


AN INTRODUCTION TO AUTHENTICATION WITH OPENID CONNECT

- Konrad Müller
- Xamarin, ASP.NET Core, Cloud stuff

 @konmue

 krdmlr

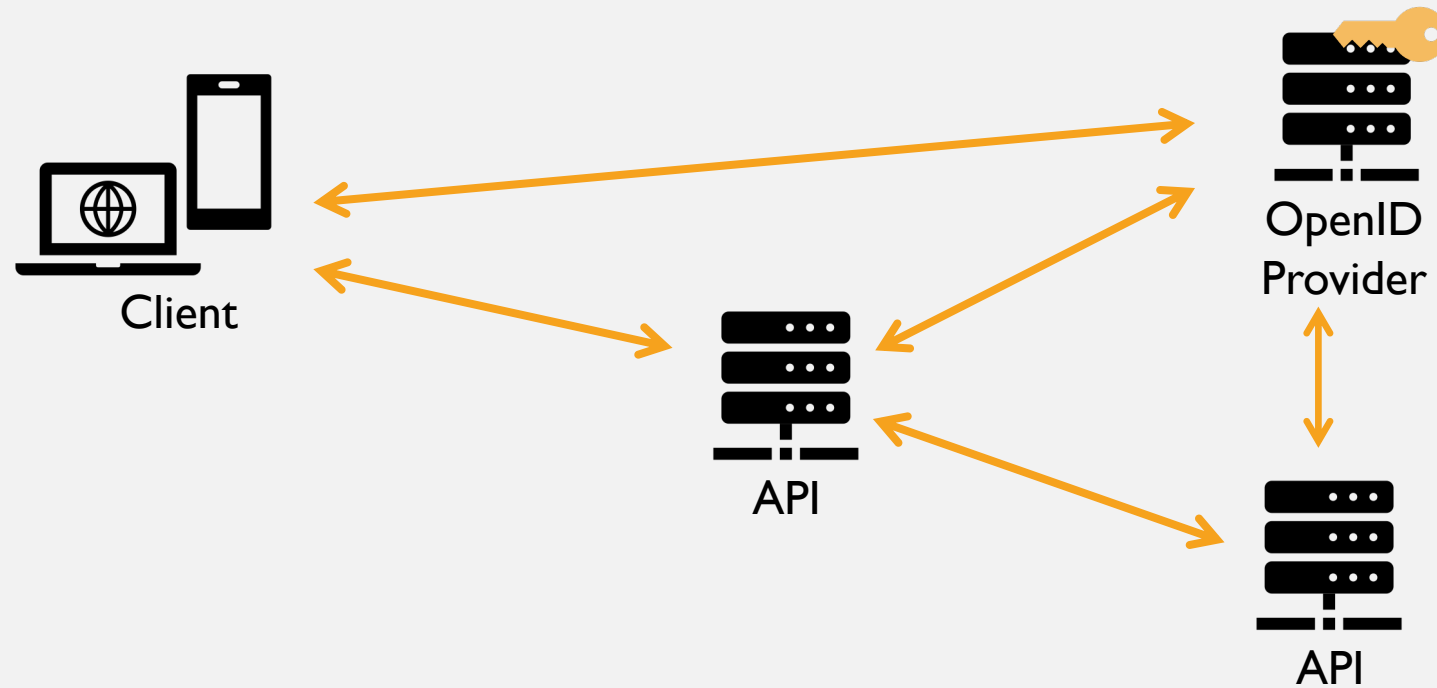


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- What is OpenID Connect and how does it work?
- How can I integrate it in my app and backend services?

