

DUO Two-Factor Authentication (DUO 2FA) User Guide

Prepared By

ITSC

Version: 3.0

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Document History		
Version	Update Date	Changes
1.0	Feb 2018	Initial version
1.1	Jul 2020	Added Duo mobile app installation steps, under Section 2.1, for Android devices which can't connect to Google Play Store
2.1	Oct 2020	Added Rescue Code generation in Section 2.2, and updated related screens
2.2	Dec 2022	Update the screens for Rescue Code generation and Duo mobile v4
3.0	Feb 2024	Update screen and steps for switching from Traditional Prompt to University Prompt in Device Management

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1. About DUO 2FA

The traditional authentication method by just verifying the username and password is no more secure enough nowadays. In order to strengthen the protection of our account, two-factor authentication (2FA) is introduced. 2FA is an enhance authentication mechanism which requires user to provide any 2 of below factors for identity verification:

- Something you know: e.g. password
- Something you have: e.g. token, one-time passcode
- Something you are: e.g. fingerprint, voice

DUO 2FA is a two-factor authentication solution which requires users to provide the 2nd factor, i.e. a Duo push response / one-time passcode, from a designated device (e.g. your mobile device) for identity verification when they login those 2FA integrated applications.

1.1. Duo 2FA integrated User Applications

The latest list of Duo 2FA Integrated User Applications can be found in Duo 2FA website (<https://www.itsc.cuhk.edu.hk/all-it/information-security/two-factor-authentication-2fa/>) > under Tab '2. Implementation Scope'.

1.2. How It Works

Steps:

You need to:

- i. **Enroll your O365 account and designated mobile device** (e.g. your mobile phone, tablet) via the Duo 2FA Self-Service User Portal (<https://duo.itsc.cuhk.edu.hk>).
- ii. **Install DUO Mobile App** on above enrolled mobile device for linking up your account and receiving DUO Push notification or generate the one-time passcode for your login request.

Afterwards, when you are logging in to those 2FA integrated applications, you will need to:

- i. first login the application with your username and password;
- ii. then provide the 2nd factor (either one of below) to the application for authentication:
 - a. **DUO Push response**, it is the authorization response to the Duo Push notification which sent from the login request of the application to your DUO Mobile App; or
 - b. **One-Time Passcode**, it is generated from your DUO Mobile App for inputting to the application.

Once the above verification is passed, your access to the application is granted.

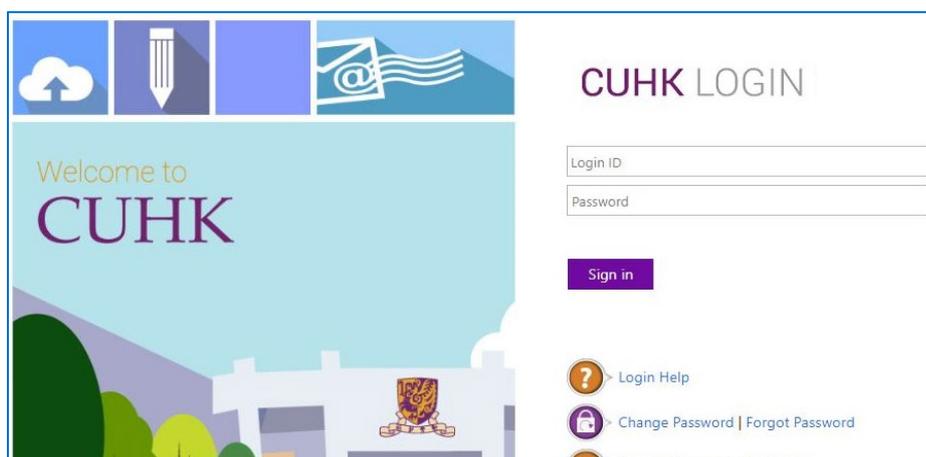
2. Duo 2FA Enrollment

2.1. User Enrollment, Mobile Device Registration

Before you can use the 2FA to login those 2FA integrated applications, you need to **enroll your account & register a designated mobile device** via DUO 2FA Self-Service User Portal, and **install the DUO Mobile App** on your designated mobile device for one-time passcode generation or Duo Push authorization.

Steps:

- i. Open a web browser, visit Duo 2FA Self-Service User Portal at <https://duo.itsc.cuhk.edu.hk>.
- ii. Login with the account that is going to enroll Duo 2FA, i.e. your O365 staff/student/project account (@cuhk.edu.hk or @link.cuhk.edu.hk).



After login, **read** the on-screen information carefully. Then click **START SETUP**.

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Two Factor Authentication

ABOUT 2FA | ENROLL DEVICE | BYPASS CODE | RESCUE CODE | LOG OUT

Important!

- After enrolling your device, **2FA CANNOT be disabled** by deleting the Duo Mobile app or removing the CUHK account in the app.
- **Select "Tablet" for your mobile phone** during device enrollment. No SMS will be sent and phone number will NOT be used.

Protect Your CUHK Account

Two-factor authentication enhances the security of your account by using a secondary device to verify your identity. This prevents anyone but you from accessing your account, even if they know your password.

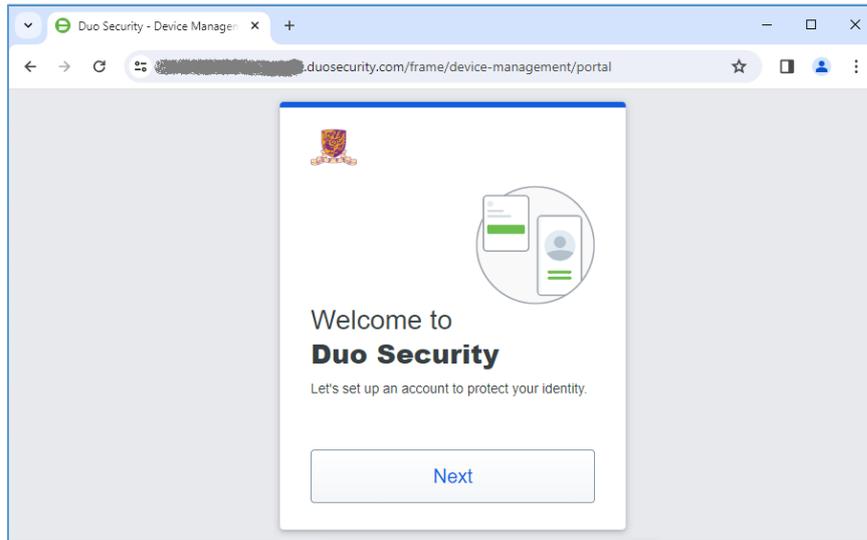
This process will help you set up your account with this added layer of security.

START SETUP

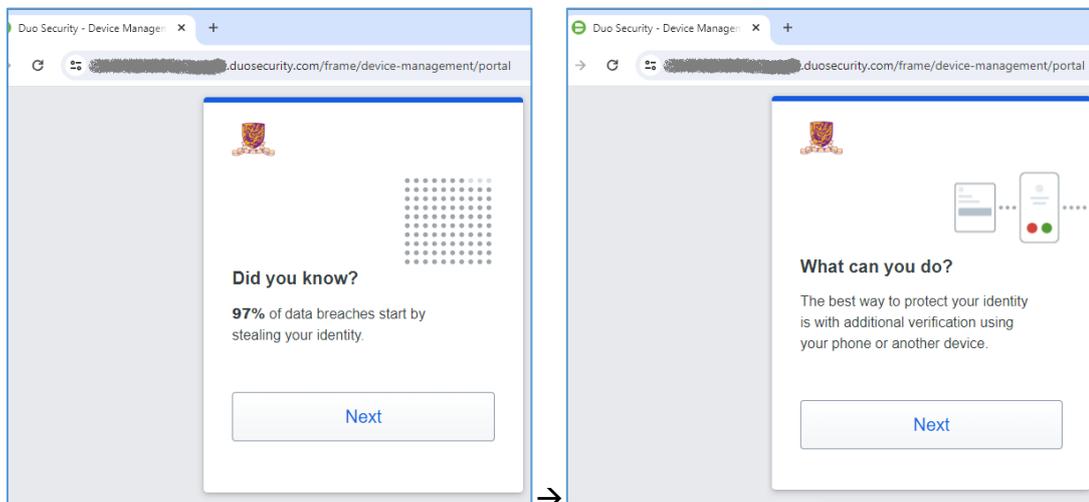
Do You Know?

