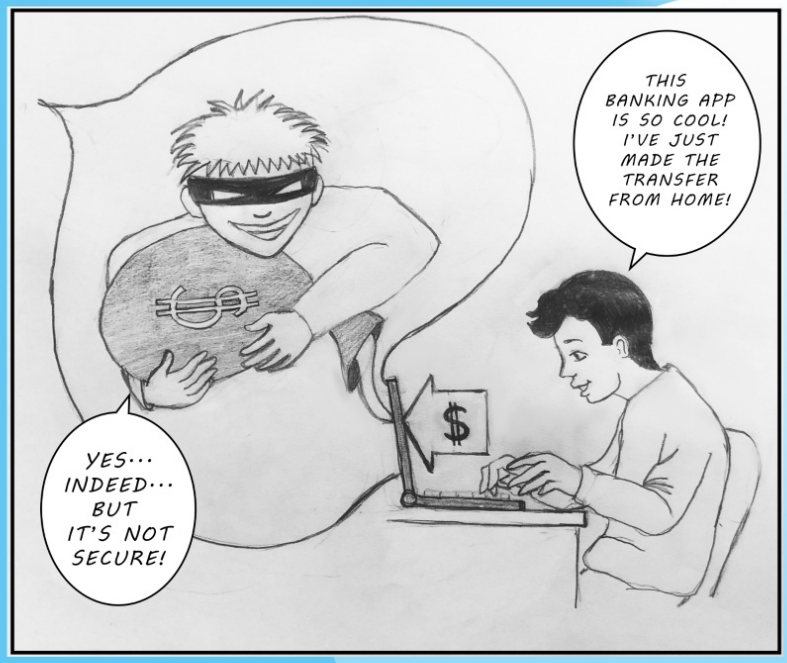

endava
How
Security
Hands-on
OAuth 2
Using OAuth 2
With Spring Security
A Masterclass
SLI.DO #32413



- cross-site request forgery
- session fixation
- injection
- broken authentication
- broken authorization
- unsecured data storage
- unsecured data transition

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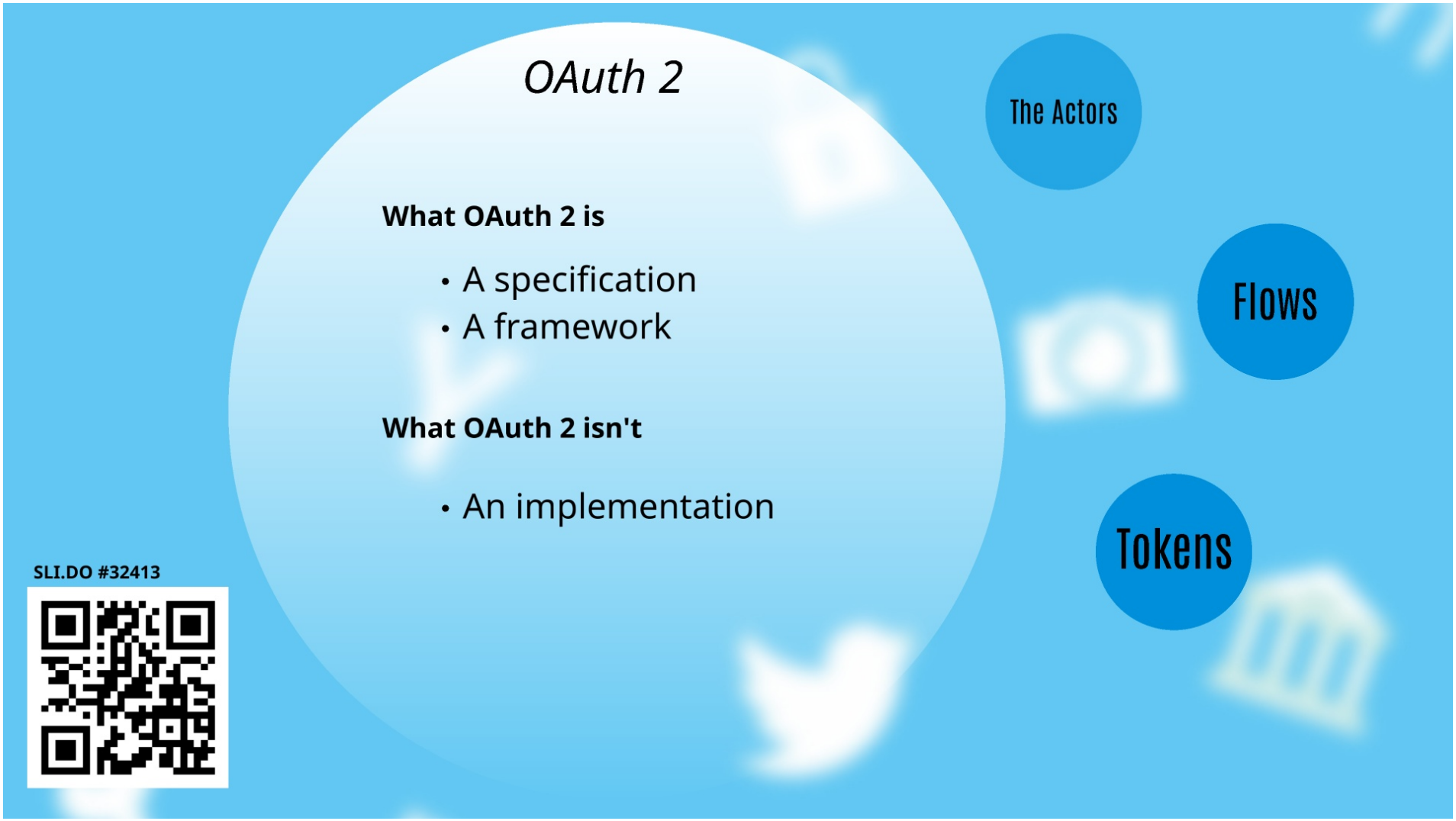
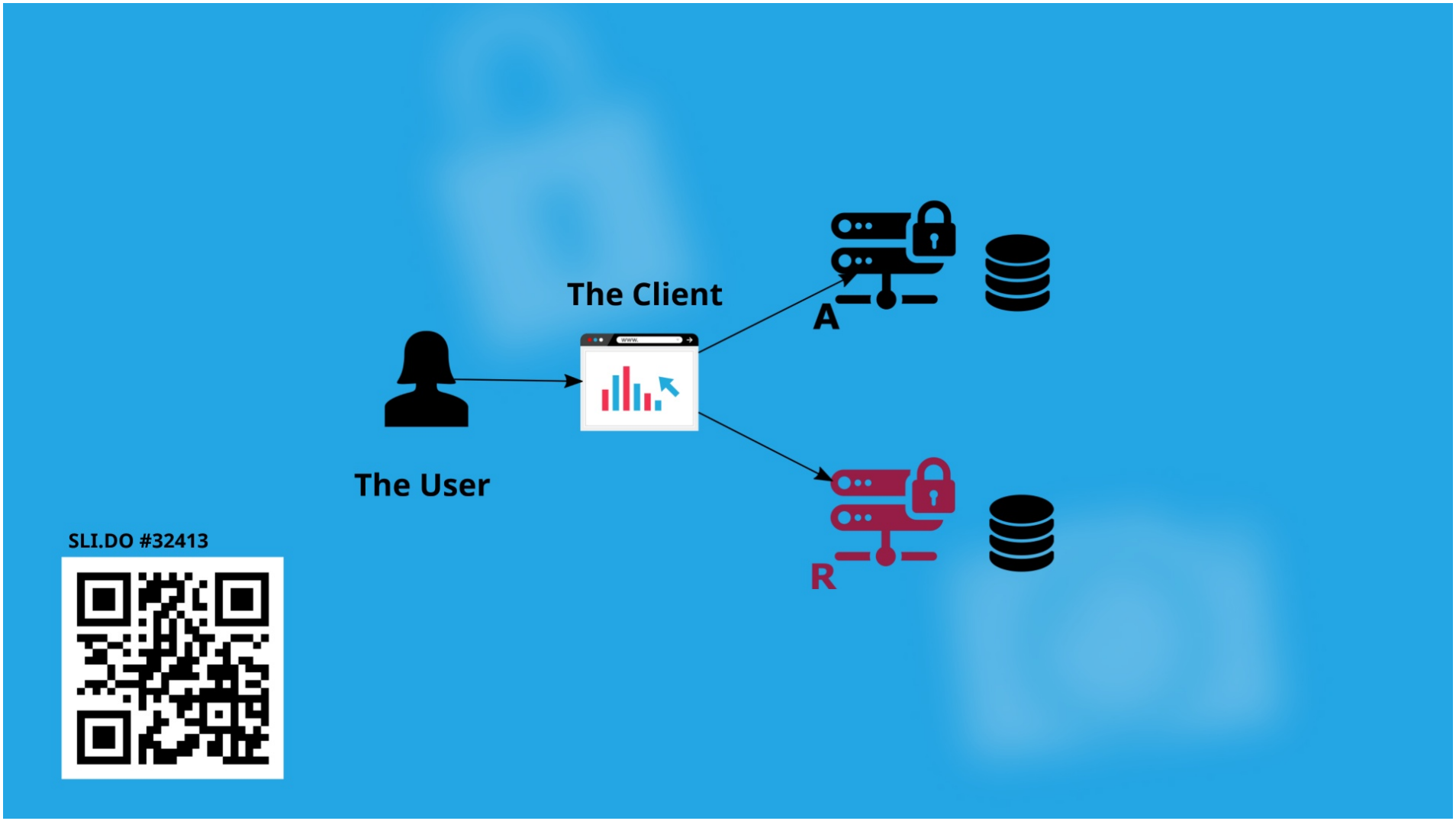

OAuth 2
What OAuth 2 is
• A specification
• A framework
What OAuth 2 isn't
• An implementation
SLI.DO #32413
The Actors
Flows
Tokens


