

## Roles







### Flow



## Lots of Auth Server out there ...

Active Directory
Federation
Services

Identity Server
(.NET)

Redhat Keycloak
(Java)

Okta

Okta

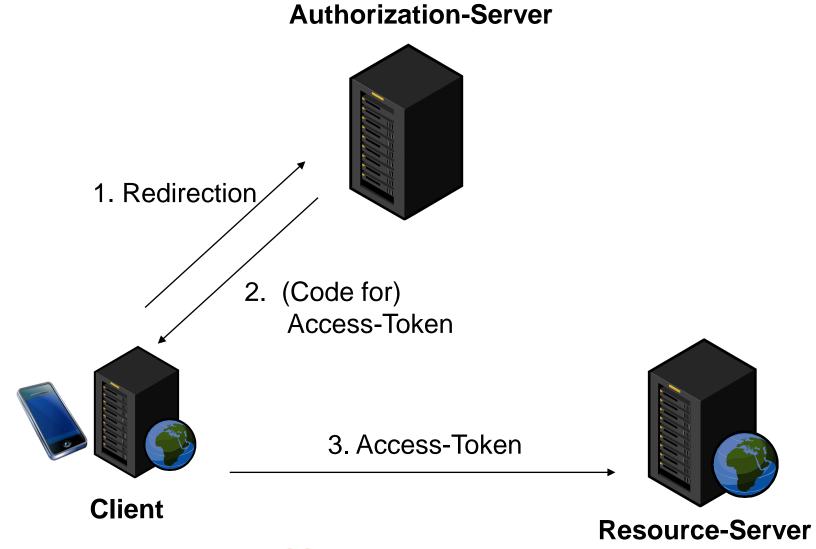
Azure Active
Directory

...

