DualAuth

Passwordless Technology for Zero Trust

AutoPassword Product Introduction

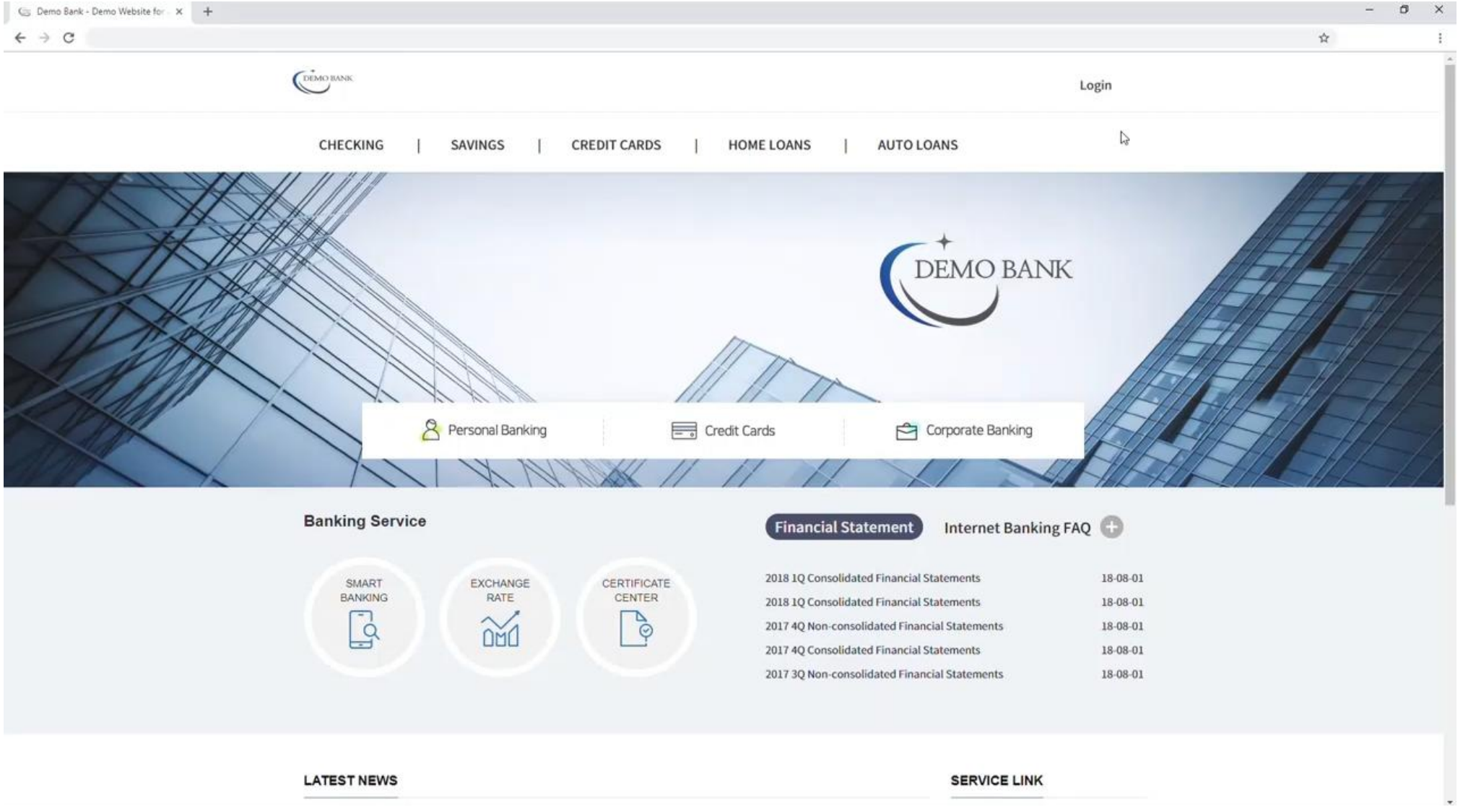
DualAuth

Passwordless Authentication Technology

AutoPassword

The passwordless solution AutoPassword is a mutual authentication technology in which the user does not enter a password, but instead the online system presents an AutoPassword to the user, and the user verifies the AutoPassword submitted by the online system using their smartphone. (International Standard X.1280)