- What is a bypass code? A bypass code can be used as a passcode to pass through 2FA. You can generate a bypass code using your CU Link or a rescue code.
- What is a rescue code? Rescue code is an alternative way to generate bypass code when your Duo Mobile and CU Link is not on hand. They should be generated in advance and have them printed or saved to a place where you can find them in an emergency. These are single-use codes, so after you use a code it cannot be used again. Get your rescue codes [HERE](#).

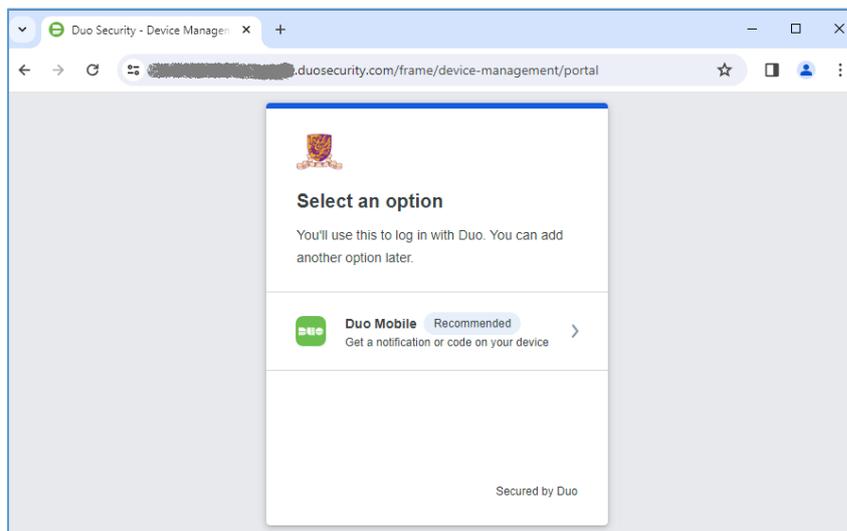
- iii. Then, you will be redirected to a webpage hosted by DUO at “*.duosecurity.com/” for the enrollment process. Click ‘Next’.



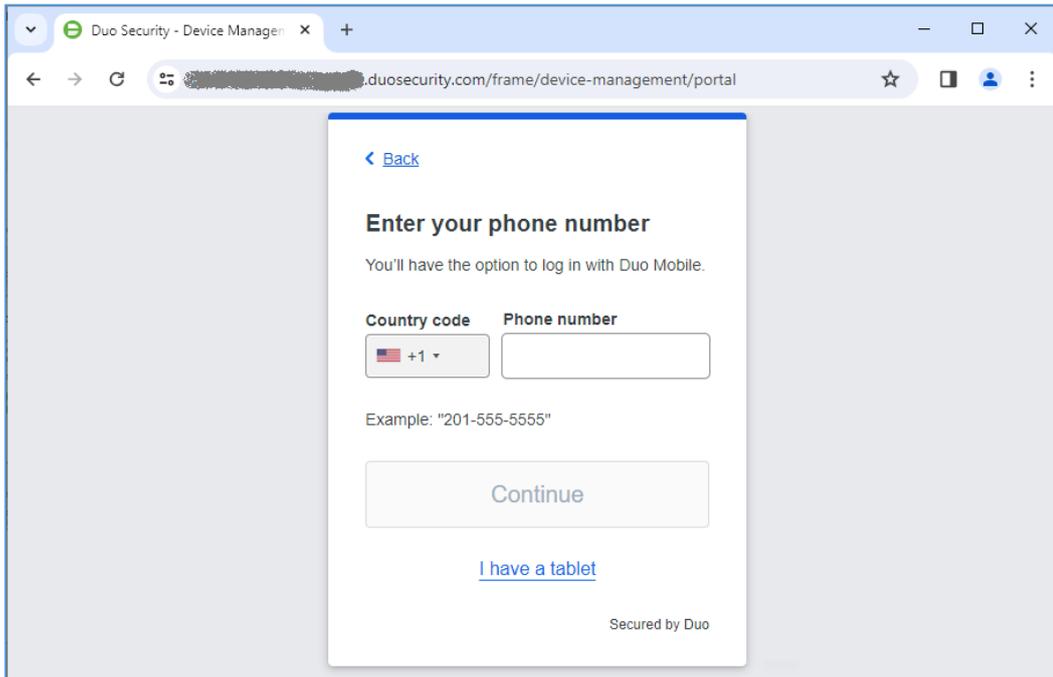
- iv. Click ‘Next’.



- v. By default, your mobile device will be used to receive and approve the Duo push notification or generate passcode for 2FA login. Click ‘Duo Mobile’.

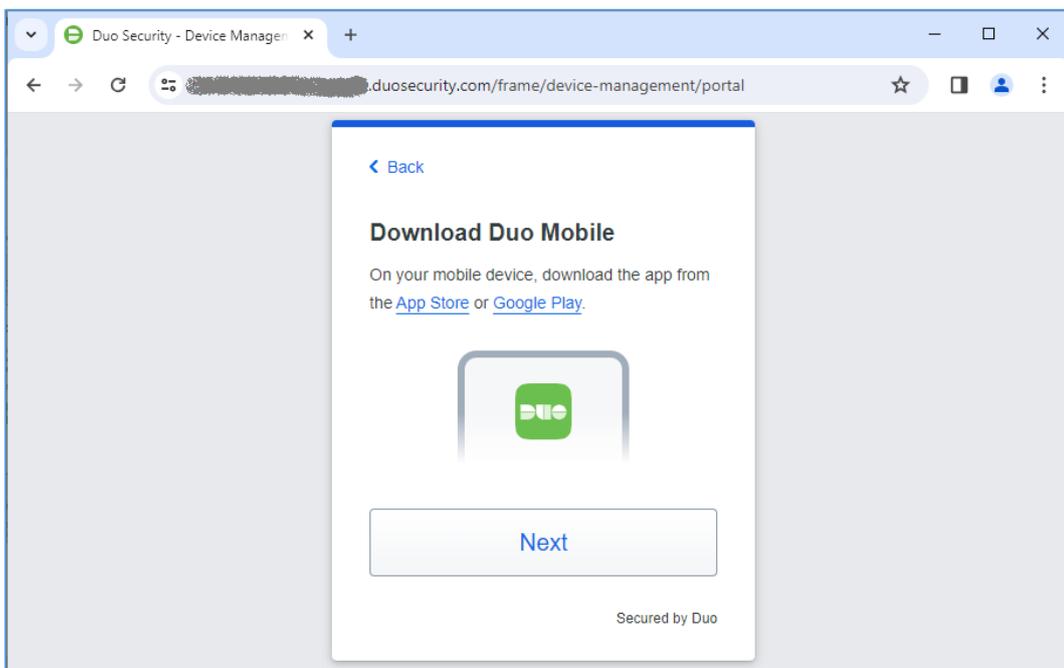


- vi. In this screen, you will be asked to provide the mobile phone number for Duo to send the passcode to you via SMS, or register your mobile device as a tablet.