A
R
SLI.DO #32413


The Client
A
The User
R
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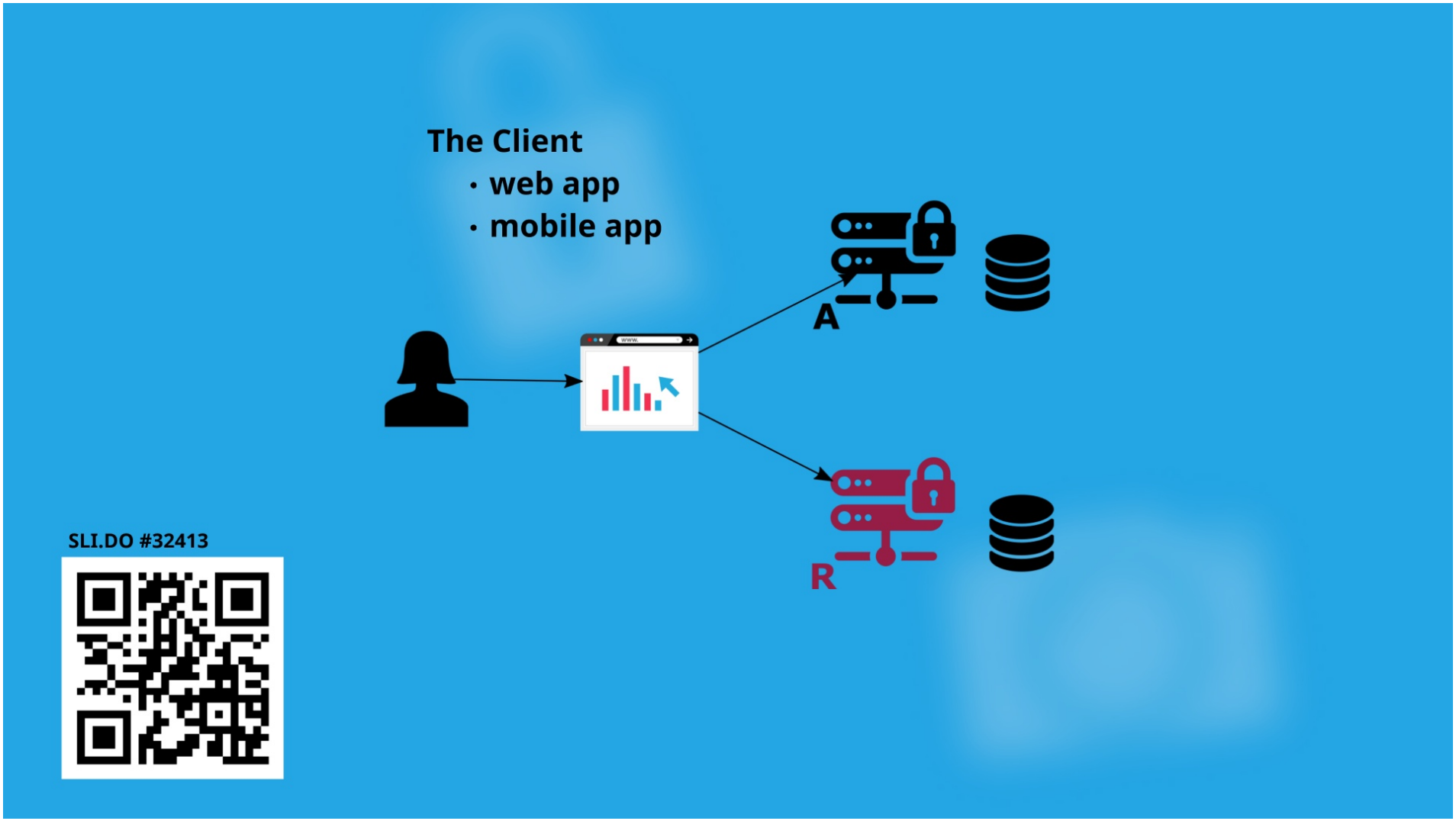
The Client
• web app
• mobile app
A
R
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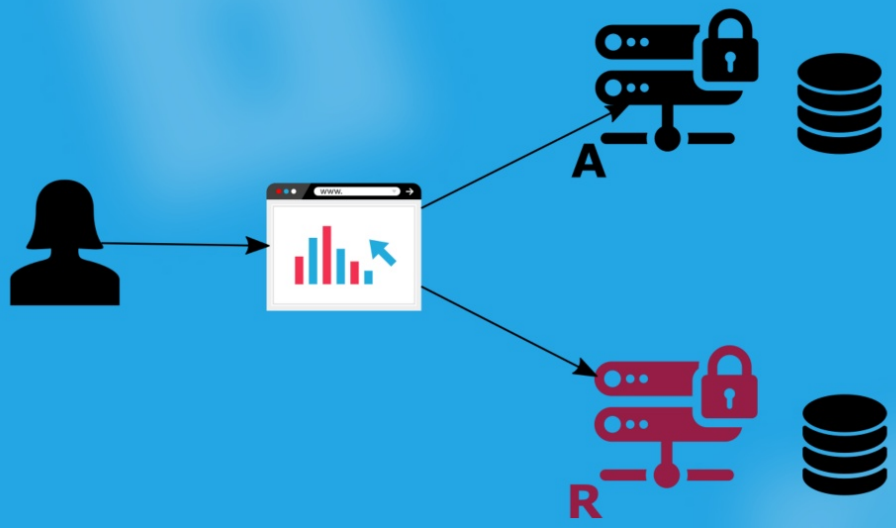
The Authorization Server

