OAuth2.0, Digital Certificates

CS 390 – Web Application Development

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Outline

1. Why it's Worth Your Time
2. Persistent Session
3. OAuth 2.0
4. Digital Certificates
5. ETC

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WIWYT – OAuth2.0, Digital Certificates

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- OAuth allows us to access information from a 3rd party, without risking privacy.
- Certifcates allow us to maintain encrypted client-server communication.

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Session Store (last time, I promise)

Sessions are not persistent by default. When the node server is restarted, the server is reset.

We can setup persistence using a **Session Store**. The default implementation of `MemoryStore` includes persistence, but is not meant for production.

It only runs a *single* thread, *leaks* memory, and does *not* scale well.

Instead, we can use **MongoDB** as the session store using `connect-mongo`.

Let's Setup a NoSQL Database!

If you can view this screen, I am making a mistake.

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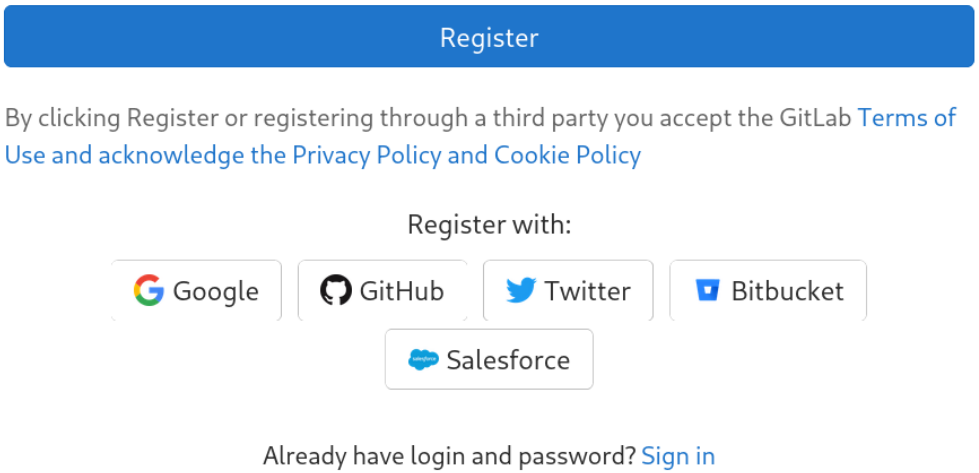

<-- right here!

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- Our access is **temporary** and **restricted** (eg. we can't update the password and take over the account).
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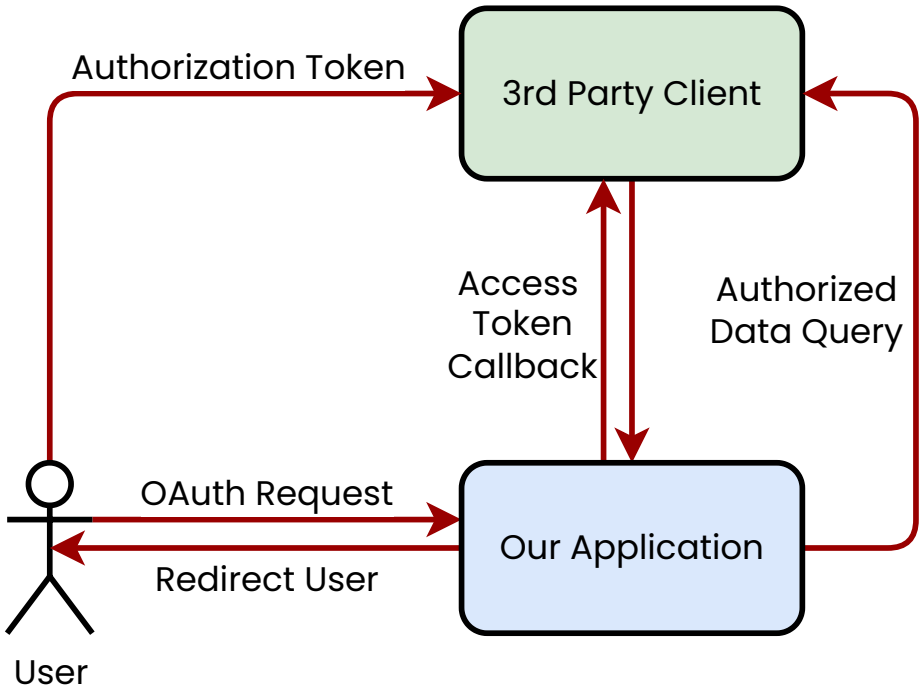

Let's Implement OAuth!

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A: Not really! Anyone on the same network can sniff keys, and security is thwarted.

We can improve this by making the keys *asymmetrical* – but this requires us to setup an accompanying security policy.

Public Key Encryption

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Q: Is this secure from intrusion?
A: Still no! If an intruder can inject their *own* public key instead of the server, there is no way for the client to know. Security thwarted.

Certificate Authorities

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Q: But what about verifying the certificate authorities' key? Is that safe?
A: We **recursively verify certificates**, until we leverage a pre-installed root certificate, that is self-signed by the local machine.

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Thank you!

Have an awesome rest of your day!

Slides: `https://cs.purdue.edu/homes/jsetpal/slides/oauth,certs.pdf`

If anything's incorrect or unclear, please ping `jsetpal@purdue.edu`
I'll patch it ASAP.