

Adding Additional Layers for Authentication



Wojciech Lesniak

AUTHOR

@voit3k



Multi-factor Authentication



security questions



pin



What they know



password



email



sms



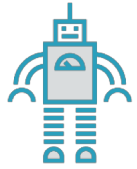
What they have



2fa



Email Verification



Reduces effectiveness of registration spam, or bot registration



Ensures the user actually has access to that email, and not someone trying to impersonate the owner of the email for malicious purposes



Gives you the ability to contact that person for feedback, notifications and marketing



Automated password reset and account recovery





AuthenticationFailureExpiredEvent

AuthenticationFailureServiceExceptionEvent

AuthenticationFailureLockedEvent

AuthenticationFailureCredentialsExpiredEvent

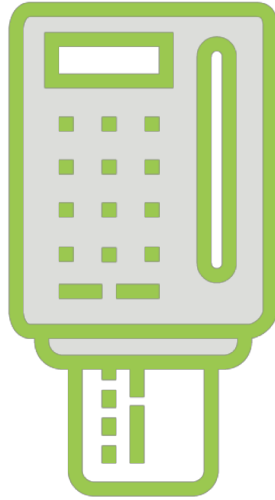
AuthenticationFailureDisabledEvent

AuthenticationFailureBadCredentialsEvent

AuthenticationFailureProviderNotFoundEvent



Additional Authentication Challenge



Security pin



Security Questions

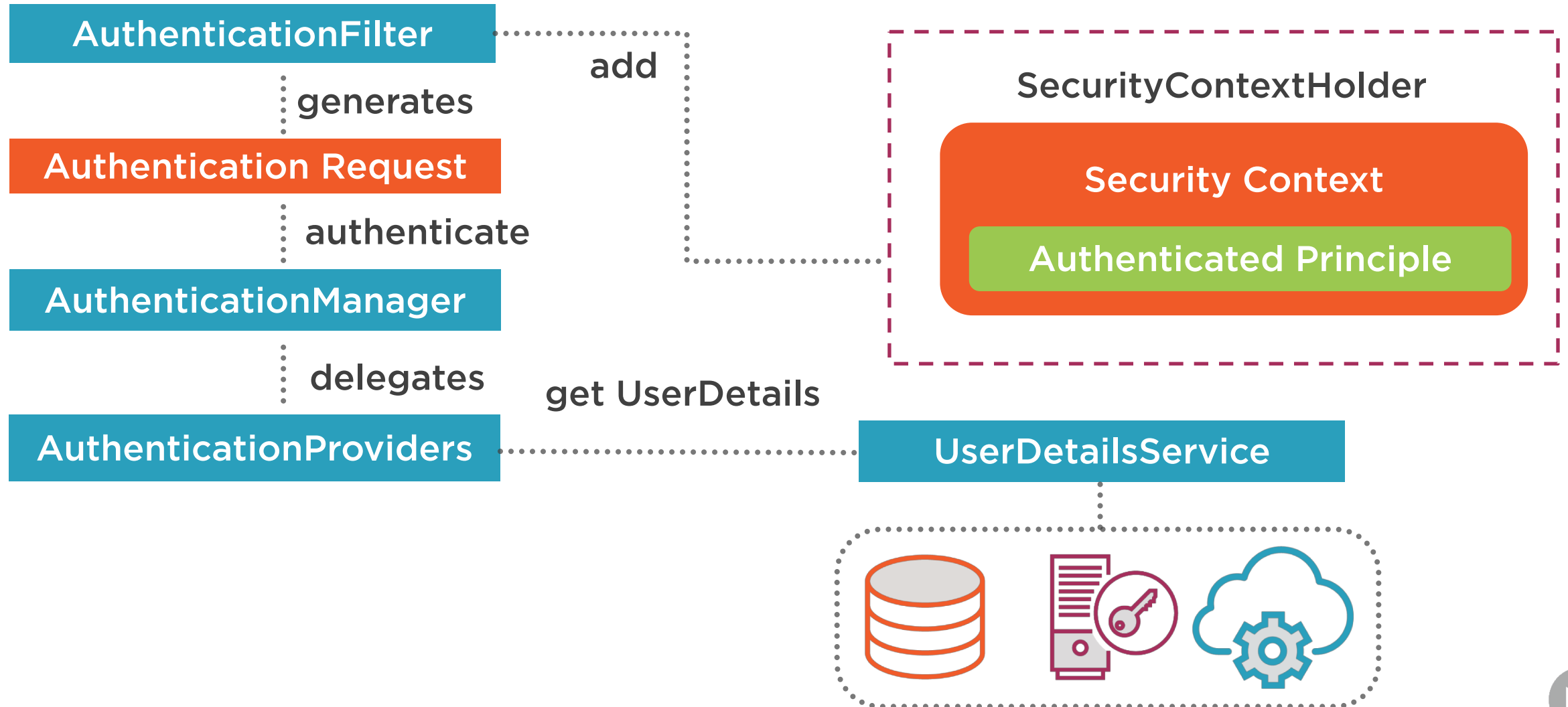
Sign-in to your portfolio

Sign in

[Create an account](#)



Recap



Something They Have





Time-based One-time Password Algorithm
(TOTP)

HMAC-based One-time Password
Algorithm (HOTP)



