eSecu FIDO2 Fingerprint Key

User Manual

(V2.5)

Excelsecu Data Technology Co., Ltd.

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1. Important Instructions

Thank you for using eSecu FIDO2 Fingerprint Key!

Please read this manual before operating your eSecu FIDO2 Fingerprint Key (FIDO2 Fingerprint Key for short) and keep it for future reference.

2. Product Overview

eSecu FIDO2 Fingerprint Key is a hardware authenticator complying with FIDO2 standard and FIDO U2F standard, which is self-developed by Excelsecu. By using an eSecu FIDO2 Fingerprint Key, users are freed from having to remember and type passwords as well as less to worry about their account information stolen by phishing, hacking or viruses. It uses Private / Public Key (asymmetric) cryptography to provide strong authentication and can be used on FIDO2-enabled or U2F-enabled services and applications as a factor of two-factor authentication, multi-factor authentication or passwordless authentication.

3. Product Picture

The key has the following lighting states:

Steady red light: Insert the FIDO2 Fingerprint Key in the computer's USB port/ Fingerprint verification fail.

Flashing red light: Need to touch.

Flashing green light: Fingerprint enroll/ Need to verify fingerprint.

4. FIDO2 Fingerprint Key Management

Before using FIDO2 Fingerprint Key, fingerprint is always required to be enrolled via USB. Currently, there are three methods to manage FIDO2 Fingerprint Key: eSecu FIDOManager, Windows settings and Chrome Browser.

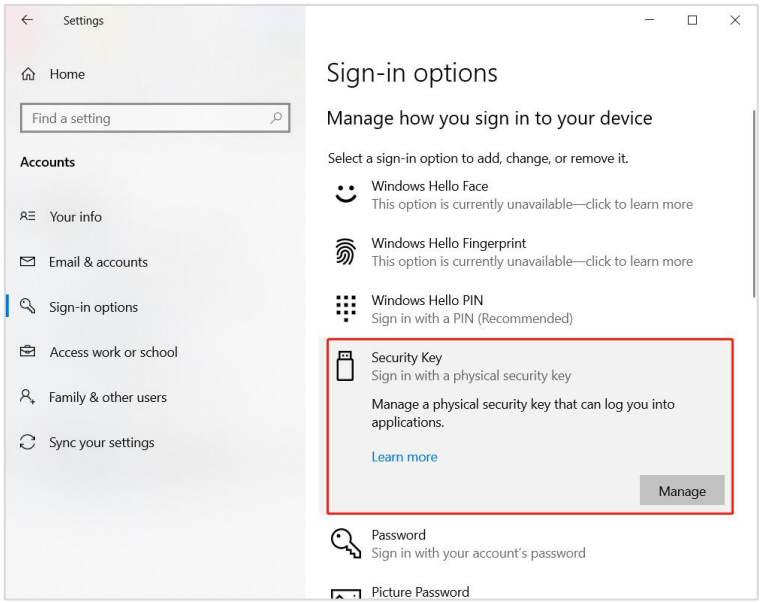
4.1. eSecu FIDOManager

The Software used to configure the FIDO and OTP (HOTP/TOTP) and fingerprint's enrollment, test, remove, reset is described in document of "Excelsecu Manager User Manual", you can refer to it for more details.

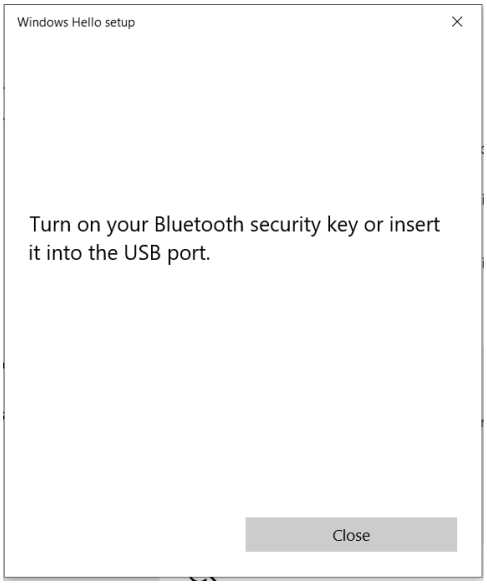
4.2. Windows Settings

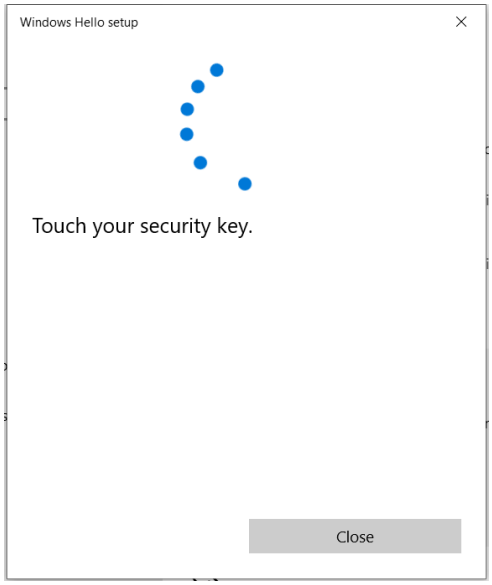
You can set up your FIDO2 Fingerprint Key straight from **Setting** page if the platform is **Windows 10 version 1903 (build 18298) or above**.