01 Product Overview



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01 Product Overview

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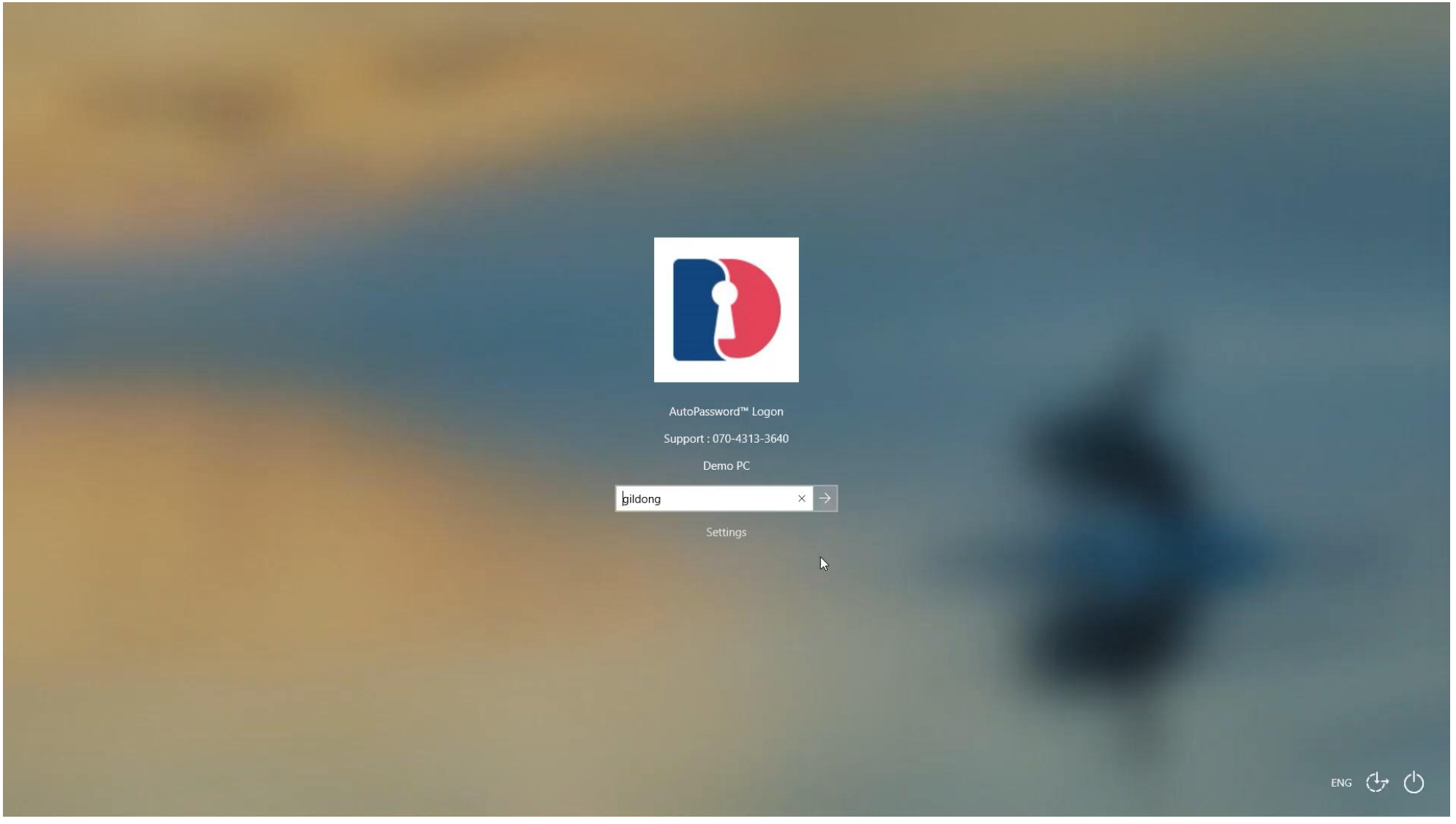