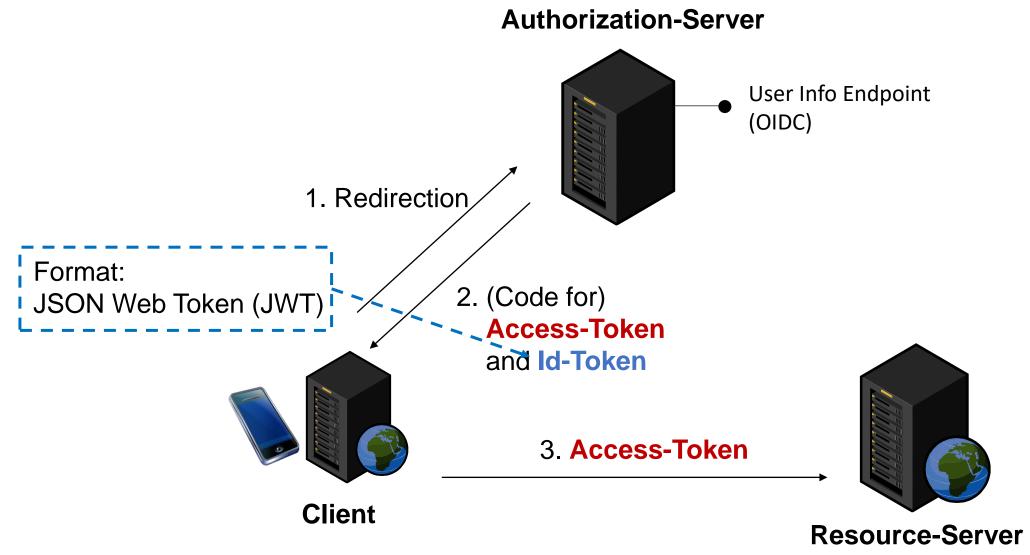


OAuth 2 and OpenId Connect

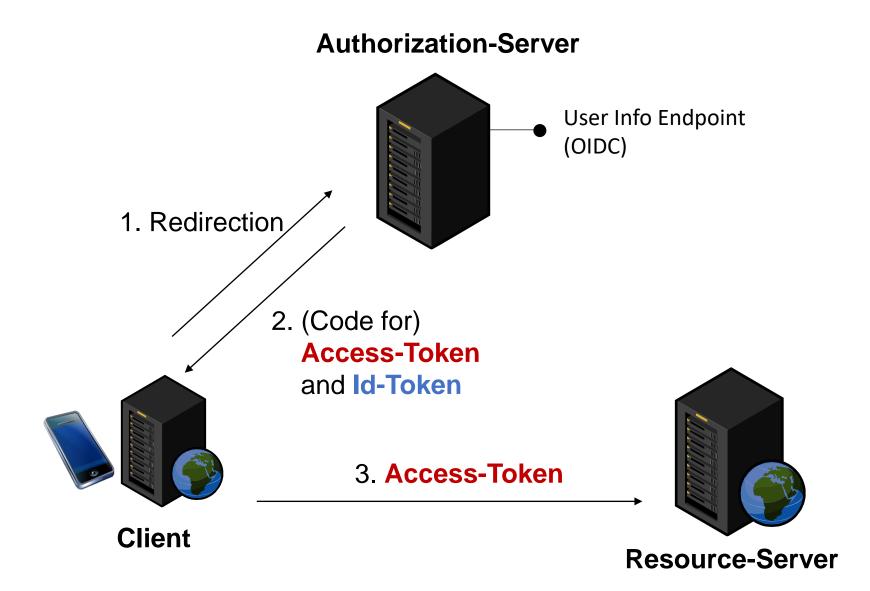
## OAuth2



# OpenId Connect

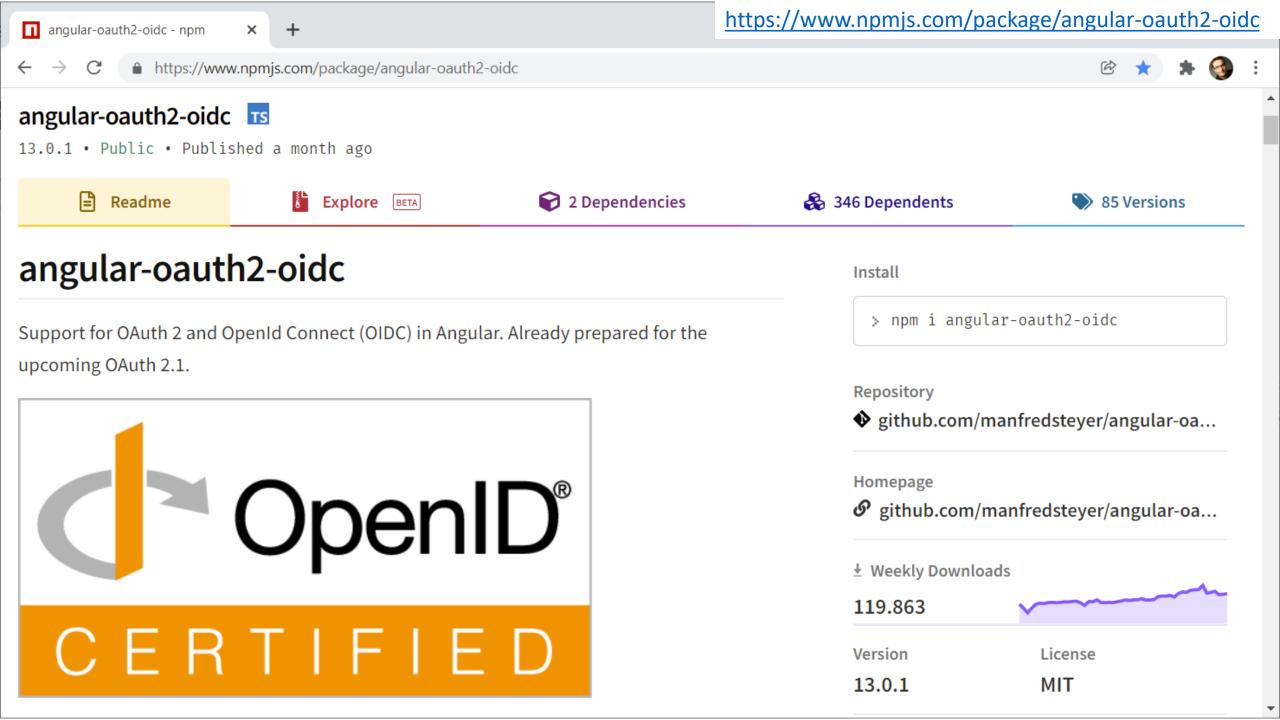


# OpenId Connect



## Flows for SPA

- Implicit Flow
  - originally for SPA,
  - Deprecated with OAuth 2.1
  - Tokens in URL
- Code Flow + PKCE
  - now recommented!



