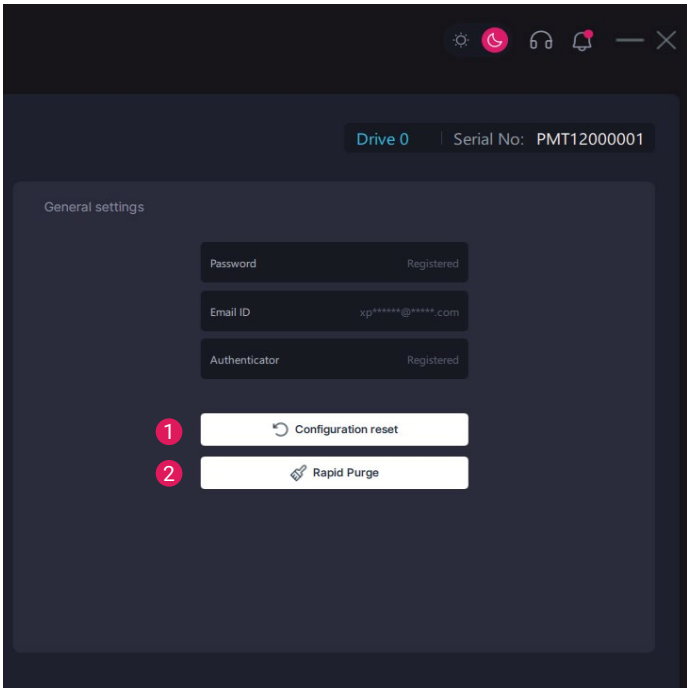


General Settings

Displays drive information like registered email ID, password and authenticator status.

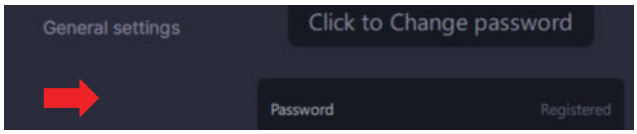
1. **Configuration Reset** button allows the user to reset all configurations and information. It is similar to a factory reset. After activating this feature, the user will be required to go through the entire registration process once again.

2. **Rapid Purge** button wipes all of all data (including operating system) found on the drive at physical block layer. ⚠️ *USE WITH CAUTION*

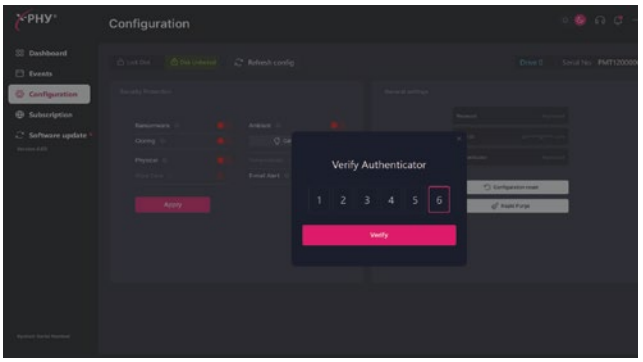


Change Password Option

Step 1: Click on **Password** field tab.



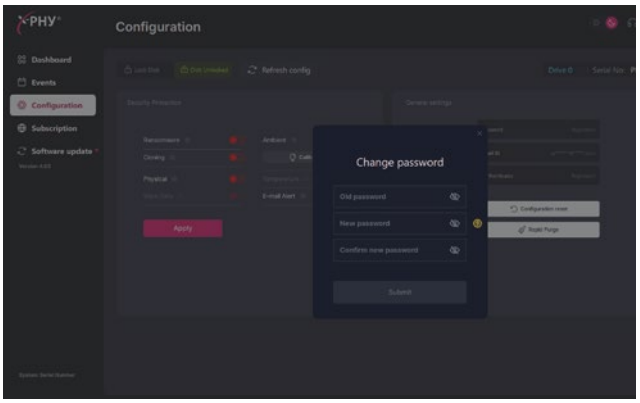
Step 2: Key in the registered 6 digit OTP from Google/MS Authenticator.



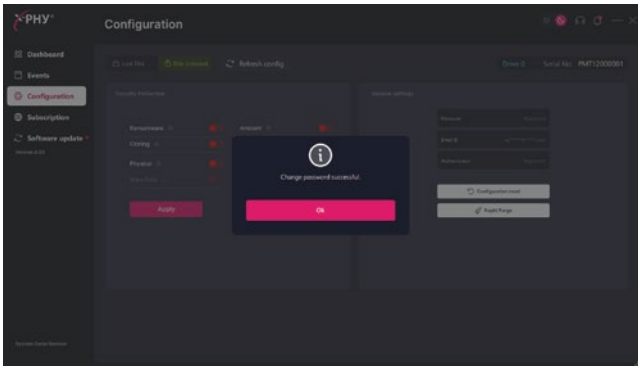
Step 3: Enter current password, new password twice for confirmation.

Note: *Click on the tooltip ⓘ for more information to meet the password criteria*

Step 4: Proceed to click the "**Submit**" button.



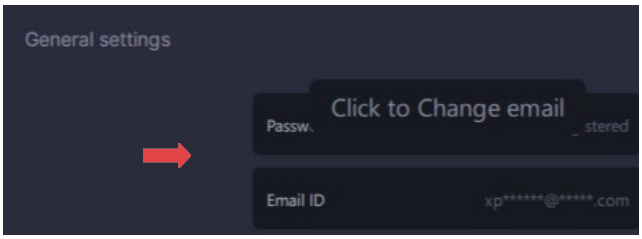
Step 5: Click "**Ok**" on the pop-up message "**Change password successful.**"



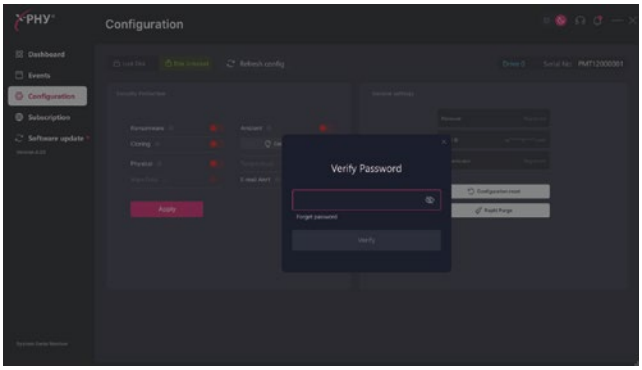
Note: *Any error encountered, please refer to the Troubleshooting Menu*