A LITTLE OVERVIEW

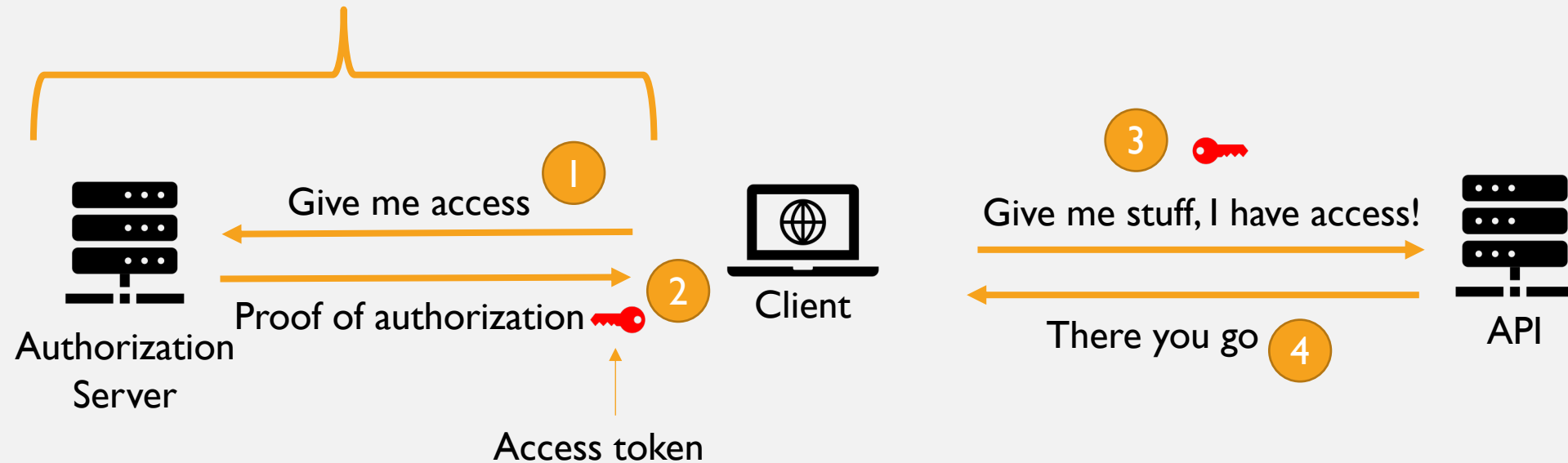
OPENID CONNECT IN YOUR SYSTEM



OAUTH 2 IN A NUTSHELL

- Standardized by IETF RFC 6749
- Authorizes resource access
- Goals:
 - Avoid sharing passwords
 - Limit access to resources
 - Ability to revoke access
- Single Sign-On ... kinda ...

Authorization Grant/Flow



→ You have no idea about the users identity

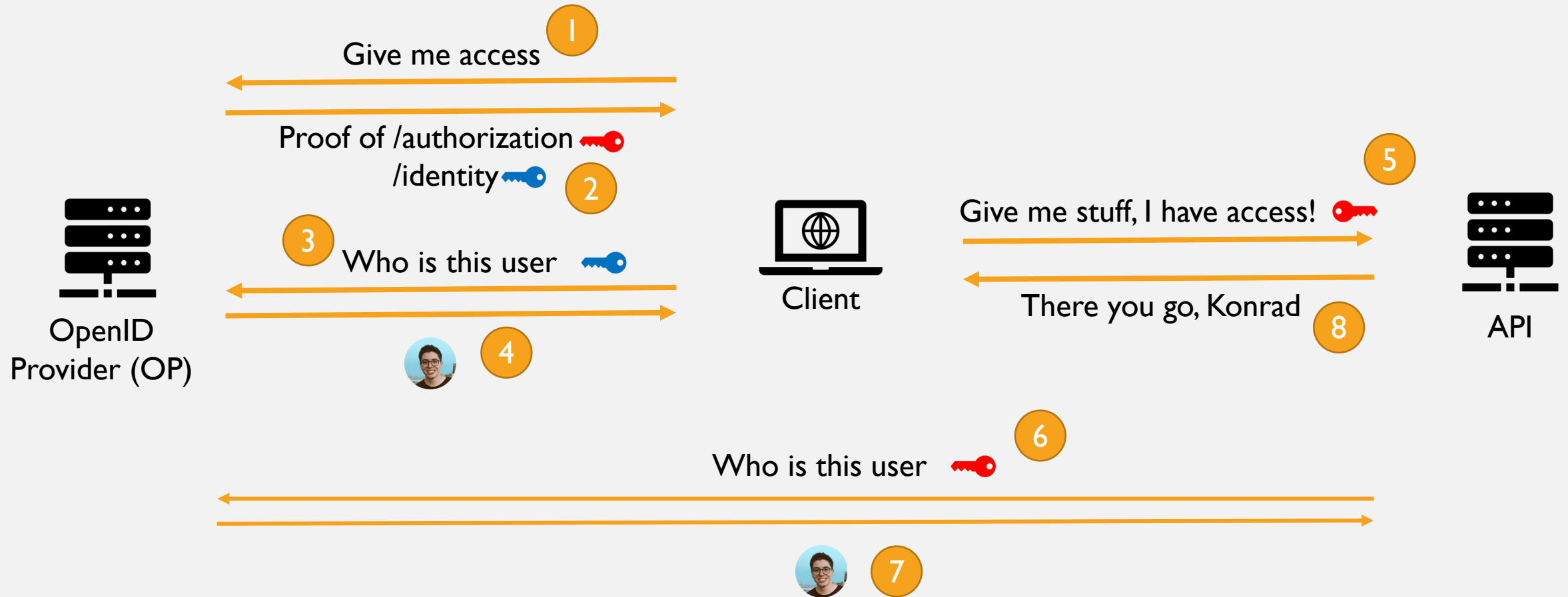
OPENID CONNECT TO THE RESCUE!

