

MIRACL Trust® Multi-Factor Authentication Demo For Tech City Bank

The Tech City Bank (TCB) demo is an example of how a bank or financial service provider can integrate MIRACL Trust® into their mobile and web applications while meeting the "strong authentication" requirement for PSD2.

You can demo the end-user scenario for downloading, activating and using MIRACL Trust® to securely authenticate both into a mobile application and into a web application.

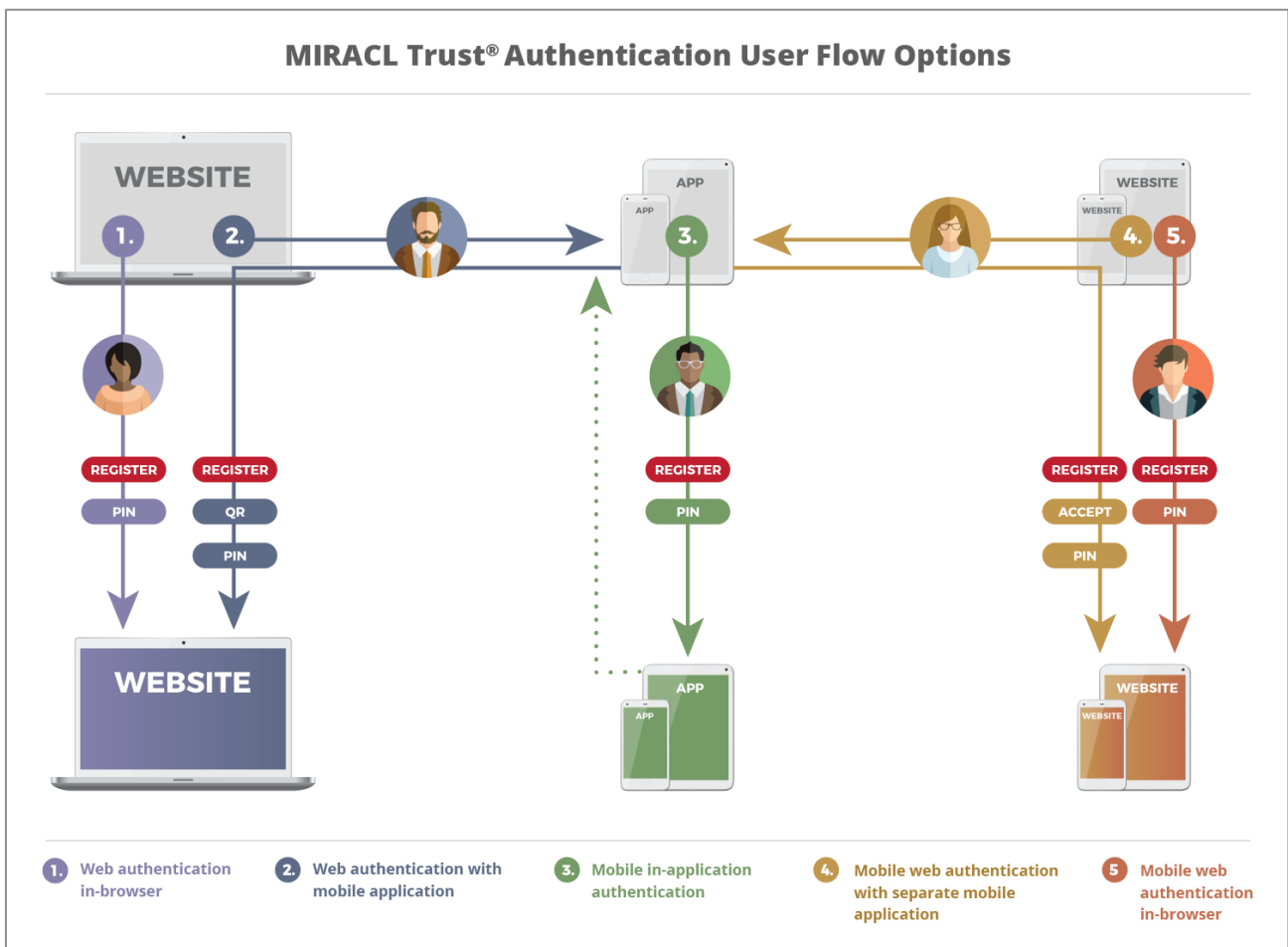
GETTING STARTED

What you need to run the TCB demo:

- **A computer (to open a web page with a browser)**
- **A working email address**
- **Five minutes**
- **Optional:** A smartphone (to run an Android or iPhone app, although not required for in-browser login)
 - The android version of the app ("TCB 4 MIRACL") can be found on Google Play [here](#) or by searching for "TCB 4 MIRACL" in the Play Store app on the device.
 - iOS version is available through Apple's TestFlight programme. Please email support@miracl.com requesting an invite for "TCB 4 MIRACL".

DEMO JOURNEYS

There are **5 methods** available in this demo which show the different user journey's with MIRACL Trust® authentication, each method depends on the user device and the type of login they require.



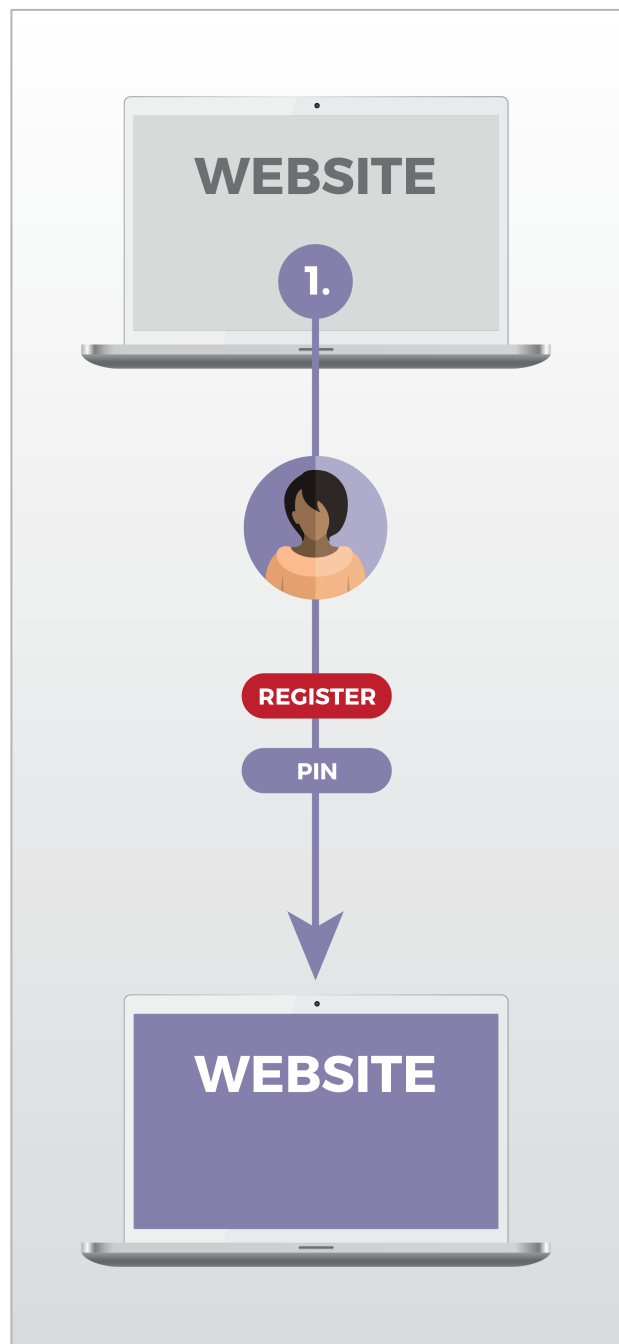
Notes:

- The Tech City Bank demo site allows anyone to register and log in. In a real world scenario, such a site would typically also perform authorisation and would only allow approved users to log in.
- Full user guide documentation can be found here:

<https://userguide.trust.miracl.cloud/en>

Scenario 1: Web authentication in-browser

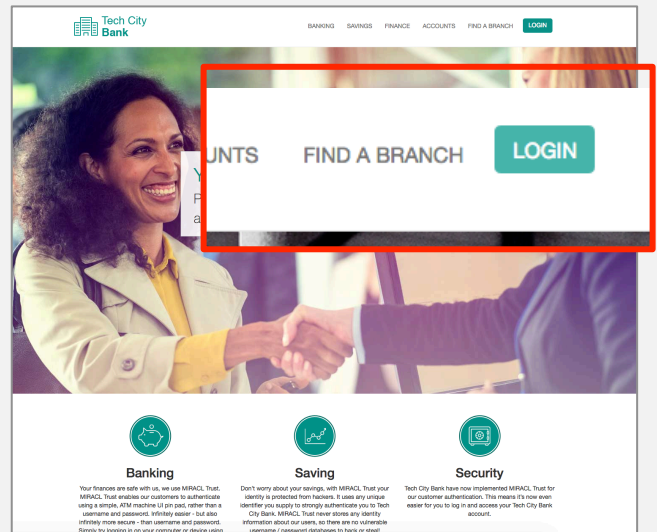
*“A user wants to login to a **website** on a **personal trusted desktop browser**”*



NEW USERS LOG IN STEPS TO ACCESS TECH CITY BANK

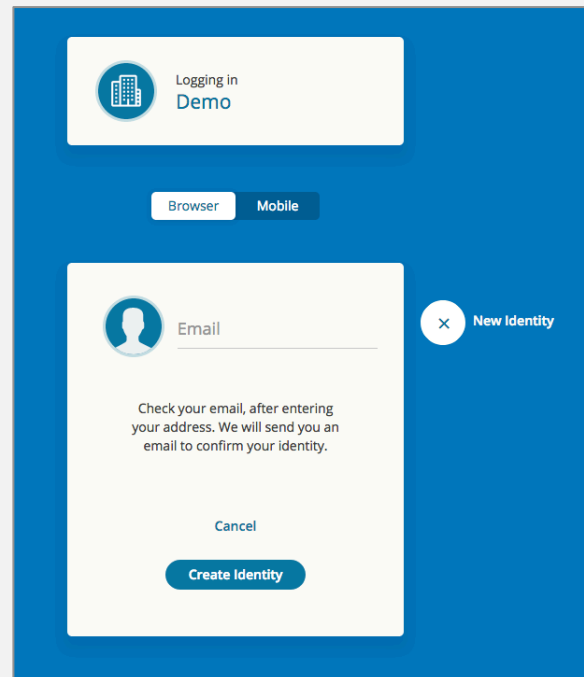
1. Signing User selects “Login”

Open up <https://demo.trust.miracl.cloud> on your desktop computer in any browser.



2. In-browser login is displayed

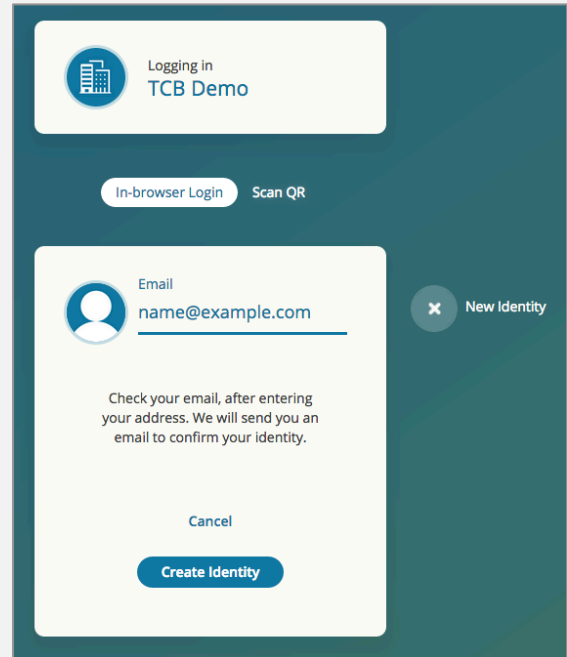
The browser login option is shown by default, although a developer will be able to choose whether mobile and/or browser login is enabled, and which is displayed by default.



NEW USER REGISTRATION PROCESS

3. Register your identity (e-mail address) in the TCB app

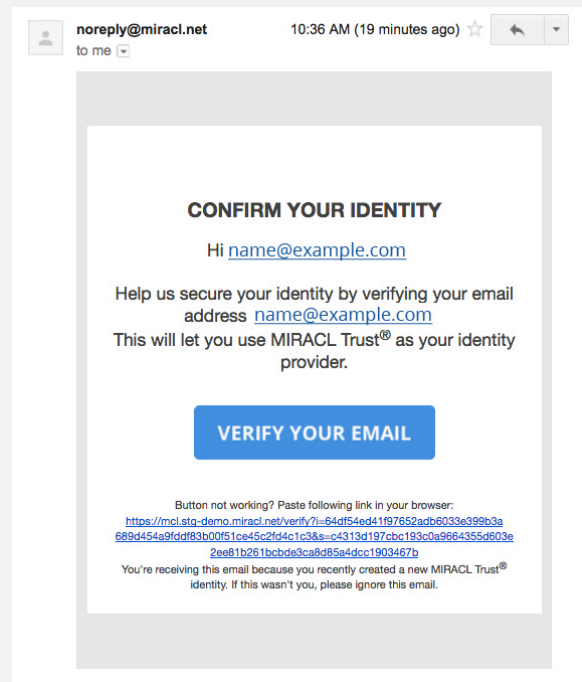
- User selects "In-browser login"
- The "New Identity" page will be displayed.
- Enter your email address, then click "Create Identity". You will now be sent an email to verify your email address.



NEW USER REGISTRATION PROCESS

4. User receives verification email

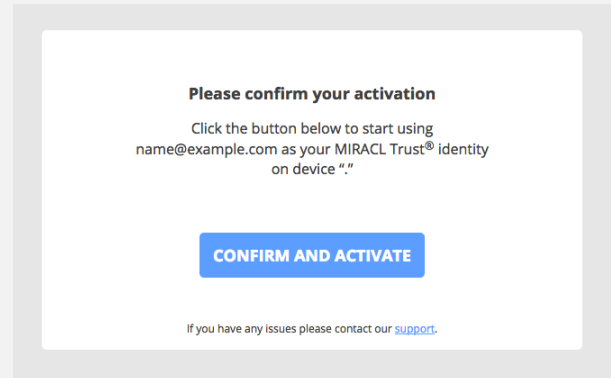
- Go to your email client on your desktop and open the email from MIRACL Trust. Now click the "VERIFY YOUR EMAIL" button in this email.



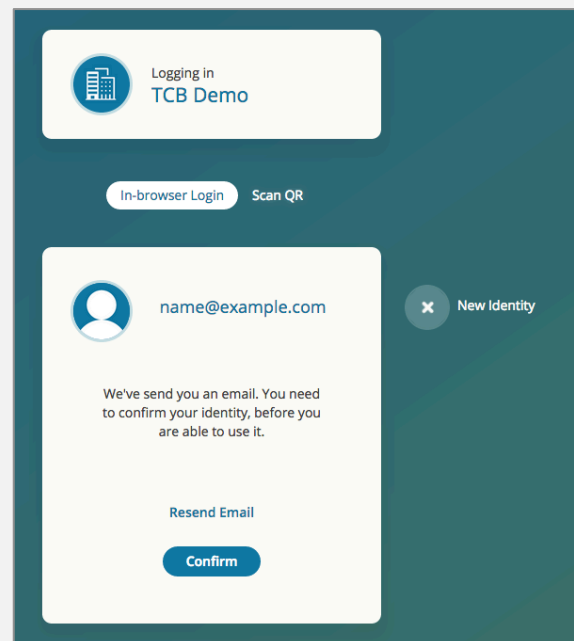
NEW USER REGISTRATION PROCESS

5. User confirms activation

- In the resulting page that launches in a browser window, click "**CONFIRM AND ACTIVATE**" on this webpage. You are now verified.