Change Email Settings

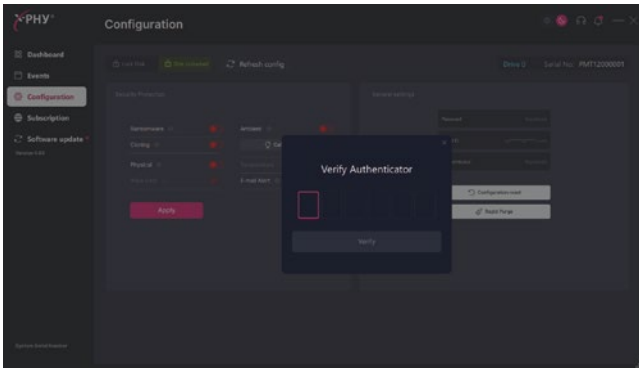
Step 1: Click on the **Email** field tab.



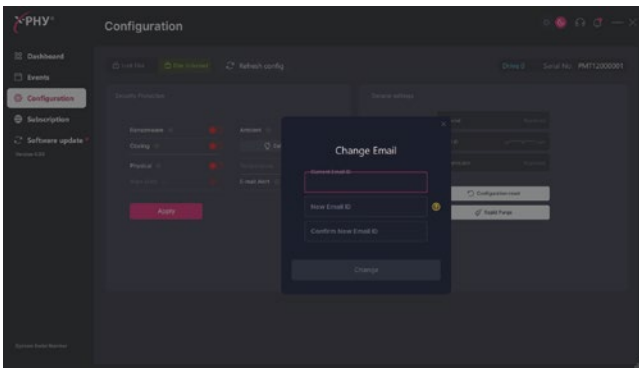
Step 2: Enter **password** for verification.



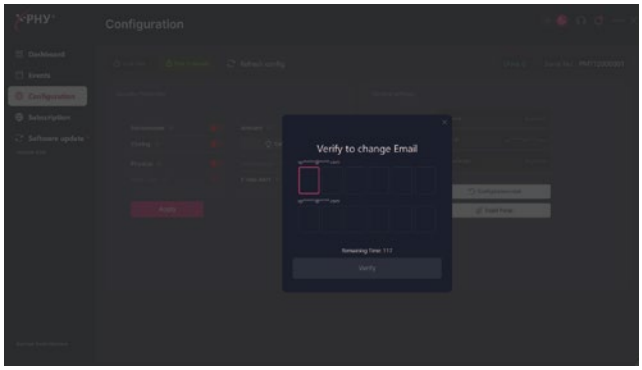
Step 3: Key in the registered 6 digit OTP from Google/MS Authenticator. Click **“verify”** to proceed.



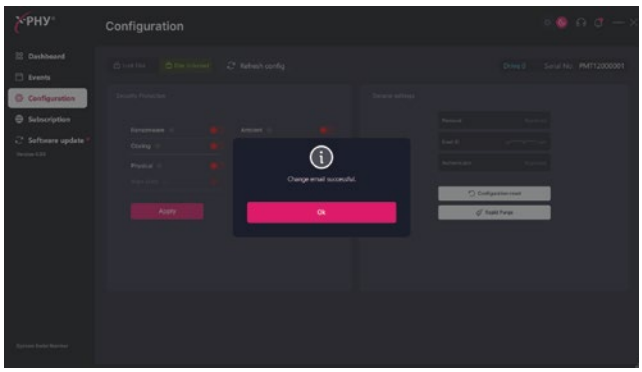
Step 4: Enter current email, new email twice for confirmation. Click **“Change”** to proceed.



Step 5: Go to your new email account, enter the code provided in the email for verification. Click **“verify”** to proceed.



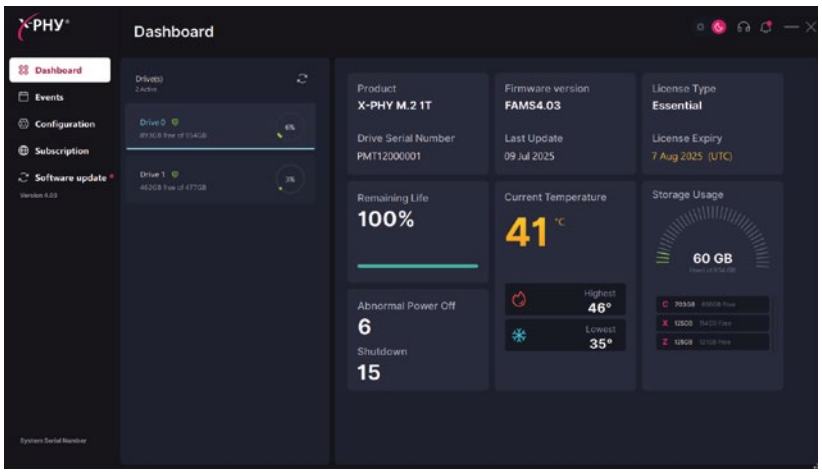
Step 6: Click “**Ok**” on the pop-up message for “**Change email successful.**”



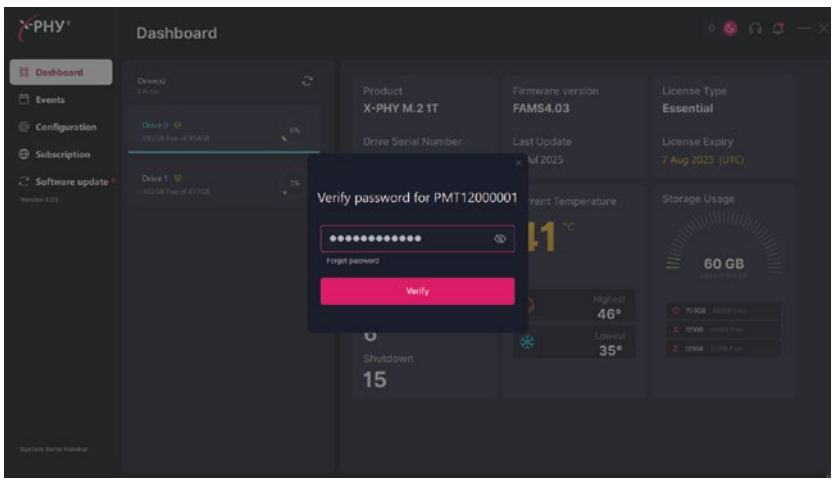
Unlocking the X-PHY SSD as a Secondary Drive

1. If the SSD is locked due to the attacks by ransomware, data cloning or theft, temperature or physical disconnections, the SSD can be unlocked by connecting it as a secondary drive and running the X-PHY Guard.