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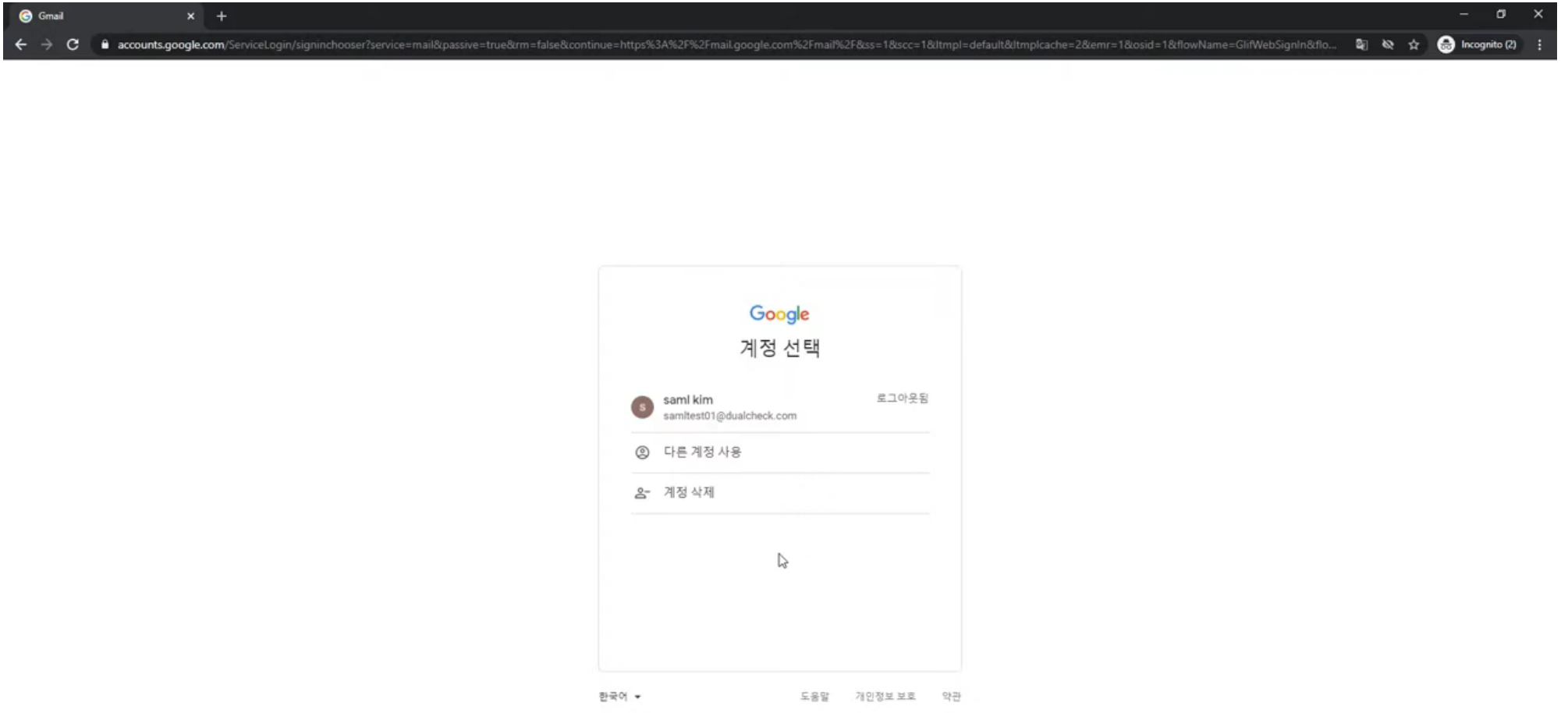
01 Product Overview



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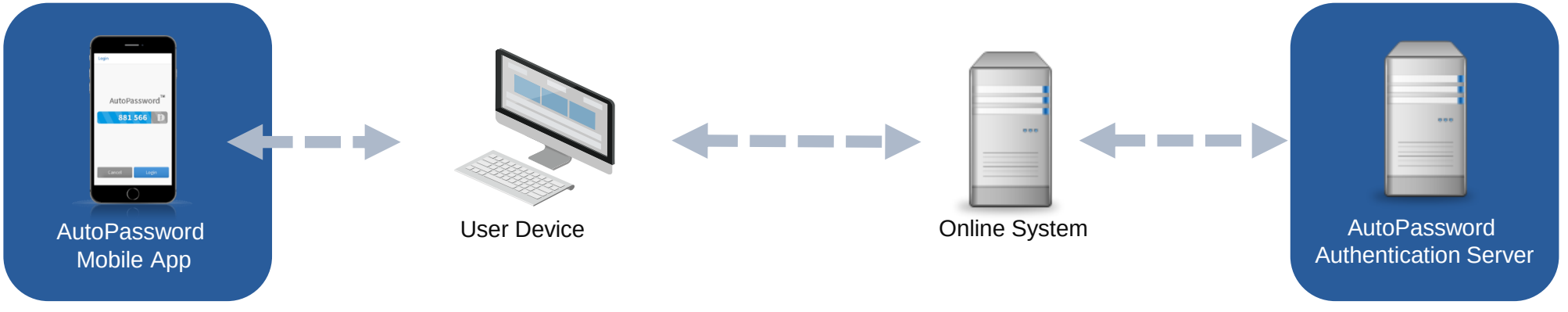
AutoPassword Architecture

To switch to AutoPassword, you only need to add the AutoPassword authentication server and the AutoPassword mobile app to the existing online system. This allows you to build a secure and convenient authentication environment without significantly changing the existing service structure. The administrator first installs the AutoPassword authentication server, and then integrates the AutoPassword API to enable communication between the online system and the authentication server. API integration is the setting that allows the AutoPassword to be displayed in the service.

The user must install the AutoPassword mobile app from the app store. After installation, the user goes through an identity verification process to link the user's account with the mobile app. In this process, the user's ID and app are registered with the authentication server, and afterward, the user can securely access the online system through AutoPassword verification and out-of-band biometric authentication on the registered smartphone.

