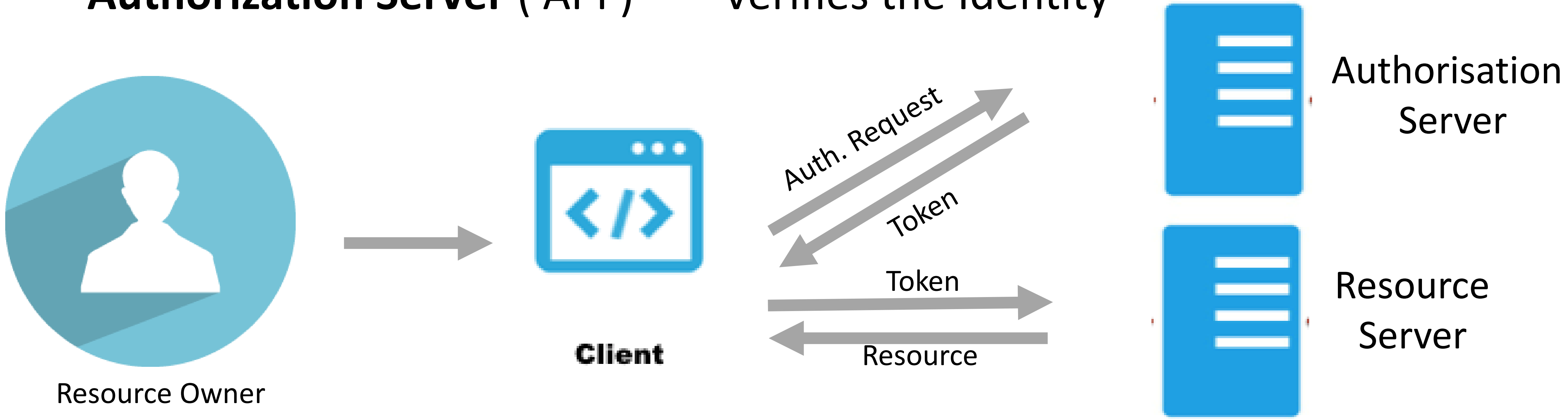
OUATH 2 Introduction

- Roles
- Grant Types
- Flows
- Demo

OAuth Roles

- **Resource Owner** (User)
- **Client** (Application that wants to access user account)
- **Resource Server** (API) Hosts User Accounts
- **Authorization Server** (API) Verifies the Identity