Google Authenticator

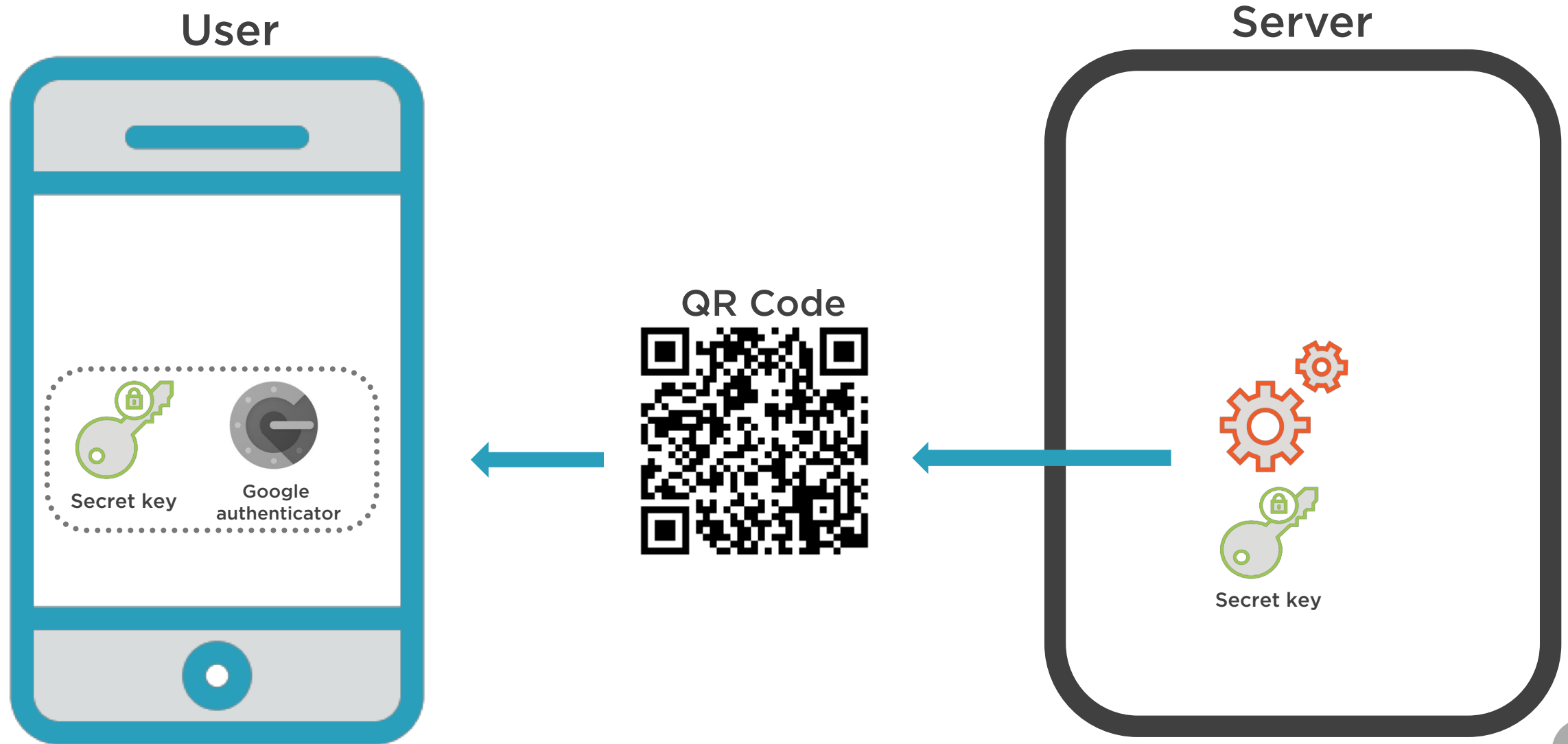


Time-based One-time Password Algorithm (TOTP)