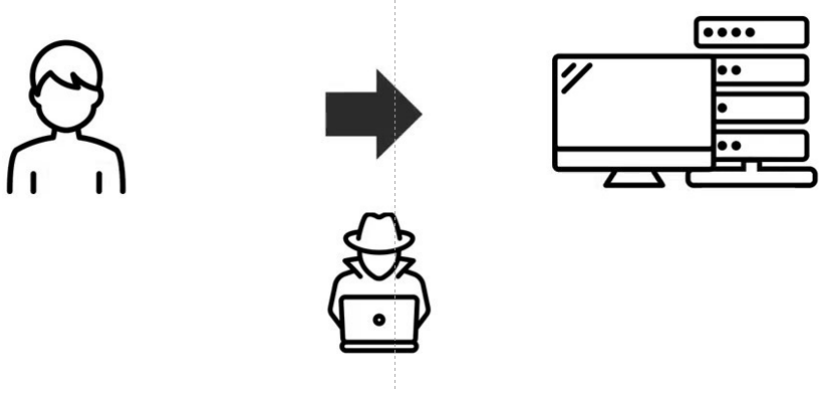


DualAuth

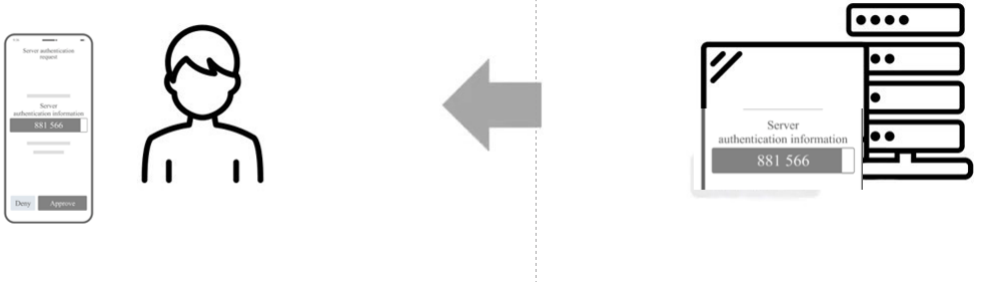
Feature 1 – Authentication technology secure against phishing, pharming, and man-in-the-middle attacks

AutoPassword is not a method in which the user directly enters a password, but a method in which the online system generates and displays an AutoPassword, the user verifies it, and then the user authentication value is delivered to the online system through smartphone communication.
Thanks to this structure, neither passwords nor authentication values are entered or stored on the user's device during the authentication process, and as a result, attempts to steal authentication information that occurred in conventional methods, such as phishing, pharming, and man-in-the-middle attacks, are fundamentally neutralized.

Input-based authentication technology
vulnerable to theft or misuse



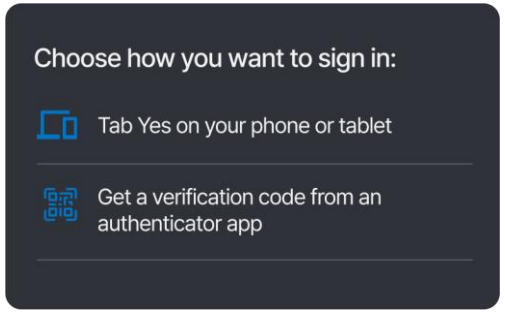
Output-based authentication technology
immune to theft or misuse

