

Multi-factor authentication System Overview

2022/3/24



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What is Multi-factor authentication system

- When accessing from off-campus, in addition to ID and password, an additional authentication is mandatory required.
- When accessing from on-campus, only ID and password is requires. From the off-campus, **multi-factor authentication** is required.

Authentication Method	Explanation	Device used
TOTP authentication (Onetime password)	The onetime password is created in the smartphone/tablet. By entering the onetime password, the authentication will be completed.	PC Smart Phone/Tablet
FIDO authentication	By registering your smart phone / tablet, that device's fingerprint authentication, face recognition etc. is used for authentication.	Smart Phone/Tablet
Imaging Matrix authentication	The images are displayed with random arrangement each time, user will select the images sequentially which have been set in advance.	PC

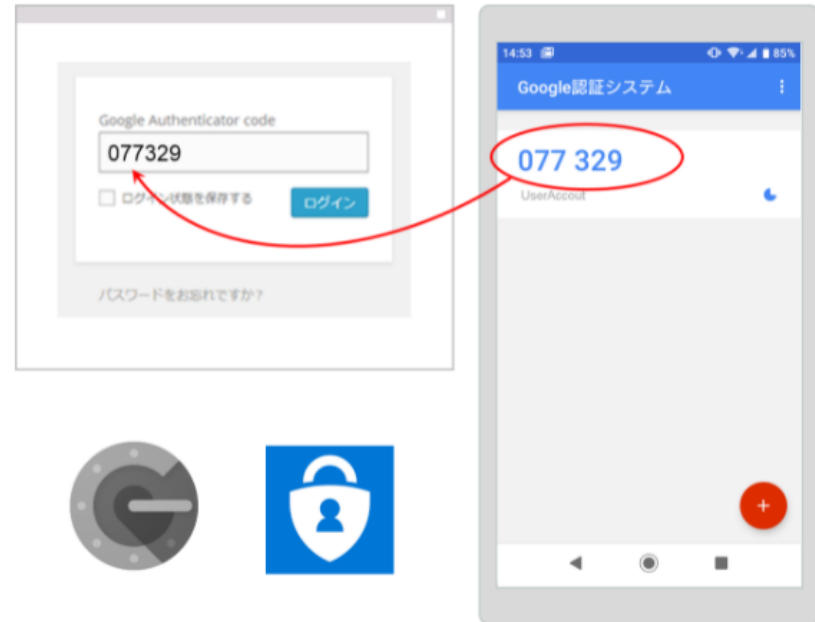
Authentication method using mobile device

Fingerprint / Face authentication



Fingerprint/face/passcode
Authentication using iPhone/
Android/iPad

Onetime password authentication



Enter the onetime password generated
by the mobile application 「Google
authentication system」 or 「Microsoft
Authenticator」

TOTP authentication (onetime password)

- The application of smart phone/tablet「Google authentication system」 or 「Microsoft Authenticator」) displays the different token code(6 digit number).

The image shows a web browser window on the left and a mobile authenticator app on the right. The browser window displays the Shiga University of Medical Science logo and the text "SHIGA UNIVERSITY OF MEDICAL SCIENCE". Below the logo, it says "多要素認証システム / Multi-Factor Authentication System". The instructions read: "GoogleAuthenticatorやMicrosoft Authenticatorに表示されたトークンコード（6桁の数字）を入力してください。" There is a text input field labeled "トークンコード" and a red "ログイン" button. A red arrow points from the "219 941" code in the app to the input field, with the text "Input the generated code" written in red. The mobile app screen shows the time "12:00 PM", the title "認証システム", and the code "219 941" circled in red. The user email "user@example.com" is visible below the code.

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FIDO authentication

- Register your device in the Multi-factor authentication system in advance and use the device's fingerprint authentication and face authentication. Only one device can be registered for each OS.
- The only authentication result is sent to the Multi-factor authentication system, the biometric data will not be saved in the university's system.



Fingerprint / face
authentication using iPhone/
Android/iPad

Imaging Matrix authentication

- The images are displayed with random arrangement each time, user will select the images sequentially which have been set in advance.
- 4 digit numbers are put for each images.

ga-med.ac.jp/idp/Authn/External?conversation=e1s4

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多要素認証システム / Multi-Factor Authentication System

Login to mfa-sp.shiga-med.ac.jp

	43	98	51	49	29
52					
51					
17					
65					
22					

ログイン クリア パネル表示

javascriptを用いて認証を行ないます。
入力した文字列（認証情報）は使い捨てパスワード化されますので、ネットワーク上にそのまま流れることはありません。

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Example



The authentication can be done without iPhone/Android/iPad.

Reference

Device used	Device used for authentication	TOTP authentication (Onetime Password)	FIDO authentication	Imaging Matrix authentication
PC (Windows/Mac)	←Device used	×	×	○
PC (Windows/Mac)	iPhone/iPad/Android	○	×	×
iPhone/iPad/Android	←Device used	○	○	×