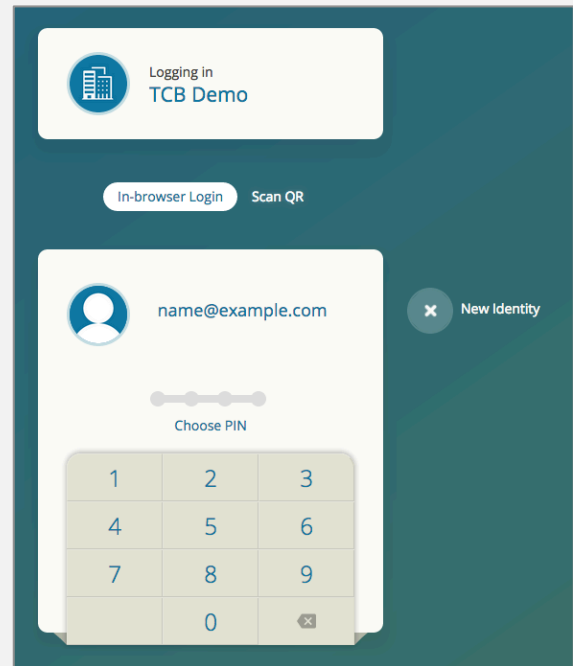


- Go back to the app, and click "**Confirm**".



6. User creates 4-digit PIN

- Now you can create a 4-digit PIN and re-enter it again to confirm your chosen PIN.



- Success!** Once registered, you will be automatically logged into the application.

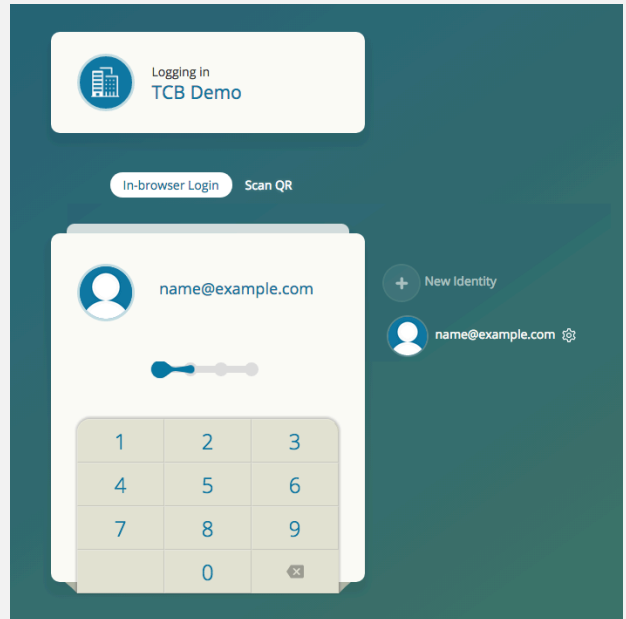
Date	Description	Amount	Status	IBAN
02.03.2015	Flying ticket / London - USA	- 2345 USD	Success	GB15040L40051512345678
01.03.2015	Cash Withdrawal	- 50 USD	Success	GB15040L40051512345678
28.02.2015	Benson's Group Income	+ 16 USD	Success	GB15040L40051512345678
26.02.2015	How's Group Income	+ 3000 USD	Success	GB15040L40051512345678
24.02.2015	Cash Withdrawal	- 48 USD	Success	GB15040L40051512345678
22.02.2015	Fobber's Group Income	+ 903 USD	Success	GB15040L40051512345678
20.02.2015	Smart's Group Income	+ 824 USD	Success	GB15040L40051512345678
20.02.2015	Salter's Group Income	+ 213 USD	Success	GB15040L40051512345678
18.02.2015	Cash Withdrawal	- 704 USD	Success	GB15040L40051512345678
16.02.2015	Cash Withdrawal	- 19 USD	Success	GB15040L40051512345678

REGISTERED USERS LOG IN STEPS TO ACCESS TECH CITY BANK

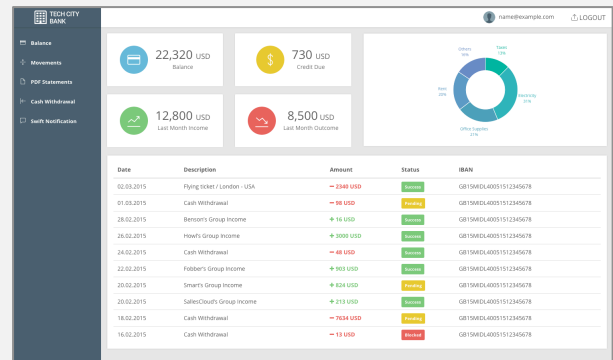
REGISTERED USER PROCESS

Signing in to the In-Browser Tech City Bank Application

- Enter your 4-digit PIN into the app to authenticate.



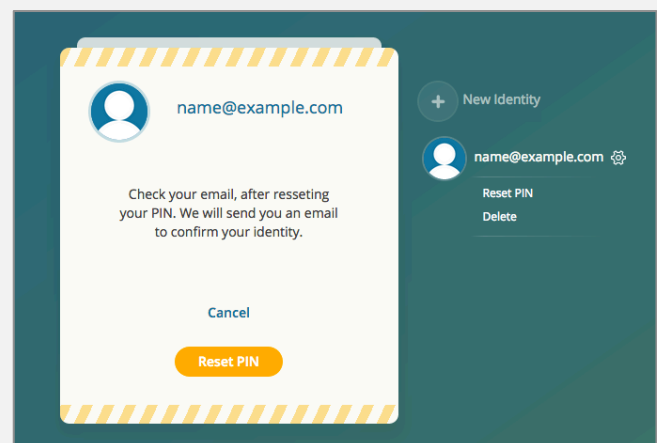
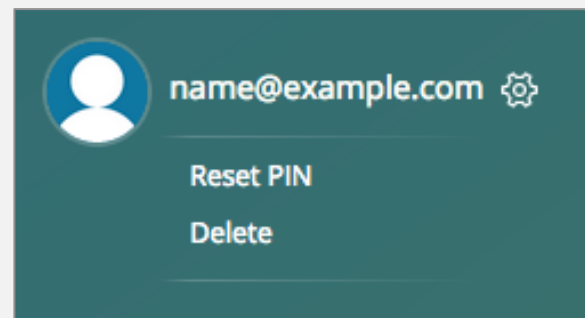
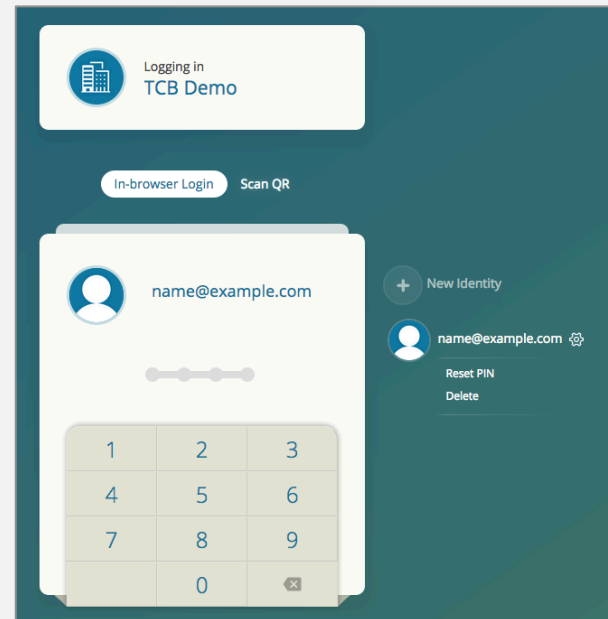
- **Success!** You are now logged in to the TCB website - note that this is just an example Tech City Bank banking website that has no functionality other than to show that you are logged in.