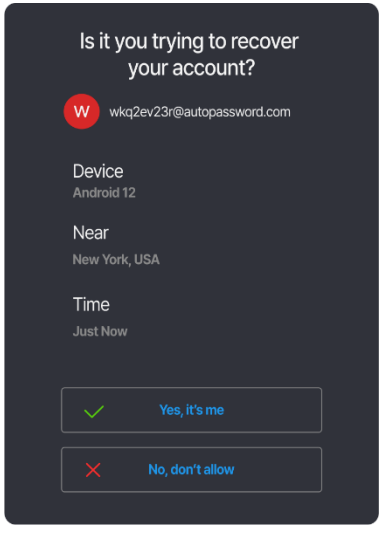


Feature 2 – Mobile Mutual Authentication Technology

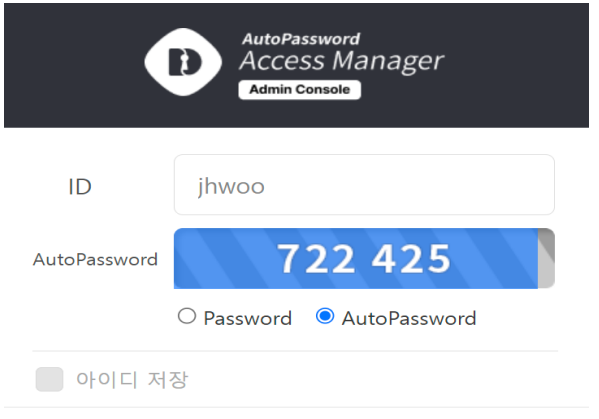
Conventional mobile authentication technology is a user verification technology that sends a push notification or text message to the user's smartphone, and the user checks and approves it. The mobile user authentication method only verifies that the user possesses a "legitimate mobile authenticator," but it does not verify whether the service the user is accessing is an actual legitimate system. As a result, if the user is accessing a phishing site or a disguised system, the user may inadvertently approve the authentication request, leading to authentication being stolen. In contrast, AutoPassword is a mutual authentication technology that uses mobile devices but allows the user to first verify the system they are accessing.

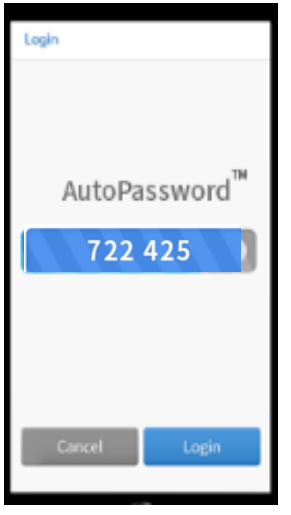
Mobile authentication technology that authenticates only the user





Mobile mutual authentication technology that authenticates both the online system and the user simultaneously



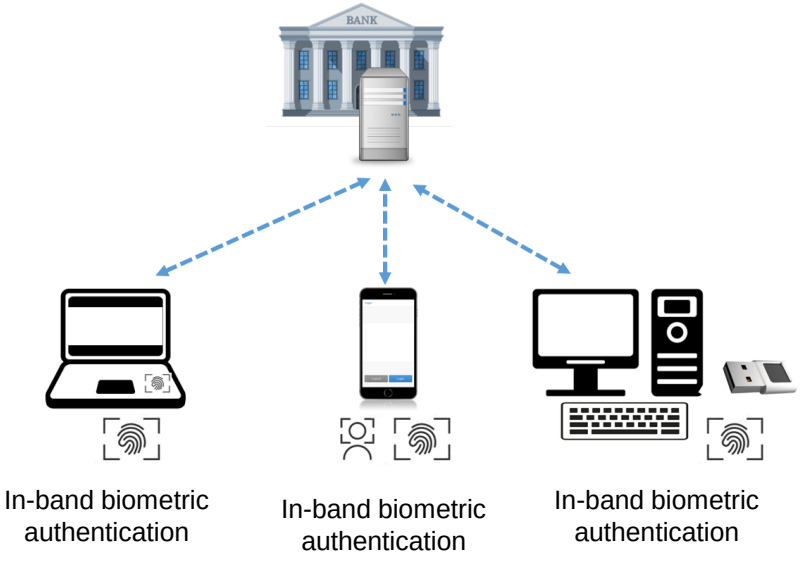


Feature 3 – The Most Economical Biometric Authentication Technology

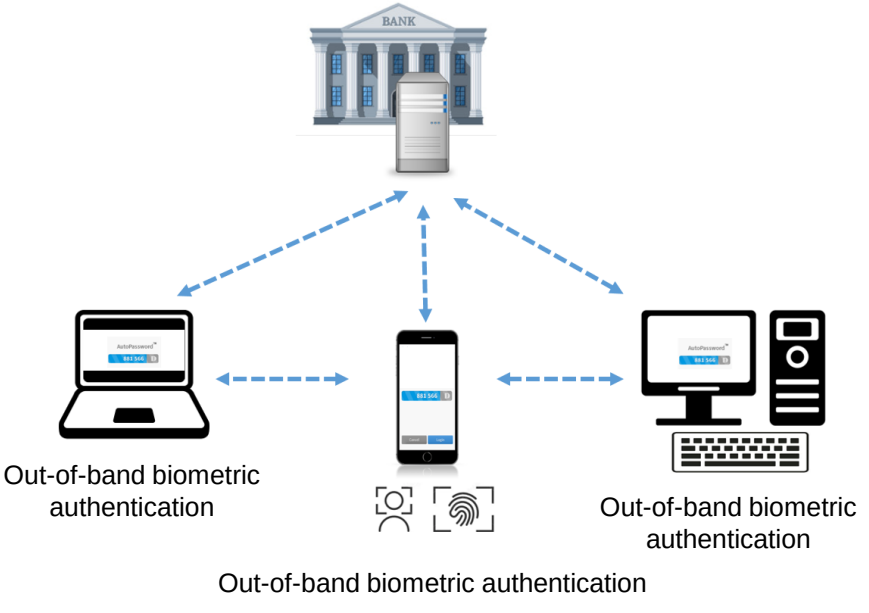
Conventional biometric authentication technologies such as FIDO or Passkey are “in-band biometric authentication” technologies, which require that each user device performing authentication must be equipped with a biometric sensor. While smartphones are generally equipped with fingerprint or facial recognition sensors, desktops and some laptops do not have such sensors, and therefore, to use biometric authentication in a PC environment, additional hardware sensors must be purchased and installed.