1. Choose **Setting -> Accounts -> Sign-in options -> Security Key.**

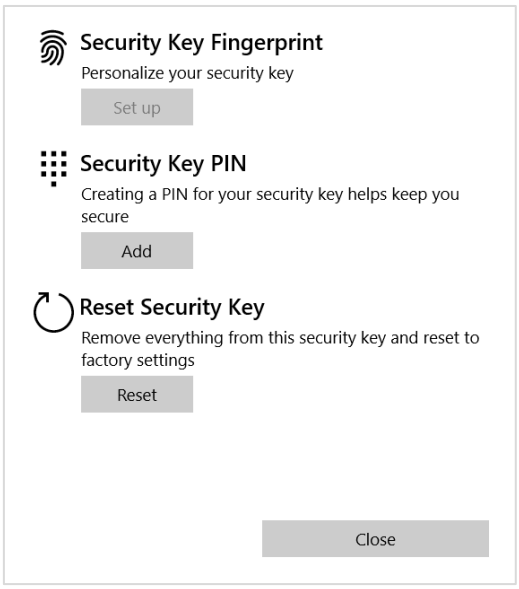


2. Click **Manage**, and connect your key to the computer according to the prompt.





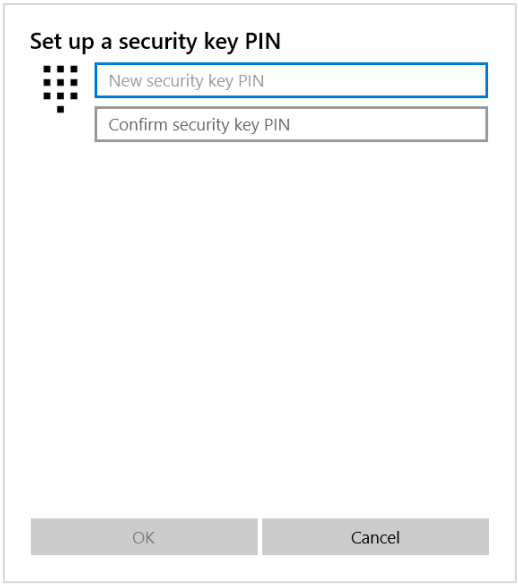
3. You are able to manage fingerprint, PIN or reset your FIDO2 Fingerprint Key now.



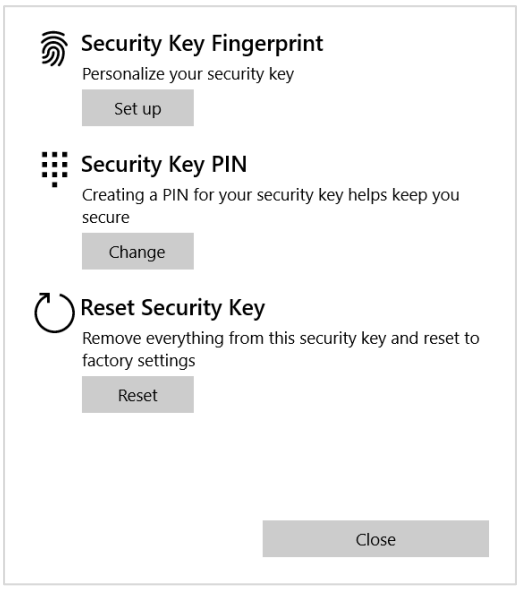
Fingerprint Enrollment

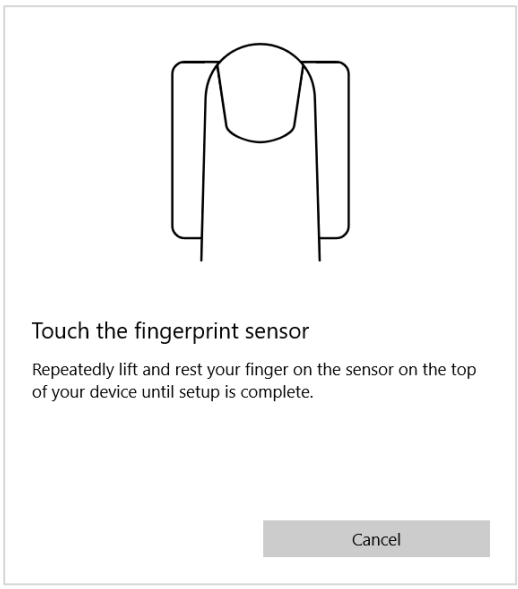
Before you set up your fingerprint, you need to set a PIN. You are able to change the PIN if PIN is already set.

Note: PIN length is between 4 to 63 characters.



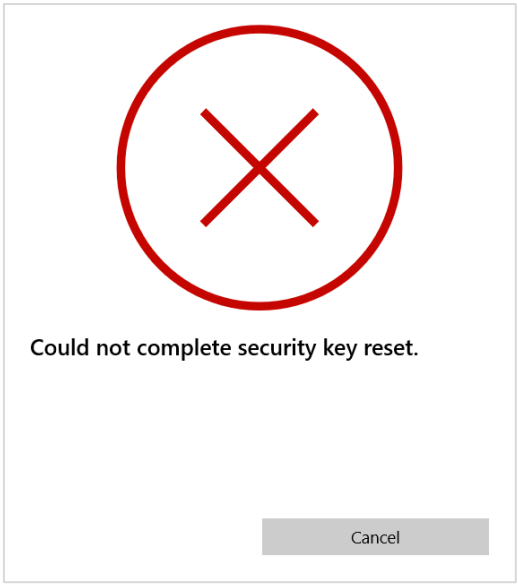
Click **Set up** to enroll a fingerprint, and you are required to input the PIN. The enrollment process requires you to touch the fingerprint sensor 4 times. You are able to remove fingerprints if there is at least one enrolled.



