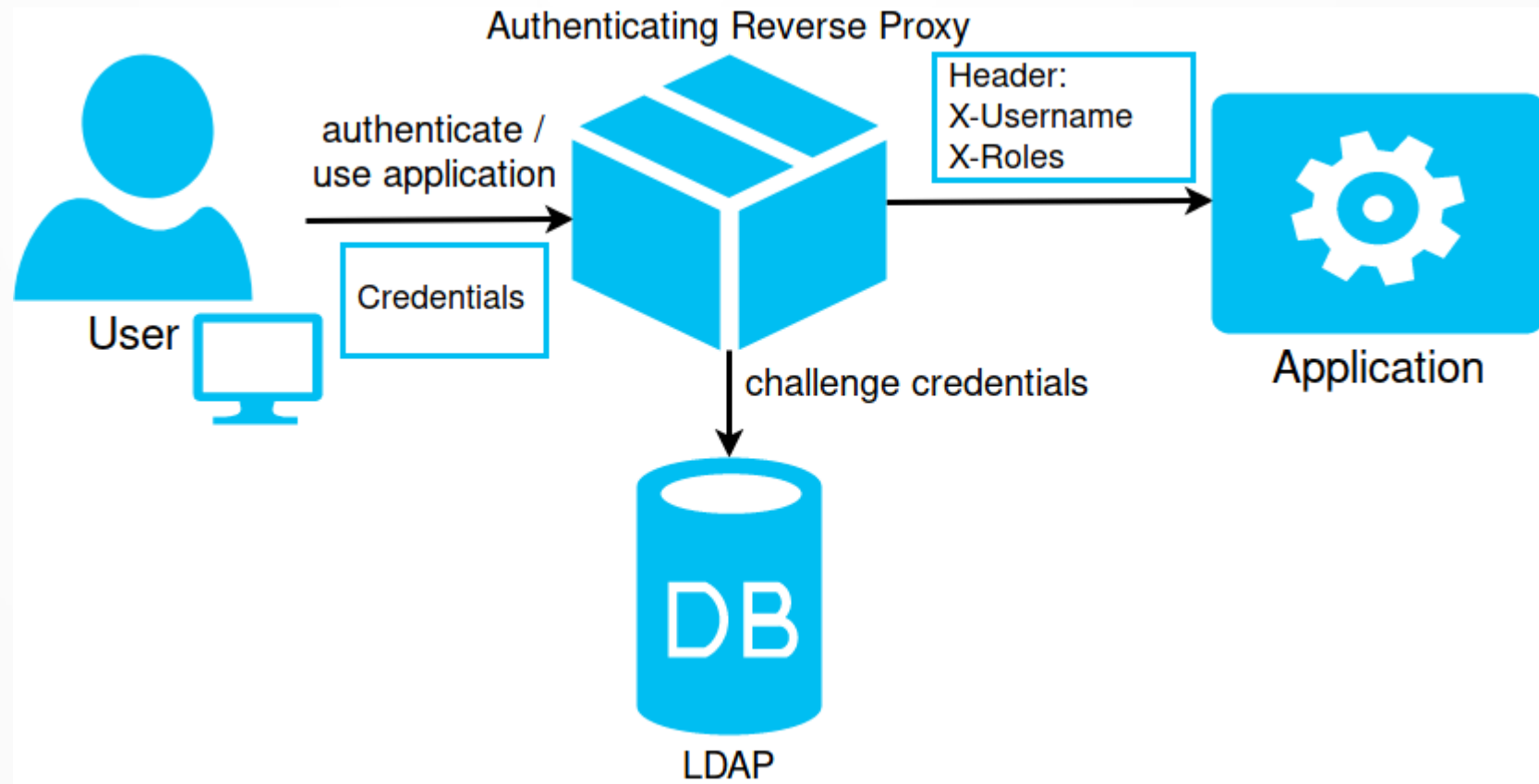


Authentication using OpenID Connect

Benni Boortz
at 35C3 Lighting Talk

Web Authentication Nowadays

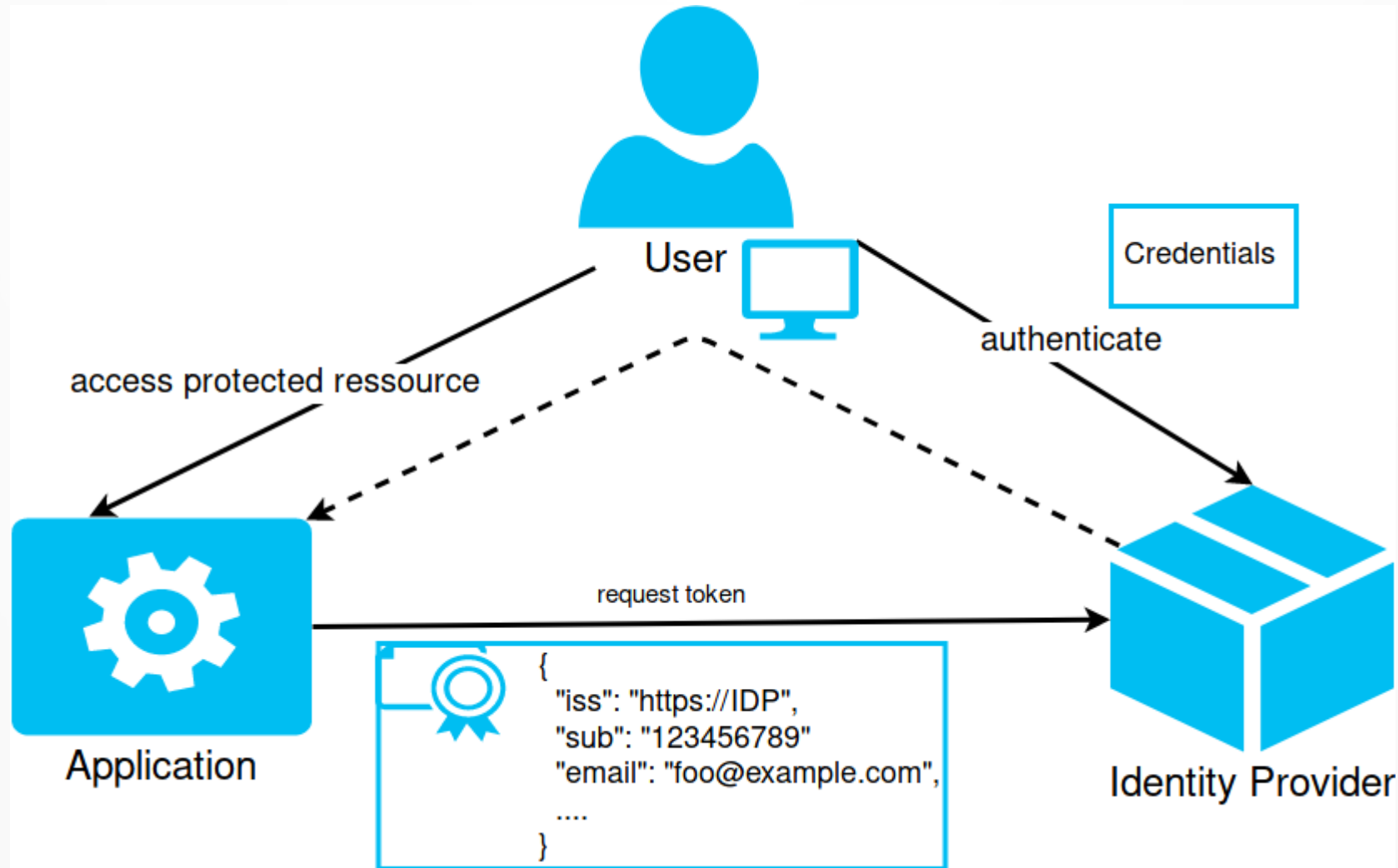


- Tight coupling between application and reverse proxy
- Developer must have knowledge about your authentication infrastructure like LDAPs

What is OpenID Connect?