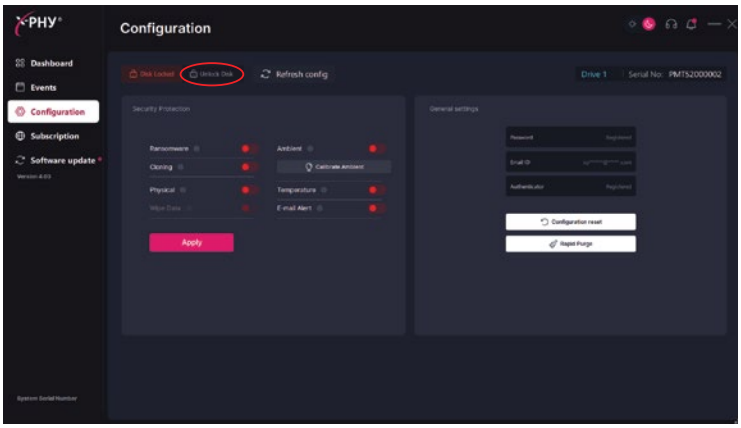
   From the Dashboard select **“Drive 1”** to access the secondary X-PHY SSD.



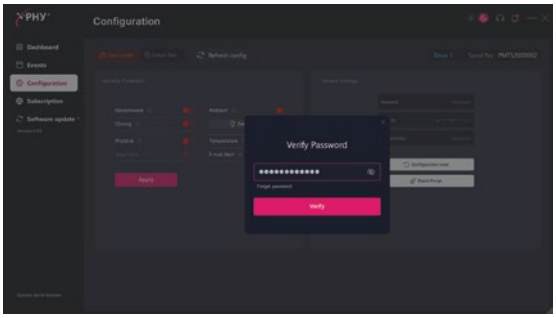
2. Key in your registered password for Drive 0 in order to access **Drive 1**.

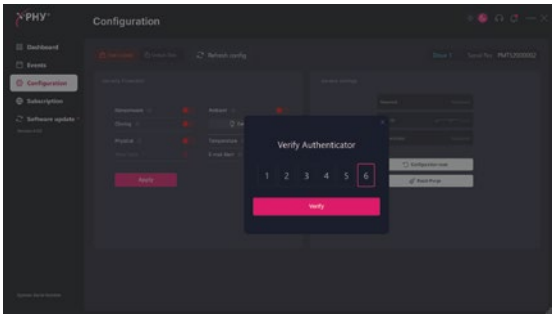


3. Click on the “Configuration” tab, the locked status will be shown “**Disk Locked**” in the configuration page of the application. Click “**Unlock Disk**” button to unlock the SSD.

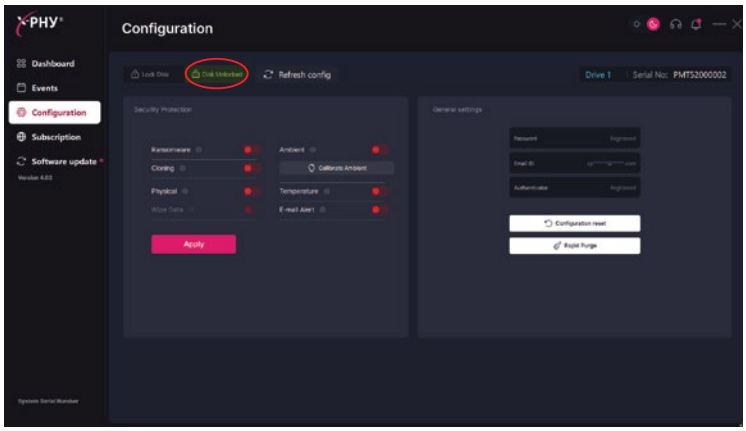


4. The application will prompt for the password and the Authenticator OTP.



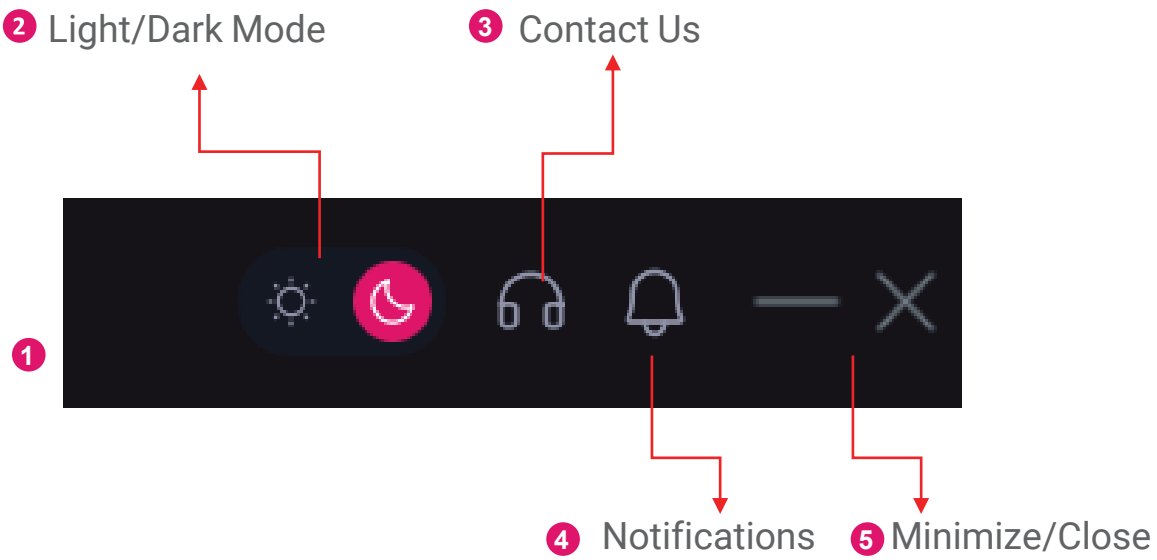


5. Once authentication is verified, the SSD will be **unlocked**.



⚠ Ensure the unlocking process is performed in a secure environment. (example: Non-Public Places)

General Controls



1. **Quick Link** located at top right panel provide settings such as the Theme Mode, Contact Us, Notifications, Minimize and Close buttons.