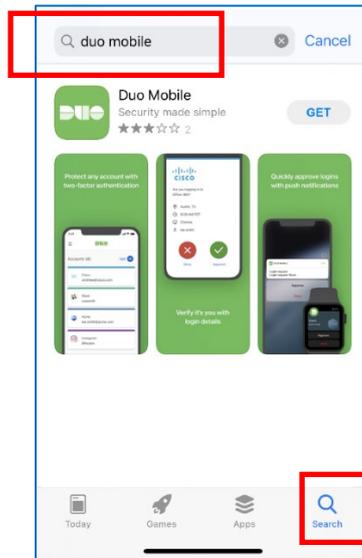
In CUHK's deployment, no SMS will be sent to user's mobile phone and the phone number will not be used, so we highly recommend users to select '**I have a Tablet**' even you are using a mobile phone.

- vii. Follow the on-screen instruction to download the Duo Mobile app  to your mobile device, then click 'Next'.



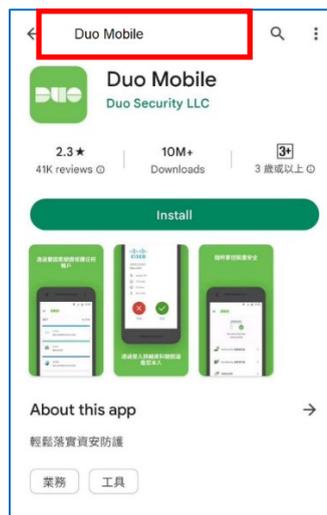
If you are using iOS device:

- Open the **App Store**  on your mobile, tap **search**  and search 'Duo Mobile'.
- Tap 'Get' and then 'install' to download and install the app.



If you are using Android device:

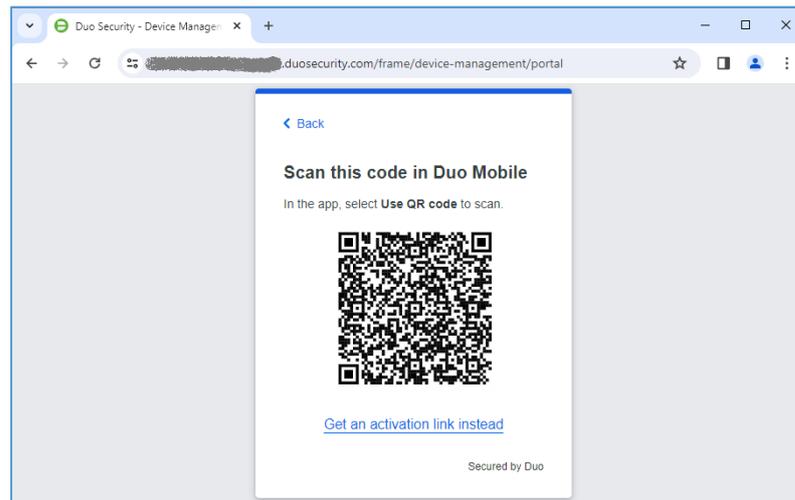
- Open the **Google Play Store**  on your mobile, and search 'Duo Mobile'.
- Then tap 'install' to download and install the app.



If you are using Android device bought in China, where Google Play Store is not available:

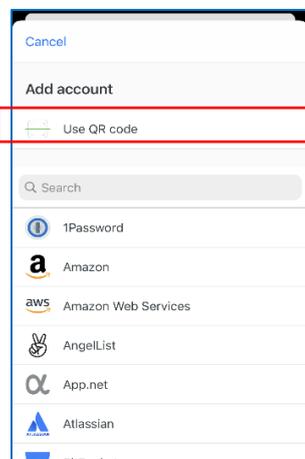
- **Open** the browser on your mobile, and **download** the Duo Mobile APK directly **from official Duo website, details can be found at https://help.duo.com/s/article/2094?language=en_US**. **Please do not download and install any untrusted APK files into your mobile since they may be altered by hackers for malicious purposes.*
- After the file is downloaded, open Downloads, tap on the APK file, and tap 'Yes' when prompted or follow the onscreen instruction for installation, the app will begin installing on your device.

- viii. After the mobile app is installed, back to your computer screen, a QR code to add your account to the Duo mobile app is generated.

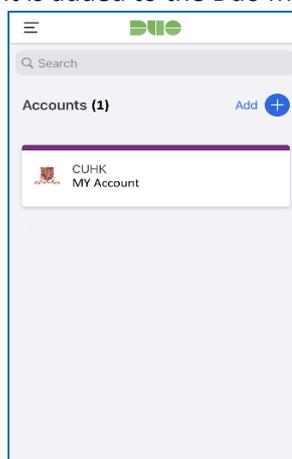


Note: Please make sure to allow the Duo Mobile app to access the camera, otherwise, it would not be able to scan the activation code.

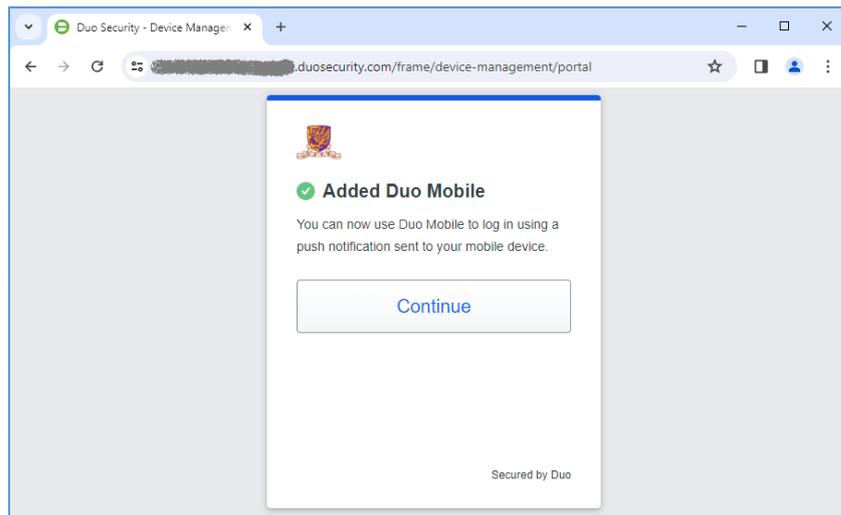
Open the 'DUO Mobile' app on your mobile device, then tap "Add +" icon on the top right hand corner, then select "Use QR code" and scan the QR code image appear on your screen.



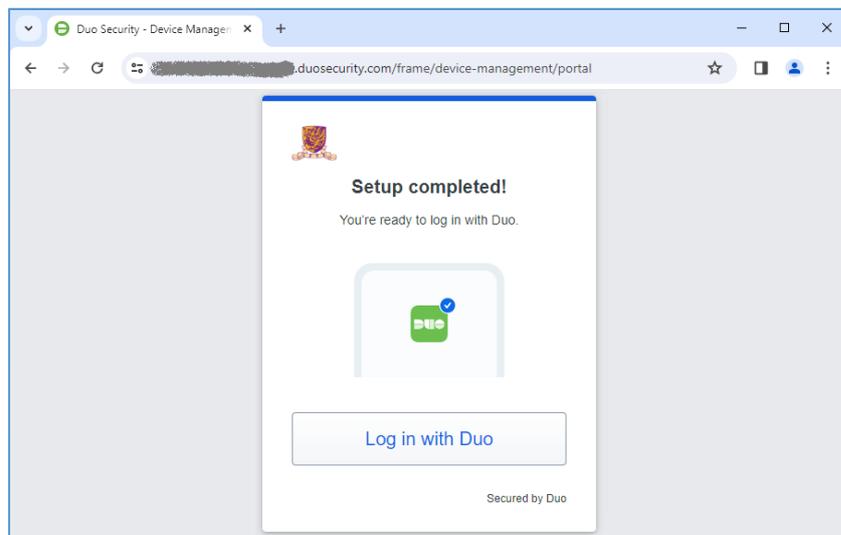
Then, you should find your account is added to the Duo Mobile app.