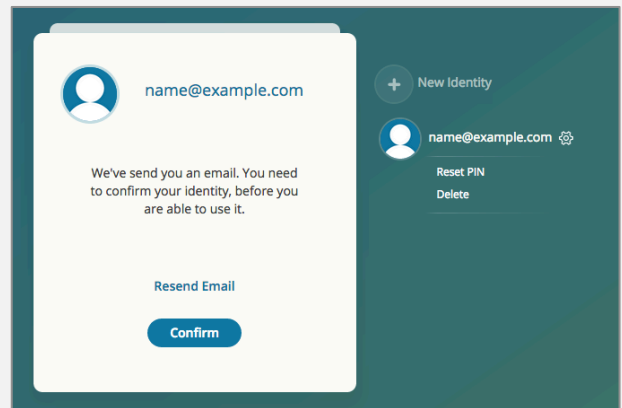
ADDITIONAL MANAGEMENT TIPS

Resetting a PIN

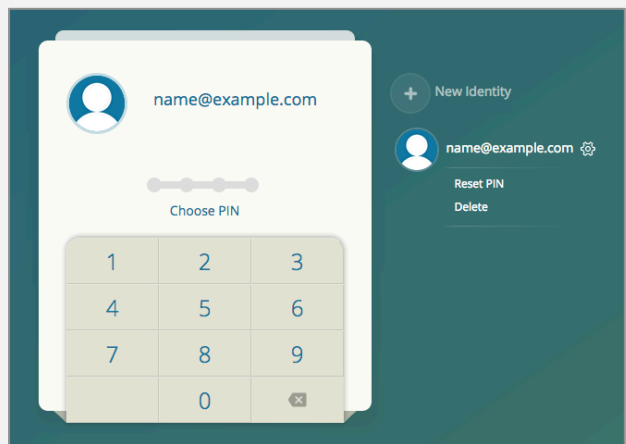
- To reset your PIN, select the settings icon to the right of your identity, to reveal the “Reset PIN” and “Delete” options.
- Select **“Reset PIN”**.
- A prompt is displayed asking if you wish to go ahead.
- Click **“Reset PIN”**. You should now receive an email asking you to confirm your identity.



- After you have confirmed your identity via the link in the email, return to the app and tap “**Confirm**”.



- If the email address was confirmed via the email message, you will be prompted to create your PIN. Enter 4 digits, then enter them again to confirm your new PIN:

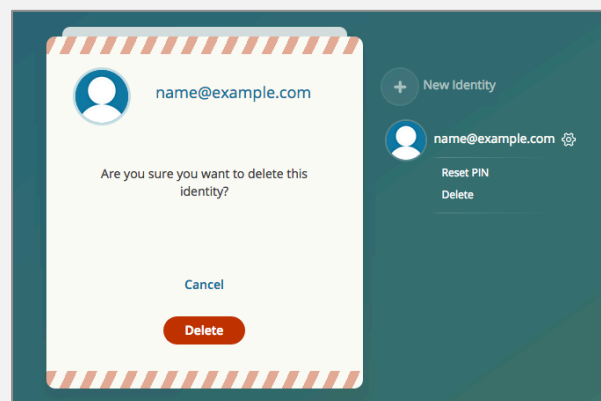
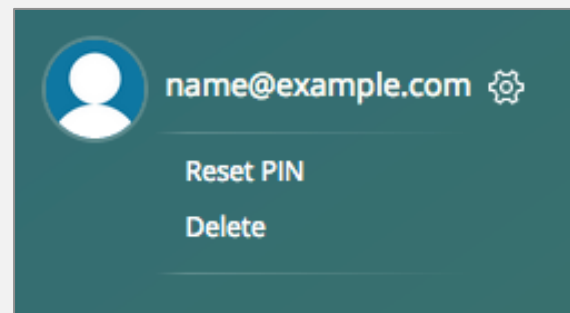
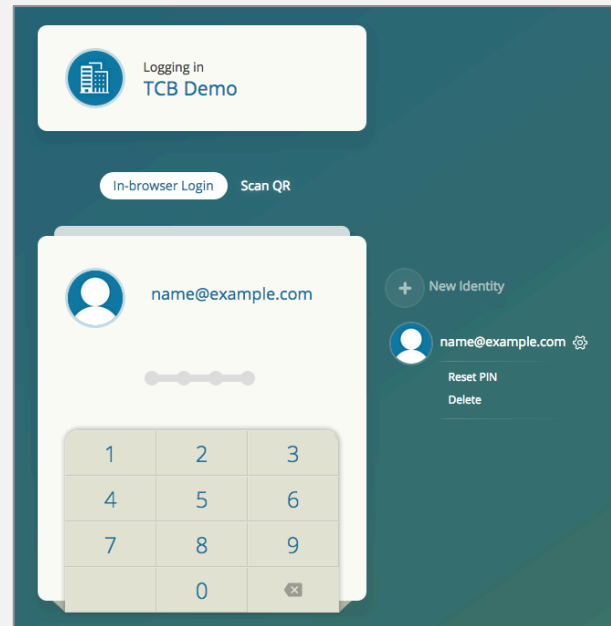


- You will now see a confirmation that your identity was reset successfully.