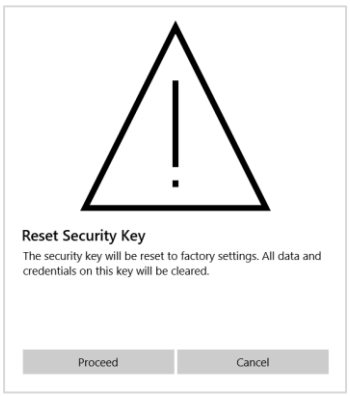


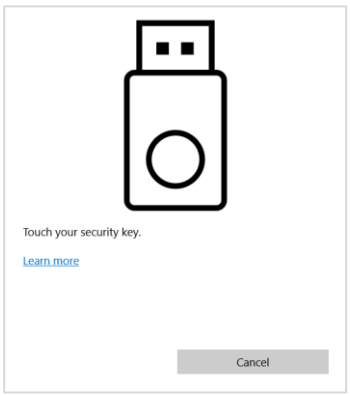
Reset Security Key

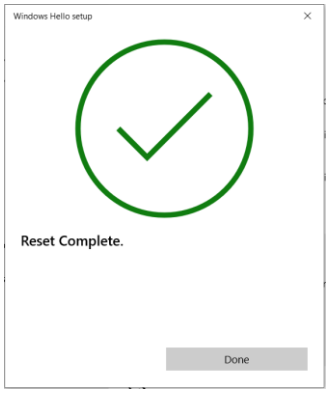
Note: Resetting the key requires to be done within 10 seconds after powering up. If the following prompt shows up, reinsert your key and click reset again.



Follow the prompt windows to finish reset.







4.3. Chrome Browser

Chrome Version 79 or above on Windows, Mac or Linux are able to manage eSecu FIDO2 security keys. Here we take Windows as an example.

Note: if you are using Chrome on Windows 1903, **each time** you use the chrome to manage your eSecu FIDO2 security key, you need override this by running Chrome as Administrator with the command line flag:

--disable-features=WebAuthenticationUseNativeWinApi.

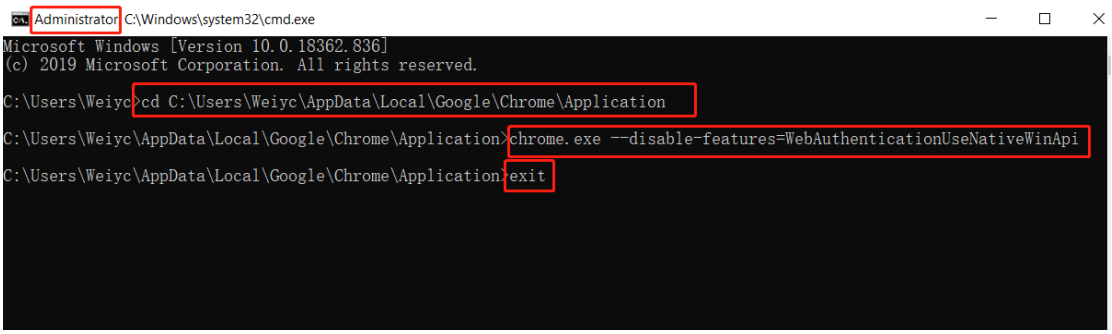
1. Go into the chrome.exe file location, here we take "C:\Users\Weiyc\AppData\Local\Google\Chrome\Application" as an example, please change

it to your chrome file location, and run the following command as administrator:

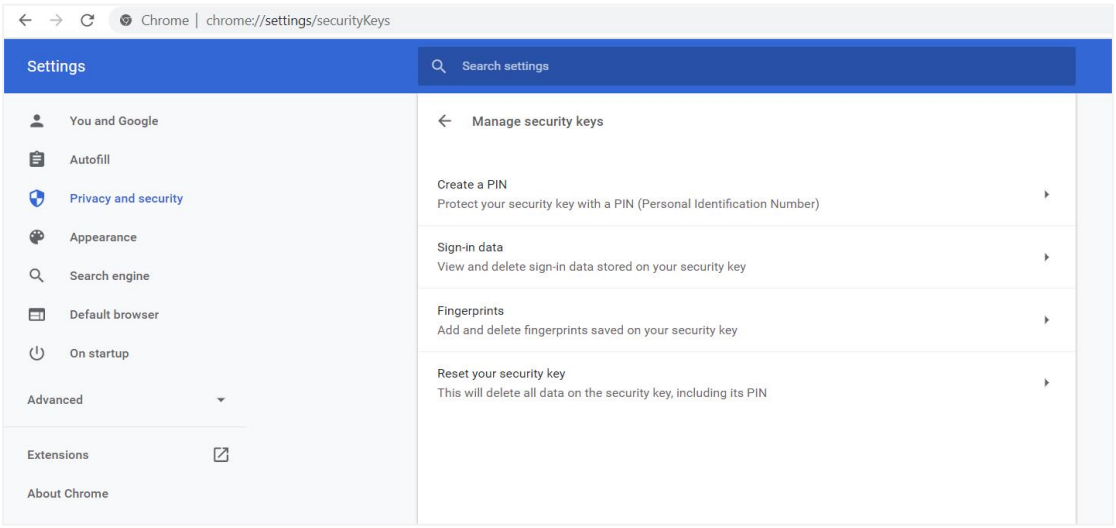
```
cd C:\Users\Weiyc\AppData\Local\Google\Chrome\Application

chrome.exe --disable-features=WebAuthenticationUseNativeWinApi

exit
```



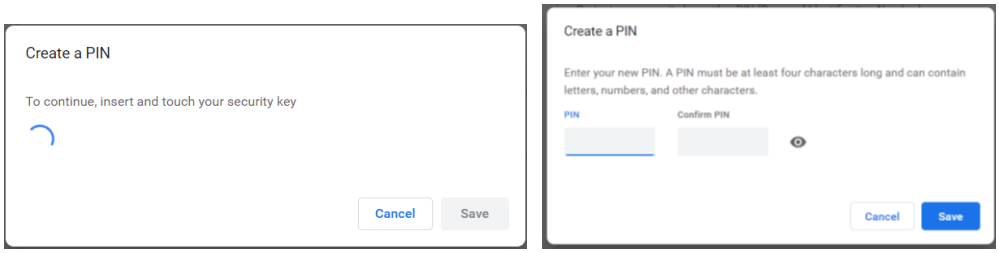
2. This command will automatically open the chrome browser. Then go to **chrome -> settings -> Privacy and security -> Security -> Manage security keys**, or directly visit the link: chrome://settings/securityKeys, then you are able to manage PIN, sign-in data, fingerprints and reset.