In contrast, AutoPassword adopts an “out-of-band biometric authentication” method, which allows users to utilize the biometric sensor already built into their smartphone to perform out-of-band biometric authentication on various devices such as desktops and laptops. The out-of-band biometric authentication method eliminates the need to add separate biometric sensors to PCs or laptops, drastically reducing the cost of device adoption.

In-band biometric authentication
that requires a biometric sensor on each device



Out-of-band biometric authentication
that does not require a biometric sensor on each device

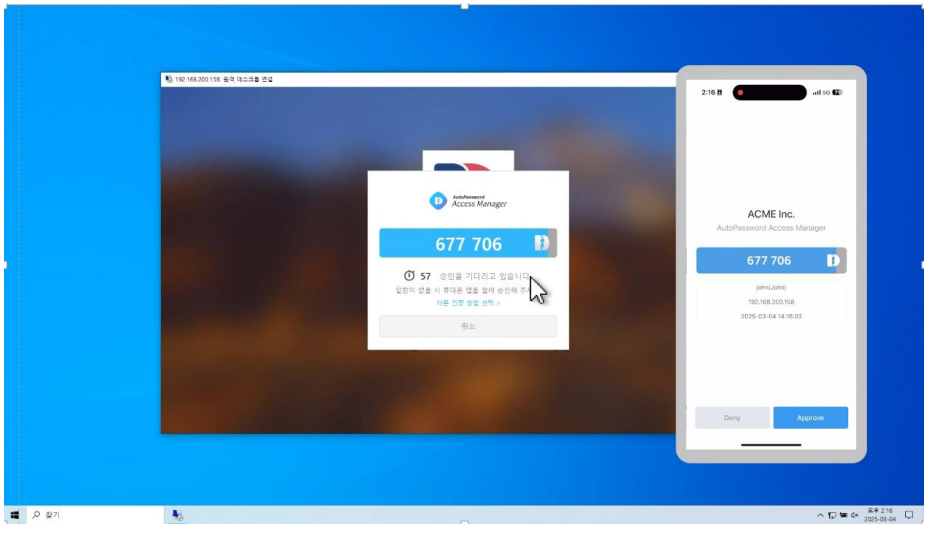


Feature 4 – Biometric Authentication Technology Supporting Cloud and IoT Devices Where Sensors Cannot Be Added

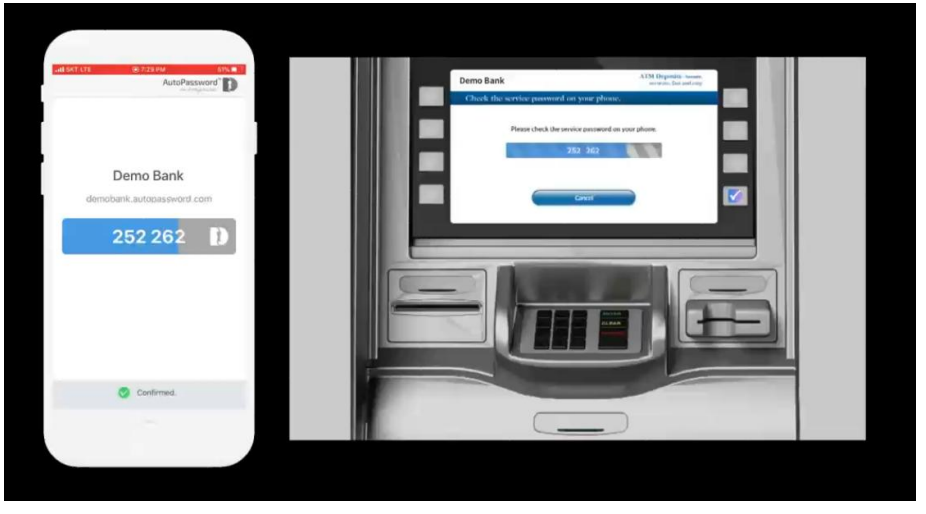
To apply biometric authentication in cloud or IoT environments, the device must be equipped with a biometric sensor. However, many cloud devices or IoT devices do not have USB ports or Bluetooth functions that allow biometric sensors to be added, and in such cases, passwords ultimately have to be used again.

AutoPassword resolves this limitation by using out-of-band biometric authentication technology. On a cloud or IoT device equipped with a screen, the AutoPassword is first presented, and the user approves it with the biometric sensor on their smartphone, enabling secure authentication even on such devices. Through this approach, the scope of biometric authentication can be extended beyond desktops and laptops to cloud and various IoT devices.