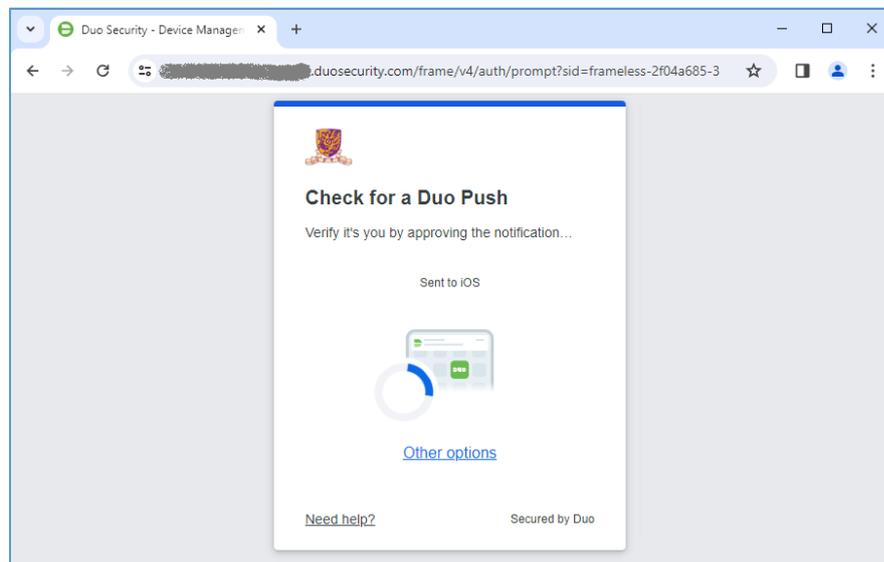
ix. Click 'Continue'.



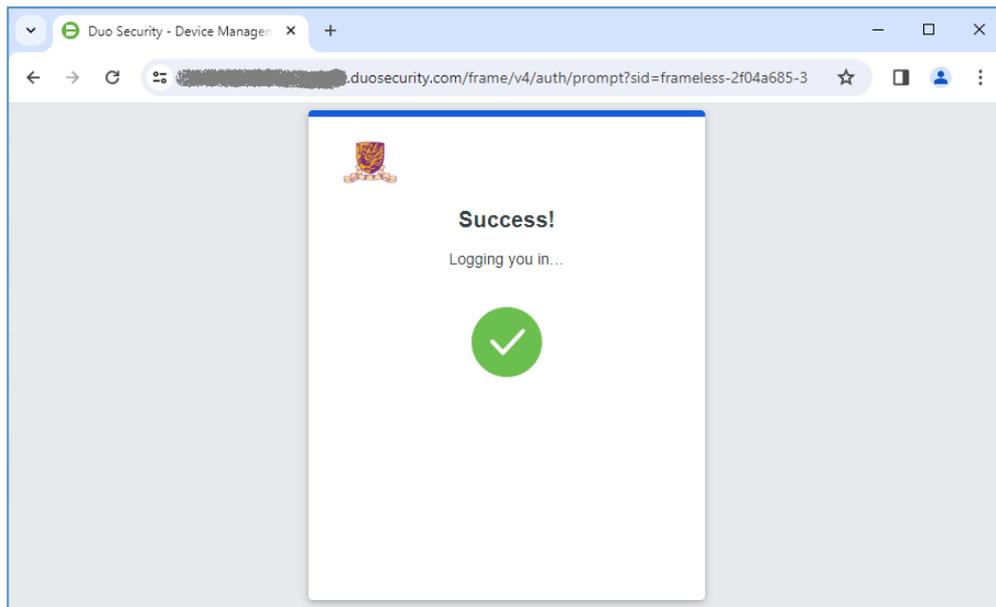
x. The setup is completed, click 'Log in with Duo'.



xi. A Duo Push notification will be sent to your registered mobile device.



xii. Accept the Duo push notification on your mobile device if the login is triggered by you.



xiii. It's Almost done, the following screen should be shown. Please **follow the steps in Section 2.2 for Rescue Code Generation**.

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Two Factor Authentication

ABOUT 2FA ENROLL DEVICE BYPASS CODE RESCUE CODE LOG OUT

Important!

- After enrolling your device, **2FA CANNOT be disabled** by deleting the Duo Mobile app or removing the CUHK account in the app.
- **Select "Tablet" for your mobile phone** during device enrollment. No SMS will be sent and phone number will NOT be used.

Almost Done

Since this is the first time you registered a device to DUO 2FA, a set of RESCUE CODES have been automatically generated for you as a backup. Please keep these codes in a safe place.

In case your 2FA device is not available, you can use the rescue code to create a temporary bypass code to confirm your identity during login. Click the button below to retrieve your rescue codes.

GET MY RESCUE CODES

Do You Know?

- What is a bypass code? A bypass code can be used as a passcode to pass through 2FA. You can generate a bypass code using your CU Link or a rescue code.
- What is a rescue code? Rescue code is an alternative way to generate bypass code when your Duo Mobile and CU Link is not on hand. They should be generated in advance and have them printed or saved to a place where you can find them in an emergency. These are single-use codes, so after you use a code it cannot be used again. Get your rescue codes [HERE](#).

2.2. Rescue Code Generation

The Rescue Code provides a backup measure for you to generate a bypass code **when emergency**, i.e. when both your mobile device and CU Link Card are not available. User should generate a set of 5 rescue codes in advance when you can login [Duo 2FA Self Service User Portal](#) and keep them in a safe place but where you can find when emergency.

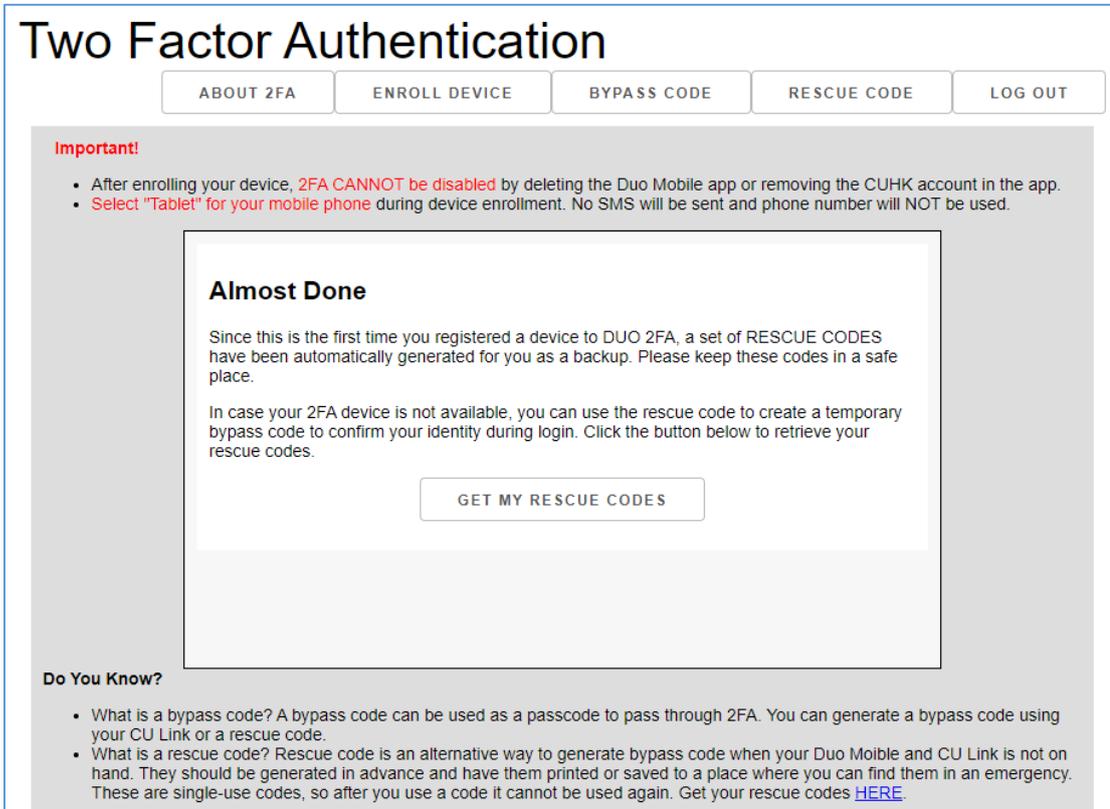
Usage of Rescue Code:

- the rescue code can **ONLY** be used to **generate the bypass code**;
- the rescue code **CANNOT be used as the 2nd factor** to login any 2FA integrated application; and
- each rescue code can only be used **ONCE**.