2. **Toggle** between Dark and Light mode.

3. **Contact Us** directly link to X-PHY Support website.

4. **Notification** icon will show the application's events & notifications.

5. **Minimize** icon will hide the application into the system tray.
   Close icon will close the application's interface.

Note: *To close the application completely, go to the system tray*
-> right click on the X-PHY Guard icon
*-> click "**Exit**" option.*

Troubleshooting Summary

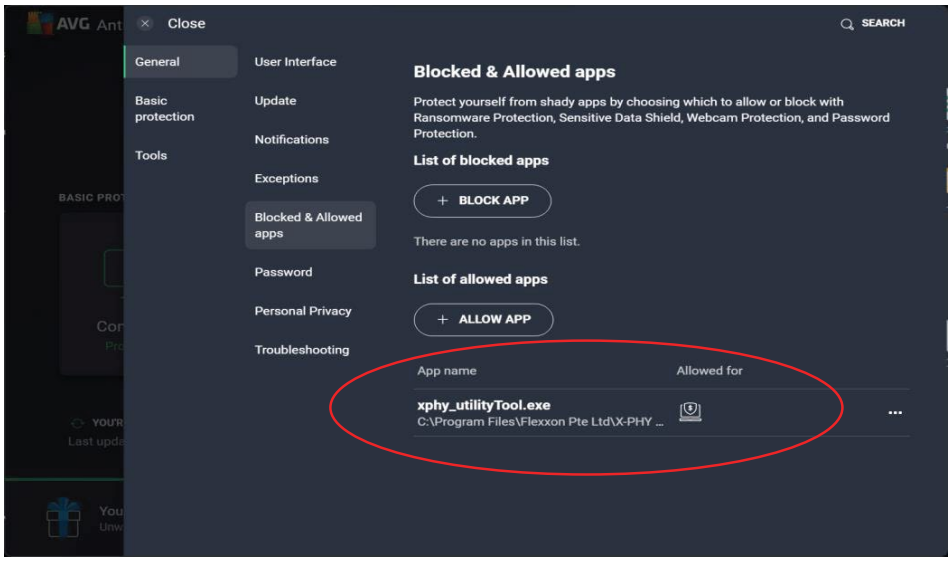
Error Scenario	Solution
Antivirus software blocks X-PHY Guard	Appendix 1
Initial Email Registration Error	Appendix 2
Change Password Error	Appendix 8
Change Email Error	Appendix 9

-APPENDIX-



Appendix 1: How to whitelist the X-PHY Guard in an Antivirus software

*To prevent the antivirus software from interfering with the operations of X-PHY, proceed to whitelist the **X-PHY Guard** to allow software and firmware updates when available.*



(images are for illustration purposes only.)

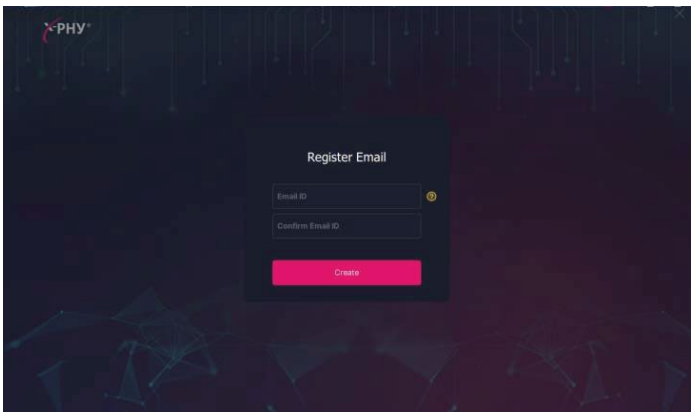
Below are links to tutorials of how to whitelist an application in common Antivirus software.

Antivirus Software	Link
Symantec	https://knowledge.broadcom.com/external/article/160078/how-to-whitelist-or-exclude-an-applicati.html
McAfee	https://www.mcafee.com/support/?articleId=TS100813&page=shell&shell=article-view
Kaspersky	https://www.kaspersky.co.in/blog/how-to-add-apps-to-exclusions/23331/
Norton	https://www.solveyourtech.com/how-to-stop-norton-360-from-blocking-a-program/
Avast	https://support.avast.com/en-sg/article/antivirus-scan-exclusions/#pc

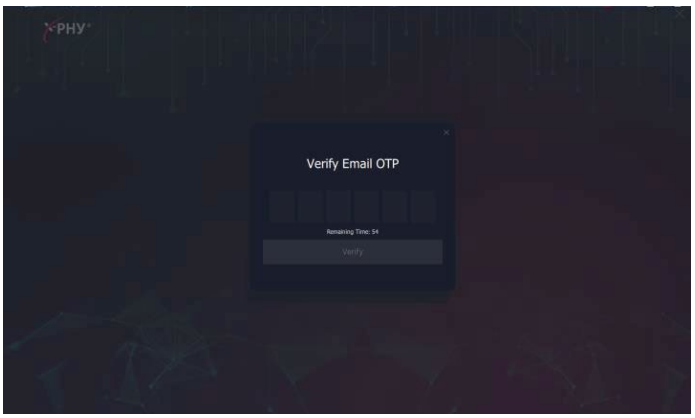
Appendix 2: Possible Scenario (Initial Email Registration Error)

In the event where there is an error during the initial e-mail registration such as due to a lost internet connection, the X-PHY Guard will prompt a second email registration.