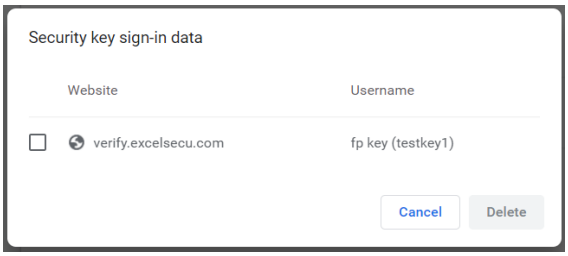
Create a PIN

Click **Create a PIN** to set the PIN for your key.

Note: PIN length is between 4 to 63 characters.



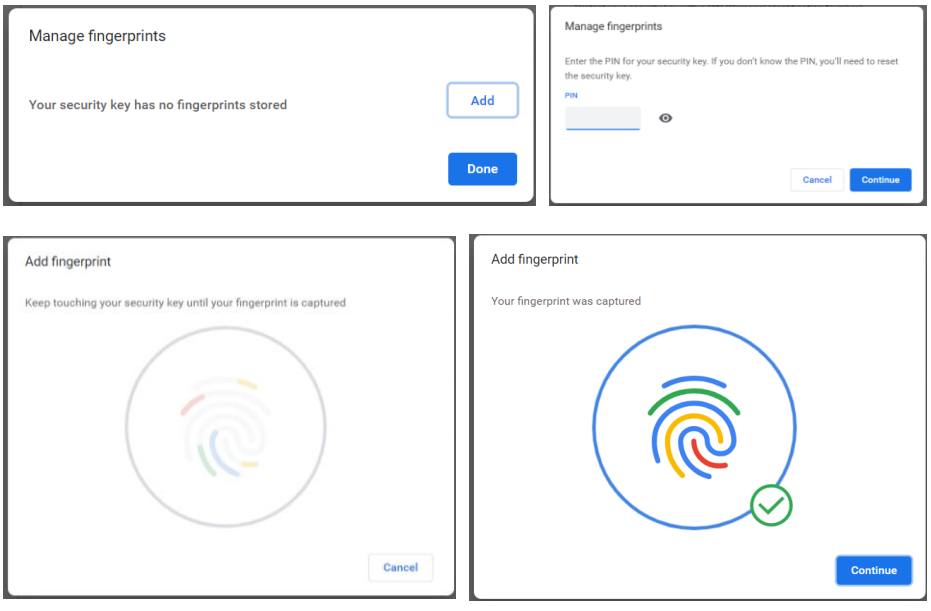
If you have **resident credentials for passwordless login** stored in authenticator, you are able to manage sign-in data by clicking **Sign-in data**.



Manage fingerprints

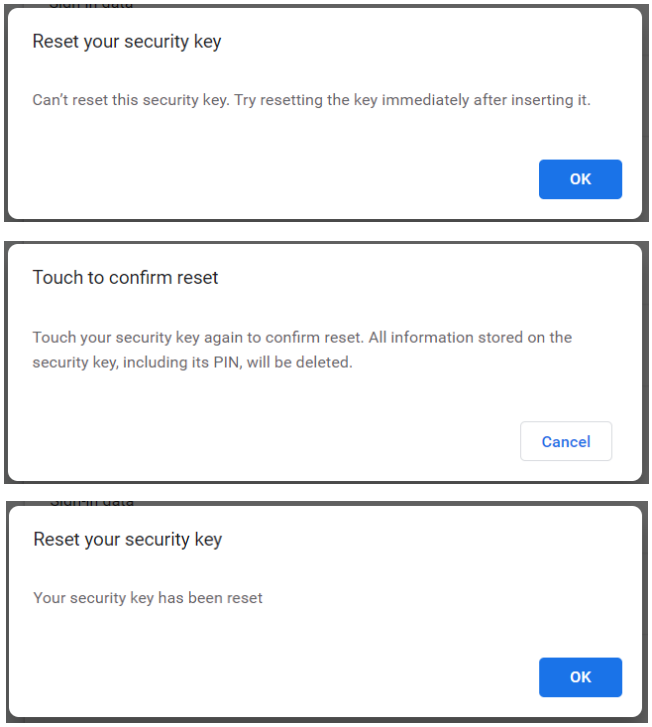
You can add and delete fingerprints saved on your security key by click **Fingerprints**.

Note: before managing fingerprints, you need to set a PIN for your key.



Reset security key

Note: Resetting the key requires to be done within 10 seconds after powering up. If the following prompt shows up, reinsert your key and click reset again.



5. The Basic Operation of FIDO2 Fingerprint Key

5.1. Register (First Time Only)

1. Enter the username and password to log in to any application that supports FIDO U2F/FIDO2.
2. Insert the FIDO2 Fingerprint Key in a USB-A port.
3. Add the FIDO2 Fingerprint Key to your account(s).

5.2. Signing-In (After Completing Registration)

1. Open the website you want to log in.

2. Enter your usual username and password (for U2F-enabled services).

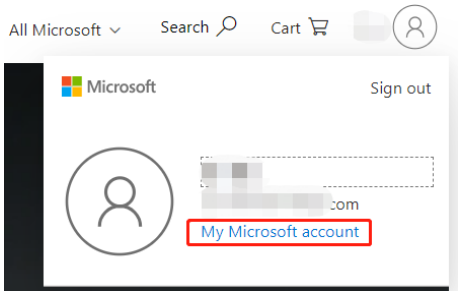
3. Insert the registered FIDO2 Fingerprint Key to the computer's USB port.