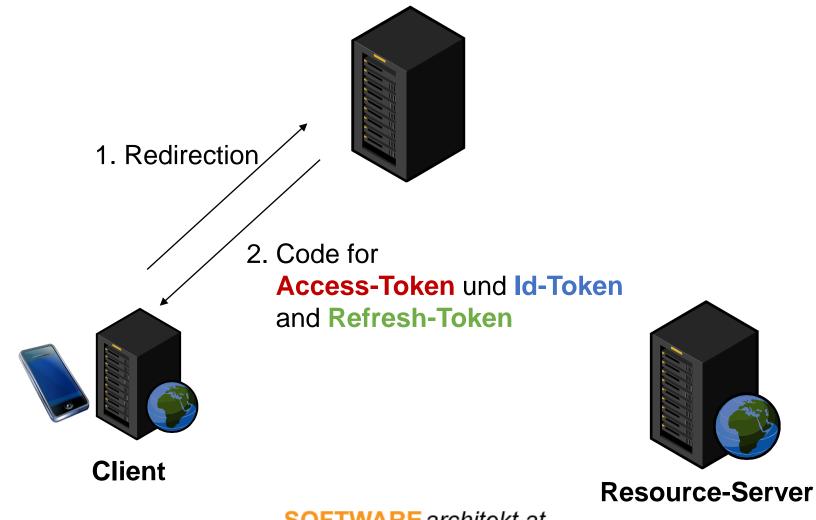


# Why Token Refresh?

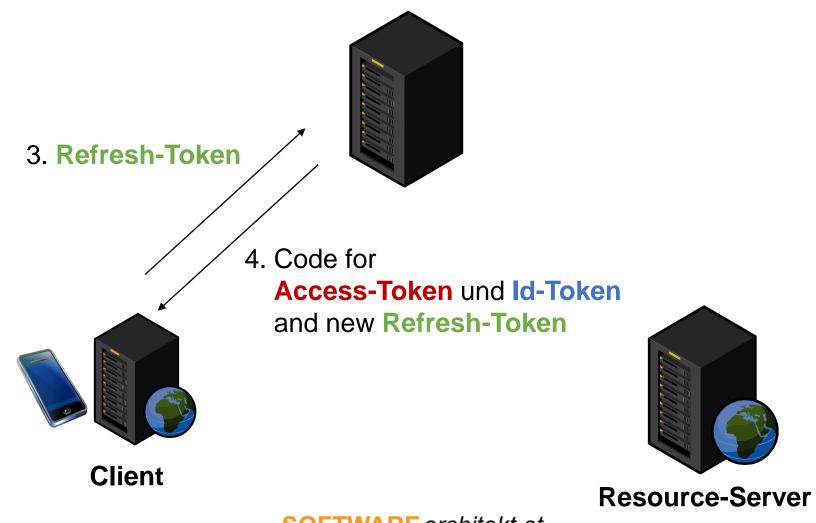
Short living Tokens increase Security

Users don't want to login over and over again

# Refresh Token (1)



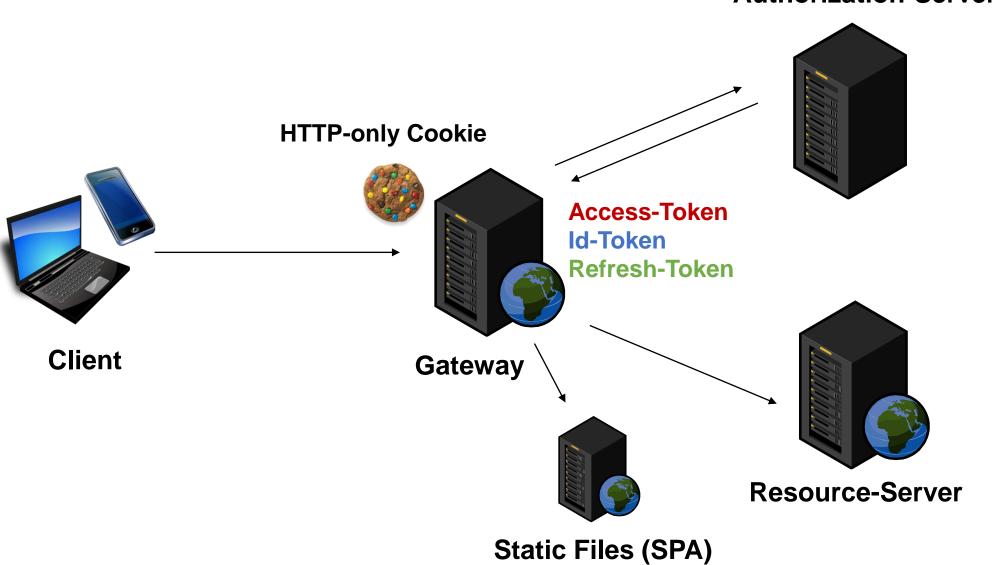
# Refresh Token (2)



### Refresh-Token and Browsers

- OAuth 2.0 Security Best Current Practice allows it under specific circumstances
- Security Audit (XSS!)
- Refresh Token needs to be one-time token
- After Refresh: Client gets new refresh token
- If used by several users: log out both

## "Backend for Frontend"



### Possible Solutions

Kong API Gateway Traefik API Gateway Amazon API Gateway

Azure API Management

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### Demo

- SPA: https://purple-flower-021fa1b03.azurestaticapps.net/home
- SPA behind Security Gateway: <a href="https://demo-auth-gateway.azurewebsites.net/home">https://demo-auth-gateway.azurewebsites.net/home</a>
- Source Code for Gateway: https://github.com/manfredsteyer/yarp-auth-proxy
- Source Code for Auth in SPA: https://github.com/manfredsteyer/auth-gateway-client/

### Conclusion

Token:
Flexibility,
Cross Origin ...

OAuth 2: Access to Service OpenId
Connect:
SSO at Client

Implicit Flow

Code Flow + PKCE