- Authentication layer on top of OAuth 2
 - Defines open specifications of Auth2
 - Identity information (Identity Token, User-Info endpoint)
 - Additional flows
- Centralized authentication and authorization
- Widely used and standardized by the OpenID foundation
- Single Sign-On!



🔑 Access Token

🔑 ID Token



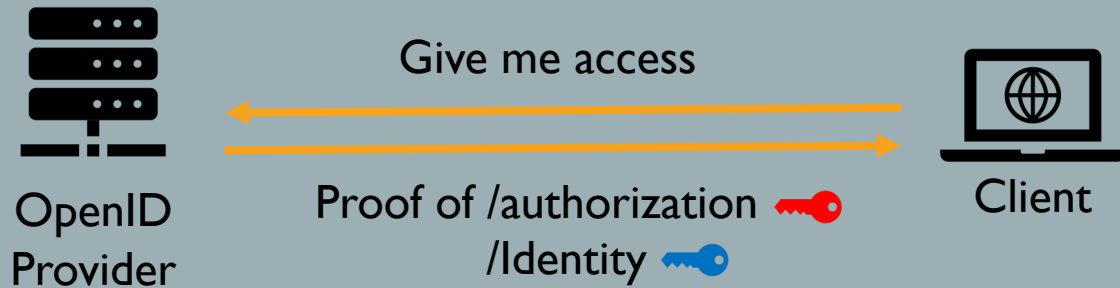
ABOUT TOKENS

- Json Web Token (JWT) Bearer Token
 - Meta
 - Body
 - Signature
- Base64 encoded

SCOPES

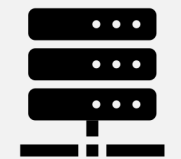
Specifies ...

1. Which resources can be accessed
2. Which information about the identity are available
 - Optional: Consent
 - Not all scopes must be granted
 - “openid” is required