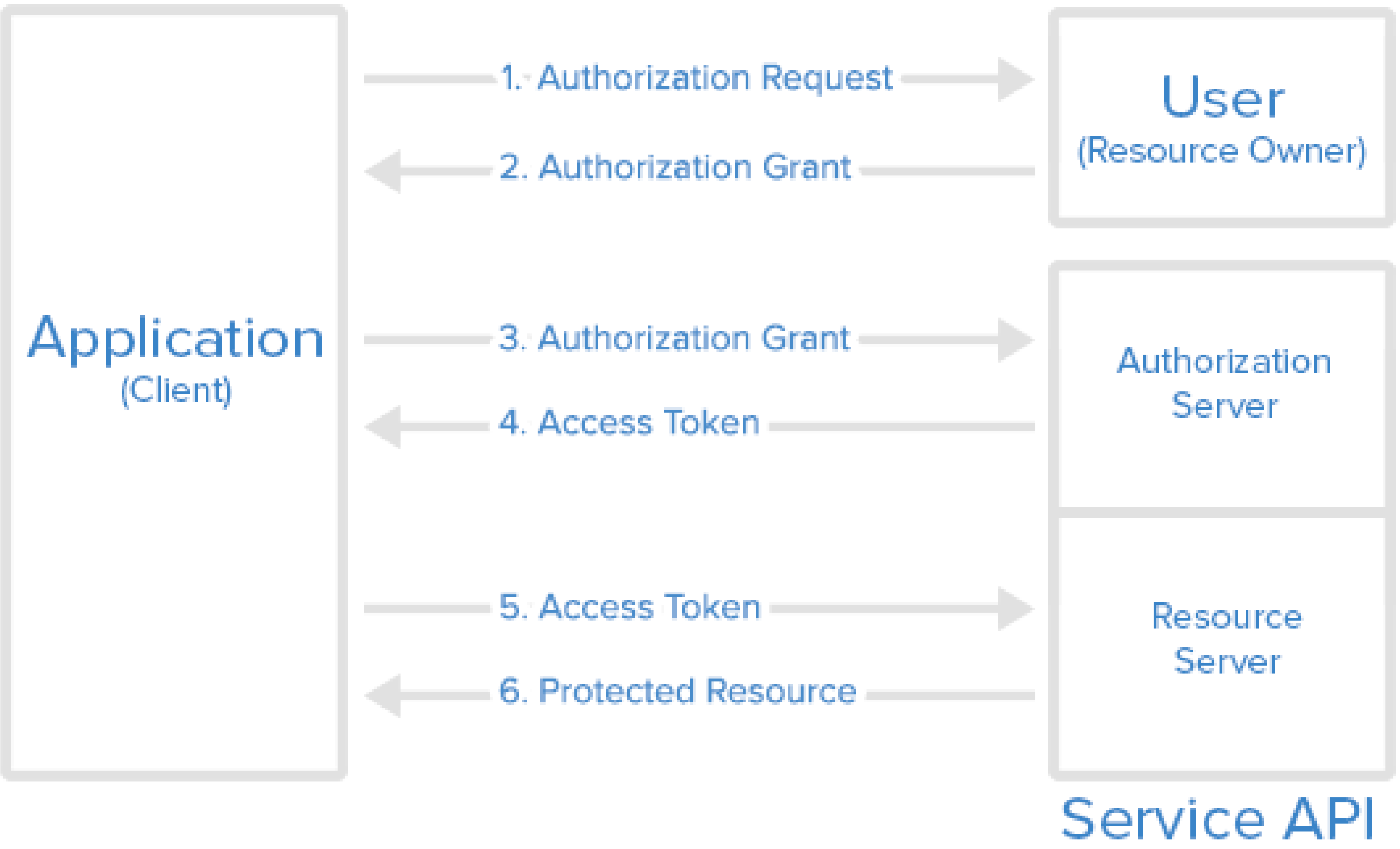


Authorization Grant

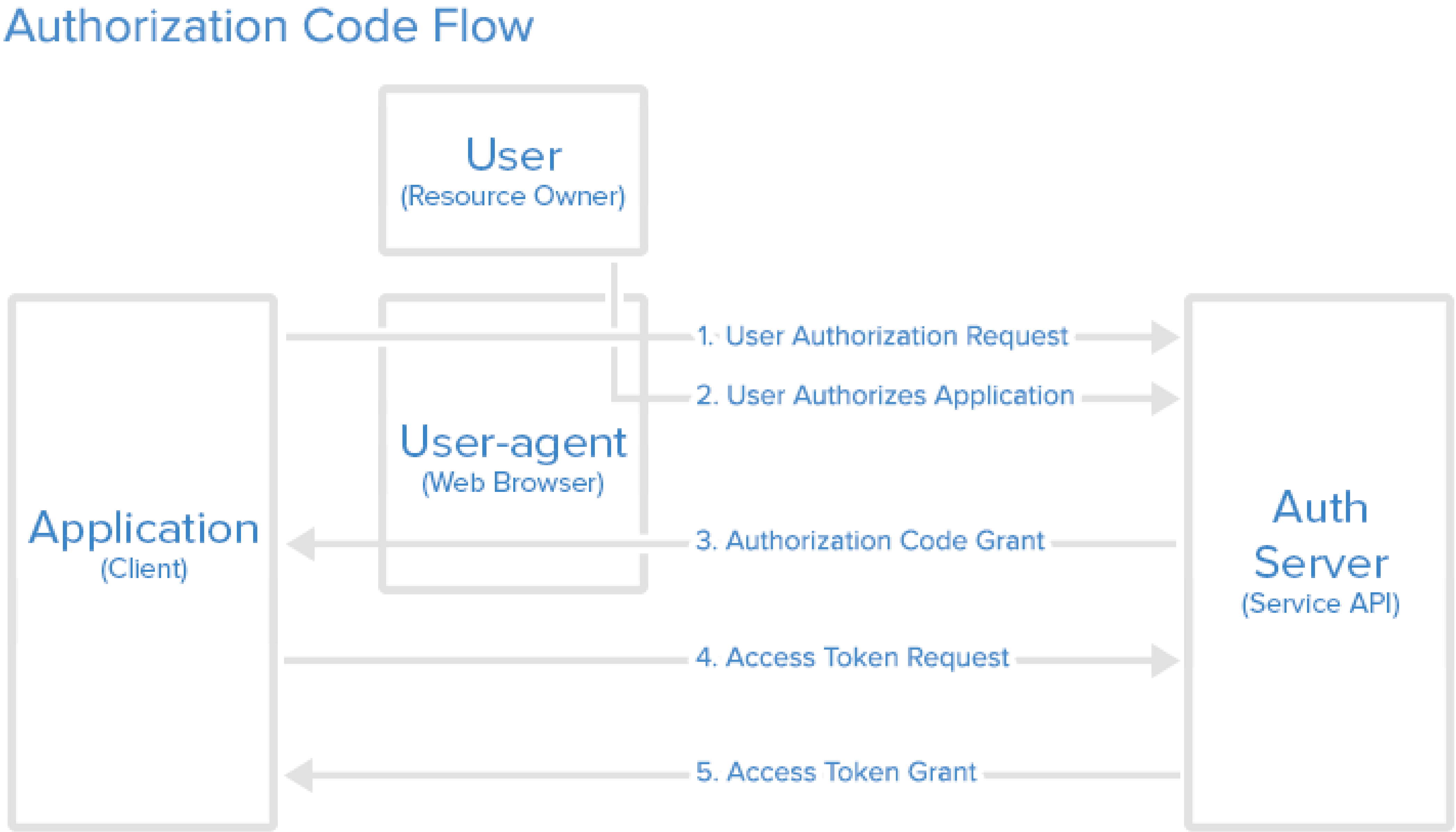
- **1. Authorization Code**: used with server-side Applications
- **2. Implicit**: used with Mobile Apps or Web Applications (applications that run on the user's device)
- **3. Resource Owner Password Credentials**: used with trusted Applications, such as those owned by the service itself
- **4. Client Credentials**: used with Applications API access, example use case, changing application settings (authorization based on with client_id, client_secret)
- **5. Refresh token grant**: used to obtain an access token with a refresh token