4. When prompted, authenticate with a simple touch of the fingerprint module to sign in.

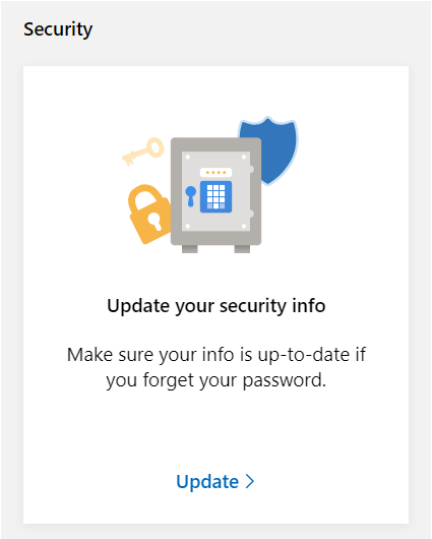
6. How to use FIDO2 Fingerprint Key with Microsoft for passwordless login

6.1. Register the FIDO2 Fingerprint Key

1. Click "My Microsoft account" after signing in.

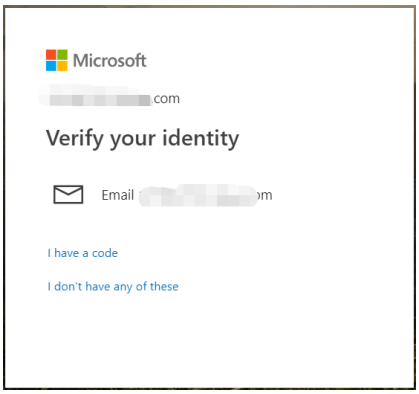


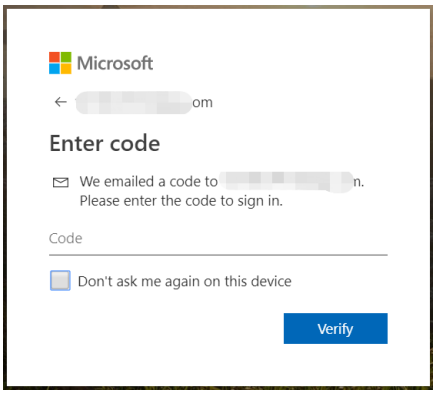
2. Select "Security".



3. Click "more security options".

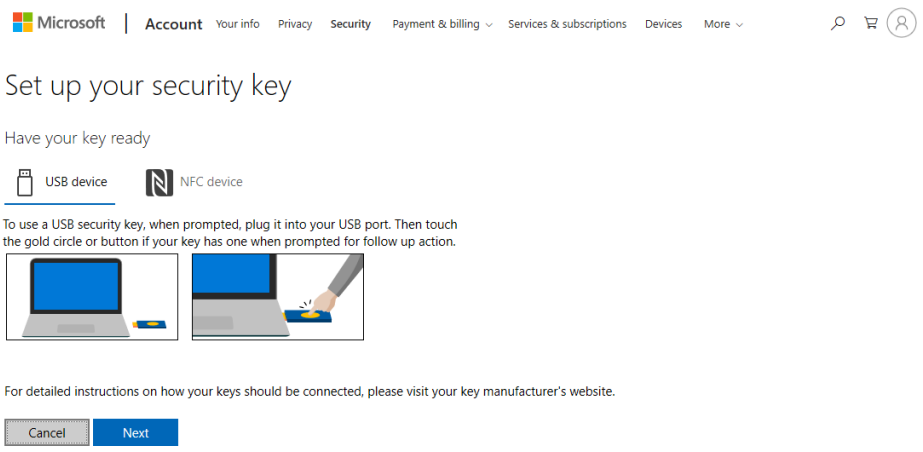
4. You will be asked to verify your identity.



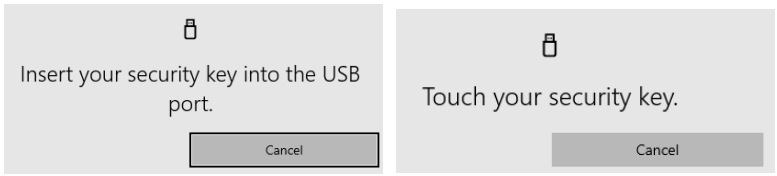


5. After the verification is passed, enter the “Additional security options” page, and click “Set up a security key” under “Windows Hello and security keys”.

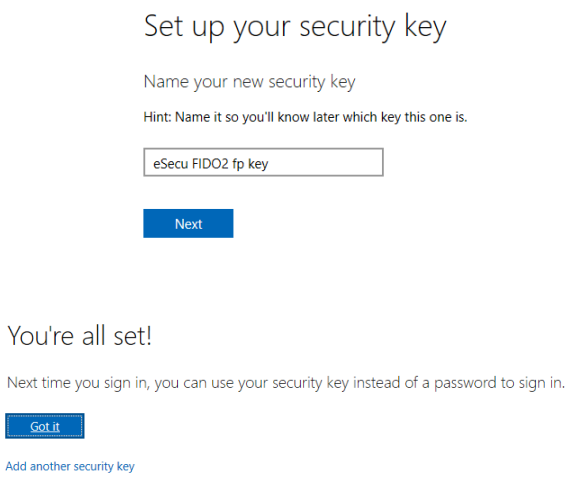
6. Identify what type of key you have (USB or NFC) and click next.



7. Insert your key into the USB port and touch your key to verify the fingerprint when the key flashes green light.



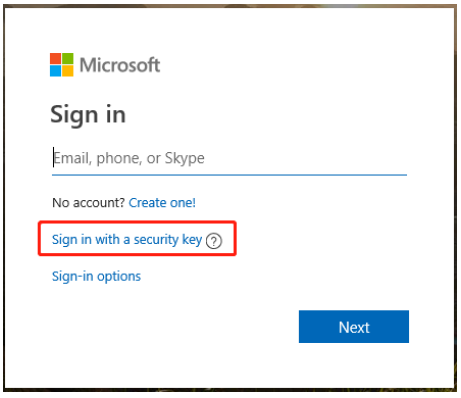
8. Name your FIDO2 Fingerprint Key, and the registration is finished.



