MACO

Multi-Authentication Convenience Option

2023 Update

SecuriKey

CU*ANSWERS
A Credit Union Service Organization

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MACO SOFTWARE CONTROLS

Online Banking Authentication. Members cannot use MACO unless initially authenticated through Online Banking.

Authentication Process. Biometric authentication is a process, requiring the member to ensure identity recognition prior to authentication with the Mobile Banking system.

DATA TRANSMISSION

Encryption. Information entered by the member is encrypted through 256-bit encryption.

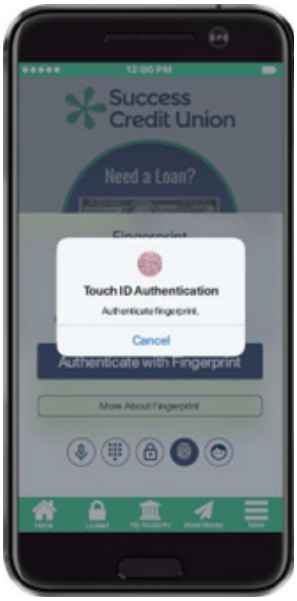
Data Storage. No biometric data is stored on the MACO servers. Any biometric information is stored on the member's device using the device's native encryption (not in the MACO app itself).

AUTHENTICATION CONTROLS

Temporary/Permanent Lockout. MACO temporary locks out the member if member authentication fails. If the member fails to authenticate four times, the lockout is permanent.

Probabilistic Authentication. If the member chooses biometric authentication options, authentication is provided through a probabilistic authentication algorithm.

MACO is a secure method for Mobile Banking authentication. When the member selects to enroll in a MACO method, authentication must be established by entering standard login credentials (username, password, and security question answer). After enrollment in MACO, the standard authentication is not required; however, standard authentication can always be selected in place of MACO.



CU*ANSWERS

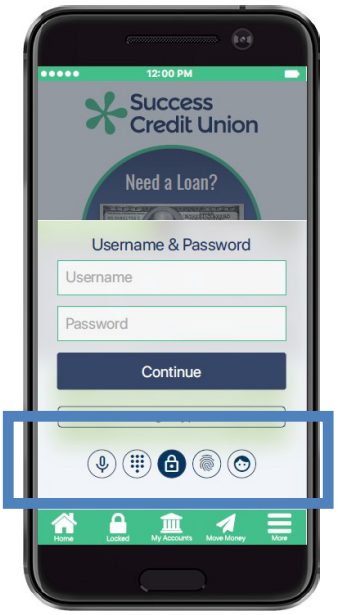
OVERVIEW:

MULTI-AUTHENTICATION CONVENIENCE OPTION ("MACO")

CU*Answers' Multi-Authentication Convenience Option ("MACO") allows our network credit unions to provide your members more options for authentication in I**t's Me 247** Mobile Banking. MACO includes four convenience options: fingerprint, face recognition, voice recognition, and PIN. CU*Answers does not recommend advertising MACO as being "more secure." MACO meets requirements for reasonable security, but the tool is primarily a convenience option for members.

USING SECURIKEY: Credit unions may be asked by examiners or auditors to provide a MACO risk assessment, documenting MACO's safeguarding of authentication information. Members may have concerns about biometric information used for authentication. **SecuriKey provides descriptions of the controls used to protect sensitive information and authenticate members**.

ABOUT DAON: MACO authentication controls is provided through Daon, Inc., and their IdentityX product. Daon is based out of Ireland, and has a worldwide customer base, including government agencies.



FINGERPRINT

Fingerprint authentication will only show on devices that support fingerprint technology. To use fingerprint authentication, the member must first save a fingerprint sample in the operating system of the device. During MACO fingerprint enrollment, the member touches the sensor of their device (for example the Home button) to verify the member has a match with the fingerprint saved in the operating system of the device. During MACO fingerprint authentication, the member places their finger on the device's sensor. If the fingerprint matches the fingerprint saved in the device's operating system, the member is logged on to Mobile App Banking.

FACE RECOGNITION

During face recognition enrollment the device camera takes several pictures of the member. Helpful messaging assists the member to align their face in the proper manner. The best photo is analyzed according to a series of measurements which may include eye socket depth, distance between the eyes, the width of the nose. An encrypted metric assigned to the photo is sent to the DAON server. During face recognition authentication, the member gives a live-test sample by blinking (shaking or nodding) which causes the camera of the device to take a photo of the member. The photo metrics are sent to the MACO server. If the photo metric matches what is saved on the MACO server, the member is logged on to Mobile App Banking. If the member is using a device with Apple Face ID, MACO will adjust to use this authentication method.

VOICE RECOGNITION

During enrollment, the member says a passphrase that is presented on the screen. Three acceptable recordings are captured, and the best is converted to encrypted voice data that is sent to the DAON server. During voice recognition authentication, the member is asked to say the phase again. The voiceprint is compared with the audio data on the DAON server. If a match is found, the member is logged on to Mobile App Banking.