General Overview

Abstract Protocol Flow



1. Authorisation Code Grant Type



1. Authorisation Code Grant Type

- 1. Applciation requests AUTHORISATION_CODE

https://cloud.digitalocean.com/v1/oauth/authorize?response_type=code&client_id=CLIENT_ID&redirect_uri=CALLBACK_URL&scope=read

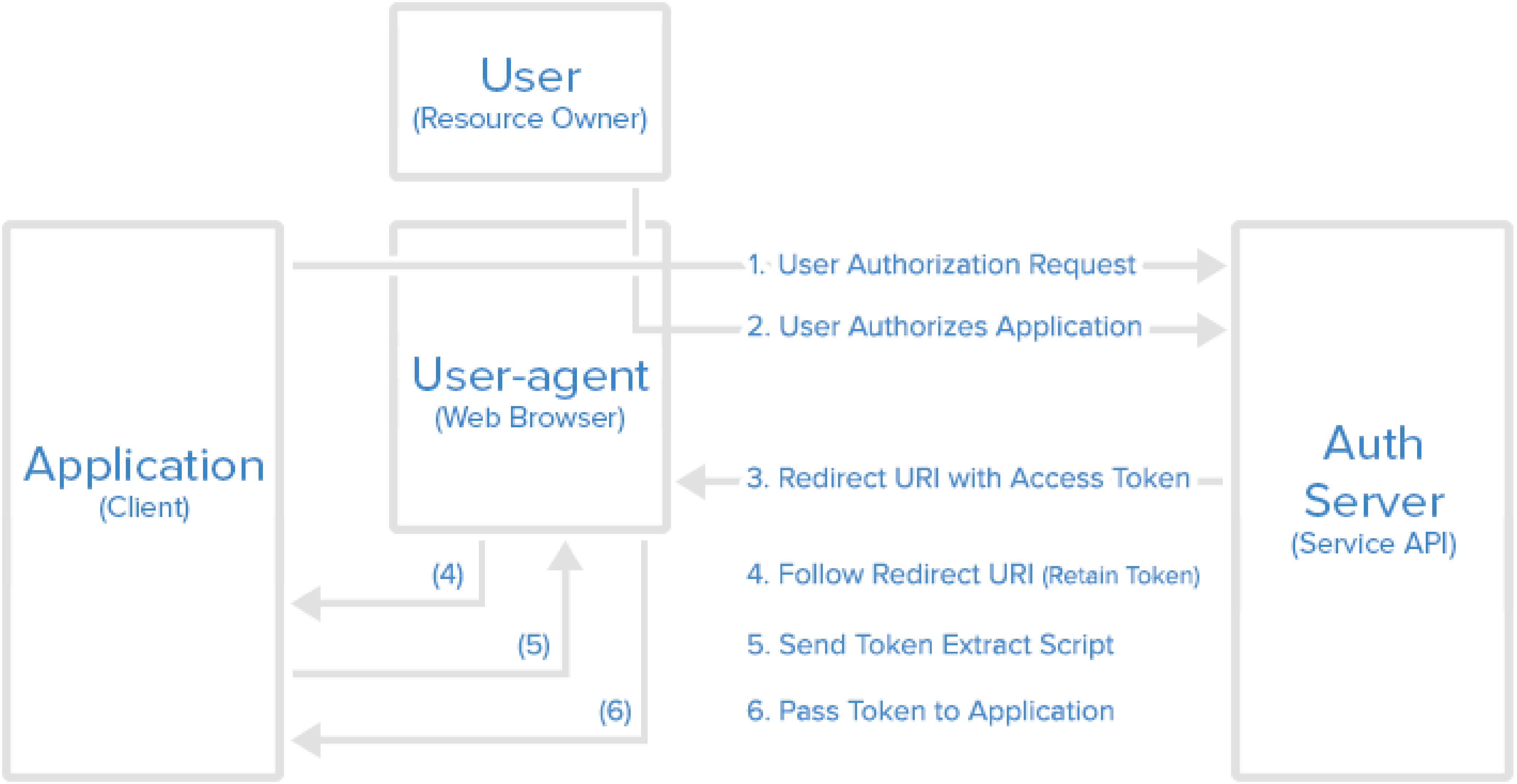
- 2. User authorizes
- 3. Application receives AUTHORISATION_CODE
  https://dropletbook.com/callback?code=AUTHORIZATION_CODE
- 4. Applciation requests ACCESS_TOKEN

https://cloud.digitalocean.com/v1/oauth/token?client_id=CLIENT_ID&client_secret=CLIENT_SECRET&grant_type=authorization_code&code=AUTHORIZATION_CODE&redirect_uri=CALLBACK_URL

- 5. Application receives ACCESS _ TOKEN

2. Implicit Grant Type

Implicit Flow



1. User Authorization Request
2. User Authorizes Application
3. Redirect URI with Access Token
4. Follow Redirect URI (Retain Token)
5. Send Token Extract Script
6. Pass Token to Application

2. Implicit Grant Type

1. Applciation requests authorisation

https://cloud.digitalocean.com/v1/oauth/authorize?response_type=token&client_id=CLIENT_ID&redirect_uri=CALLBACK_URL&scope=read

2. **User Authorizes Application**

- **Step 3: User-agent Receives Access Token with Redirect URI**

https://dropletbook.com/callback#token=ACCESS_TOKEN

- **Step 4: User-agent Follows the Redirect URI**
- **Step 5: Application Sends Access Token Extraction Script**
- **Step 6: Access Token Passed to Application**

3. Grant Type: Resource Owner Password Credentials

1. Requesting a Token Based on User Credentials

https://oauth.example.com/token?grant_type=password&username=USERNAME
&password=PASSWORD&client_id=CLIENT_ID

4. Grant Type: Client Credentials

1. Requesting Token Based on Application Credentials

https://oauth.example.com/token?grant_type=client_credentials&client_id=CLIENT_ID&client_secret=CLIENT_SECRET

5. Grant Type: Refresh Token

1. Requesting Token Based on a Refresh Token

https://cloud.digitalocean.com/v1/oauth/token?grant_type=refresh_token&client_id=CLIENT_ID&client_secret=CLIENT_SECRET&refresh_token=REFRESH_TOKEN

Demo

http://www.aademo.tk

Thank You!

- Resources used:
  - https://www.digitalocean.com/community/tutorials/an-introduction-to-oauth-2
  - https://dzone.com/articles/oauth2-implicit-grant-flow-example-using-facebook
  - https://developers.facebook.com/docs/php/howto/example_retrieve_user_profile
  - https://developers.facebook.com/docs/facebook-login/access-tokens