Input your email address into the "**Email ID**" and "**Confirm Email ID**" fields respectively. Click on the "Create" button.



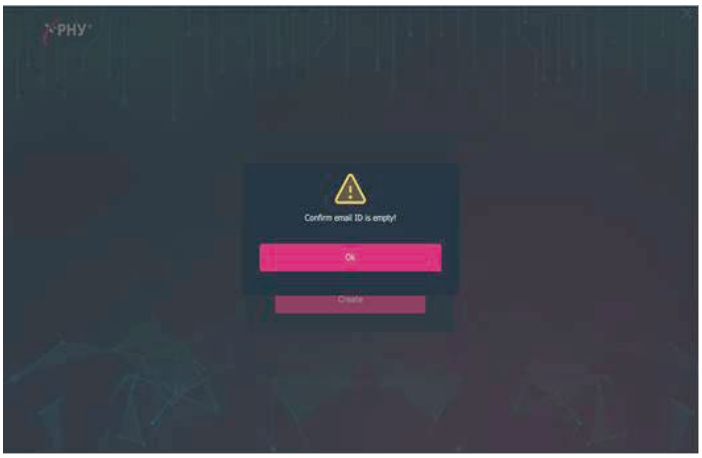
Enter the six digit OTP sent to the registered email and click on the "**Verify**" button.



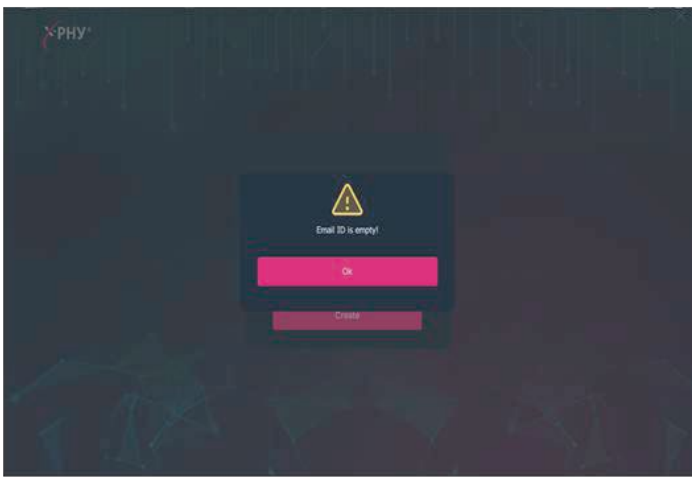
*Should there be any errors encountered, please refer to *Appendix 3A* and *Appendix 3B*

Appendix 3A: Possible Error Scenarios (Register Email)

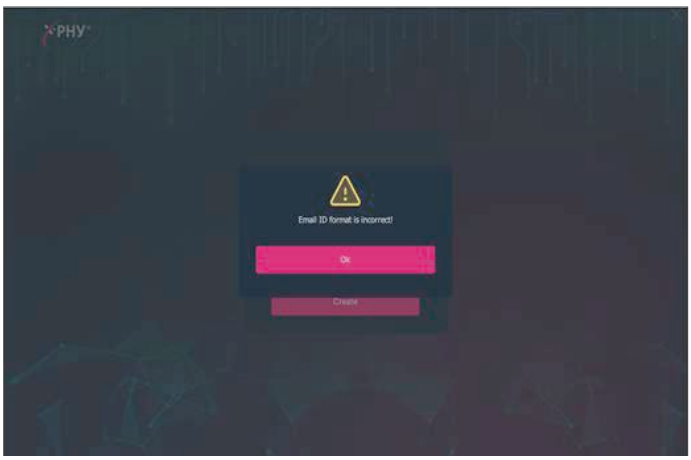
The “**Confirm email ID is empty!**” pop-up message will appear when the second field, “**Confirm Email ID**” is empty.



The “**Email ID is empty!**” pop-up message will appear if the “**Current Email ID**” field is empty.

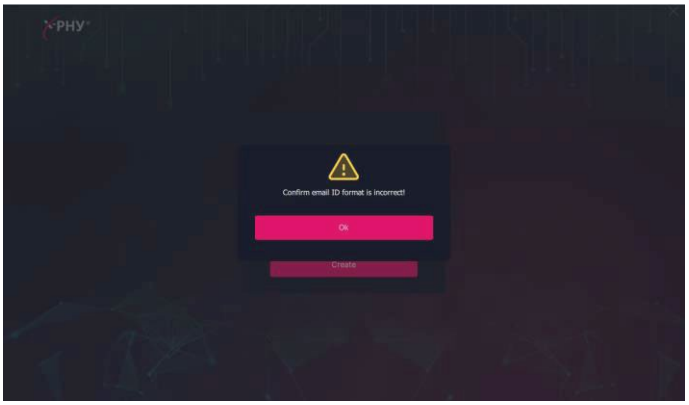


The “**Email ID format is incorrect**” pop-up message will appear if the user key the wrong email format in the “**Email ID**” field.

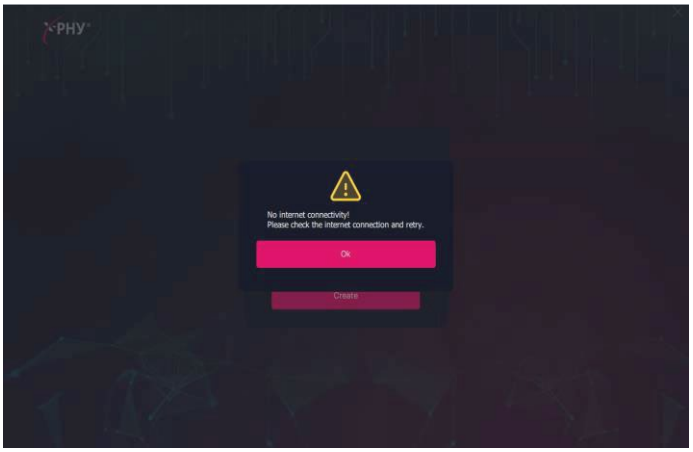


Appendix 3B: Possible Error Scenarios (Register Email Continued...)