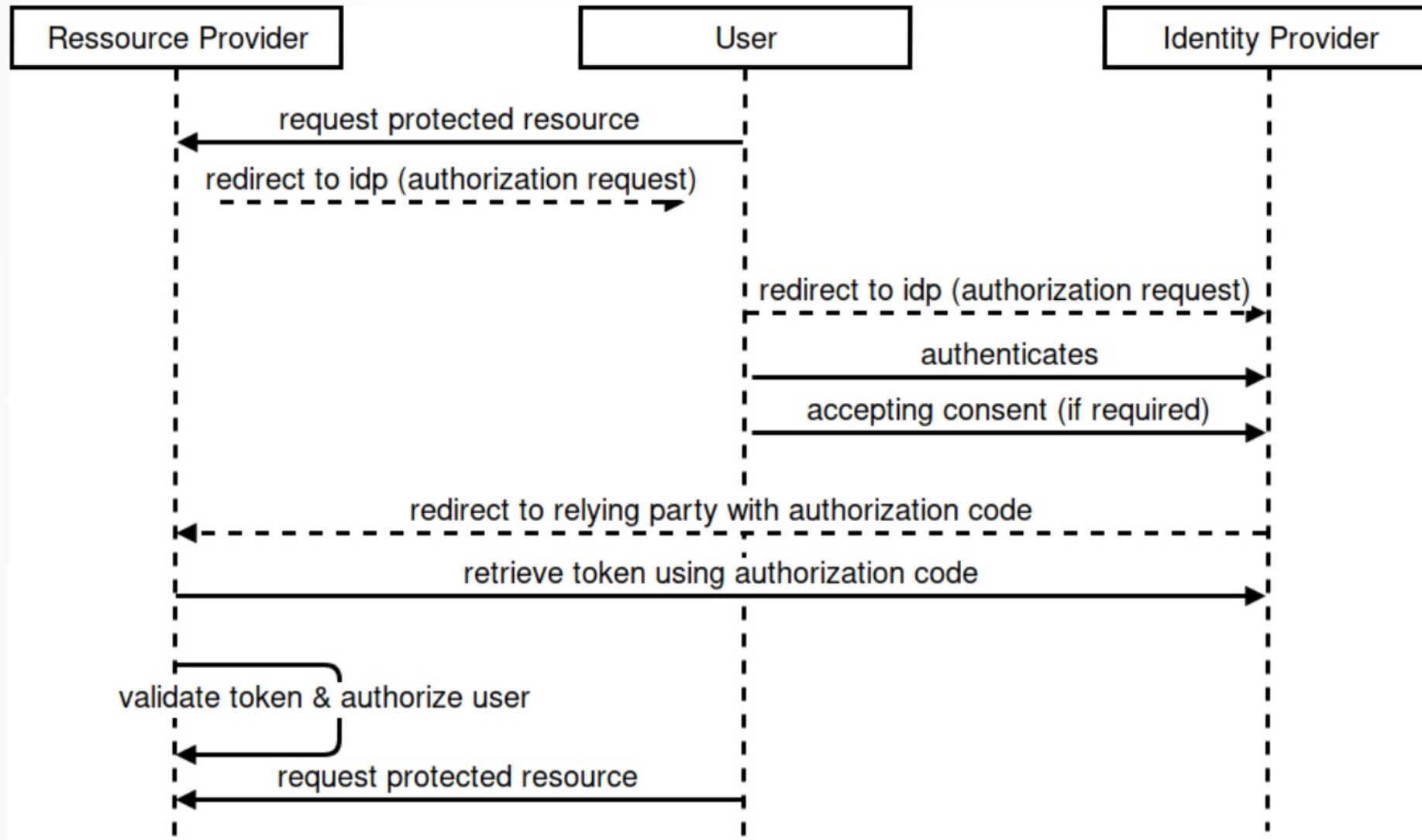
- authorization framework based on OAuth2 and JWT
 - using REST/JSON flows
 - providing a secure way to identify users with signed tokens
 - abbreviated with OIDC
 - specified: <https://openid.net/specs/>

How does it work?



How does it work?

The OIDC authorization code flow:



How does a token look like?

```
eyJhbGciOiJIUzI1NiIsInR5cCI6IkpXVCJ9.  
eyJzdWUiOiIxMjM0NTY3ODkwIiwiaWF0IjoxNTE2MzkwMjQ.  
SI6IkpvaG4gRG9lIiwiaWF0IjoxNTE2MzkwMjQ.  
5MDIyfQ.SfIKxwRJSMeKKF2QT4fwpMeJf  
36POk6yJV_adQssw5c
```

The tokens will be transmitted in HTTP headers. Web applications are able to process them as a JSON object

Base64 decode

You can use tools to decode the JWT

- <https://github.com/jpadilla/pyjwt>
- <https://jwt.io/>

```
{  
  "iss": "https://idp.url",  
  "azp": "yourclient.com",  
  "aud": "yourclient.com",  
  "sub": "123456778",  
  "email": "you@example.com",  
  "email_verified": true,  
  ...  
}
```

Why do you need it?

OIDC is

- mobile friendly
- simple to integrate into web applications
- offering an userinfo service
- providing consent for application users
- supporting developer creating application without knowing application users credentials

How to use it?

- On Server Side you need an identity provider
 - <https://www.keycloak.org>
 - <https://github.com/dexidp/dex>
 - <https://github.com/ory/hydra>

How to use it?

- On Client Side use client libraries like
 - <https://github.com/coreos/go-oidc>
 - <https://github.com/rohe/pyoidc>
 - <https://github.com/jaredhanson/passport>
- Or use reverse proxies like
 - <https://github.com/BTBurke/caddy-jwt>
 - <https://github.com/keycloak/keycloak-gatekeeper>

Thanks

- Try it online using a simple test application (it is using Google as an IDP)

<https://go-oidc-testapp.appspot.com>



- Or checkout the source:

<https://github.com/bboortz/go-oidc-testapp>