- knows the users



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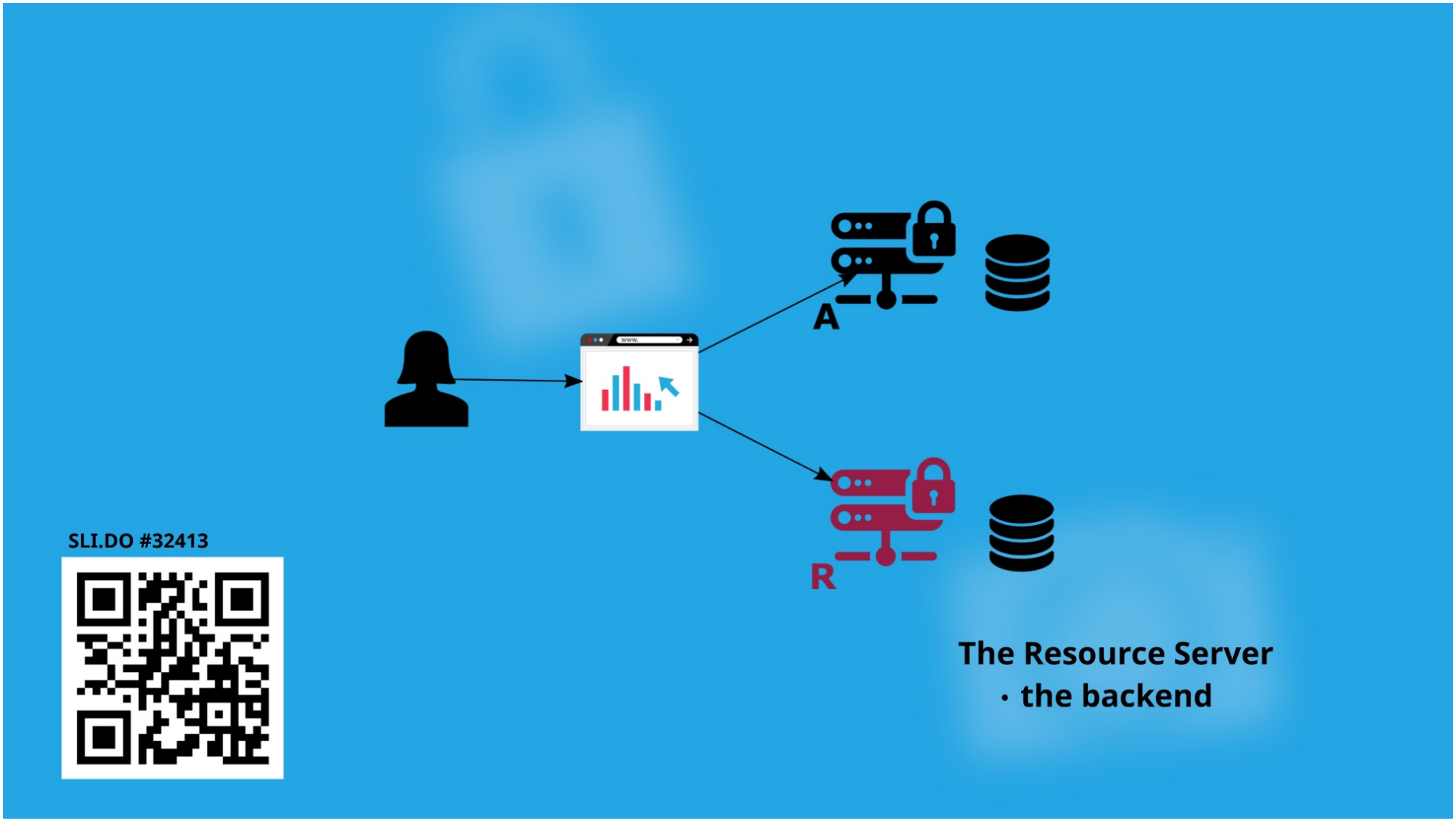
A
R
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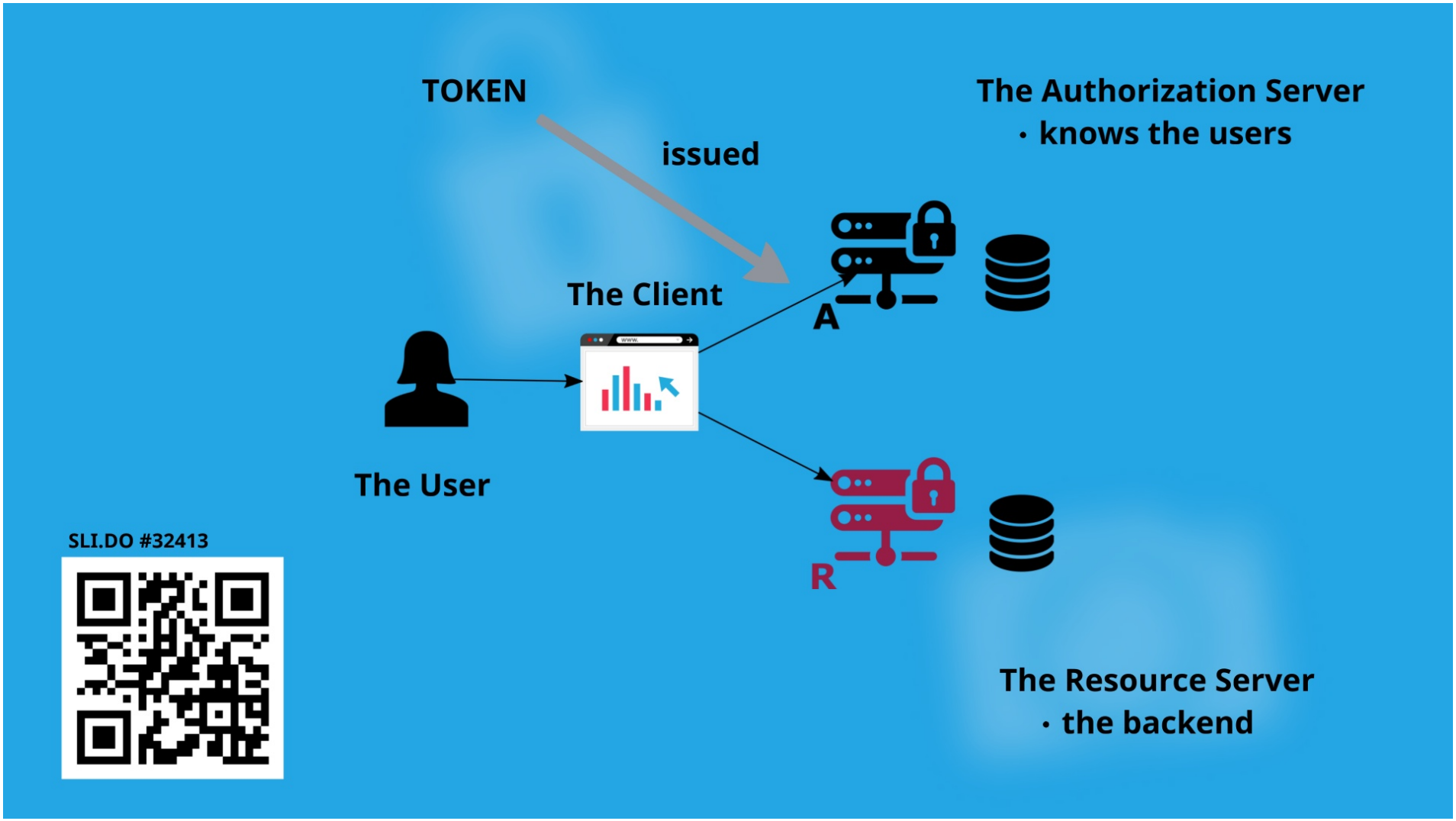
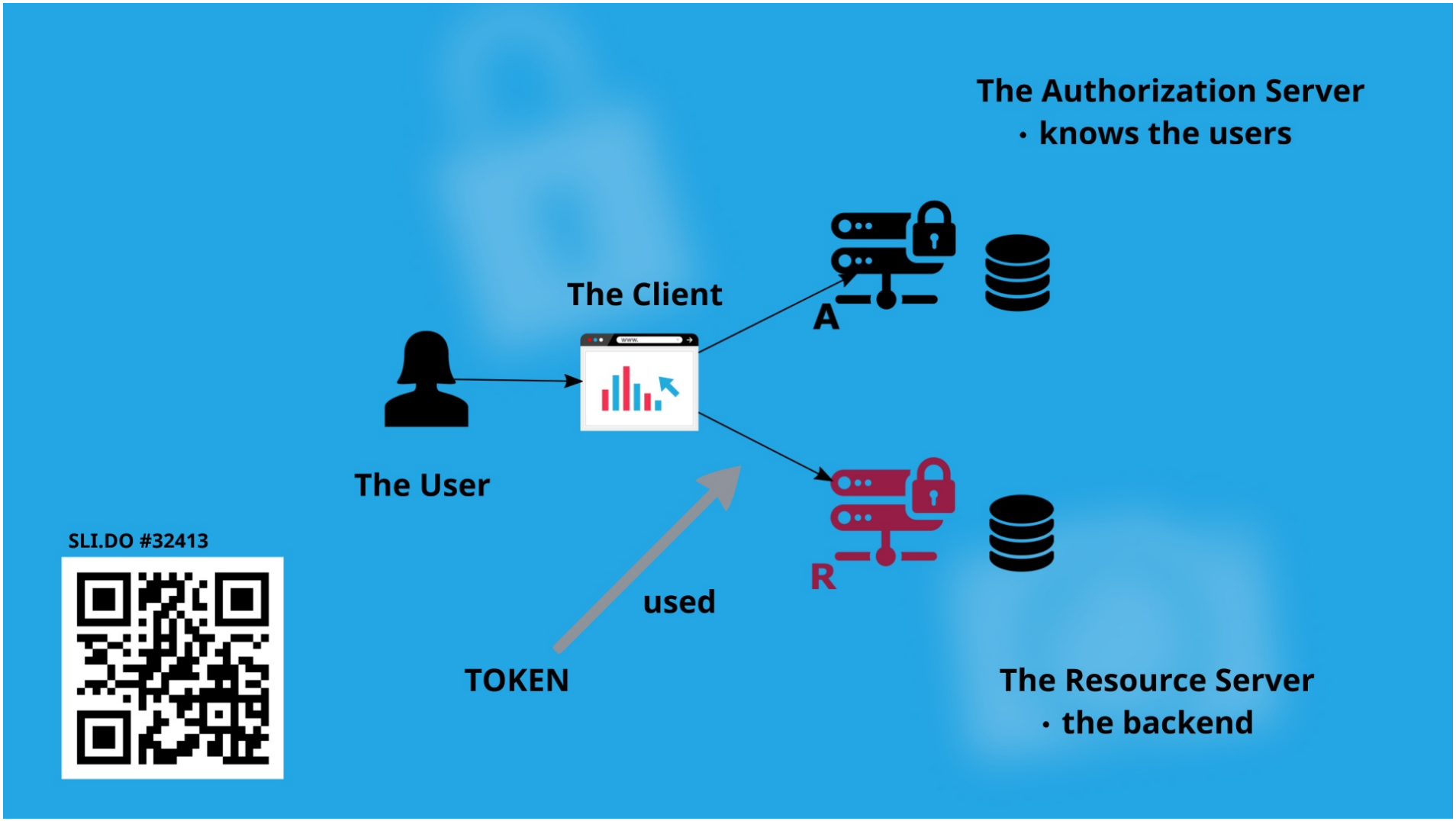
The Resource Server
· the backend