The “**Confirm Email ID format is incorrect!**” pop-up message will appear if the user keys the wrong email format in the “**Confirm Email ID**” field.



The “**No internet connectivity! Please check the internet connection and retry**” pop-up message will appear if the internet connection is lost after clicking the “**Create**” button.



Appendix 4: Quick links to X-PHY Connect Mobile Application Guides



Android

Android Guide

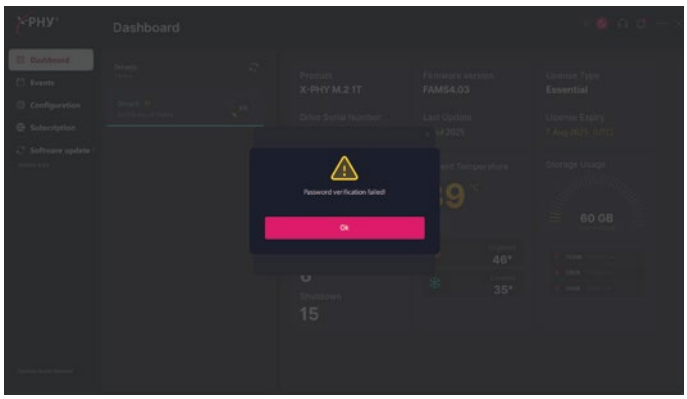


iOS

iOS Guide

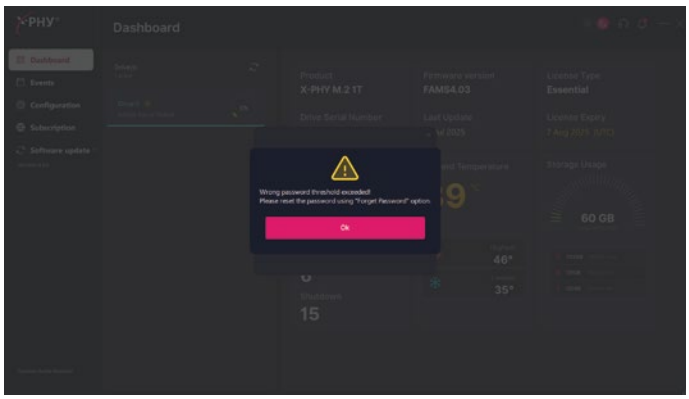
Appendix 5: Possible Error Scenario (Wrong Password Upon Initial launch of the PC Application)

The “**Password Verification Failed**” pop-up message will appear if the wrong password is entered. Solution: Click “**Ok**” and re-key correct password.



The “**Wrong password threshold exceed! Please reset the password using ‘Forget Password’ option.**” pop-up message will appear if the wrong password is entered 5 times & above.

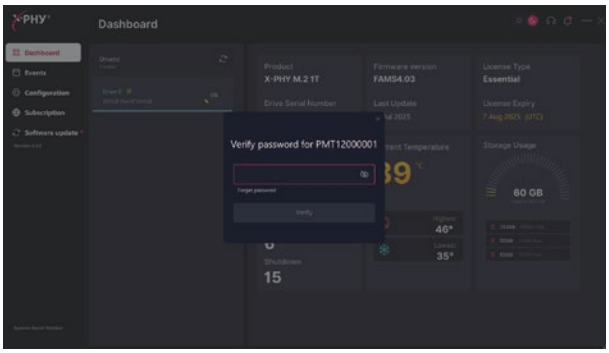
Solution: refer to page 33 to reset password



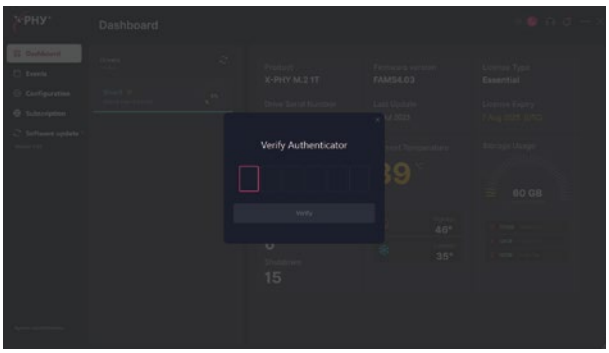
Appendix 6A: Forgot your Password?

Step 1: If password is forgotten, the "**Forget Password**" button can be used to reset password.

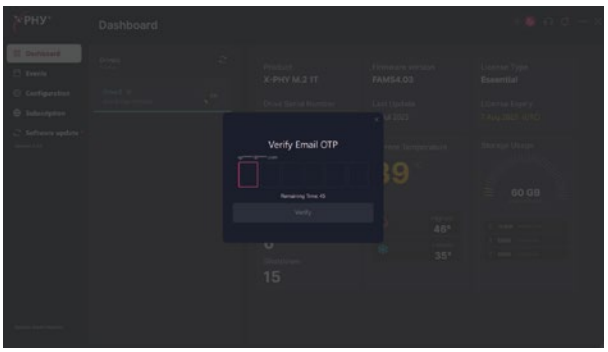
Note: an email OTP will be sent to the registered email account for verification before reset.



Step 2: After Click "**Forget Password**", enter the 6 digits OTP key from your Authenticator App and Click the "**Verify**" to proceed next.



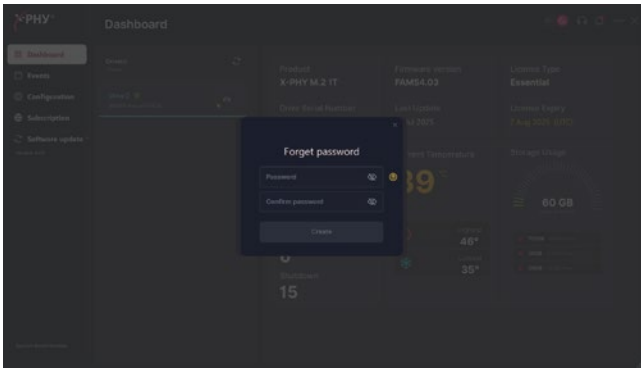
Step 3: An email OTP code will be sent to the registered email account. Enter the 6 digits Email OTP code into the "**Verify Email OTP**" window pop-up. Click "**Verify**" to proceed next.