ADDITIONAL MANAGEMENT TIPS

Removing an Identity

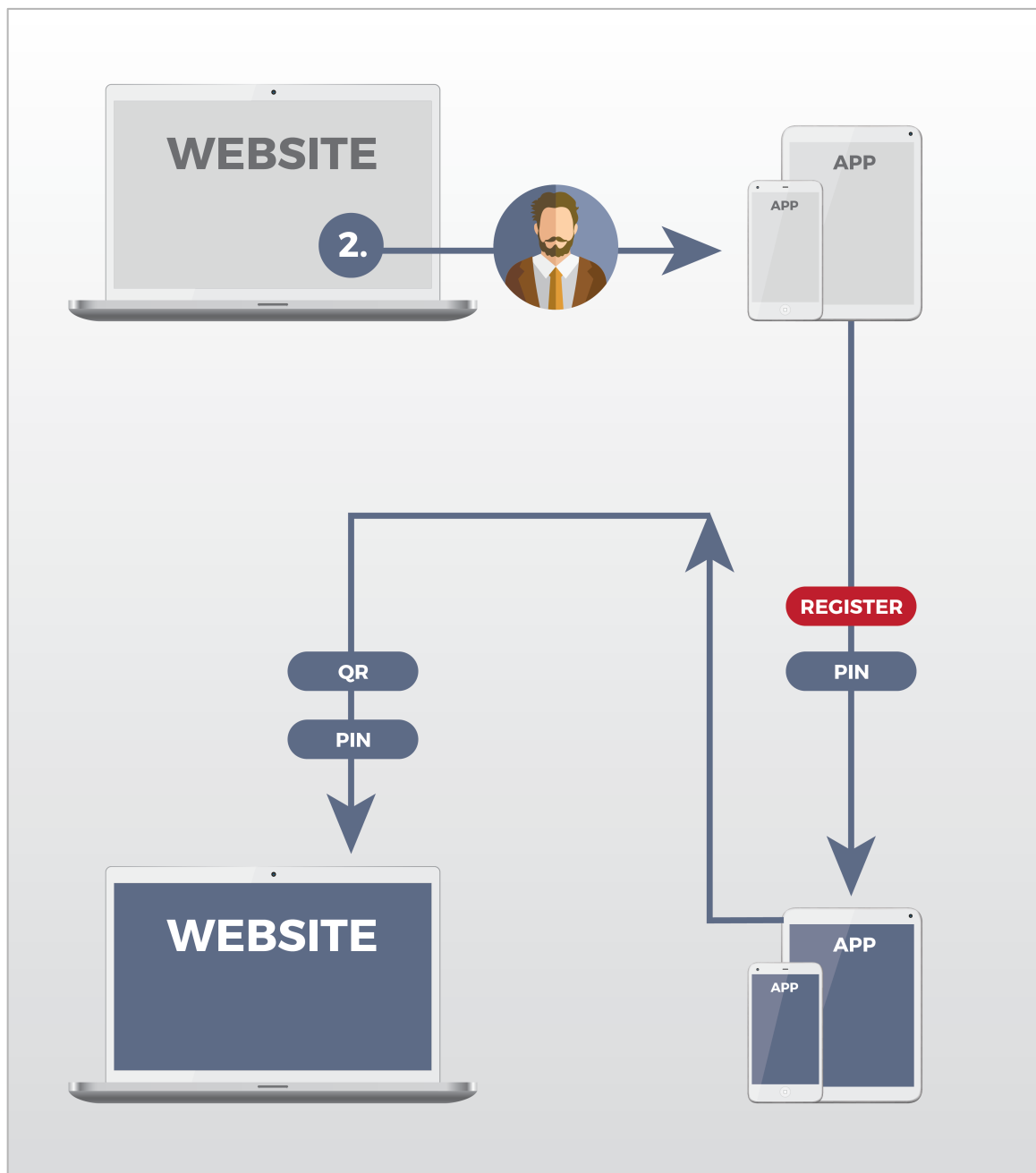
- To remove an identity, select the settings icon to the right of your identity, to reveal the **“Reset PIN”** and **“Delete”** options.
- Select **“Delete”**.
- A prompt is displayed asking if you wish to go ahead. Select **“Delete”** to remove your identity from this browser or device.



Scenario 2:

Web authentication with mobile application

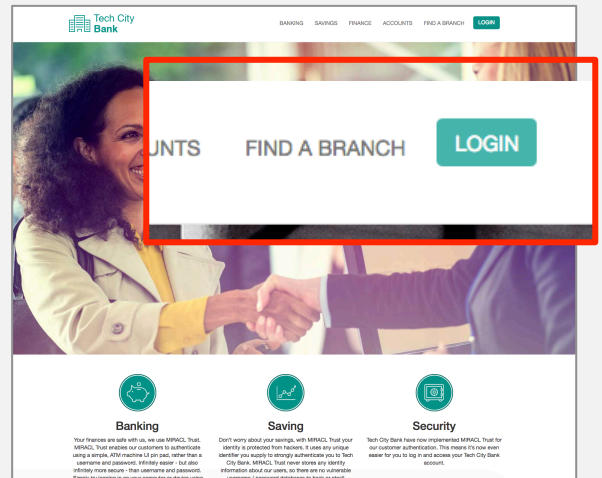
*“A user wants to login to a **website** on a **shared un-trusted desktop browser**”*



NEW USERS LOG IN STEPS TO ACCESS TECH CITY BANK

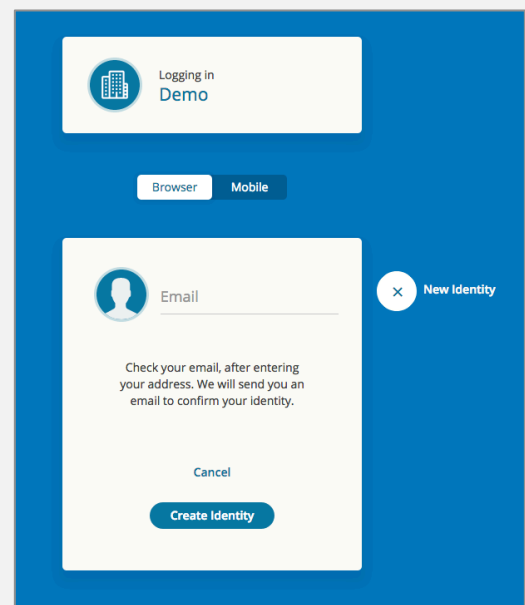
1. Signing User selects “Login”

Open up <https://demo.trust.miracl.cloud> on your desktop computer in any browser.



2. In-browser login is displayed

The browser login option is shown by default, although a developer will be able to choose whether mobile and/or browser login is enabled, and which is displayed by default.



NEW USER REGISTRATION PROCESS

3. Signing into the TCB mobile application

- Install the Tech City Bank app on your Smartphone and accept the request to access your device's camera.

Google Play: "TCB 4 MIRACL" app

<https://play.google.com/store/apps/details?id=com.miracl.android.tcbmcl&hl=en>

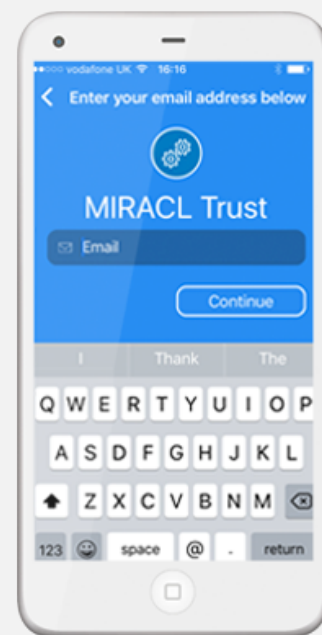
iTunes: Please

email support@miracl.com requesting an invite for "TCB 4 MIRACL".



4. Register your identity (e-mail address) in the TCB app

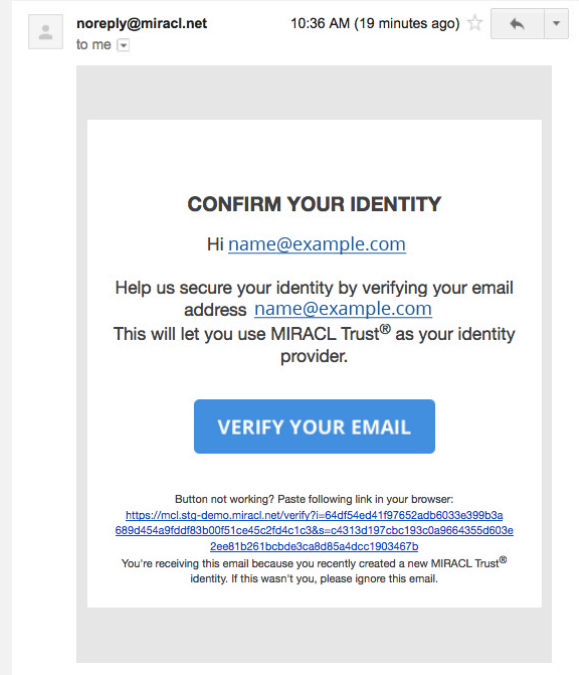
- Open the app on your smartphone, the "New Identity" page will be displayed.
- Enter your email address, then click "**Continue**". You will now be sent an email to verify your email address.