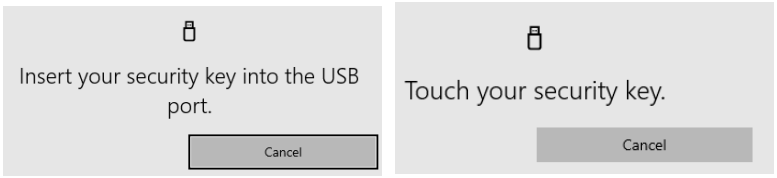
6.2. Sign in with FIDO2 Fingerprint Key

1. Click “Sign in”.

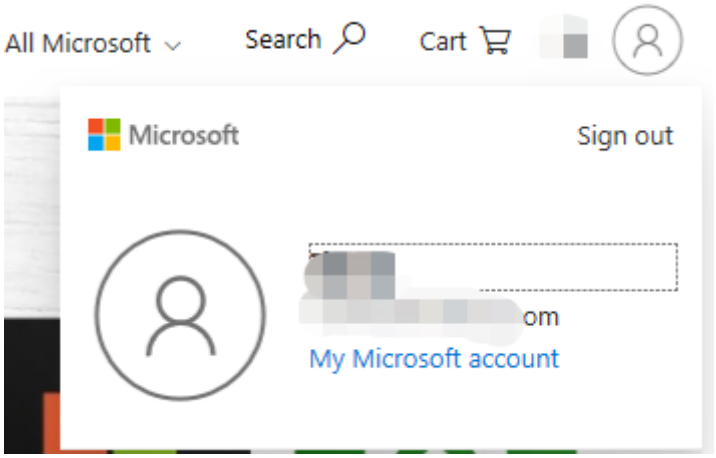
2. Click “Sign in with a security key”.



3. Insert your key into the USB port and touch your key to verify the fingerprint when the key flashes green light.



4. Sign in successfully.

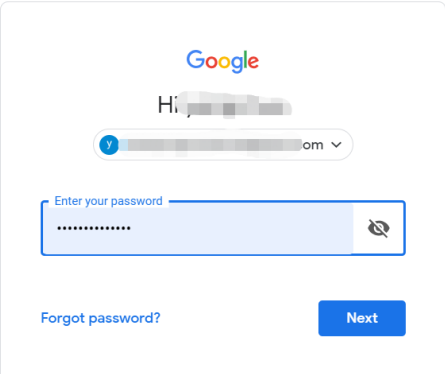


7. How to use FIDO2 Fingerprint Key with Google for 2-Step Verification

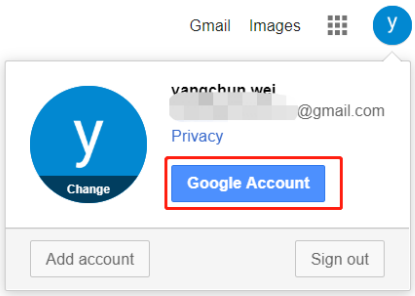
7.1. Register the FIDO2 Fingerprint Key

Register FIDO2 Fingerprint Key with your Google account to make it become the second authentication factor.

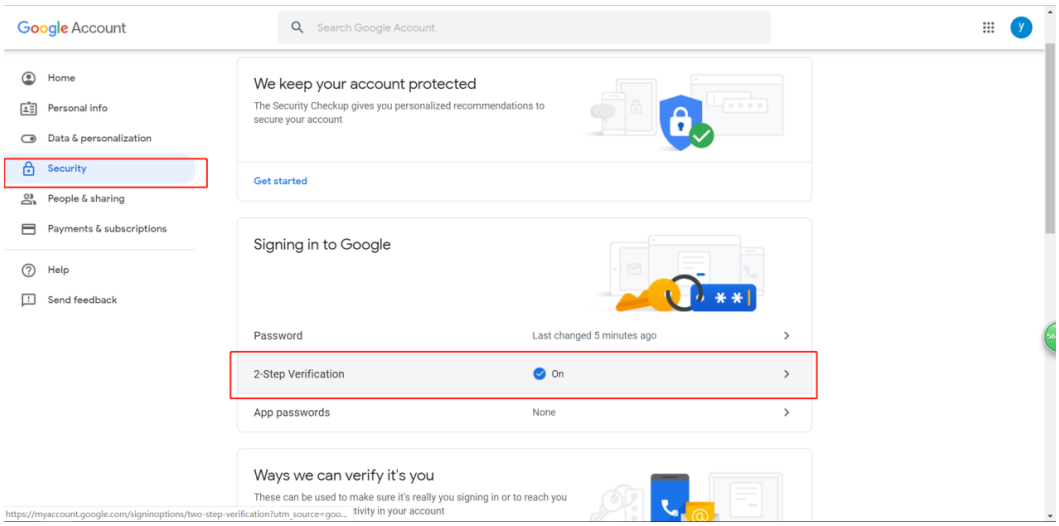
1. Log in to the website: https://www.google.com/ and click Login in the top right corner. Enter your account name and password.



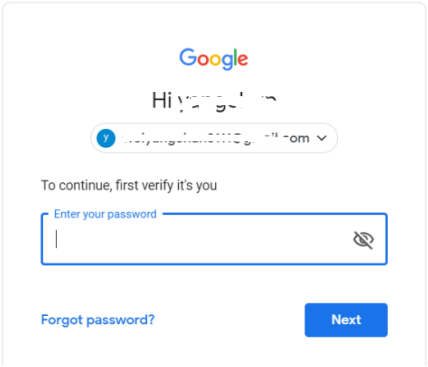
2. Once you have successfully logged in, click on your Google Account.