Remote cloud PC login using
out-of-band biometric authentication



ATM transaction approval using
out-of-band biometric authentication

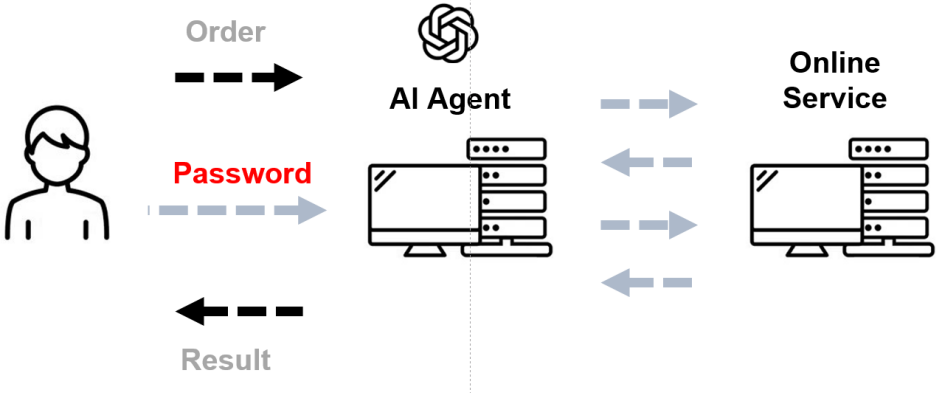


Feature 5 – Out-of-Band Biometric Authentication Technology Extendable to AI Agents

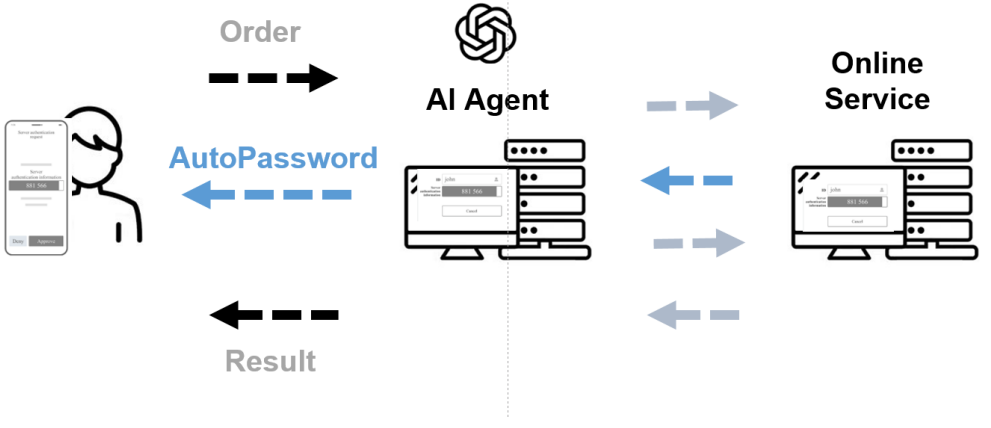
As the use of generative AI services, including ChatGPT, expands, it is important to verify whether the AI service being accessed is legitimate or a disguised service. AutoPassword allows the user to first verify the authenticity of the AI service before using it.

AutoPassword is also effectively used when utilizing AI agents. When using AI agents, there are situations where the agent must be provided with the user's password to perform tasks on behalf of the user. Providing passwords to AI agents poses a significant security risk. However, if AutoPassword is applied, the AI agent can present an AutoPassword to the user at the moment authentication is required during task execution, and the user approves it on their smartphone, eliminating the risk of password sharing. With AutoPassword, users do not need to enter passwords into AI agents. When authentication is required, the AI agent presents the AutoPassword to the user, and the user approves it, enabling safe use of AI agents.

Method in which the user enters a password into the AI agent



Method in which the AI agent presents an AutoPassword to the user



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03 References

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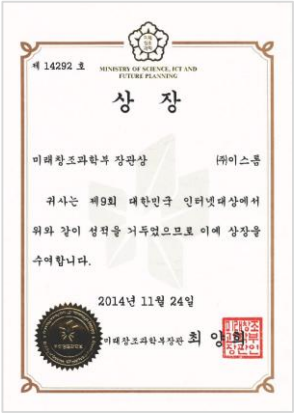
우리은행	Woori Bank - Passwordless PC access management and application access management for Woori Bank employees
유안타증권	Yuanta Securities - Passwordless PC access management and application access management for Yuanta Securities employees
통계청	National Library of Korea - Controlling login rights for statistical information viewing PCs installed in the library introduced by Statistics Korea
KORAIL	Korea Railroad Corporation - Implemented passwordless authentication to strengthen user terminal authentication security for the next-generation Nara Market System
KOMSA 한국해양교통안전공단	Korea Maritime Transportation Safety Authority - Enhanced user login security using passwordless authentication for external webmail login
한국관광공사	Korea Tourism Organization - Enhanced authentication security for managers and partners for system development operations in every corner of Korea
KIAT	Korea Advanced Institute of Industrial Technology - Introduced to internal work system for employees to control individual access to internal and external networks
구리시	Guri City Hall - Responding to security compliance through login security and automatic password change when accessing important servers
CWA 건설근로자공제회	Construction Workers' Mutual Aid Society - Strengthened login security of server system to improve internal system operation