Steps:

- The last step of the enrollment process is to generate the Rescue Code.

Read the on-screen information carefully, then click **GET MY RESCUE CODES**.



The screenshot shows a web interface titled "Two Factor Authentication". At the top, there are navigation buttons: "ABOUT 2FA", "ENROLL DEVICE", "BYPASS CODE", "RESCUE CODE", and "LOG OUT". Below the navigation is an "Important!" section with two bullet points: "After enrolling your device, 2FA CANNOT be disabled by deleting the Duo Mobile app or removing the CUHK account in the app." and "Select 'Tablet' for your mobile phone during device enrollment. No SMS will be sent and phone number will NOT be used." The main content area is titled "Almost Done" and contains the following text: "Since this is the first time you registered a device to DUO 2FA, a set of RESCUE CODES have been automatically generated for you as a backup. Please keep these codes in a safe place. In case your 2FA device is not available, you can use the rescue code to create a temporary bypass code to confirm your identity during login. Click the button below to retrieve your rescue codes." Below this text is a button labeled "GET MY RESCUE CODES". At the bottom, there is a "Do You Know?" section with two bullet points: "What is a bypass code? A bypass code can be used as a passcode to pass through 2FA. You can generate a bypass code using your CU Link or a rescue code." and "What is a rescue code? Rescue code is an alternative way to generate bypass code when your Duo Mobile and CU Link is not on hand. They should be generated in advance and have them printed or saved to a place where you can find them in an emergency. These are single-use codes, so after you use a code it cannot be used again. Get your rescue codes [HERE](#)."

- ii. A set of 5 Rescue Codes should be generated. You can save it or print it for keeping.

Two Factor Authentication

ABOUT 2FA ENROLL DEVICE BYPASS CODE RESCUE CODE LOG OUT

Registration Complete

Done! You just registered your first device to Duo for two-factor authentication. Below are the rescue codes for your emergency use. Please keep these codes in a safe place.

- Here're five rescue codes for your account. Please save them in a secure place. You can use them to generate bypass codes for your 2FA.
- Please note that each rescue code can only be used **ONCE**
- If all the rescue codes have been used, you can generate new rescue codes at [here](#).

Generation Date: 02/12/2022 12:11:34 PM

- F87E 3170 C56F BCE2
- D369 63A1 913C BB8D
- 3C0B DEA9 D340 DB2F
- B336 A232 81DB 6E6F
- 7CD4 7A98 DF77 0E84

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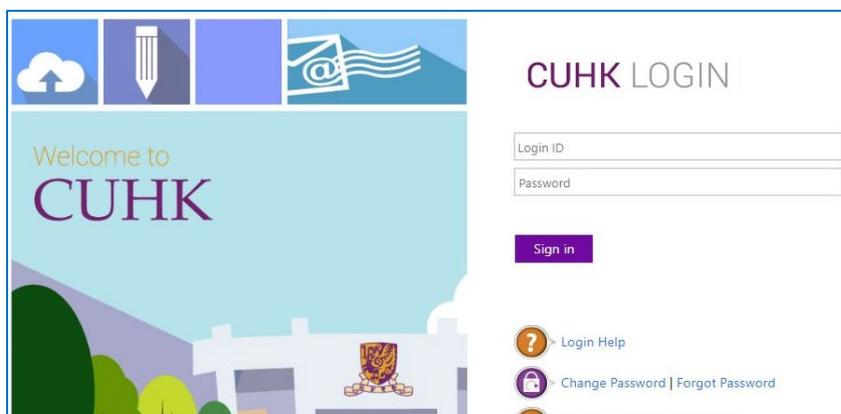
The enrollment process is finished. You can click the “**ENROLL DEVICE**” button on the top menu to manage your registered mobile device(s). More details can be found in Section 3.

3. Registered Device(s) Management

You can manage (view, add, or edit) the registered device(s) for Duo 2FA via the Duo 2FA Self-Service User Portal.

Steps:

- i. Open a web browser, visit Duo 2FA Self-Service User Portal at <https://duo.itsc.cuhk.edu.hk>.
- ii. Login your account, i.e. your O365 staff/student/project account (@cuhk.edu.hk or @link.cuhk.edu.hk).



After login, **read** the on-screen information carefully. Then **tick 'Okay, I am ready now.'** and **click 'GO TO ENROLL/MANAGE DEVICE'**.

Two Factor Authentication

ABOUT 2FA ENROLL DEVICE BYPASS CODE RESCUE CODE LOG OUT

Important!

- After enrolling your device, **2FA CANNOT** be disabled by deleting the Duo Mobile app or removing the CUHK account in the app.
- **Select "Tablet" for your mobile phone** during device enrollment. No SMS will be sent and phone number will NOT be used.

Before you start managing your device ...

... watch the video below and make sure you know how to gain access to the device list!

GO TO ENROLL/MANAGE DEVICES

1. Click 'GO TO ENROLL/MANAGE DEVICES'

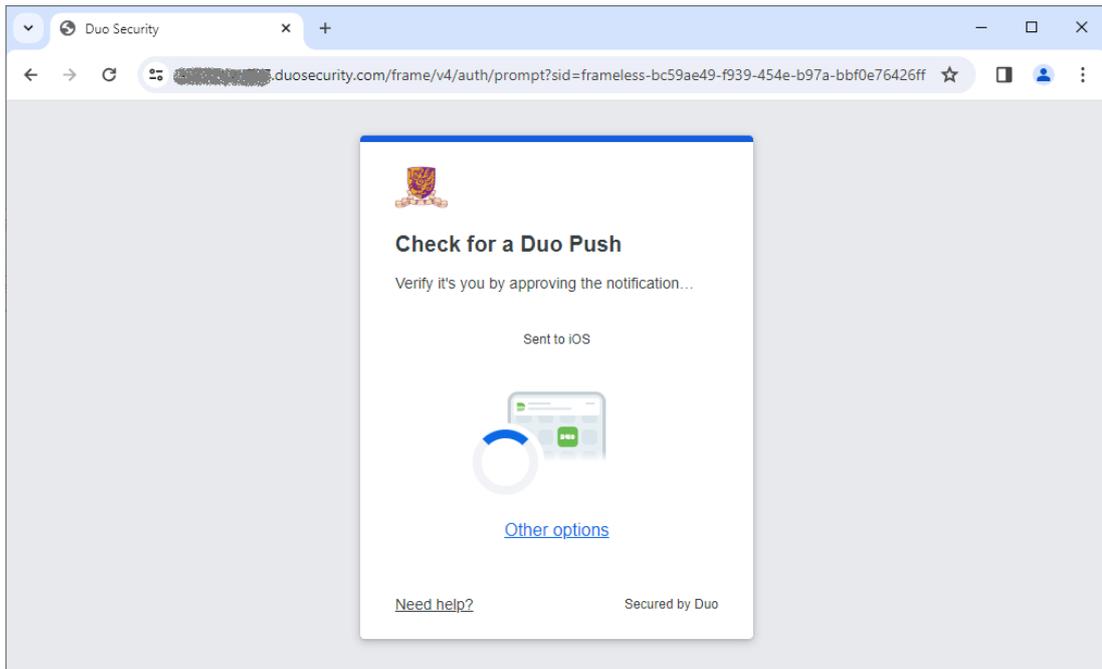
Okay, I am ready now.