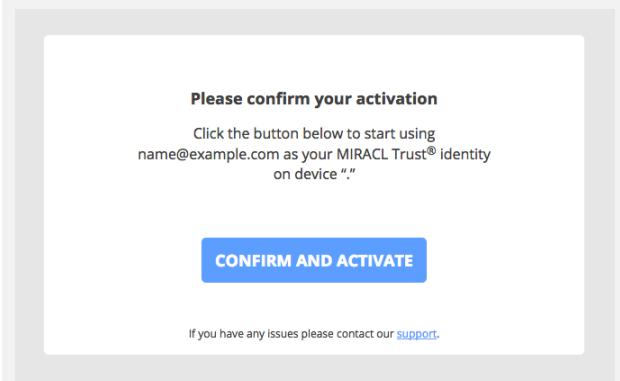
NEW USER REGISTRATION PROCESS

5. User receives verification email

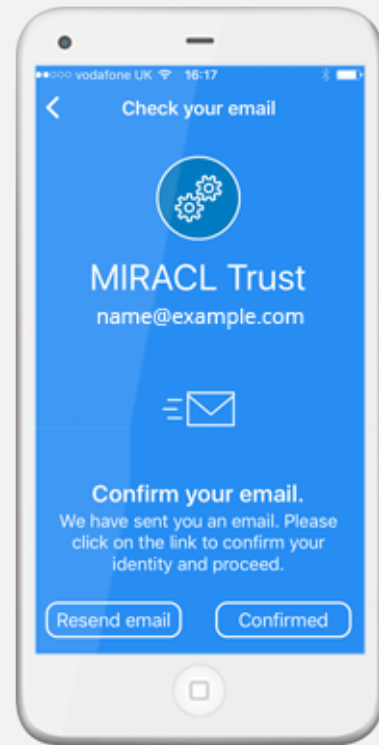
- Go to your email client on your mobile device and open the email from MIRACL Trust. Now click the "**VERIFY YOUR EMAIL**" button in this email.



- In the resulting page that launches in a browser window on your smartphone/device, click "**CONFIRM AND ACTIVATE**" on this webpage. You are now verified.

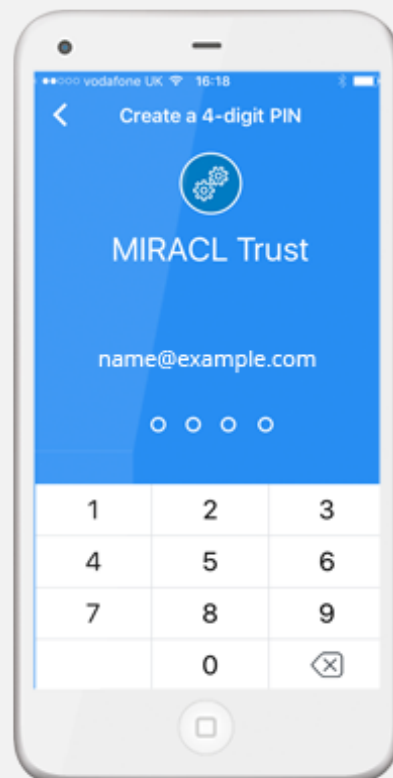


- Go back to the TCB app, and click "**Confirmed**".



5. User creates 4-digit PIN

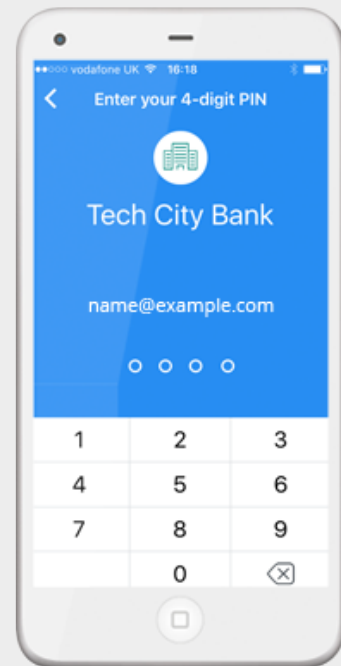
- Now you can create a 4-digit PIN and re-enter it again to confirm your chosen PIN.



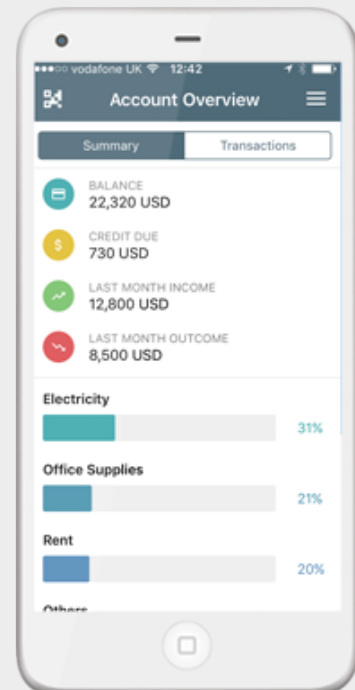
NEW USER APP LOG IN

Sign in to the TCB mobile application

- Select "**Log in**" in the mobile app and enter your PIN again.



- **Success!** You are now logged into the mobile app without sending, storing, or synchronizing credentials in whole form.

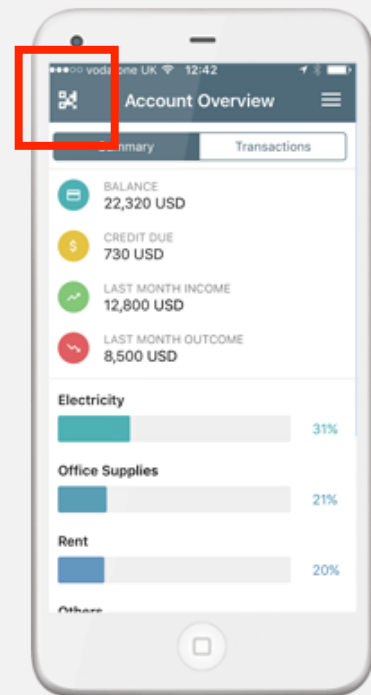


REGISTERED USERS LOG IN STEPS TO ACCESS TECH CITY BANK

REGISTERED USER PROCESS

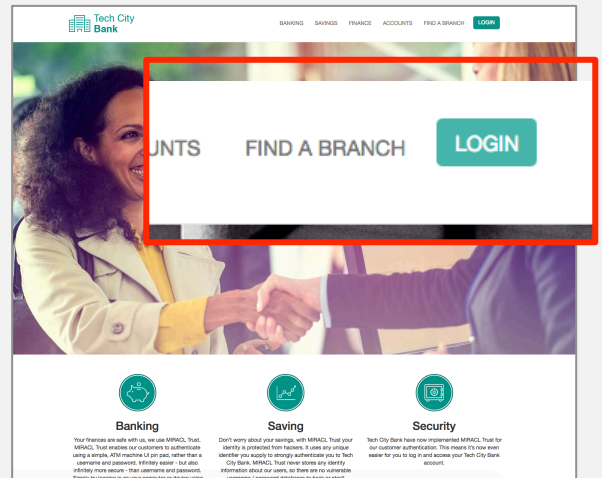
Signing in to the Tech City Bank Web Application

- Once you have signed into the mobile application, you can now also sign into the TCB web application. Click the QR code icon on the top-right corner of the app or open the QR scanner via the app menu in the upper left corner on your smartphone.



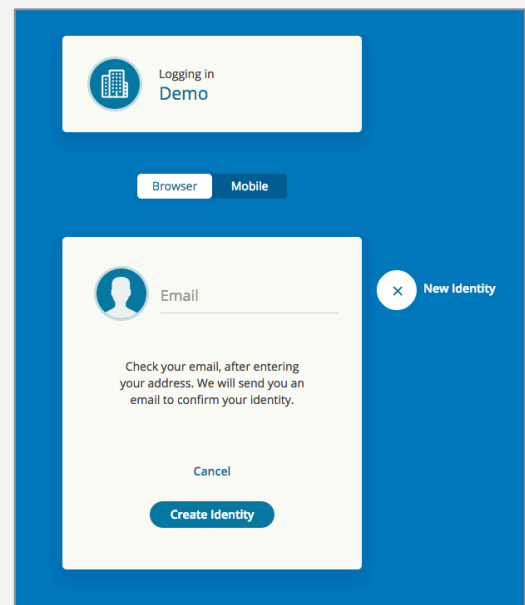
1. Signing User selects “Login”

On your desktop computer open up <https://demo.trust.miracl.cloud> in any browser.