03 References

Awards


제 14292 호

상 장

미래창조과학부 장관상 (주)이스룸

귀사는 제9회 대한민국 인터넷대상에서 위와 같이 성적을 거두었으므로 이에 상장을 수여합니다.

2014년 11월 24일

미래창조과학부장관 최 양희

The Korea Internet Awards


제17511호

상 장

-표준특허 창출지원 우수 참여기관-

(주)이스룸

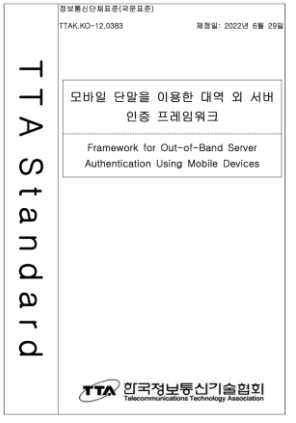
귀 기관은 표준특허 창출지원 사업을 통해 우수한 성과를 창출하여 표준특허 창출·활용 전략 확산에 기여한 바가 크므로 이 상장을 수여합니다.

2025년 6월 26일

특허청장 김

The Commissioner's Award

Standard Technologies


TTA Standard

TTAK.KO-12.0383

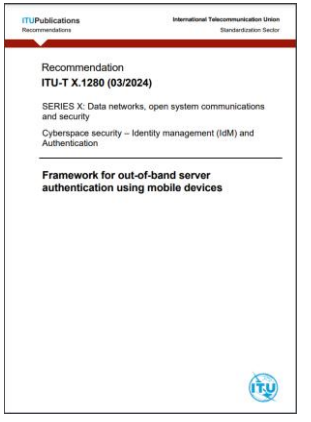
제정일: 2022년 6월 29일

모바일 단말을 이용한 대역 외 서버 인증 프레임워크

Framework for Out-of-Band Server Authentication Using Mobile Devices

TTA 한국정보통신기술협회 Telecommunications Technology Association

TTAK.KO-12.0383


ITUPublications

Recommendations

International Telecommunication Union

Standardization Sector

Recommendation

ITU-T X.1280 (03/2024)

SERIES X: Data networks, open system communications and security

Cyberspace security – Identity management (IdM) and Authentication

Framework for out-of-band server authentication using mobile devices

ITU X.1280

Presentations

FINOVATE FALL 2016 ALUMNI

NEW YORK

FinovateFall 2016

Presenter

https://youtu.be/w2NtbPVaHSk

https://youtu.be/rBUK45fdBtY?t=838

FINOVATE FALL 2018 ALUMNI

NEW YORK

FinovateFall 2018

Presenter

https://youtu.be/-DG-LYmRVfk

TRUSTECH

Payments | Identification | Security

https://youtu.be/nF72E24BCec

Certificates

fido CERTIFIED UAF

GOOD Software

ISO/IEC 25023, 25051, 25041

oath

initiative for open authentication

IBM Security

DualAuth

Specialists in passwordless identity and access management

DualAuth is a technology company providing passwordless identity authentication and access management solutions. Its primary solutions include passwordless authentication solutions, integrated ID and access management, mobile ID solutions, and physical facility access management. These technologies possess outstanding usability and security, as evidenced by their adoption as ITU standards X.1280 and X.oob-pacs under the UN's International Telecommunication Union. They are gaining attention as core technologies in the Zero Trust era. DualAuth is promoting its free Passwordless X1280 solution globally through the Passwordless Alliance based in Geneva, Switzerland, to solve password problems for B2C online services worldwide and advance ESG implementation.

Passwordless Identity Authentication and Access Management for Zero Trust Implementation

Passwordless Authentication Technology	Integrated ID and Access Management Technology	Mobile ID Technology	Physical Facility Access Management Technology
AutoOTP	AutoPassword	AutoPassword ID Card	AutoPassword ID Card
AutoPassword	AutoPassword Access Manager	AutoPassword ID Card Reader	AutoPassword IoT Controller

04 Contact

DualAuth

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- Telephone : +82-2-6925-1305
- Business Inquiry : sales@dualauth.com

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Thank you