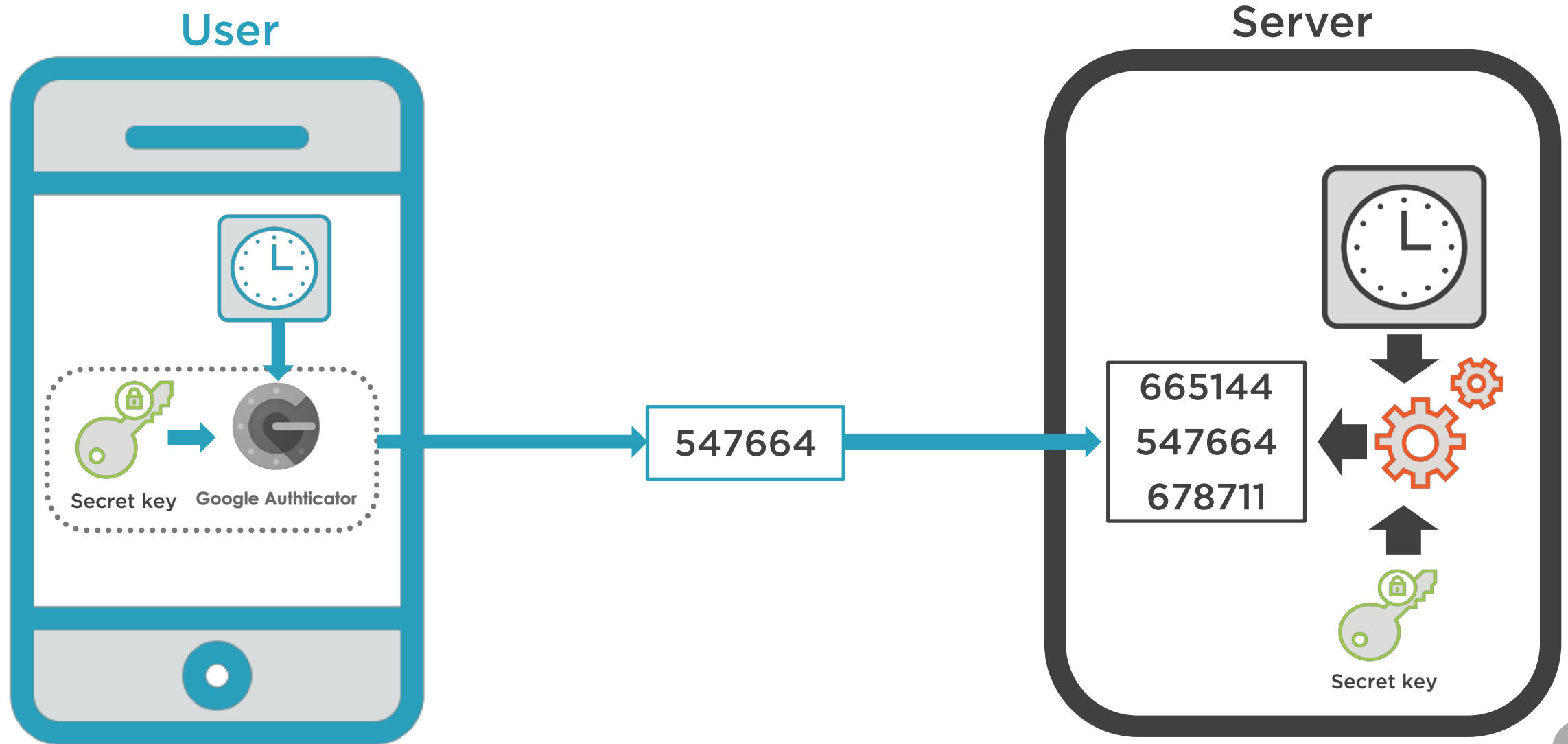
HMAC-based One-time Password Algorithm (HOTP)



