Authorization

Overview

What is Authorization?

JSON Web Tokens

Authorization

WHAT IS AUTHORIZATION?

"Authorization is the function of specifying access rights/privileges to resources. More formally, to authorize is to define an access policy."

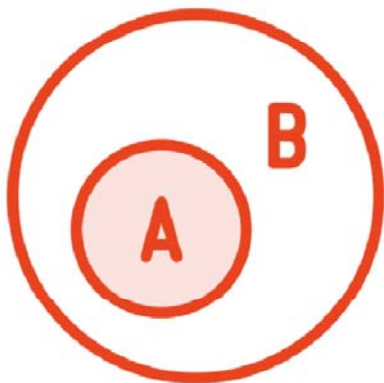Authorization - Wikipedia

What is Authorization?

- A compliment to authentication
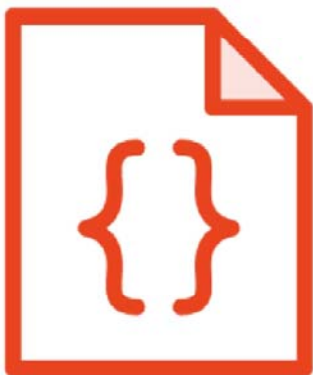- Determines what the user can and cannot do

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Authorization Types

1. Access Control Lists
2. Role-based Access Control
3. JSON Web Tokens

JSON Web Tokens

JWTs

Composed of three parts:

– A header

– A payload

– A signature

JWT Example

eyJ0eXAiOiJKV1QiLCJhbGciOiJIUzl1NiJ9.eyJpc3MiOiJodHRwczpcL1wvbG9jYWxkb21ha W4uZGV2IiwiYXVkIjoiaHR0cHM6XC9cL2xvY2FsZG9tYWluLmRldiIsImlhdCI6MTYwMTU4MDc wOSwibmJmIjoxNjAxNTgwNzY5LCJzdWIiOiJhZG1pbiJ9.qvVcdbKmmXJxEqz4xbrAcOT2KbAt Bi3GQbfexL713eM

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eyJ0eXAiOiJKV1QiLCJhbGciOiJIUzl1NiJ9.eyJpc3MiOiJodHRwczpcL1wvbG9jYWxkb21ha W4uZGV2IiwiYXVkIjoiaHR0cHM6XC9cL2xvY2FsZG9tYWluLmRldiIsImlhdCI6MTYwMTU4MDc wOSwibmJmIjoxNjAxNTgwNzY5LCJzdWIiOiJhZG1pbiJ9.qvVcdbKmmXJxEqz4xbrAcOT2KbAt Bi3GQbfexL713eM

JSON Web Tokens

Composed of three parts:

1. A header

eyJ0eXAiOiJKV1QiLCJhbGciOiJIUzI1NiJ9.eyJpc3MiOiJodHRwczpcL1wvbG9jYWxkb21ha
W4uZGV2IiwiYXVkIjoiaHR0cHM6XC9cL2xvY2FsZG9tYWluLmRldiIsImlhdCI6MTYwMTU4MDc
wOSwibmJmIjoxNjAxNTgwNzY5LCJzdWIiOiJhZG1pbiJ9.qvVcdbKmmXJxEqz4xbrAcOT2KbAt
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JSON Web Tokens

Composed of three parts:

1. A header

2. A payload

---

eyJ0eXAiOiJKV1QiLCJhbGciOiJIUzI1NiJ9.eyJpc3MiOiJodHRwczpcL1wvbG9jYWxkb21ha
W4uZGV2IiwiYXVkIjoiaHR0cHM6XC9cL2xvY2FsZG9tYWluLmRldiIsImlhdCI6MTYwMTU4MDc
wOSwibmJmIjoxNjAxNTgwNzY5LCJzdWIiOiJhZG1pbiJ9.qvVcdbKmmXJxEqz4xbrAcOT2KbAt
Bi3GQbfexL713eM

JSON Web Tokens

Composed of three parts:

1. A header

2. A payload

3. A signature

```
{
    "alg":  "HS256",
    "typ":  "JWT"
}
```

The JWT Header

Consists of two parts:

- The signing algorithm

- The token's type

```
{
    "iss":  "settermjd",
    "sub":  "login",
    "nbf":  1601296828,
    "exp":  1602592985,
    "name":  "Tammy  Green",
    "nickname":  "Tam",
    "address": "210  Queen  St,  Brisbane,  Queensland,  Australia,  4006",
    "updated_at":  1600951534
}
```

The JWT Payload

- A JSON string containing "claims", which are:

   · Statements about an entity

   · Additional data

Registered Claims

Claim	Description
aud	This determines who the JWT is intended for
exp	This determines when the JWT expires
iat	This determines when the JWT was issued
iss	This determines who issued a JWT
jti	This is the JWT's unique id
nbf	This determines the date/time before which the JWT cannot be accepted or is not valid.
sub	This determines the subject of a JWT

The JWT Signature

A combination of:

– The JWT header

– The JWT payload

– A secret value

Summary

What is Authorization?

JSON Web Tokens