FLows

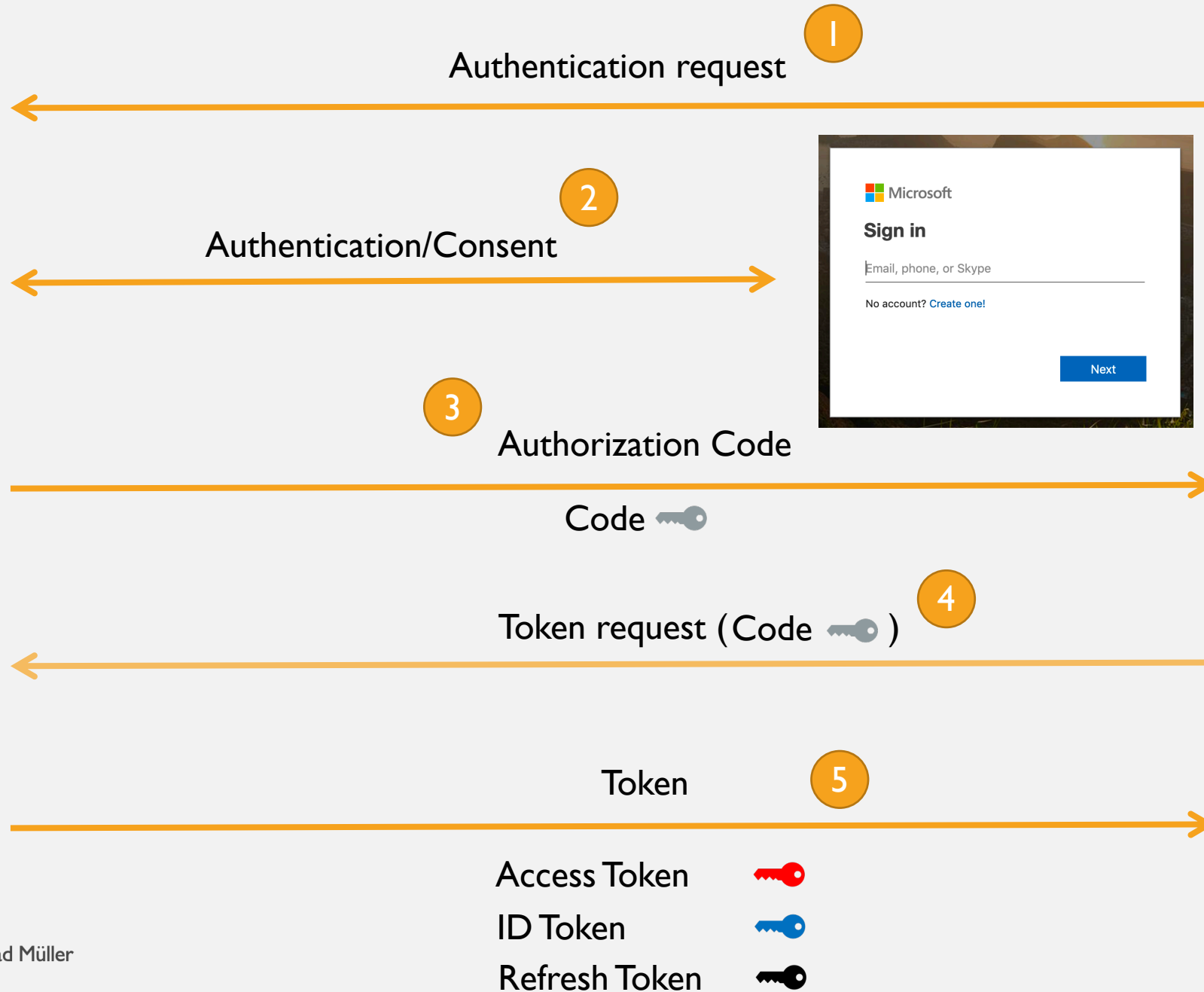
- Resource Owner Password (don't do that)
 - Client Credentials
 - Implicit (deprecated)
 - Authorization Code
 - Hybrid Flow
- } Interactive



OpenID
Provider



Client



WHY AN INTERACTIVE FLOW?

- Single Sign-On
- One trusted entity
- Consistent login experience
- Password leaks
- Safe storage