PIN

During enrollment, the member is presented a number pad on the screen of their device. Members tap a four-digit PIN and then tap it again to confirm the number. An encrypted PIN is sent to the DAON server. During PIN authentication, the member taps their PIN twice in the number pad that is presented. If this PIN matches the number saved on the DAON server, the member is logged on to Mobile App Banking.

AUTHENTICATION INFORMATION

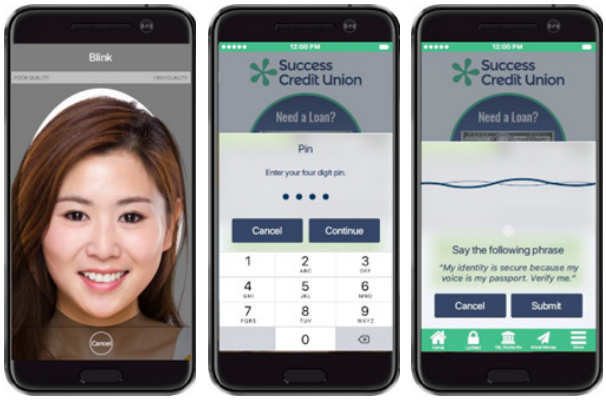
Authentication information entered by the member is encrypted. Transmission security is provided by using 256-bit encryption. For fingerprint, voice, and face recognition, the credential information is compared against the MACO probabilistic algorithm on the server. If there is a match, the member is authenticated. No biometric data is stored on the MACO servers. The biometric information is stored encrypted on the member device through the native encryption of the device OS, not the MACO application. Credit unions and members who wish to know more about device native encryption can review options provided by the manufacturer of the device.

Members should not use MACO on a device that is shared. If a member loses the device, MACO can be removed on all devices by creating a new profile on a device. If this is not an option, the credit union can request CU*Answers to disable the profile.

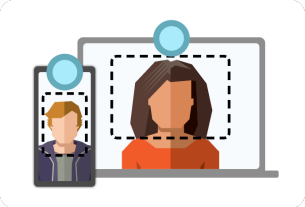
Failed authentications will lock out MACO authentication for a temporary time. Standard login is still available if the account is locked out. The lockout time increases with each lockout. Members will be unable to use MACO for fifteen minutes, then twenty and then twenty-five minutes. At the fourth lockout, the MACO profile will be disabled.

UNENROLLMENT

Members can unenroll MACO from all devices using the Reset Authentication Options on All Devices menu option. More information can be found in the How can I ensure MACO is unenrolled from all devices for a member's account? AnswerBook item.



MOP WEBSITE

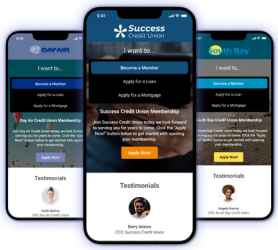


Santized Inputs
Cross Site Forgery Prevention
Location Filtering (optional)
Session Timeout
Restructions Based on Sessions

BIOMETRIC IDENTIFICATION

Policy and Consent Form
Sent by TLS v 1.2
AES-256 Encryption
Limited Retention

OFAC



Disclosures Provided
Configurable
OFAC Scan Run
Compared to Block Persons

ENCRYPTION

Information entered by the applicant is encrypted through HTTPS during transit. TLS 1.2 is enabled and preferred. Encryption falls back to TLS 1.1 and TLS 1.0 only if the user's browser does not support 1.2.

CROSS SITE FORGERY PREVENTION

Inputs are sanitized, and sessions tokens are used to prevent cross site forgery.

LOCATION FILTERING

Optional control to reject applications by states.

SESSION TIMEOUT

The timeout is 5 minutes and activity based, meaning if the user has an idle screen for 3 minutes the user will get a popup advising 2 minutes are left. If the user maintains activity, the session will continually extend itself. Activity is mouse/keyboard actions on the active browser window.

MOP RESTRICTIONS BASED ON SESSIONS

Users cannot jump ahead or go back on certain pages, and verify, fund and enroll processes are restricted to single use (even when multiple windows opened to same page).

DYNAMIC API KEYS FOR EXTERNAL ACCESS

Keys needed for external access to MOP change regularly, rather than a static set of keys that could be lost or stolen.

DATA STORAGE AND DESTRUCTION

Protected by AES-256 Encryption during the ID verification process. Data is destroyed within 48 hours of the application process.

OFAC

Disclosures are provided to applicants prior to Experian Precise ID verification. OFAC scans are run prior to offering membership. Applications will be compared to the credit union's Blocked Persons database.

MOBILE TECHNOLOGIES GROUP

VERSION CONTROL

VERSION	DATE	CHANGE	TEAM
1.0	June 14, 2018	First published	Internal Audit
2.0	May 23, 2021	Revised for clarity	Internal Audit
3.0	January 30, 2023	Revised for clarity	Internal Audit

LEARN MORE

CONCERNS ABOUT BSA?

AuditLink can provide support for CU*BASE security and tool options.

CU*ANSWERS AuditLink

KEEP CURRENT ON LATEST ENHANCEMENTS

All the latest updates for CU*BASE can be found on our Release Summaries page.