Open-Source Report for Websockets

[Flask-SocketIO]

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Code Repository	https://github.com/miguelgrinberg/Flask-SocketIO
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- Starting in our project we initialize the socket server in line 16 of __init__.py:
https://github.com/rickyjorgensen2000/cse312/blob/e2049c6fdef338f32b2251d959e4956d046a4e96/flaskr/__init__.py#L16

- This takes us into the __init__ function in the SocketIO class located in flask_socketio/__init__.py:
https://github.com/miguelgrinberg/Flask-SocketIO/blob/91b5ddc31bebeb6241d281252c711b160550ce01/src/flask_socketio/__init__.py#L171 This creates the Flask-SocketIO server. This takes in an app instance

- __init__ calls the method init_app on line 191:
https://github.com/miguelgrinberg/Flask-SocketIO/blob/91b5ddc31bebeb6241d281252c711b160550ce01/src/flask_socketio/__init__.py#L191 .
- In line 243 it intializes a Socket.IO server from the python-socketio library using socketio.Server:
https://github.com/miguelgrinberg/Flask-SocketIO/blob/91b5ddc31bebeb6241d281252c711b160550ce01/src/flask_socketio/__init__.py#L243
- This class implements a fully compliant Socket.IO web server with support for websocket and long-polling transports:
https://github.com/miguelgrinberg/python-socketio/blob/55db7458900a179a9363294cc4fc91eb9c775f54/src/socketio/server.py#L13 .
- Line 134 in socketio/server.py initializes an Engineio server:
https://github.com/miguelgrinberg/python-socketio/blob/55db7458900a179a9363294cc4fc91eb9c775f54/src/socketio/server.py#L134

- The EngineIO server has a on method that can handle messages :
https://github.com/miguelgrinberg/python-engineio/blob/6e93a2c19655b1a2f2dc4af858452505740eac3b/src/engineio/server.py#L176
- In line 158 of socketio/server.py a BaseManager class is initialized that manages user connections
https://github.com/miguelgrinberg/python-socketio/blob/55db7458900a179a9363294cc4fc91eb9c775f54/src/socketio/server.py#L158

- In line 254 a SocketIo middleware is attached to the socketio object
https://github.com/miguelgrinberg/Flask-SocketIO/blob/91b5ddc31bebeb6241d281252c711b160550ce01/src/flask_socketio/__init__.py#L254
- The middleware WSGIapp class can be found in socketio/middleware.py. This middleware dispatches traffic to a Socket.IO application. It can also serve a list of static files to the client, or forward unrelated HTTP traffic to another WSGI application.
https://github.com/miguelgrinberg/python-socketio/blob/55db7458900a179a9363294cc4fc91eb9c775f54/src/socketio/middleware.py#L4
- The middleware class is a subclass of the engineio middleware class. Which dispatches traffic to the engineio application. This hands off the traffic to the WSGI app which then continues to crawl up the stack frame and gets to our server code.