GO TO ENROLL/MANAGE DEVICES

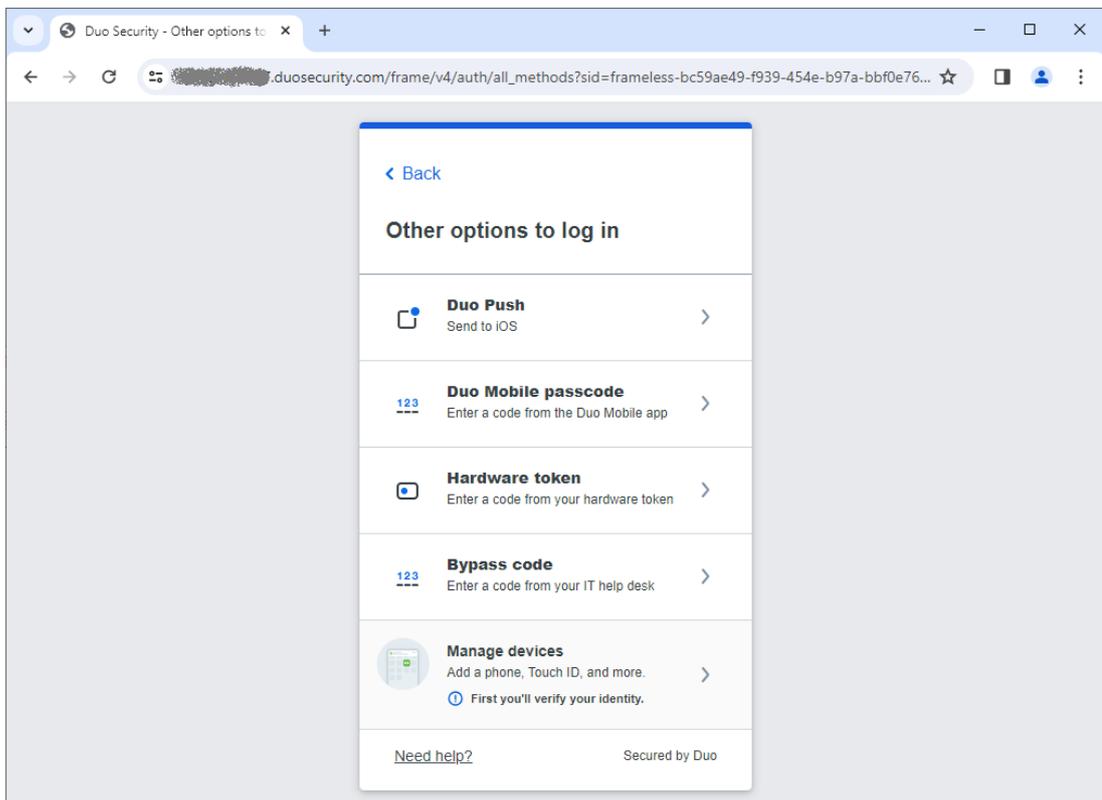
Do You Know?

- What is a bypass code? A bypass code can be used as a passcode to pass through 2FA. You can generate a bypass code using your CU Link or a rescue code.
- What is a rescue code? Rescue code is an alternative way to generate bypass code when your Duo Mobile and CU Link is not on hand. They should be generated in advance and have them printed or saved to a place where you can find them in an emergency. These are single-use codes, so after you use a code it cannot be used again. Get your rescue codes [HERE](#).

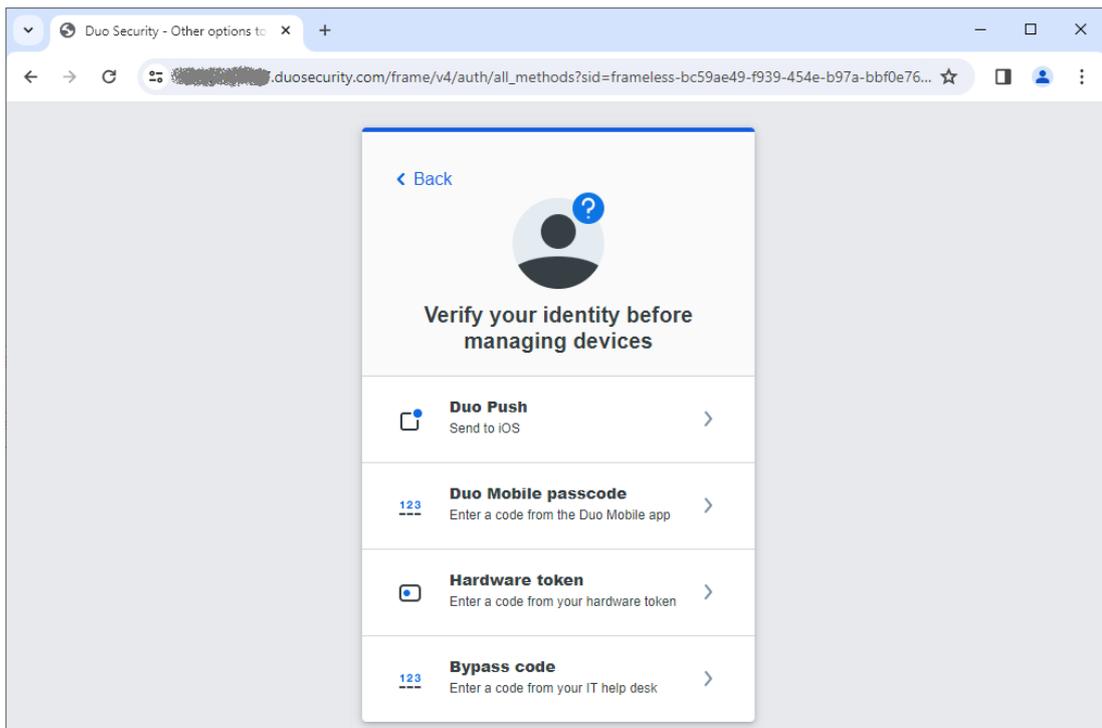
- iii. You will be redirected to a webpage hosted by DUO at “*.duosecurity.com/” and a Duo push notification is sent to your registered mobile device for the 2FA authentication. **Ignore the Duo push notification and click ‘Other options’.**



