

MEWeC

Multi Email Web Client
ADSB Challenge Task 2020

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How It Works

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1. Web Email Client with Email Accounts at one place
2. Every existing Email can be added
3. Full functionality like local clients
4. Free to use - Pay to expand

How It Works

- 2 email accounts are free to add
- Any other email account requires a token
- Valid for 12 months
- After expiration email account slot gets locked

Interfaces

External Interfaces

- Multiple provider → Different security standards
- Orientating on highest security standard

Requirements:

- Authentication
- Secure connection (SSL/TLS)



Security Strategy

Security Strategy

Main threats:

- loss/exposure of user login information
- loss/exposure of email login information

Security Strategy

Secure user login information:

during transaction:	use TLS, reduce amount of login with credentials through JWT
in database:	store as salted hash

Security Strategy

Secure email login information:

during transaction: use SSL/TLS if possible

in database: store in encrypted form (AES)

How do we store the AES decryption key?

Security Strategy

Client

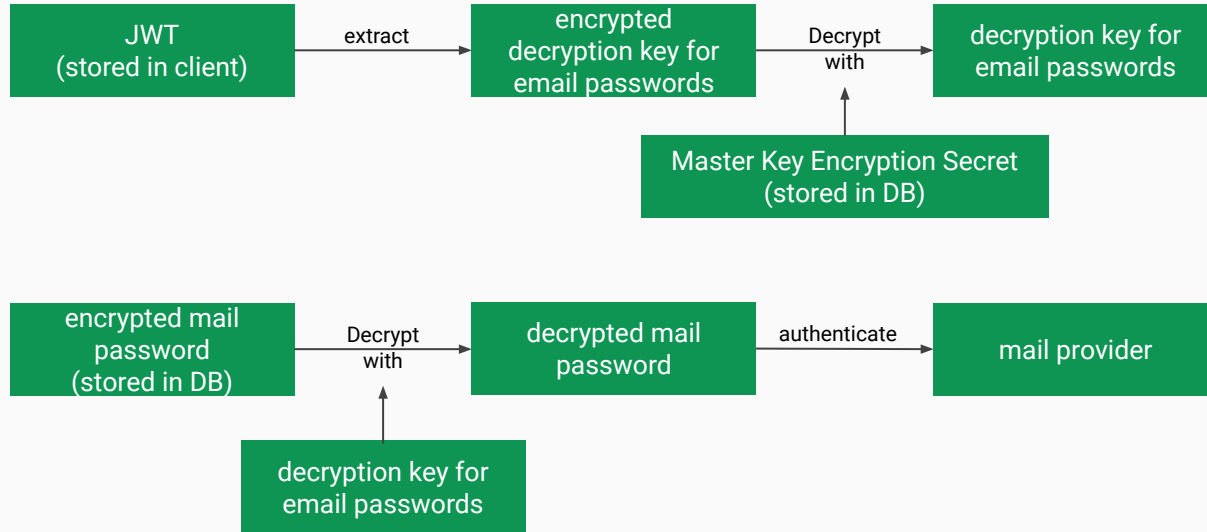
JWT
(includes the decryption key for the email
passwords in encrypted form)

Database

Master Key Encryption Secret

Email password (encrypted)