Appendix 6B: Forget Password (Continued…)

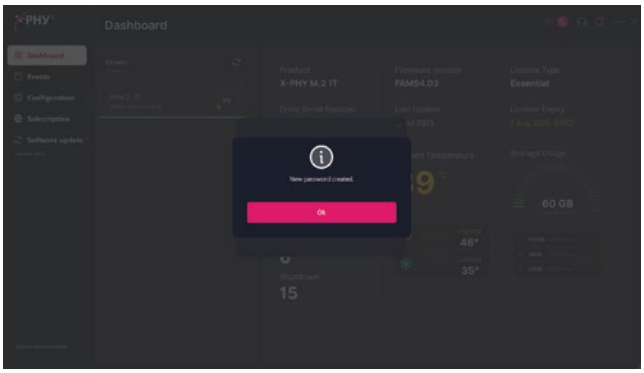
Step 4: Key in the new password into the "**Password**" and "**Confirm password**" field. Ensure that the new password adheres to the password criteria.

Note: Click on the tooltip ⓘ for more information to meet the password criteria.



Step 5: Once the new password successfully created, a "**New password created**" will pop-up.

Step 6: Click "**OK**" to complete.

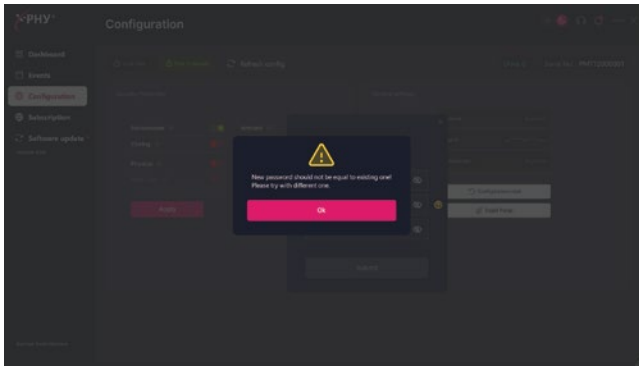


Appendix 7: Description of the Security Features

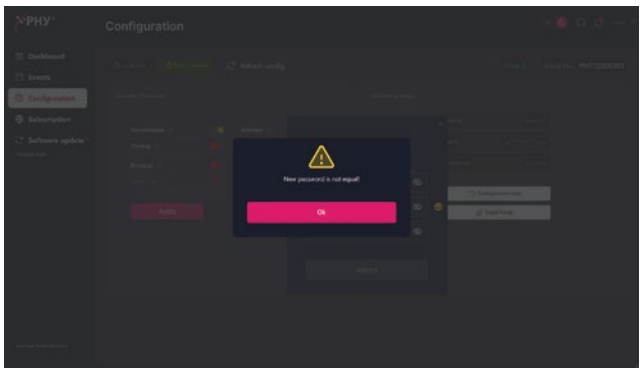
Security Feature	Description
Ransomware Protection	Protect against known and unknown ransomware.
Cloning Protection	Protect against disk or data cloning.
Physical Attack Protection	Protect against physical tampering and theft by removal of drive.
Wipe Data	To prevent data from being stolen or falling into the wrong hands, users choose this solution—especially those in sensitive industries like the military or government. With physical attack detection, the system automatically wipes all data from the SSD, ensuring it cannot be recovered or misused.
Ambient	Detect change in the lighting of the environment like for example when someone opens the panel from the workstation.
Temperature	Protect the SSD from hot and cold attacks.
E-Mail Alert	Trigger email notification to registered email on events that have happened or configuration settings changed. (eg. IT Administrator)

Appendix 8: Possible Error Scenarios (Change Password)

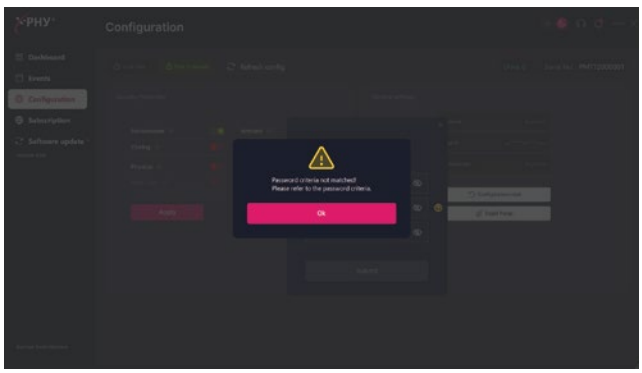
The “**New password should not be equal to existing one! Please try with a different one.**” pop-up message will be visible if current and new password are the entirely same or similarly same.



If the “**New password**” and “**Confirm new password**” entered does not match, the “**New password is not equal!**” error message will be prompt.



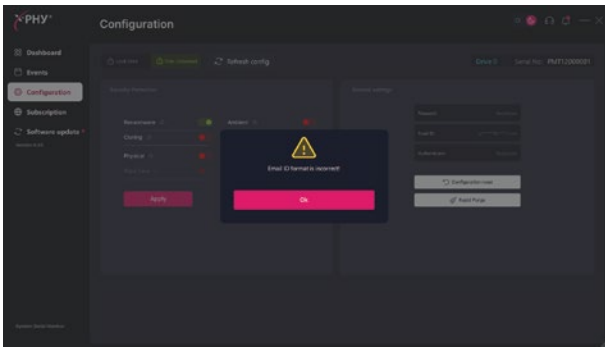
If the password criteria is not meet the following error message will be prompt.



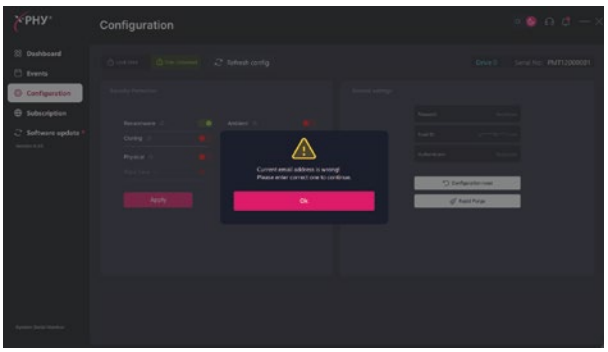
Note: Click on the tooltip ⓘ for more information to meet the email or password criteria.