TOKEN
issued
The Authorization Server
• knows the users
The Client
A
The User
SLI.DO #32413
R
The Resource Server
• the backend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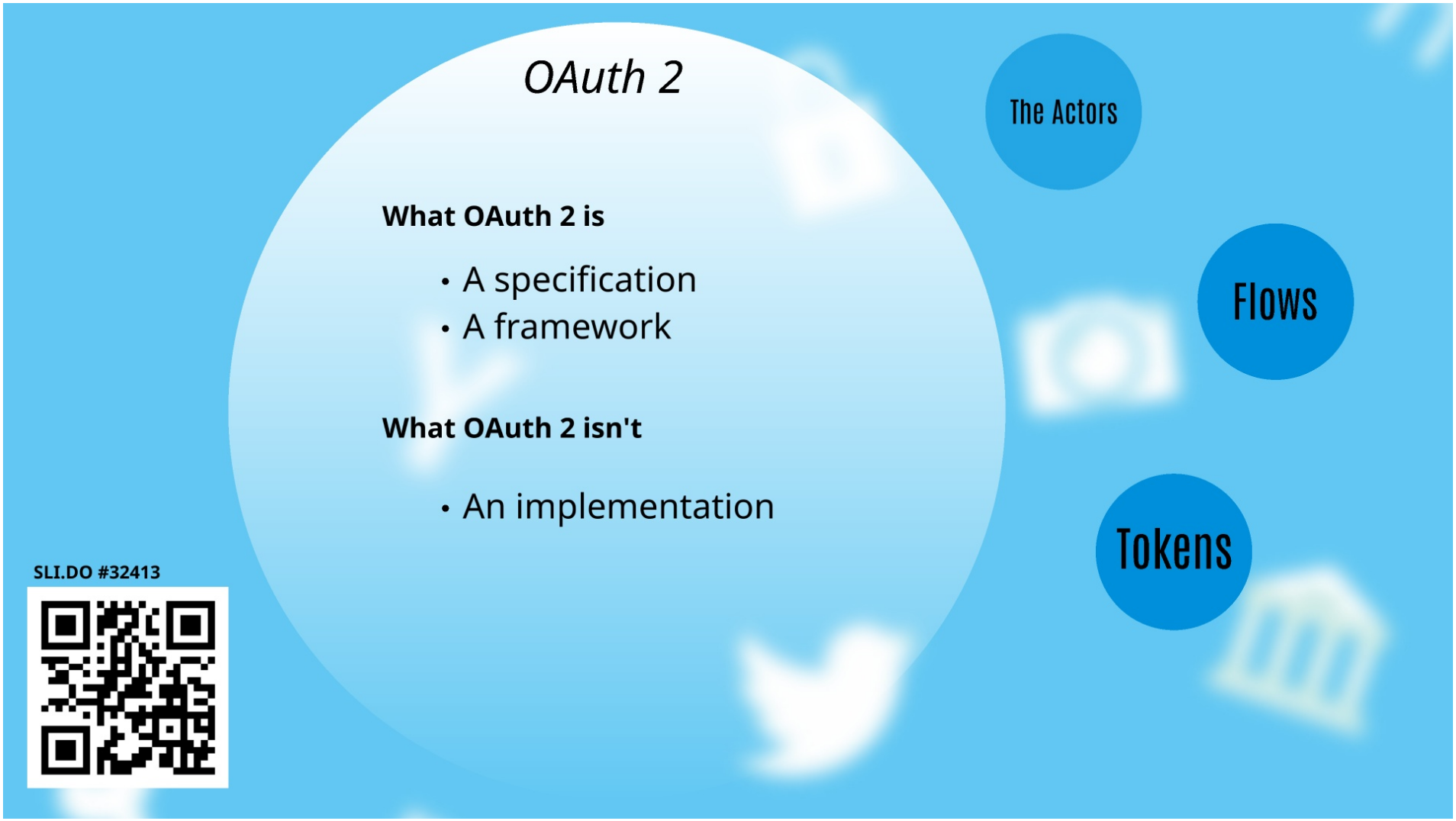
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GRANT TYPES

- implicit grant type (deprecated)
- authorization code grant type
- password grant type (deprecated)
- client credentials grant type

AC

password

client

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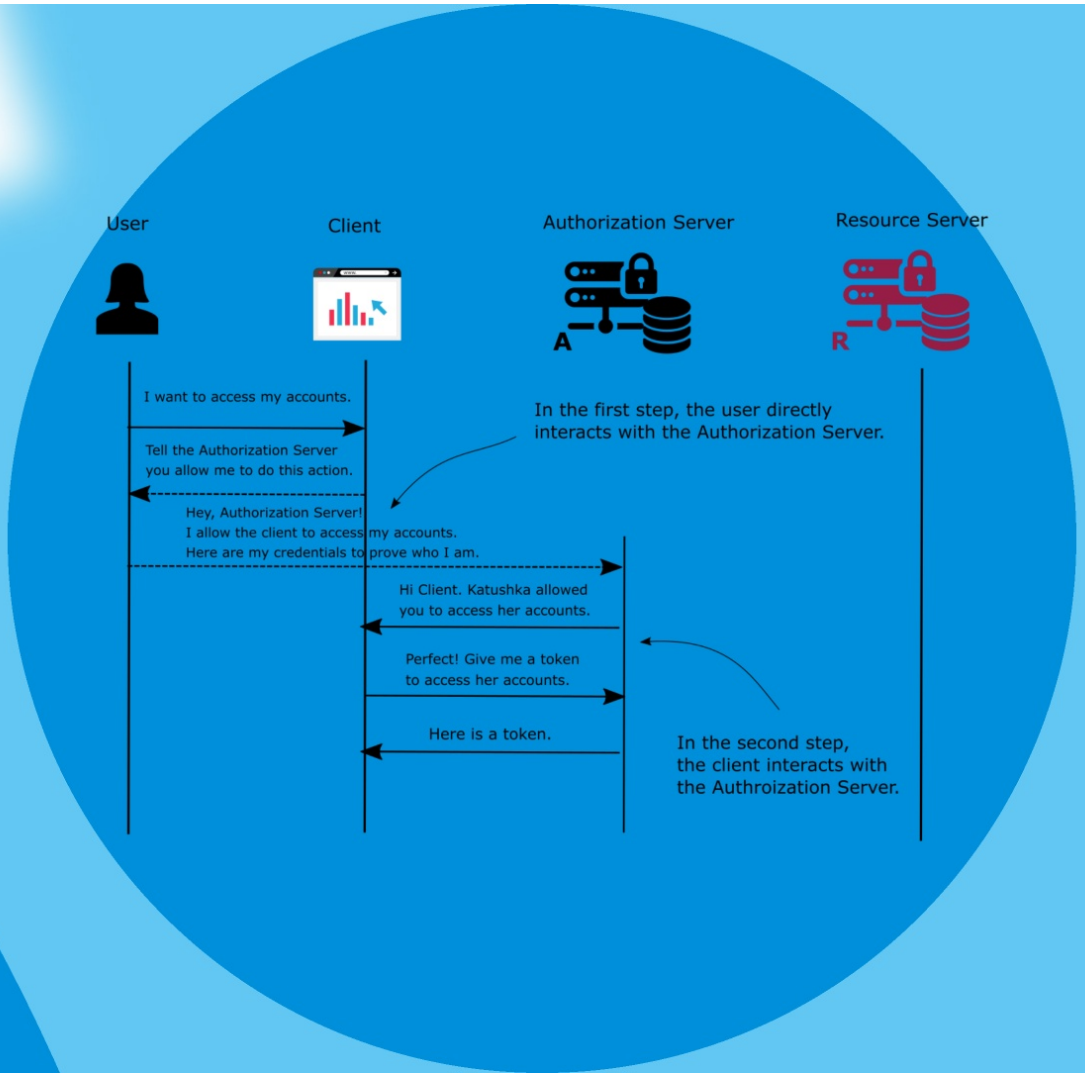
User
Client
Authorization Server
Resource Server
A
R
I want to access my accounts.
Tell the Authorization Server
you allow me to do this action.
Hey, Authorization Server!
I allow the client to access my accounts.
Here are my credentials to prove who I am.
Hi Client. Katushka allowed
you to access her accounts.
Perfect! Give me a token
to access her accounts.
Here is a token.
In the first step, the user directly
interacts with the Authorization Server.
In the second step,
the client interacts with
the Authroization Server.

