CCChat Documentation

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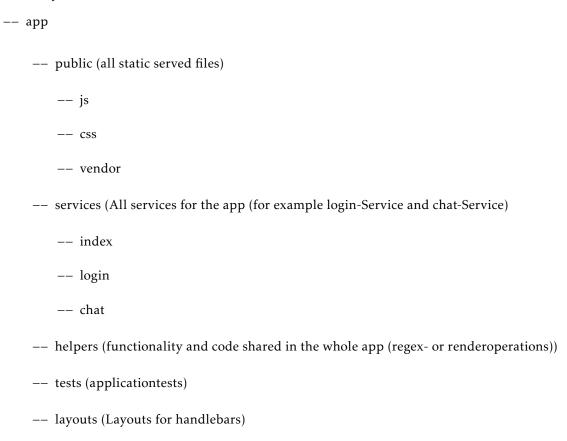9. media compression and persistency
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2 Node Modules (Serverside)

Module	Benefit
express	Web application framework that includes several useful features for web applications.
socket.io	Realtime event-based bidirectional communication.
socket.io-stream	Sending media over socket within stream
winston	Logger.
body-parser	Handles http post requests. Extracts body of http to req.body.
serve-favicon	Handles the requests from browsers for the favicon and caches the favicon.
express-handlebars	Builds semantic templates
mongoose	For MongoDB modeling. Saves all app data.
redis	For Redis Connection. Saves the cookies.
session-file-store	Fallback for failed database connections.
mocha	Testframework
chai	Helper for testframework
express-brute	Prevents bruteforce attacks on login
bcrypt	Secure hashing of passwords in database
express-session	Sessions, so that the user won't have to login all the time
express-socket.io-sessions	Creates a shared session for sockets
fs-extra	More functionality for fs module (needed to save data to tmp)
moment	Calculates time from now to certain point. For bruteforce module
popper	Required by bootstrap 4.0.0 Realtime Cross-Browser automation
winston	Logger

3   Vendor Libraries (Clientside)

Library	Benefit
bootstrap	Responsive website programming for mobile-first implementation.
jQuery	Easier handling of javascript
socket.io	To connect socket from client side
socket.io-stream	To stream media from client side
nw-dialog	Dialog to upload files from the client

4   Project Structure

−− app

    −− public (all static served files)

        −− js

        −− css

        −− vendor

    −− services (All services for the app (for example login-Service and chat-Service)

        −− index

        −− login

        −− chat

    −− helpers (functionality and code shared in the whole app (regex- or renderoperations))

    −− tests (applicationtests)

    −− layouts (Layouts for handlebars)

-- certs (Certification files for the https)

-- tmp (all tmp files: logs, modules for handlebars,...)

5 Code Documentation

modules The functionality of modules is described within a comment on top of the js-file.

functions Functions with complex implementations or unclear names (should never happen!) need a commentation
Simpler functions are not commented to produce more readable code

variables Variables require clear and good naming, never comment a variable unless absolutely necessary.
You should think a littel longer and find a better name.

6 SSL

6.1 Create certificate

```
openssl genrsa -out client-key.pem 2048
openssl req -new -key client-key.pem -out client.csr
openssl x509 -req -in client.csr -signkey client-key.pem -out client-cert.pem
```

6.2 Allow Certificate in browser for Dev

6.2.1 Chromium / Chrome 64

Option 1:

1. Go to Settings. Hit the „Advanced" button on bottom of the page

2. Click the „Manage certificates" button in the „Privacy and security" Tab

3. Click the „Authorities" Tab

4. Click on „Import"

5. Navigate to the cert file within your app source code folder.

6. Click open and allow what you want to allow

Option 2:

1. Open the side explitetly with the url „https://localhost:3000"

2. Click the advanced Button

3. Allow the certificate

4. Continue with Finish (see a little further down)

5. follow option 2 until point 3.

6. find your certificate in the list of authorities.

7. click expand on the certificate

8. click the 3 dots that appear under the certificate

9. click „edit"

10. allow what you want to allow

6.2.2 Firefox 59

1. Open the side explitetly with the url „https://localhost:3000"

2. Click the „Advanced" Button

3. Click „Add Exception"

4. Click „Confirm Security Exception"

7 Logger

We use winston for logging.
Logstati:

info Generic info

warn Can be ignored, there will be an fallback

error Should not be ignored and should be fixed

debug For debugging in development

8   Error Handling

9   Useful websites

- Simple chat with socket.io
- Handlebars
- Combine Bootstrap and ReactJS
- Mongoose
- Example of secure chat in production
- Add a SSL-Cert in Chrome