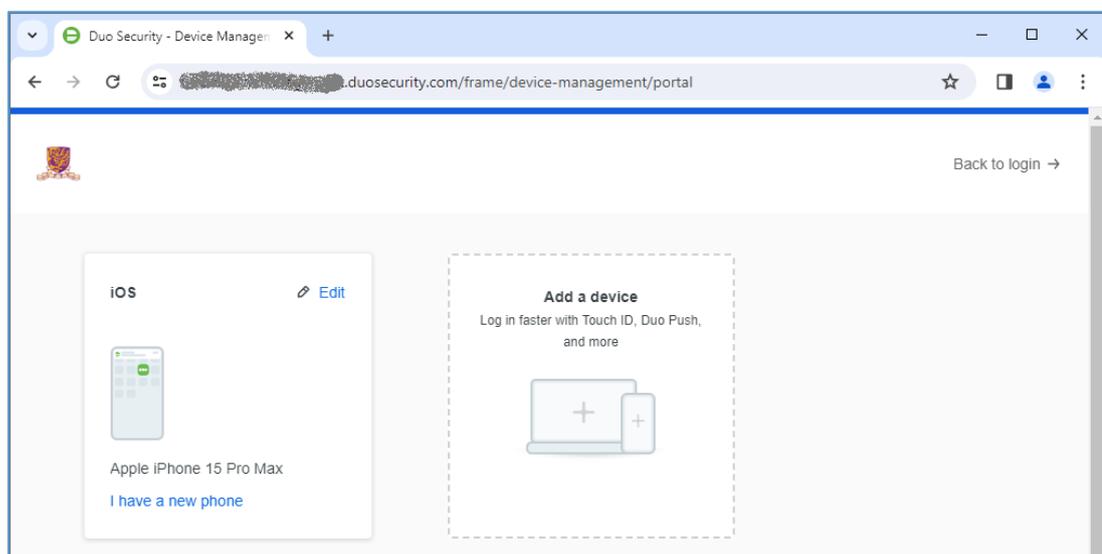
- iv. Then click “Manage devices”.



- v. You need to verify your identity first. Select one of the options for identify verification.



- vi. After your identity is verified, you can manage your device(s) for Duo 2FA. You can:
- Rename your registered device
 - Click 'Edit', 'Rename', and then input a new name.
 - Add a new device
 - Click 'I have a new phone' if you need to register a new device with the same mobile number, or, click 'Add a device' if you need to register a new device with different mobile number or device type.
 - Then follow the steps in Section 2.1 for device registration.
 - Delete an obsolete device
 - Click 'Edit' and 'Delete'.



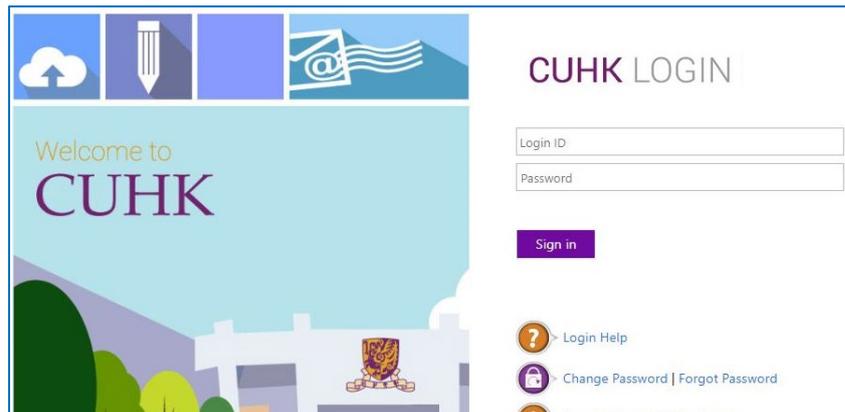
4. Use of Passcode and Duo Push

Below demonstrates the use of the 2 authentication methods, i.e. **Duo Push** and **Passcode**, for logging in those DUO integrated applications.

Steps :

- i. Take an example of logging in to the Duo 2FA-integrated web applications, e.g. O365, it will redirect to CUHK Central Authentication Login page.
- ii. Input your CUHK account credential in the fields for
 - a. **Login ID**, i.e. alias@cuhk.edu.hk / alias@link.cuhk.edu.hk
 - b. **OnePass Password**, i.e. the 1st factor

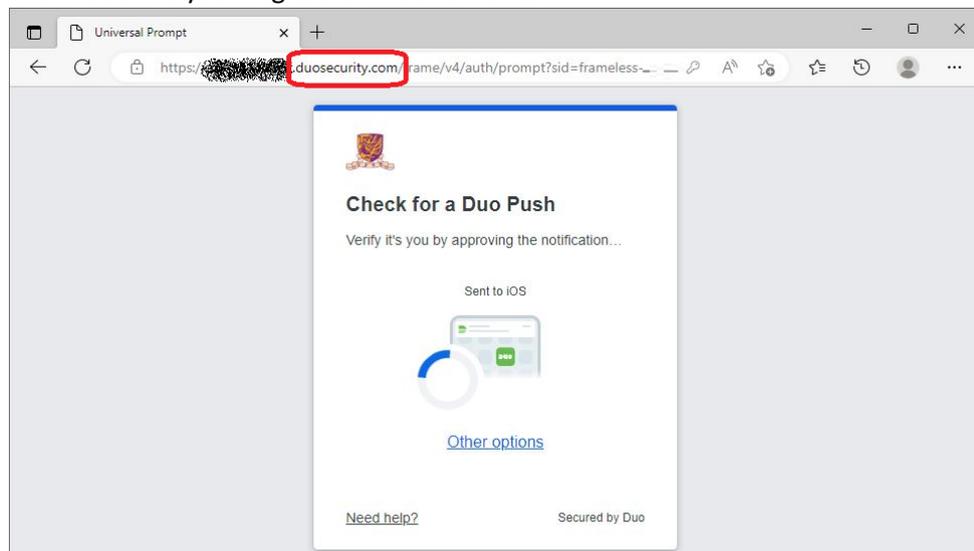
then click **Sign in**.



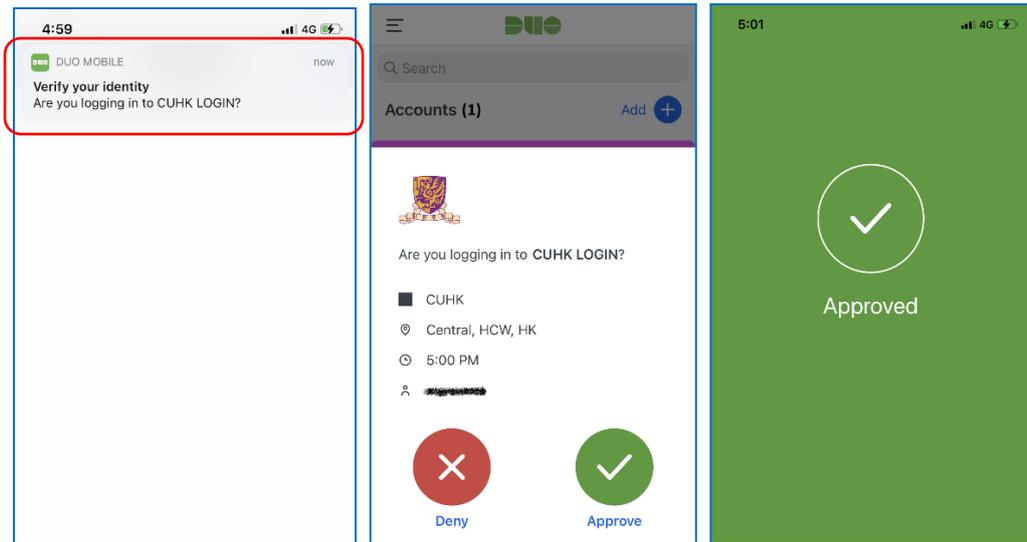
- iii. Then, you will be redirected to a webpage hosted by DUO at “*.duosecurity.com” for 2nd authentication, and you can continue using your last authentication method or select “Other options” to choose another authentication method.

. Duo Push

If you used Duo Push in last authentication, it will automatically send a Duo Push notification to your registered mobile device.