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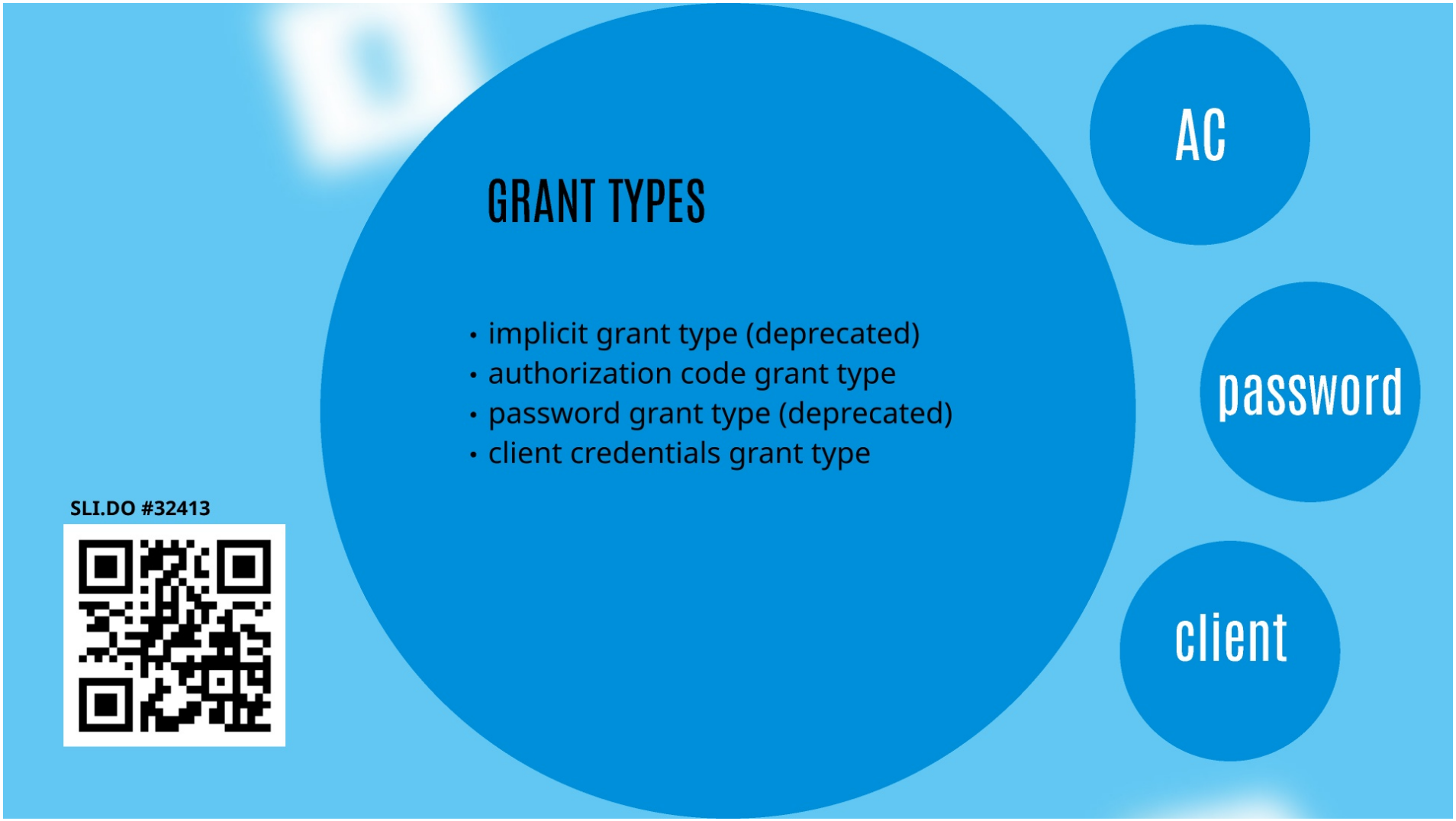
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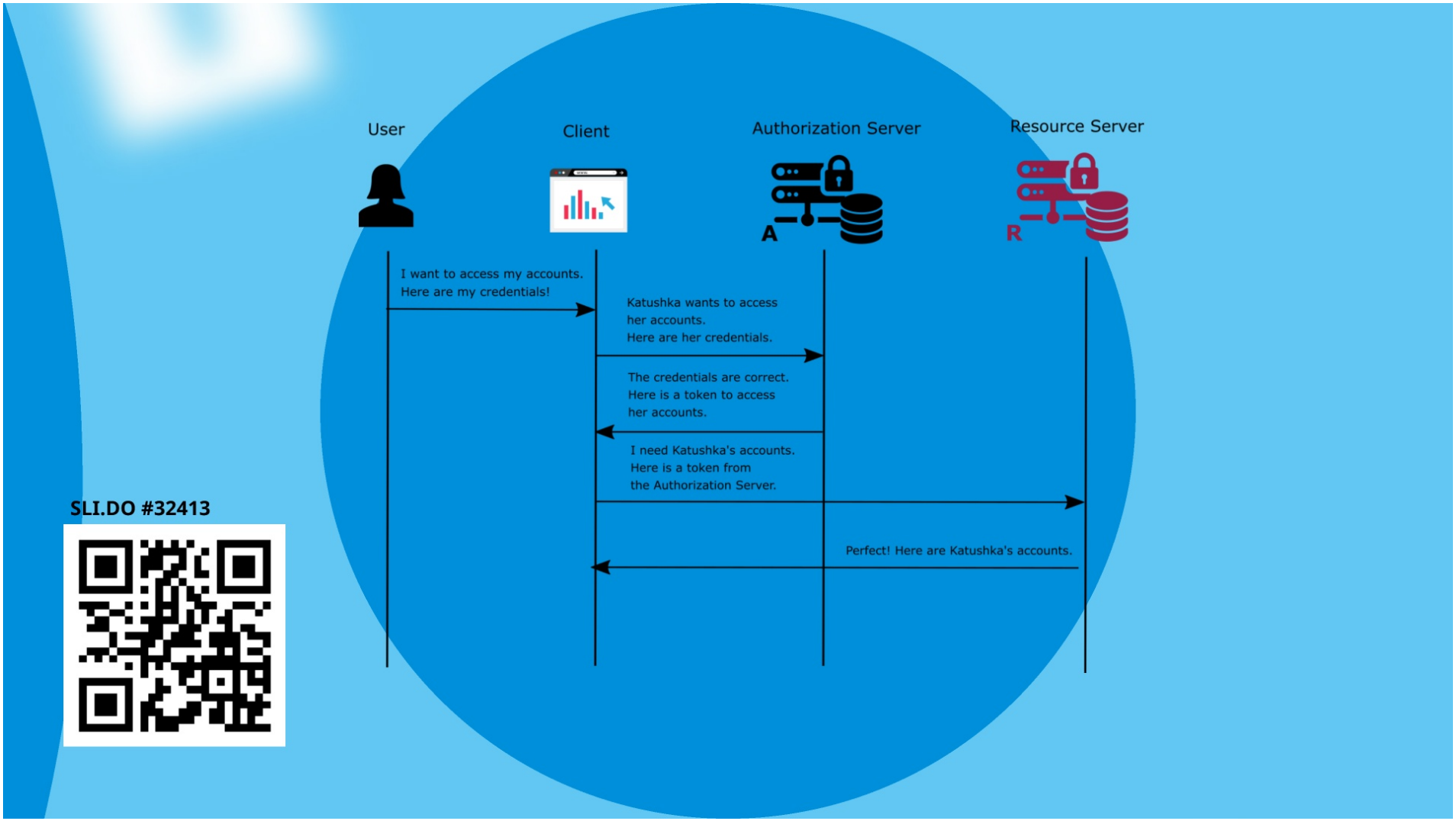
User
Client
Authorization Server
Resource Server
A
R
I want to access my accounts.
Here are my credentials!
Katushka wants to access
her accounts.
Here are her credentials.
The credentials are correct.
Here is a token to access
her accounts.
I need Katushka's accounts.
Here is a token from
the Authorization Server.
Perfect! Here are Katushka's accounts.
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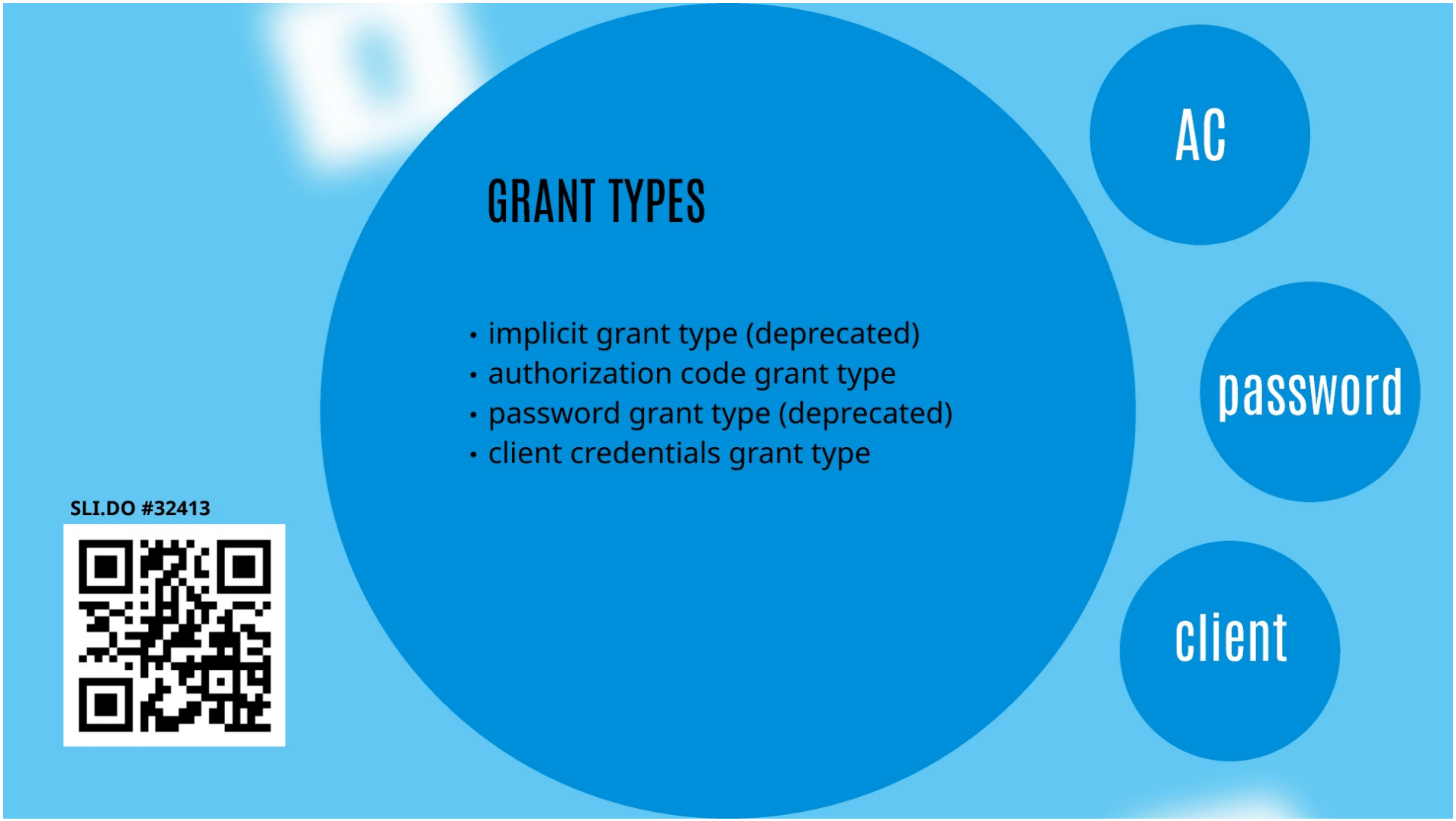
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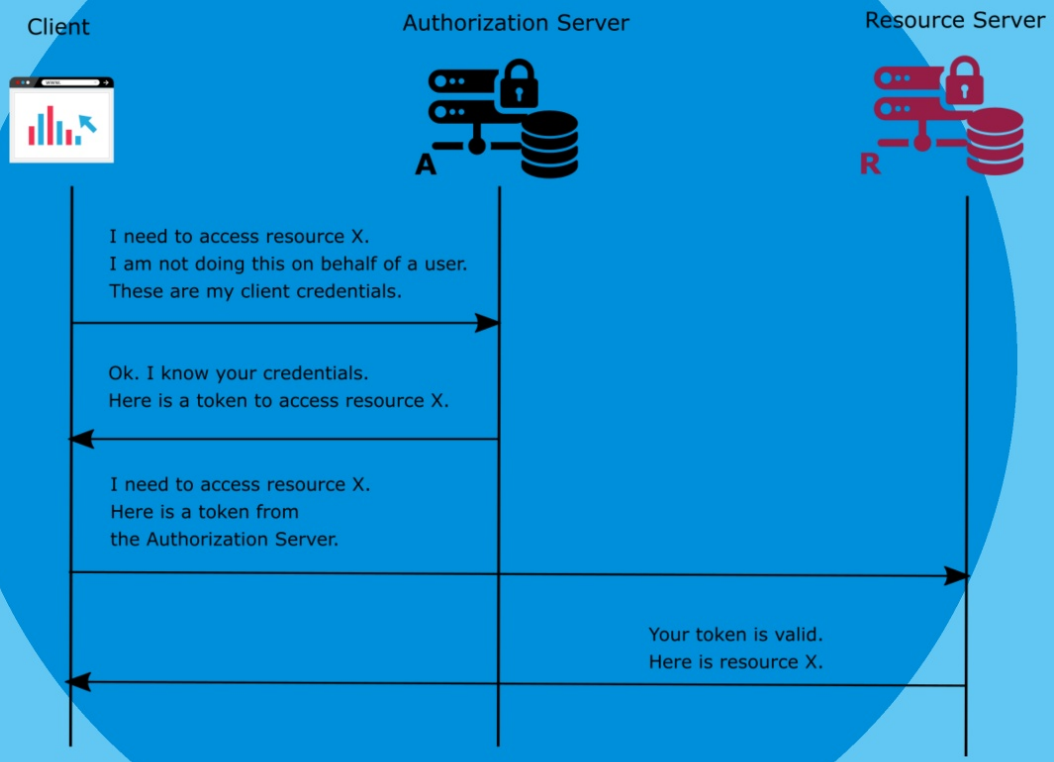
Client
Authorization Server
Resource Server
A
R
I need to access resource X.
I am not doing this on behalf of a user.
These are my client credentials.
Ok. I know your credentials.
Here is a token to access resource X.
I need to access resource X.
Here is a token from
the Authorization Server.
Your token is valid.
Here is resource X.