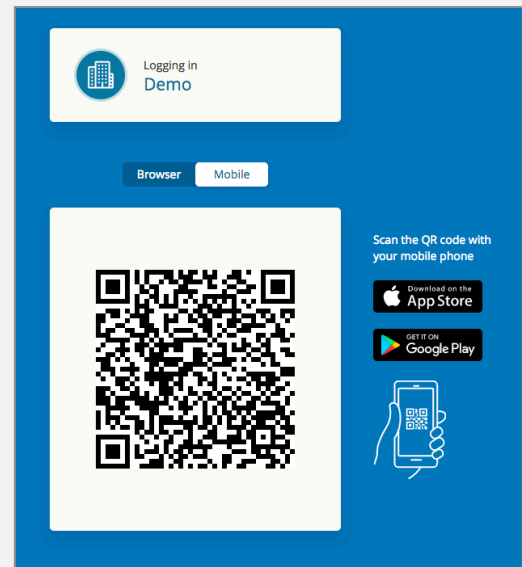


2. In-browser login is displayed

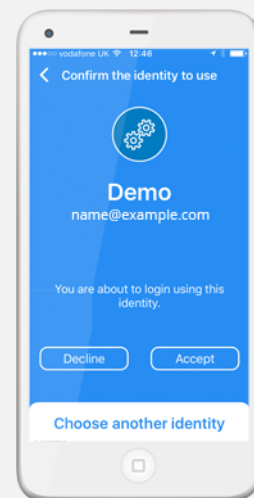
The browser login option is shown by default, although a developer will be able to choose whether mobile and/or browser login is enabled, and which is displayed by default.



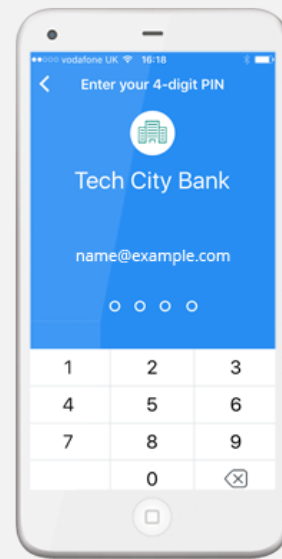
On your **desktop browser**, navigate to <https://demo.trust.miracl.cloud/> and click the **“Login”** button on the top navigation. The in-browser login will be shown as default, toggle to the **“Mobile”** option. A QR code will now be displayed on your desktop.



- Now scan the QR code with your device. When the QR is recognised by the app you can click **“Accept”** on the mobile app to accept that you are happy to sign in.



- Enter your 4-digit PIN into the TCB mobile app to authenticate.



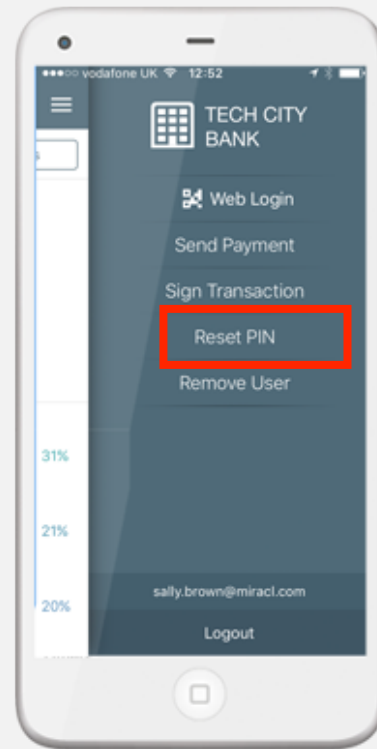
- **Success!** You are now logged in to the TCB website - note that this is just an example Tech City Bank banking website that has no functionality other than to show that you are logged in.

Date	Description	Amount	Status	IBAN
02.03.2015	Flying ticket London - USA	- 2348 USD	Success	CB15M40L40551512345678
01.03.2015	Cash Withdrawal	- 10 USD	Failed	CB15M40L40551512345678
28.02.2015	Benson's Group Income	+ 10 USD	Success	CB15M40L40551512345678
26.02.2015	Heath's Group Income	+ 3000 USD	Success	CB15M40L40551512345678
24.02.2015	Cash Withdrawal	- 40 USD	Success	CB15M40L40551512345678
22.02.2015	Fiddler's Group Income	+ 900 USD	Success	CB15M40L40551512345678
20.02.2015	Smart's Group Income	+ 824 USD	Failed	CB15M40L40551512345678
20.02.2015	SalesCloud's Group Income	+ 210 USD	Success	CB15M40L40551512345678
18.02.2015	Cash Withdrawal	- 7644 USD	Failed	CB15M40L40551512345678
16.02.2015	Cash Withdrawal	- 10 USD	Failed	CB15M40L40551512345678

ADDITIONAL MANAGEMENT TIPS

Reset your PIN

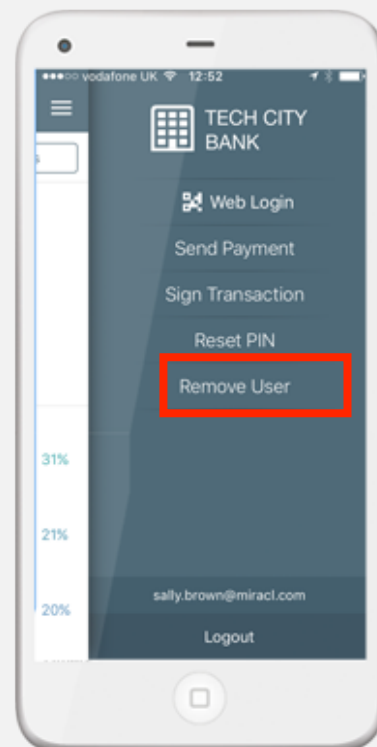
- To reset your PIN, select the menu icon from the top-left, select **“Reset PIN”** and follow verification steps described above.



ADDITIONAL MANAGEMENT TIPS

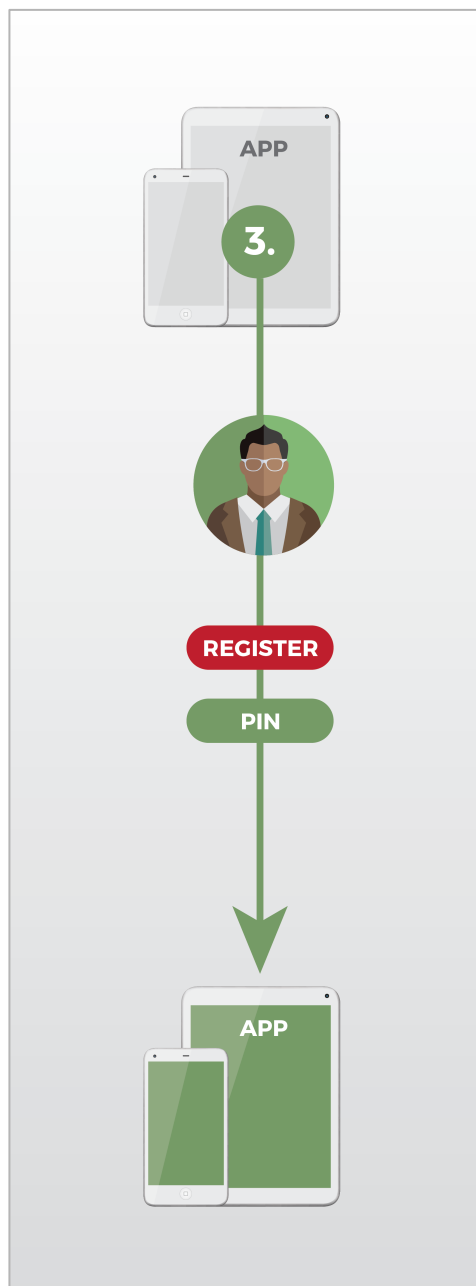
Remove your identity

- To remove your identity, select the menu icon from the top-left, select **“Remove User”** and follow the user registration steps described above.



