CCChat Documentation

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12. April 2018

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1 Start server

s

- 1. npm start
- 2. open https://localhost:3000

2 Up next

- 1. Add profile pictures
- 2. Add view of send media in chat
- 3. add secure password with specific length and special characters
- 4. write email authentication for register new user
- 5. Media compression and persistency
- 6. Online Status
- 7. Profile picture

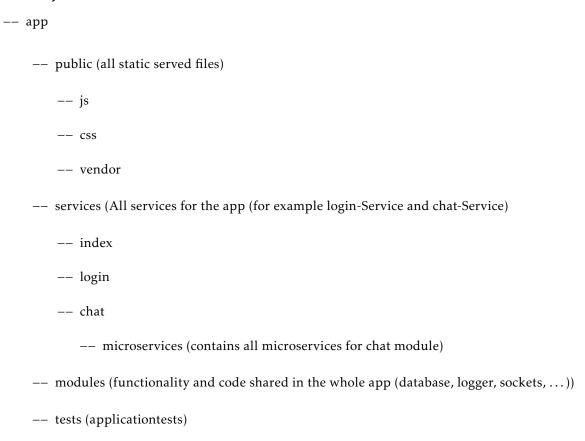
3 Node Modules (Serverside)

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

4 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

5 Project Structure



```
-- layouts (Layouts for handlebars)
```

- -- certs (Certification files for the https)
- -- tmp (all tmp files: logs, views for handlebars,...)

6 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.

7 SSL

7.1 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
```

7.2 Allow Certificate in browser for Dev

7.2.1 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

7.2.2 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"

8 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

9 Error Handling

10 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