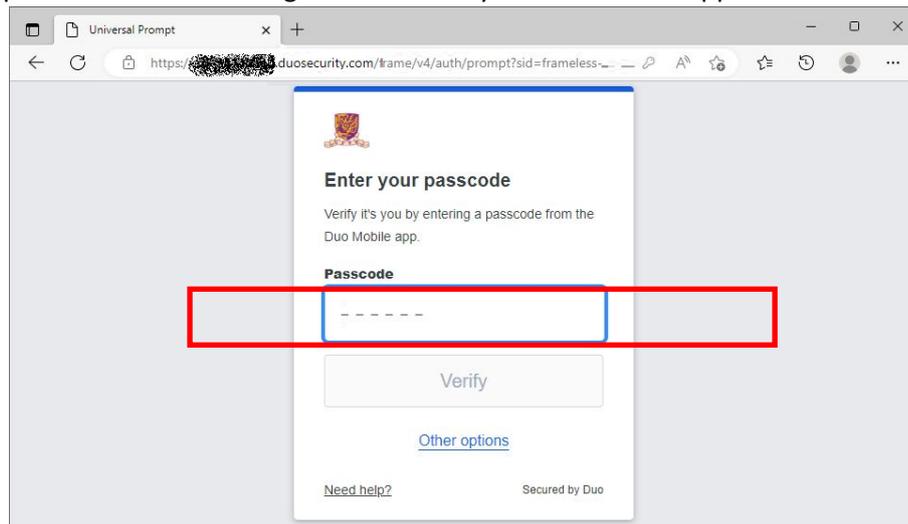
Open the DUO Mobile App on your mobile device, then tap on the notification message, a Login Request with the information of requesting source is displayed.



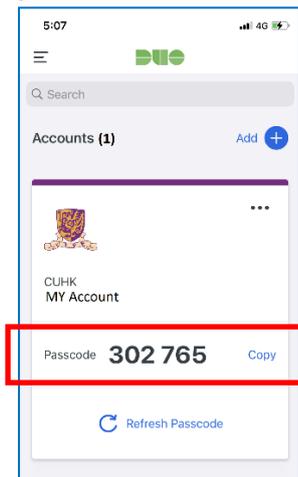
Tap **Approve** to login the application.

a. Passcode

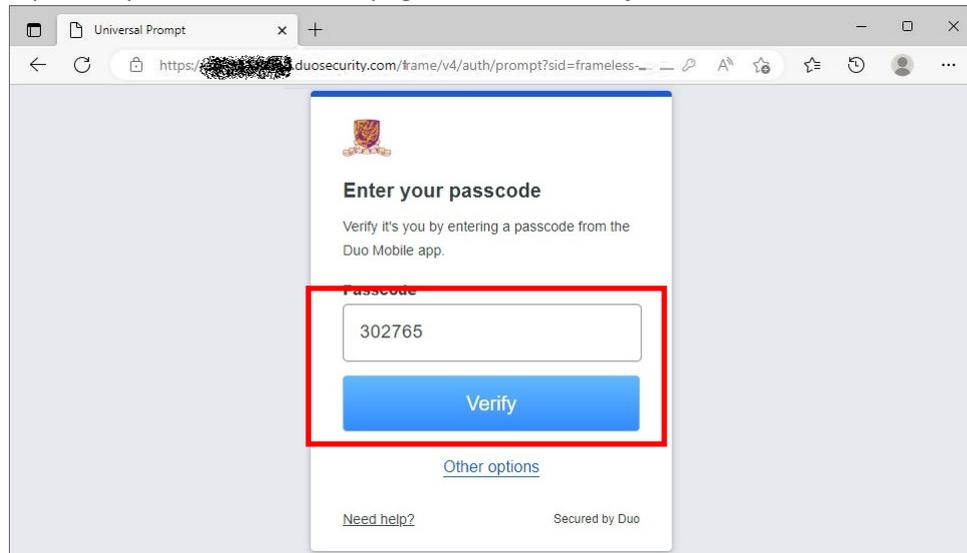
If you used Duo Passcode in last authentication, it will prompt you to enter a Duo passcode which can be generated from your Duo Mobile app.



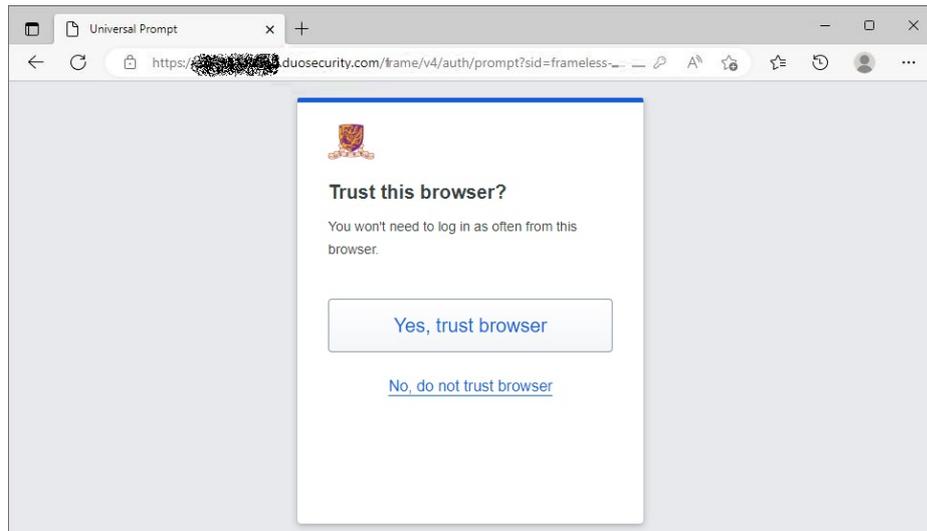
Open the Duo Mobile App on your mobile device, then tap on your account, a one-time passcode is generated.



Input the passcode in the webpage, then click **Verify** button.

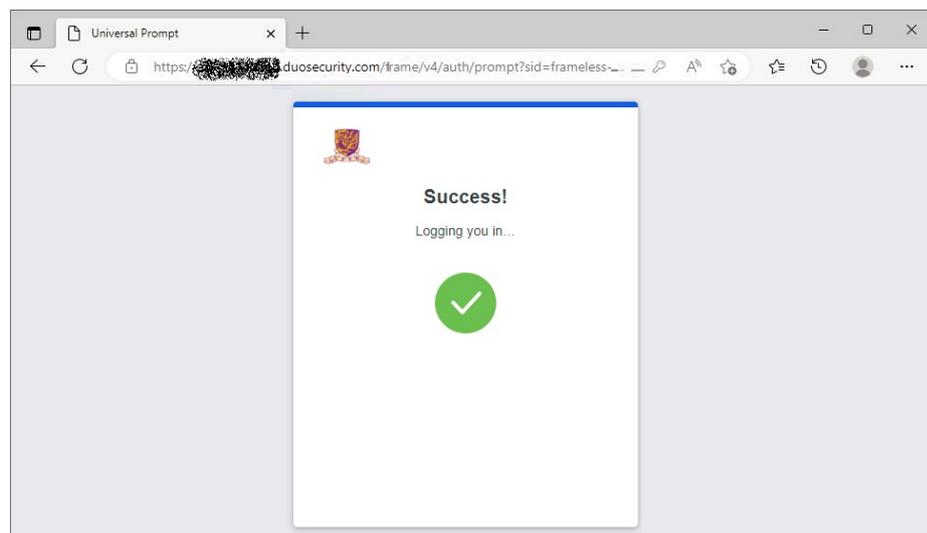


After you pass the authentication, it will show a “Trust This browser?” message. It is a remember device feature which allows you to skip Duo 2FA when you login any Duo-2FA integrated web application again within 12 hours with the same browser and device.



- Click "Yes, trust browser", only if you trust the browser from your own computer.
- Otherwise, click "**No, do not trust browser**" if you don't trust the browser, especially when using a public/shared/untrusted computer.

iii. A Success page will be shown once you are authenticated successfully.



And it should return to the application automatically.

- END -