Scenario 3: Mobile in-application authentication

*“A user wants to login to a **mobile app** on a **mobile or tablet**”*



NEW USERS LOG IN STEPS TO ACCESS TECH CITY BANK

1. Signing into the TCB mobile application

- Install the Tech City Bank app on your Smartphone and accept the request to access your device's camera.

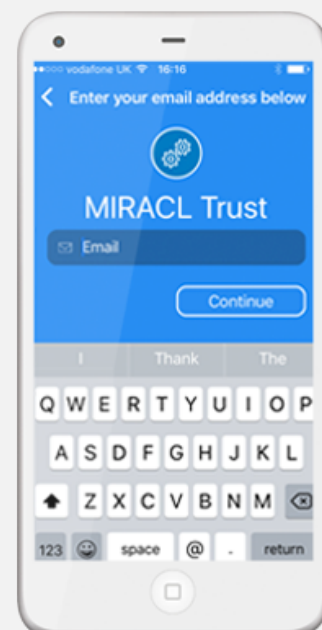
Google Play: "TCB 4 MIRACL" app
<https://play.google.com/store/apps/details?id=com.miracl.android.tcbmcl&hl=en>

iTunes: Please email support@miracl.com requesting an invite for "TCB 4 MIRACL".



2. Register your identity (e-mail address) in the TCB app

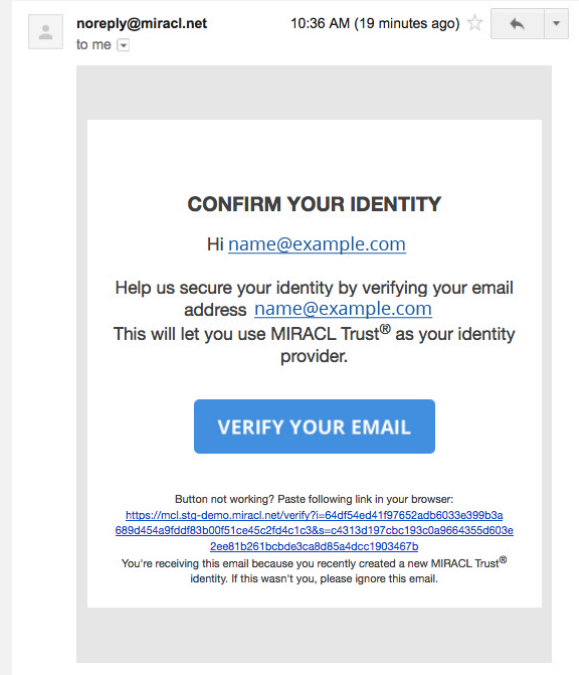
- Open the app on your smartphone, the "New Identity" page will be displayed.
- Enter your email address, then click "**Continue**". You will now be sent an email to verify your email address.



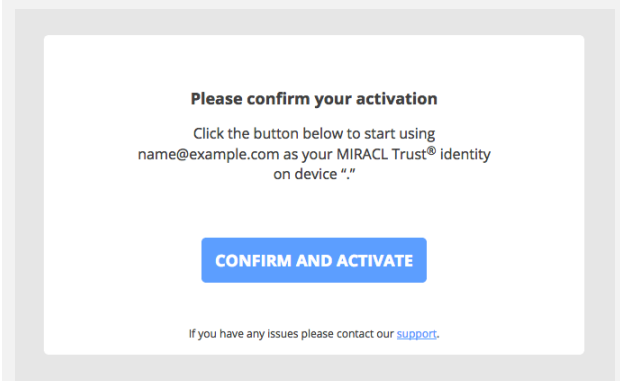
NEW USER REGISTRATION PROCESS

3. User receives verification email

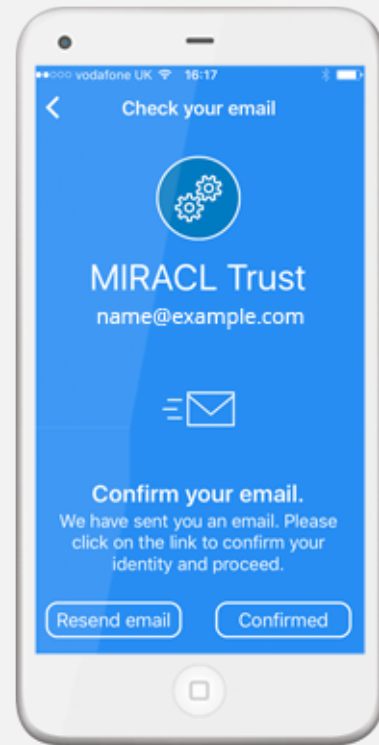
- Go to your email client on your mobile device and open the email from MIRACL Trust. Now click the "**VERIFY YOUR EMAIL**" button in this email.



- In the resulting page that launches in a browser window on your smartphone/device, click "**CONFIRM AND ACTIVATE**" on this webpage. You are now verified.

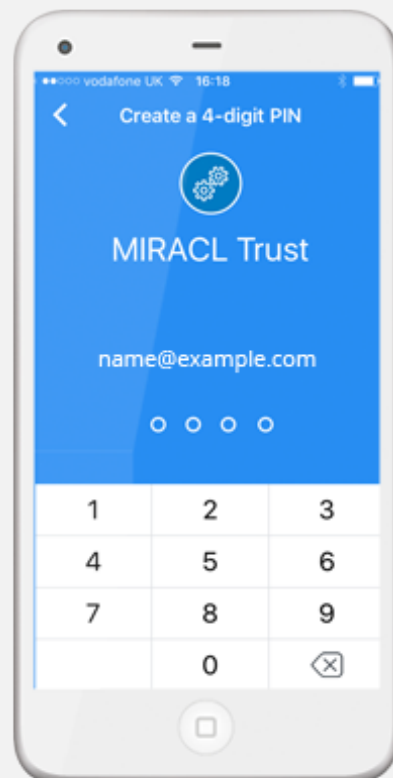


- Go back to the TCB app, and click "**Confirmed**".



4. User creates 4-digit PIN

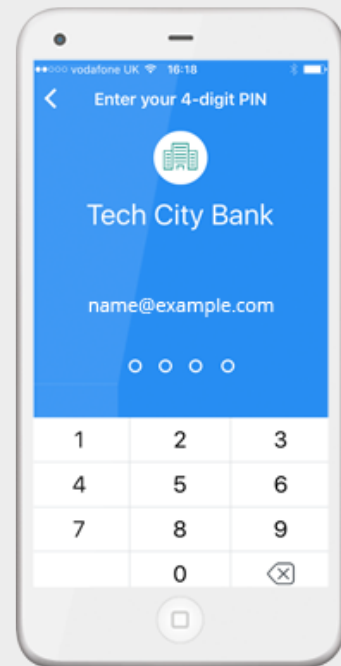
- Now you can create a 4-digit PIN and re-enter it again to confirm your chosen PIN.



NEW USER APP LOG IN

Sign in to the TCB mobile application

- Select "**Log in**" in the mobile app and enter your PIN again.



- **Success!** You are now logged into the mobile app without sending, storing, or synchronizing credentials in whole form.