Time-based One-time Password Algorithm



Time-based One-time Password Algorithm



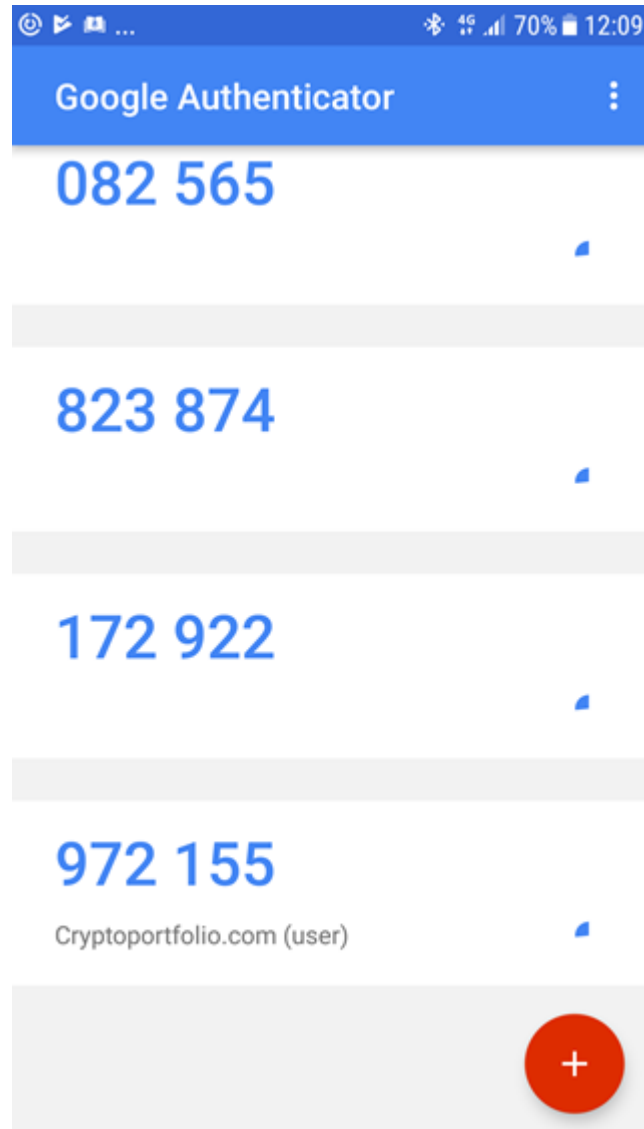
Demo



Two-factor authentication with Google Authenticator



Google Authenticator App



Sign-in to your portfolio

Sign in

[Create an account](#)



Roles and Authorities

ROLES



AUTHORITIES



Username

Password

Security pin

Sign in

☐ Remember me

[Create an account](#)



Summary



Spring Security events, creating a custom event and event listener to perform email verification of newly registered users

How to request additional evidence from your users like a pin

How to extend the UserDetails, Authentication token and AuthenticationProvider

Finally how to create a custom authentication filter to handle 2FA using Google Authenticator