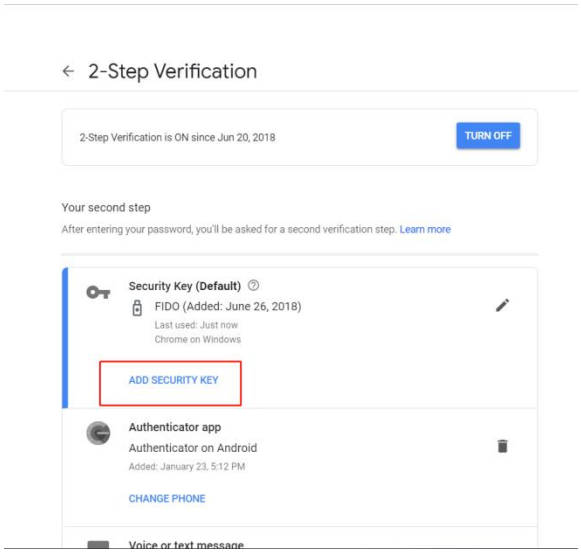
3. Select security->2-step verification.



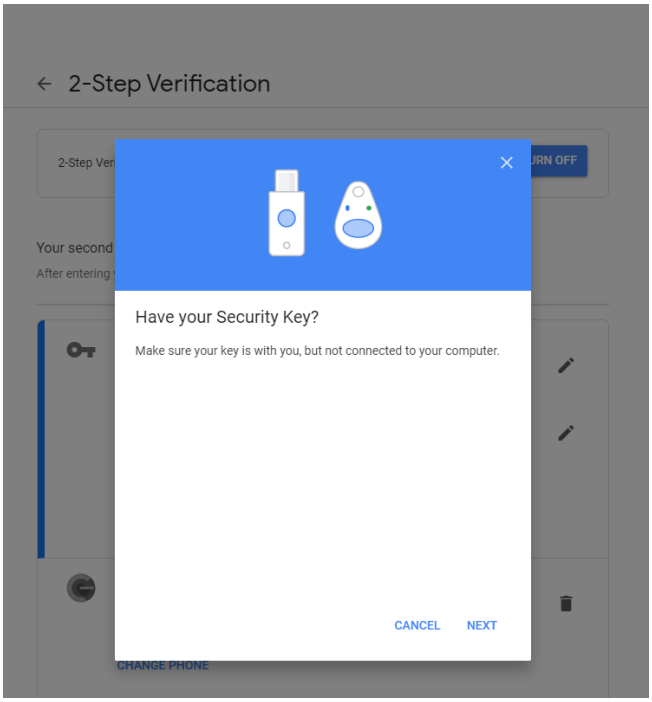
4. You will be asked to log in again.



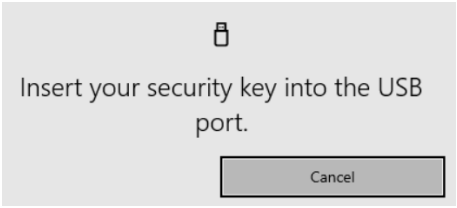
5. Click ADD SECURITY KEY.



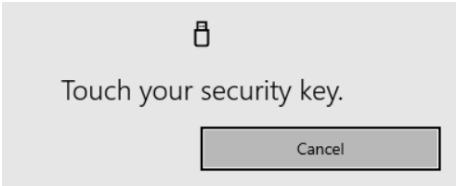
6. Click NEXT to continue.



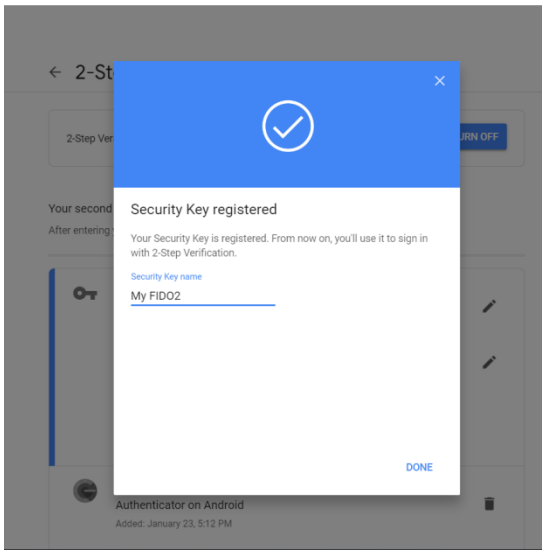
7. You will be prompted to insert your FIDO2 Fingerprint Key into a USB port.



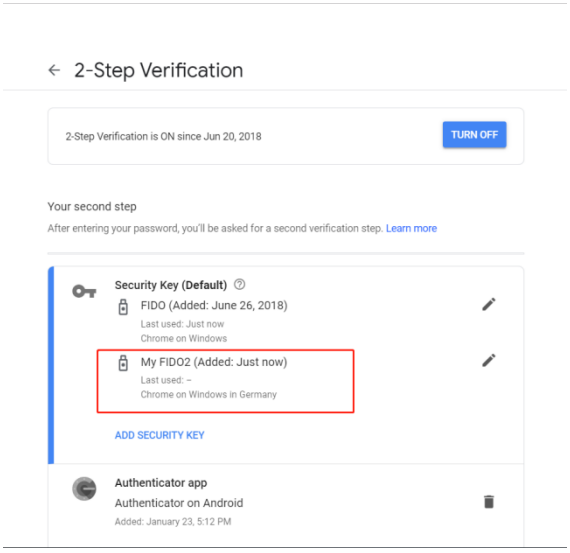
8. When the red light of the key is flashing, it means you are required to touch the key. Press the fingerprint module on FIDO2 Fingerprint Key.