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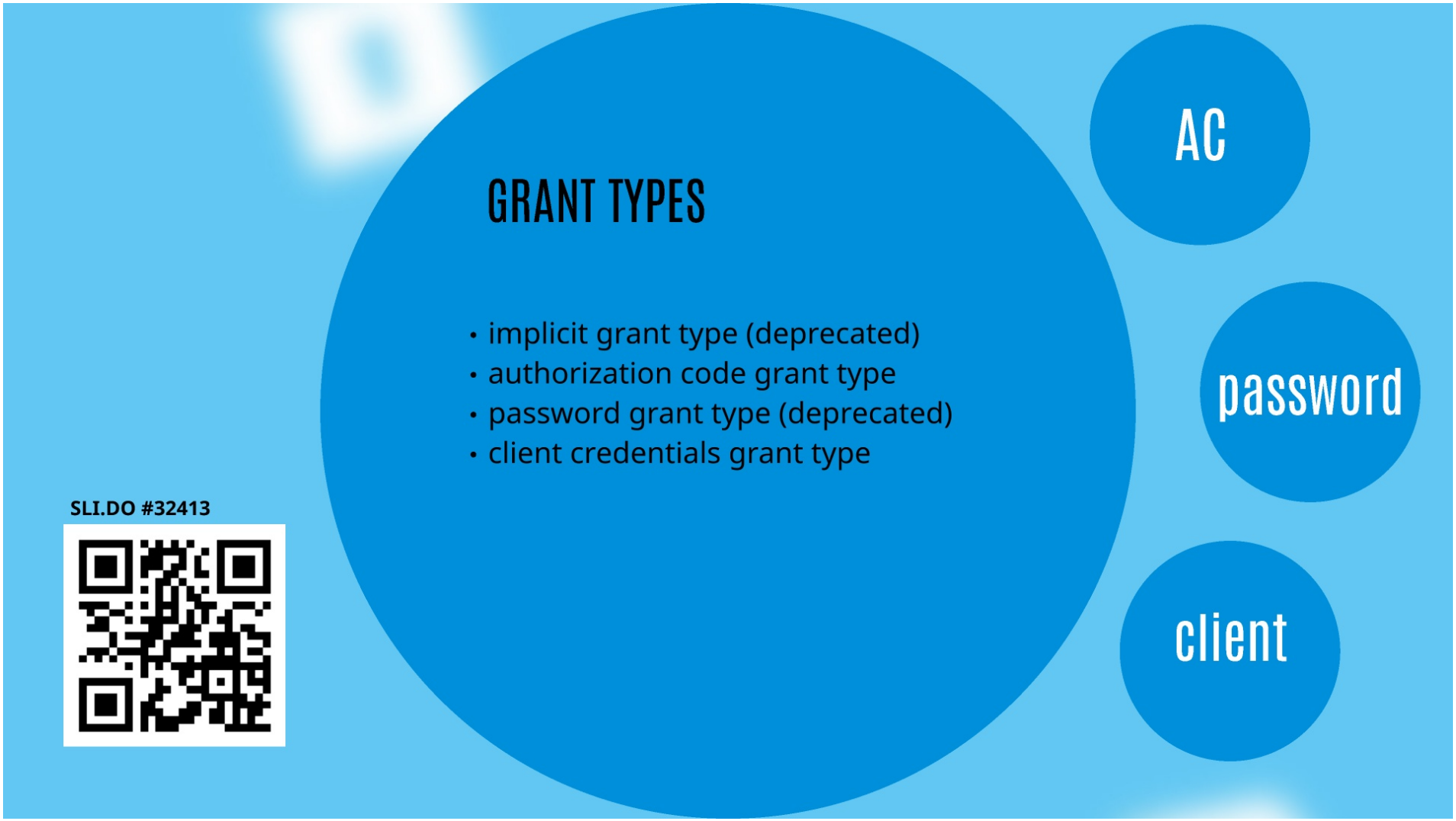
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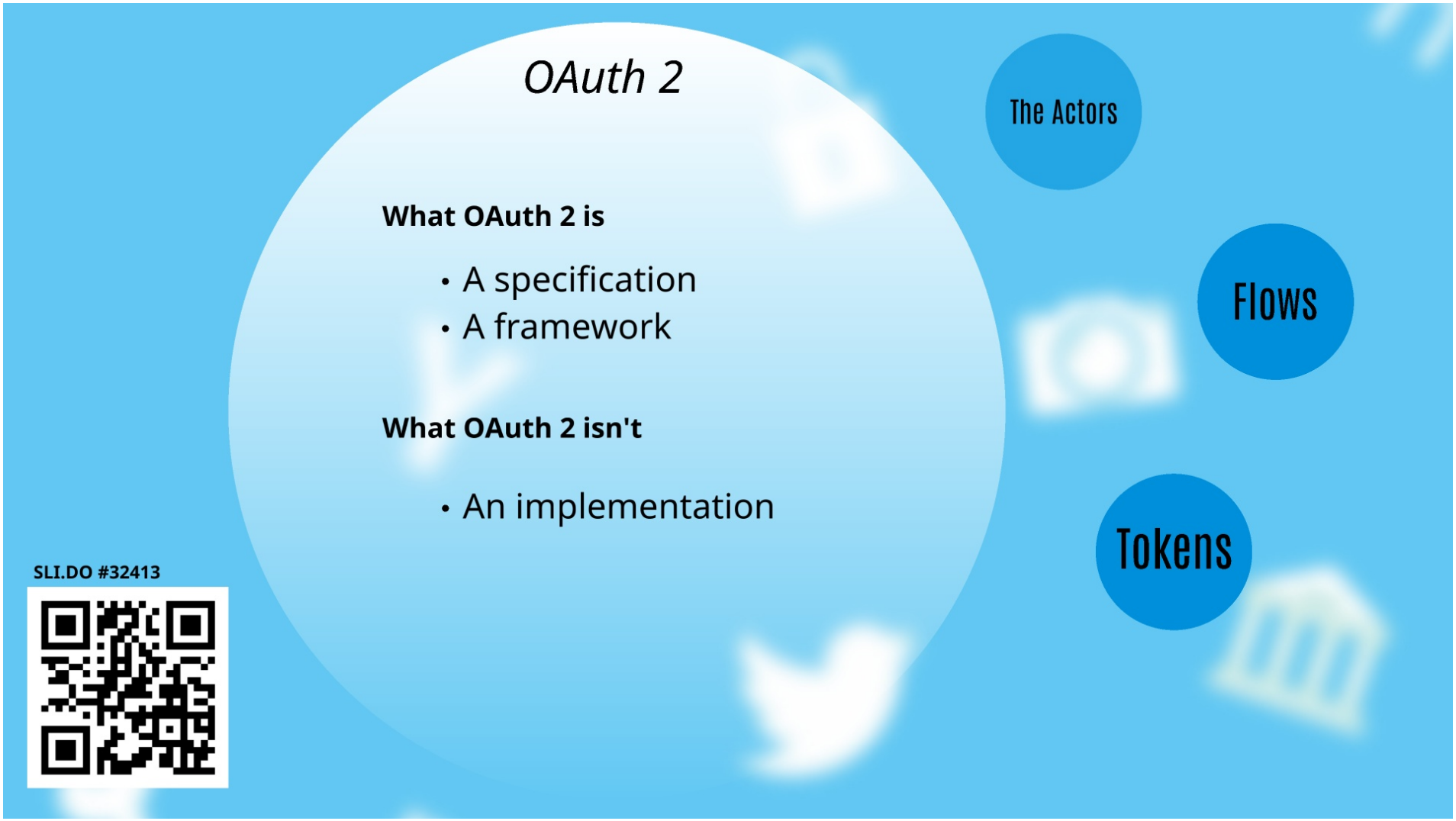
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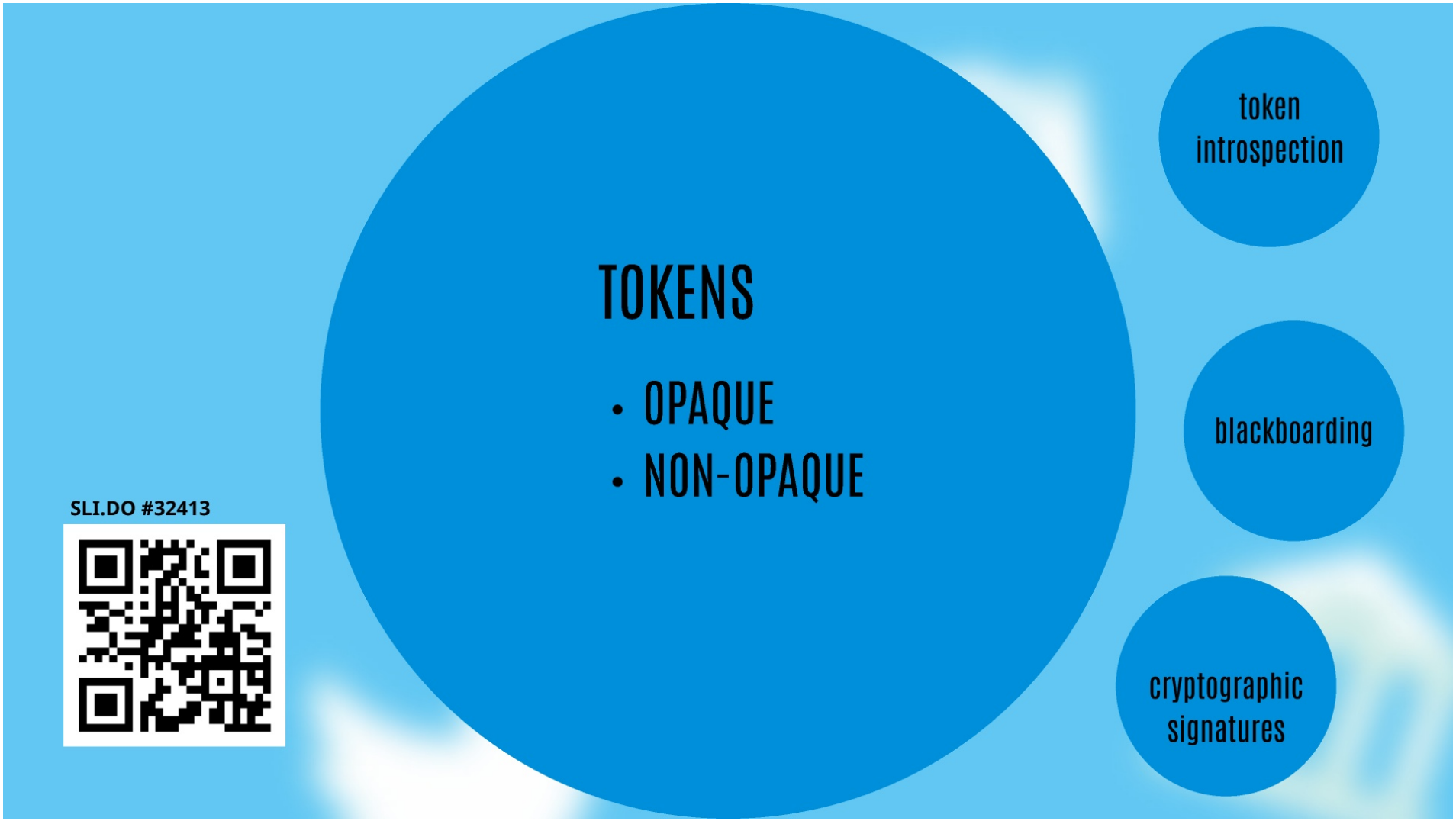
TOKENS
• OPAQUE
• NON-OPAQUE
token introspection
blackboarding
cryptographic signatures
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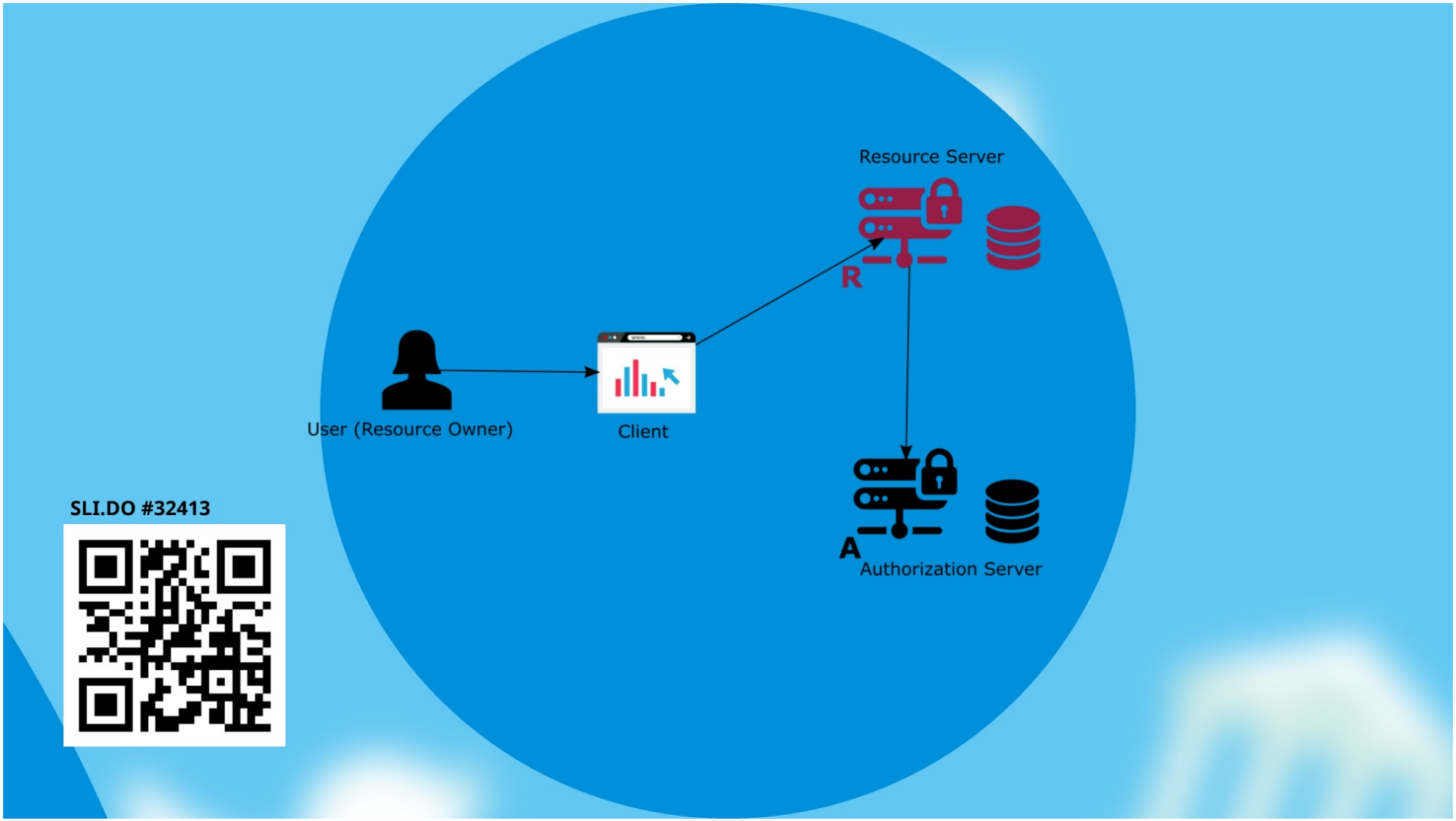
Resource Server
R
User (Resource Owner)
Client
A
Authorization Server