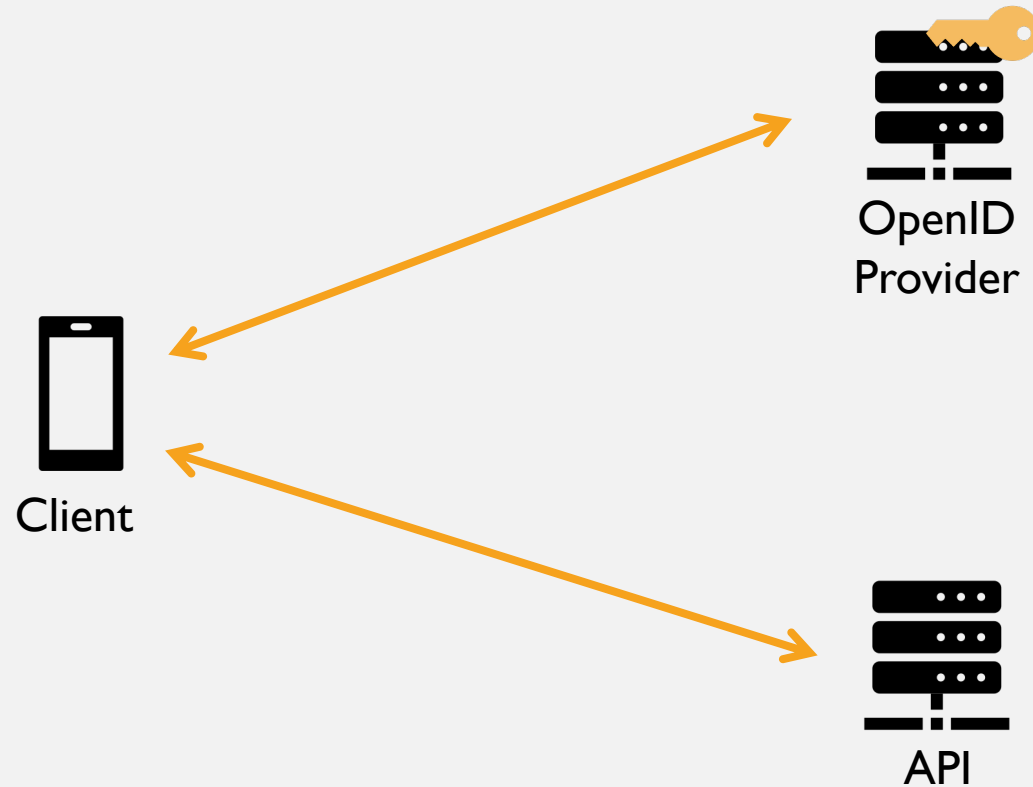
PROVIDERS, FRAMEWORKS, LIBRARIES

- Standard is widely supported
- Provider:
 - Microsoft, Google, Twitter, Facebook, GitHub, Apple
 - Auth0, Google Firebase, Azure AD B2C
 - Do it yourself: IdentityServer4 (.NET Core) and other certified provider frameworks
- Certified client and middleware libraries

IMPLEMENTING A MOBILE OIDC CLIENT WITH XAMARIN

OVERVIEW

- Identity Server 4 Demo
- Xamarin.Forms 4, iOS/Android with IdentityModel.Client library
- ASP.NET Core 3.0 API



SAMPLE TIME!

VISUAL STUDIO APP CENTER AUTH

VISUAL STUDIO APP CENTER AUTH

- OpenID provider build in Visual Studio App Center
- Easy to setup
- Support for Azure AD B2C - Auth0 and Firebase in the future
- SDK for Xamarin Android/iOS
- Preview

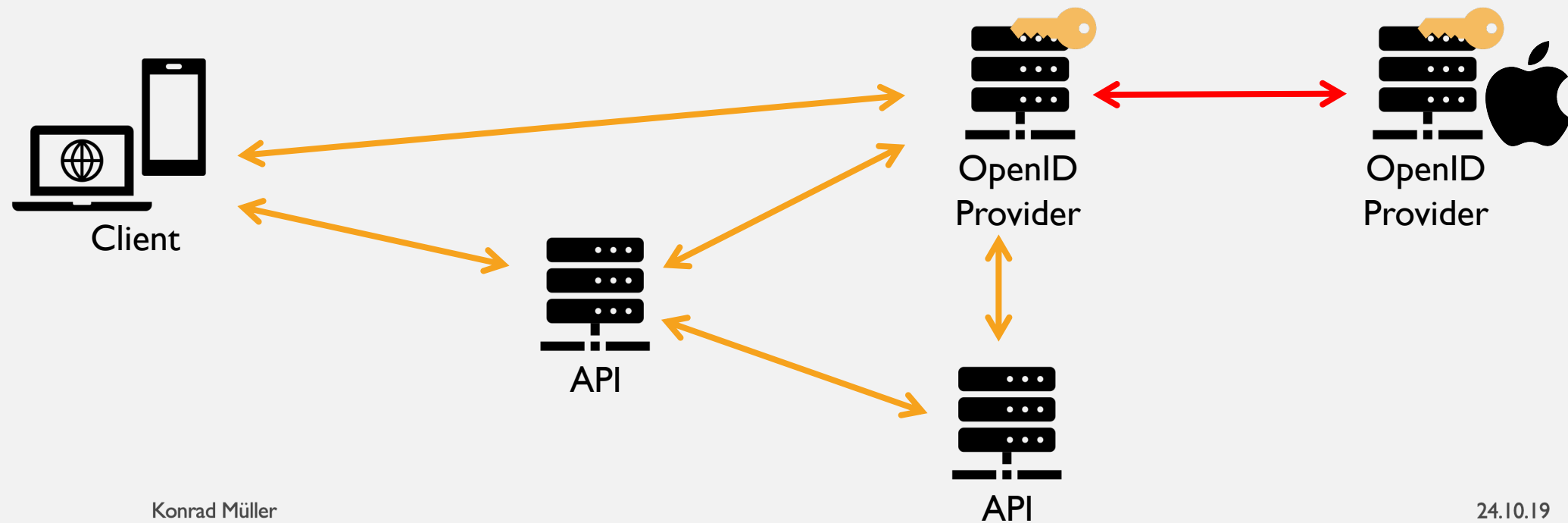
SIGN IN WITH APPLE



SIGN IN WITH APPLE


- Follows OpenID Connect standards – not fully compliant!
- Certificate based ...
- 2 Factor required
- Required for “social logins”
- ASP.NET Core middleware available
- Federation possible

FEDERATION?



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