Security Strategy



Tools and Workflow

Tools and Frameworks

Frontend

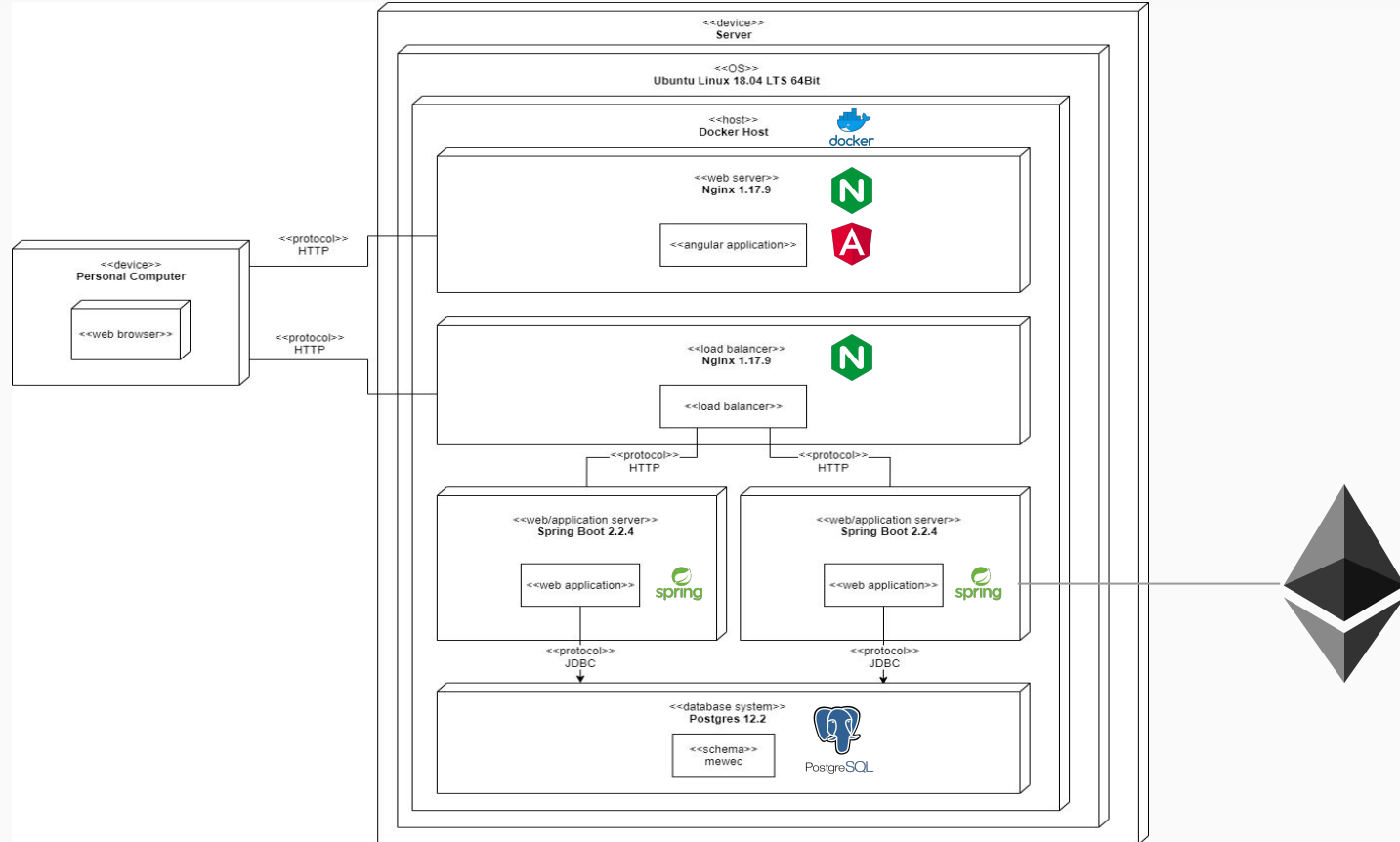


Backend



Deployment

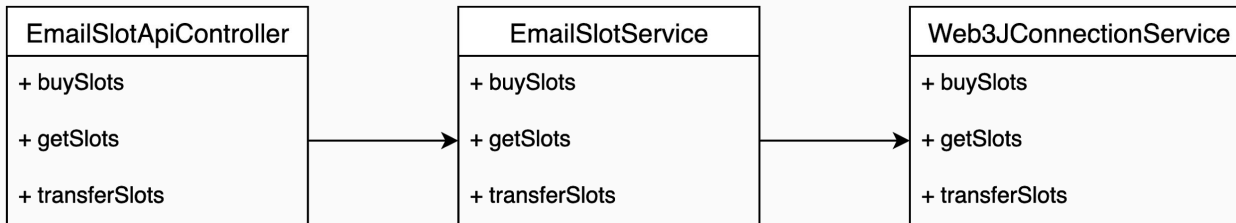
Deployment



Architecture

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- Controller → Service → Interface
- Interfaces = DB, Ethereum, External Mail Api
- Example for Email Account Slot:



Demo

Thanks

Any questions?

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