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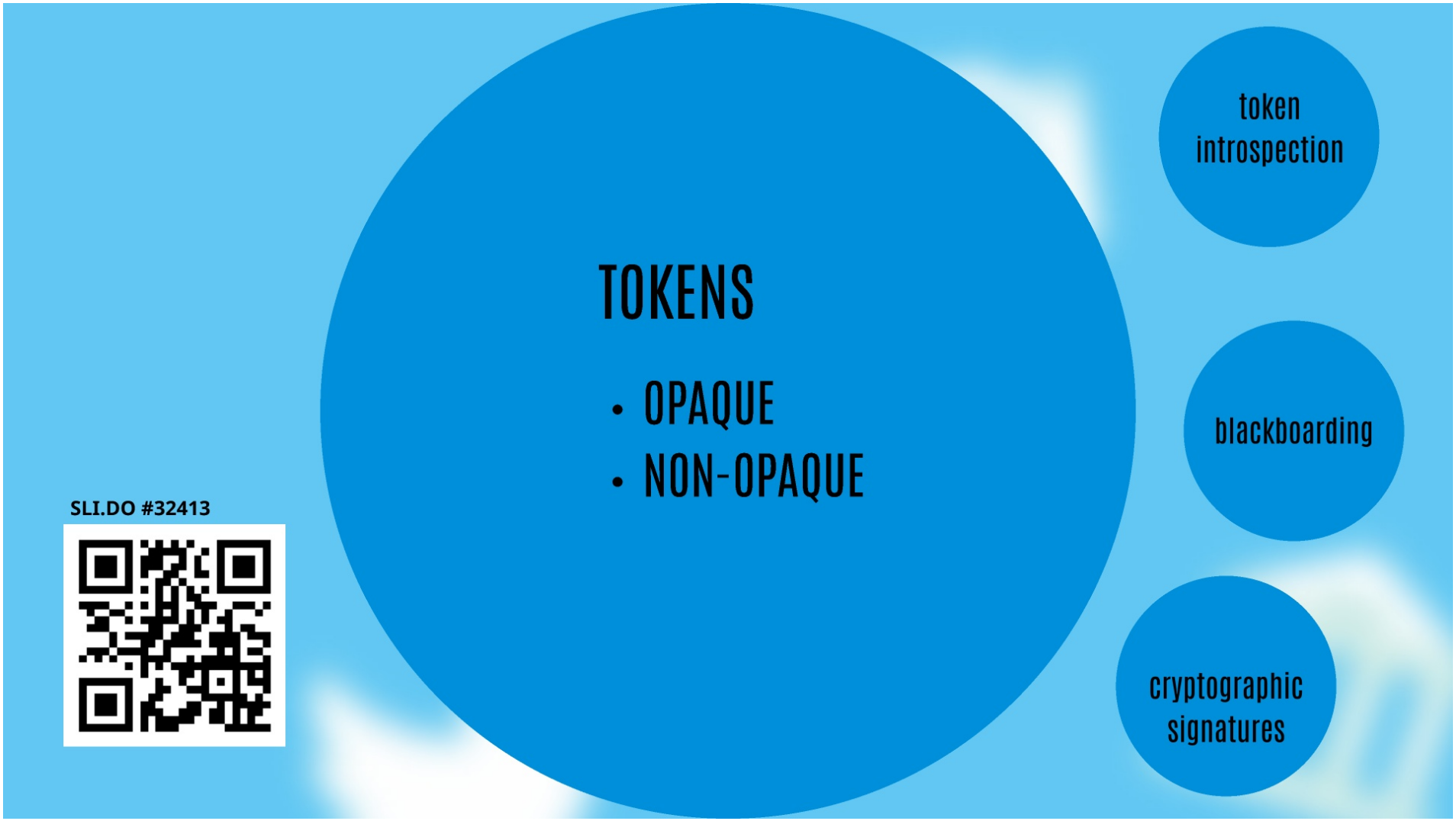
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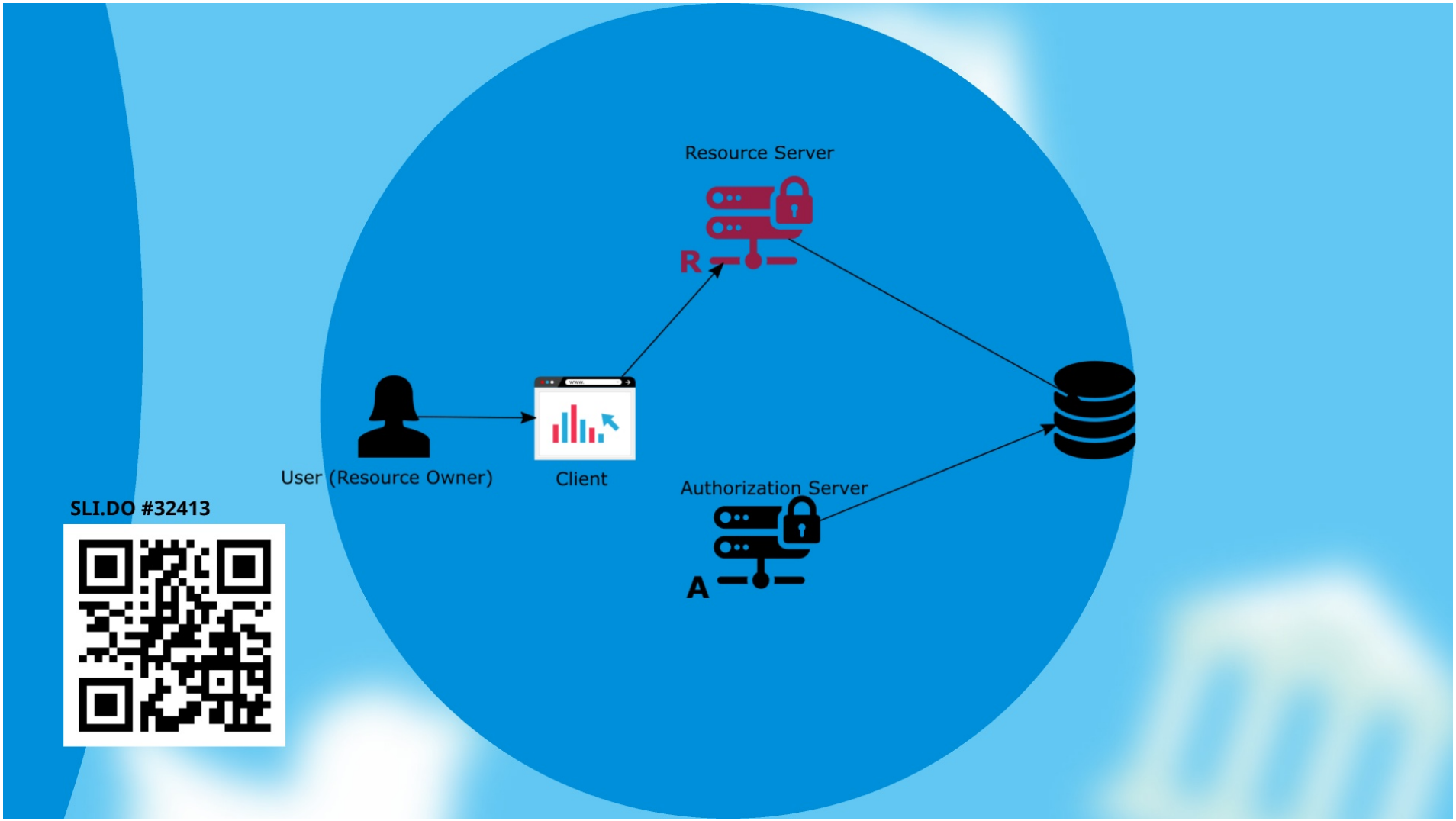
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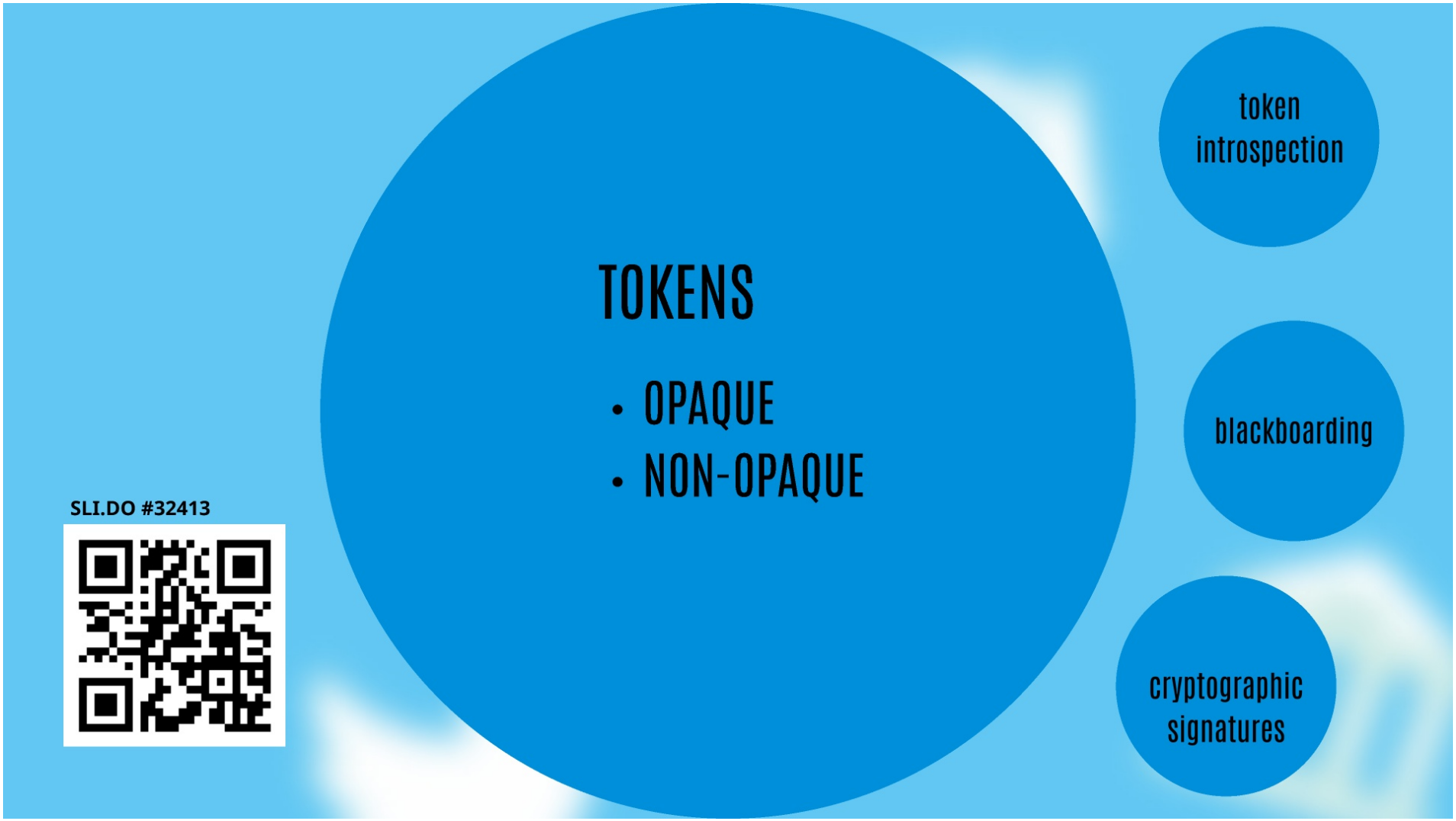
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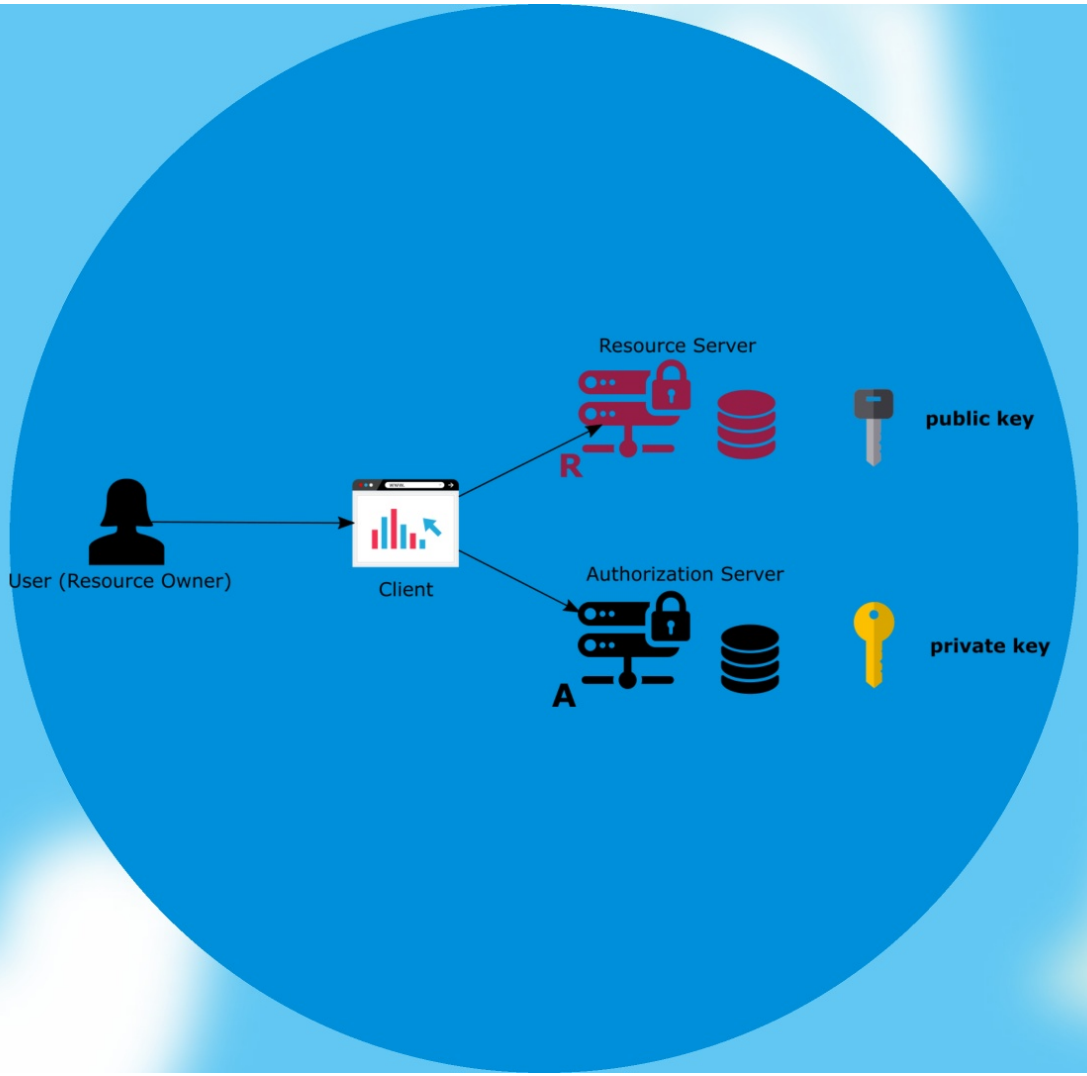
Resource Server
public key
R
User (Resource Owner)
Client
Authorization Server
private key
A