9. Rename the FIDO2 Fingerprint Key, click DONE to finish.

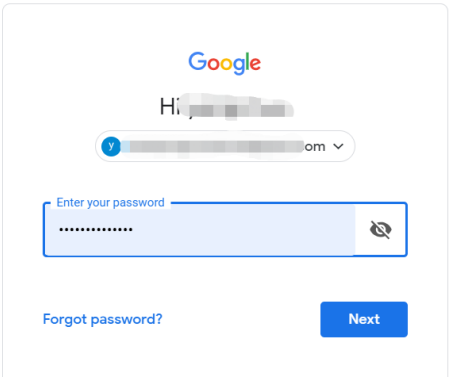


10. The FIDO2 Fingerprint Key becomes the default second authentication factor of your account. You will be asked to use it to complete 2-Step Verification when sign in to Google in the future.

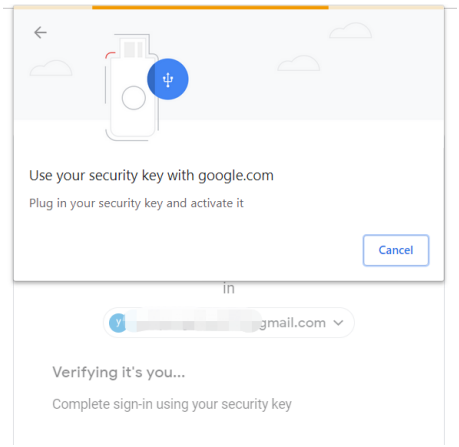


7.2. Sign in with FIDO2 Fingerprint Key

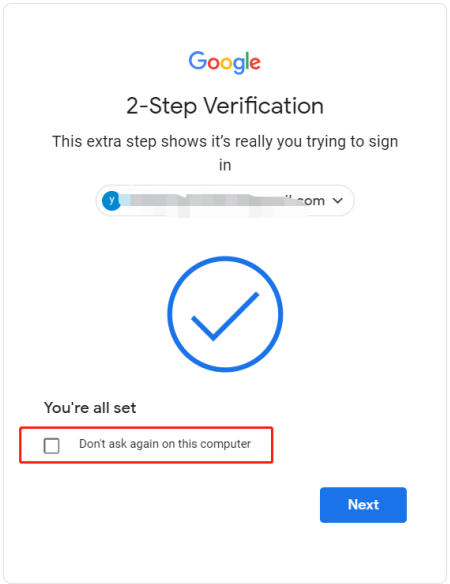
1. Log in to the website: https://www.google.com/ and click Login in the top right corner. Enter your account name and password, then click “Next”.



2. You will be prompted to insert your FIDO2 Fingerprint Key into a USB port. When the red light of the key is flashing, press the fingerprint module on FIDO2 Fingerprint Key.

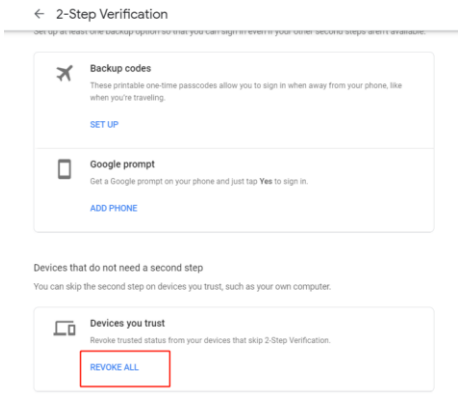


3. Click Next to login.



Note:

- By default, “Don’t ask again on this computer” is checked. After checking the box, the next login will skip the two-step verification and log in directly with the user name and password.
- You can undo trusted devices in settings to restore the use of two-step verification. Click “Revoke All” to clear the trusted device.



8. FAQ

8.1. I have two gmail accounts, how many FIDO2 Fingerprint Keys do I need to protect two gmail account. Do I need 2 keys?

Answer: You can use one FIDO2 Fingerprint Key with multiple accounts, but that is not recommended. Regardless of if you're protecting one gmail account, or two - you should register multiple keys (if the service allows it). That way, if you lose your key, or it's damaged, or it's stolen, you will still have a backup key ready to use.

8.2. What should I do if I lost my FIDO2 Fingerprint Key?

Answer: Just go to the website your key already registered. On the 2-step verification tab or similar tab, delete the device. Two FIDO2 Fingerprint Keys are recommended, one for normal use, the other for backup.

8.3. Does this FIDO2 Fingerprint Key have NFC capabilities?

Answer: No

8.4. Does this FIDO2 Fingerprint Key have Bluetooth capabilities?

Answer: No

8.5. What applications support FIDO2 Fingerprint Key?

Answer: The applications support FIDO® U2F/FIDO2 include but not limited to: Google, Microsoft, Facebook, Dropbox, GitHub, Salesforce, Dashlane, etc.

9. Product Specs

Product	eSecu FIDO2 Fingerprint Key (FD210)
System	Windows, macOS, Linux
Browser	Edge, Chrome, Firefox, Opera, Safari
Functions	FIDO U2F, FIDO2, HOTP, TOTP
Algorithm	SHA256, AES, HMAC, ECDH, ECDSA
Size	65x19x12.2mm
Interface	USB-A
Data Retention	≥10 years
Rewrite Cycle	≥100,000 times
Operating Voltage	5V±10%
Operating Current	Max <40mA
FP Sensor Resolution	508dpi
Verification Time	<1s
False Accept Rate	< 0.001%
False Reject Rate	< 1%
Storage	30 fingerprints
Operating Temperature	-10℃~60℃
Storage Temperature	-20℃~60℃
Indicator Light	2 LED (Red, Green)
Material	AL, PC
Certificate	CE, FCC, RoHS, WEEE, FIDO2 L1