Appendix 9: Possible Error Symptom (Change Email)

The **“Email ID format is incorrect!”** popup message will be visible if the wrong Email ID format is entered.



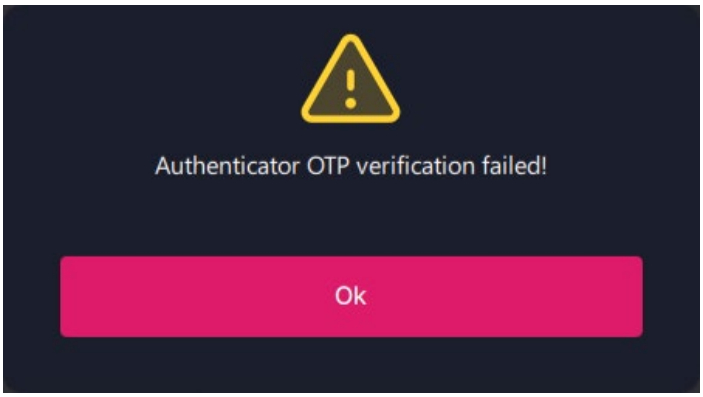
If the wrong **“Current Email”** address is entered then the following pop-up message will be observed.



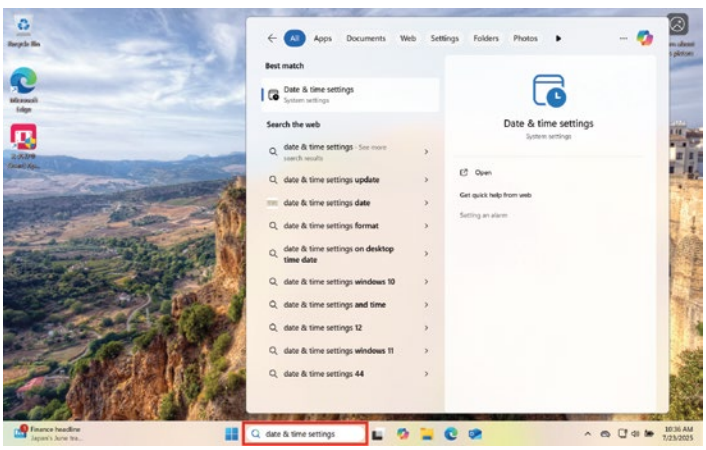
Note: Click on the tooltip ⓘ for more information to meet the email or password criteria.

Appendix 10: Incorrect Microsoft/Google Authenticator OTP

Authenticator verification may fail if the device's date and time settings are not correctly synchronized. This results in the application rejecting valid one-time passcodes (OTPs), and displaying an error pop-up message.

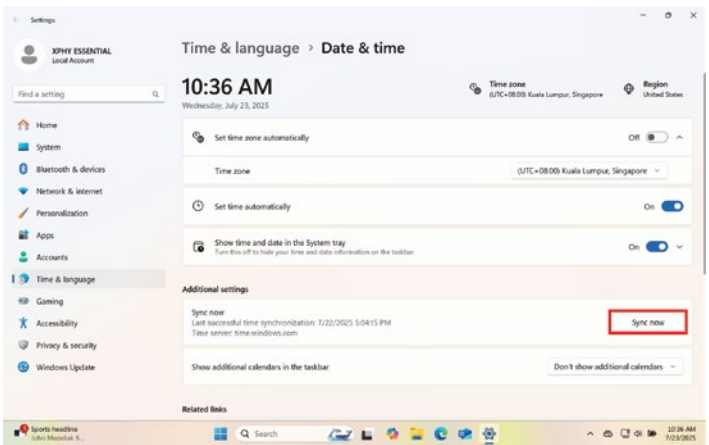


Step 1: Search for “Date & Time Settings” under the Windows Search Bar and click to open.



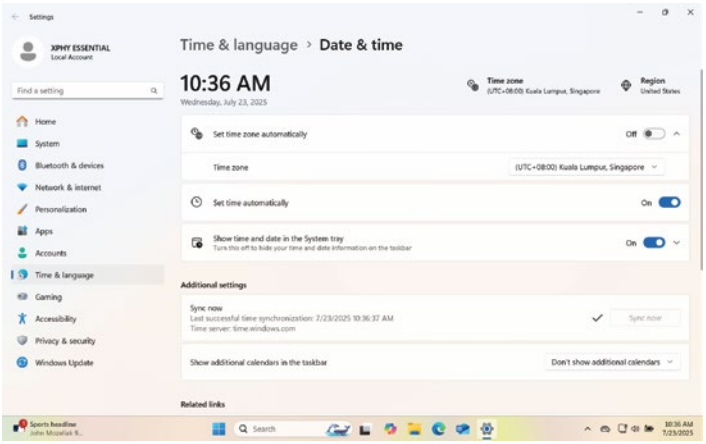
Step 2: Set your preferred timezone based on the country/region that you are in, and ensure the following settings are configured as shown.

Locate the “**Sync Now**” button and click to ensure your system is synchronized with the timezone set.



Appendix 10: Incorrect Microsoft/Google Authenticator OTP

Step 3: The time synchronization is complete when there is a tick next to the “Sync Now” button.



Certification

X-PHY® CYBER SECURE SSD
Model/Type: PCIe M.2 2280 512GB, PCIe M.2 2280 1TB

UL RECOGNIZED COMPONENT MARKS FOR CANADA AND THE UNITED STATES

European Union

Manufacturer Representative with the EU:
Philippe Marie
Le Pré de l'Aube, G6 RDC Chemin du Four-à-Chaux - 13240 Septernes-les-Vallons - France.
Phone number: +33 (0)6 70 00 37 22

United States

Contains FCC ID: RYYEYSHSN

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Great Britain

Manufacturer Representative with the UK:
Michael Barrett 3 West Barn, Old Dairy Lane, Norton, Chichester, West Sussex, P020 3AF, UK
Phone number: +44 (0)1794 301 439

Singapore

Complies with IMDA Standards DA109121

-End of User Guide-



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