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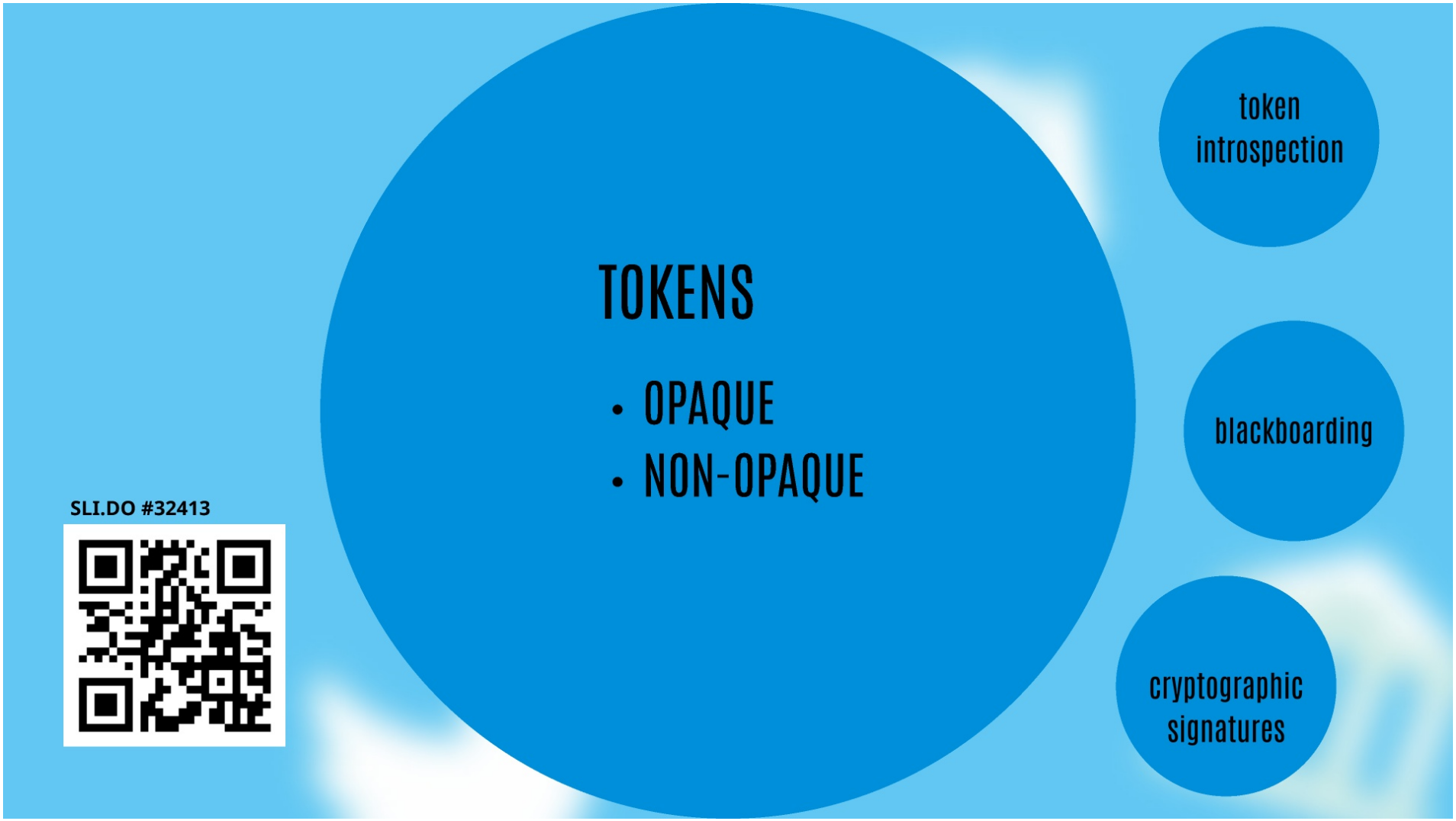
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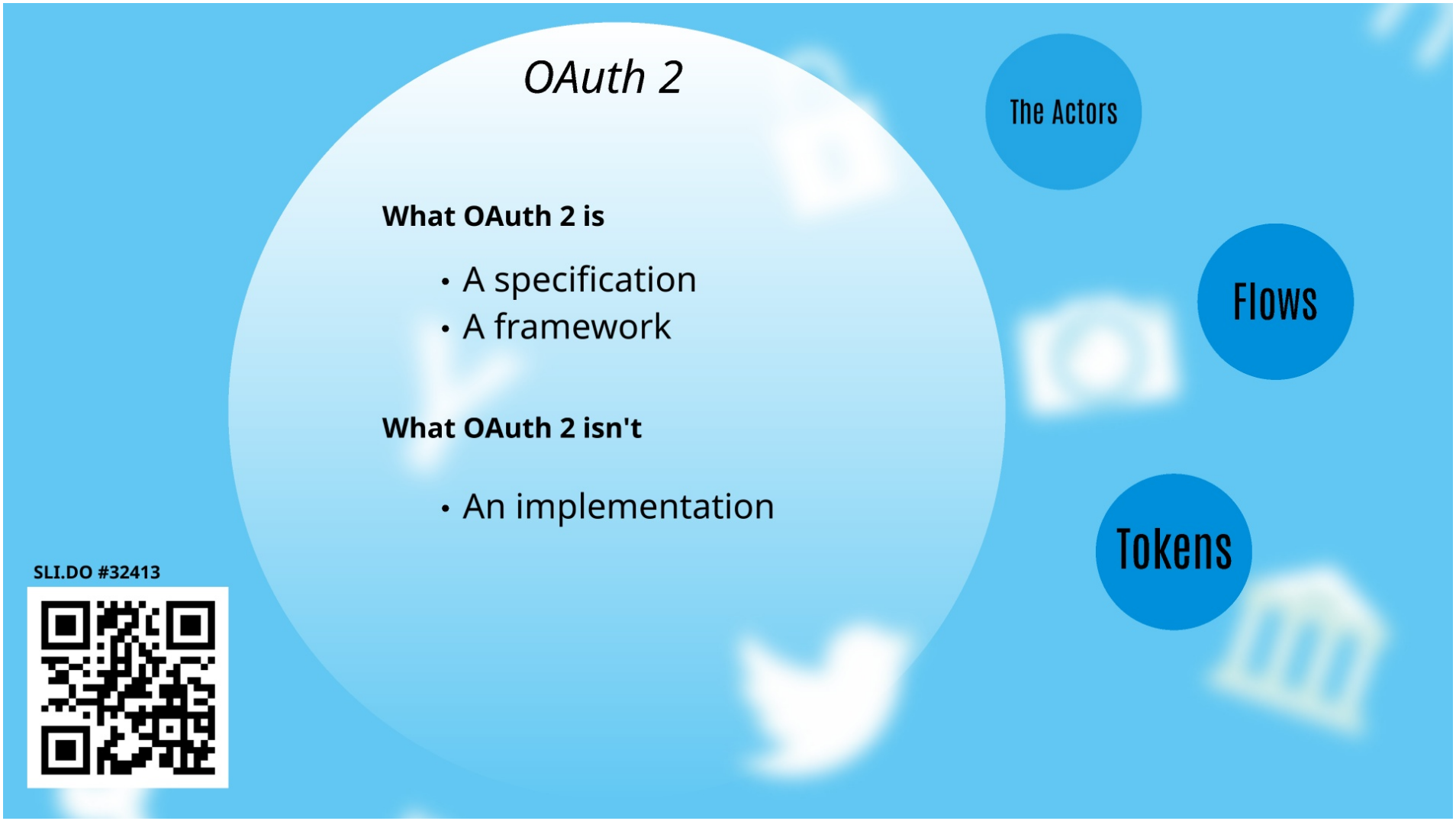
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Spring Security

- offers multiple ways to implement OAuth 2 systems
  - Spring Security OAuth
  - Spring Security

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HANDS-ON

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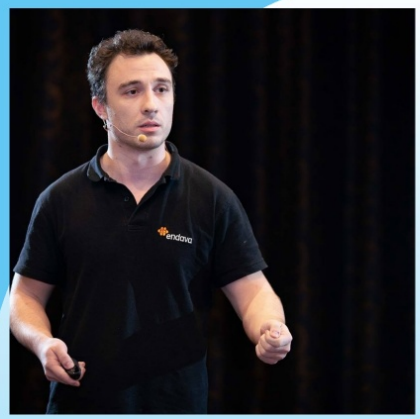

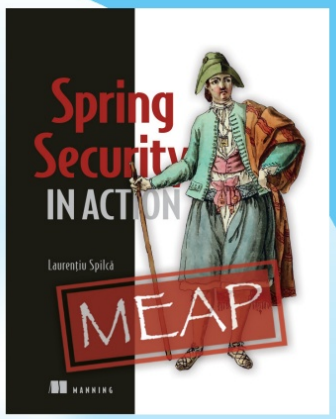

LAURENTIU SPILCA

Java Group Community Lead @ **Endava**

laurentiu.spilca@endava.com

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