**WebSocket C++ Client**

A command-line WebSocket client implementation in C++ with SSL support. This client can connect to WebSocket servers, send messages, and display received messages.

**Features**

* Connect to secure WebSocket (WSS) servers
* Send text messages to the server
* Receive and display messages from the server
* Simple command-line interface
* Handle connection errors and disconnections gracefully

**Requirements**

* C++17 compatible compiler
* Boost libraries (Beast, ASIO)
* OpenSSL
* GN build system
* Ninja build tool

**Building the Project**

**Install Dependencies**

For Ubuntu/Debian:

sudo apt-get update sudo apt-get install build-essential libboost-all-dev libssl-dev

For macOS (using Homebrew):

brew install boost openssl

**Install GN and Ninja**

Follow the instructions at https://gn.googlesource.com/gn/ to install GN.

For Ninja:

sudo apt-get install ninja-build # Ubuntu/Debian brew install ninja # macOS

**Build Instructions**

* Generate the build files for debug:

gn gen out/Debug --args-file=args\_debug.gn

* Generate the build files for release:

gn gen out/Release --args-

file=args\_release.gn

* Build the debug version:

ninja -C out/Debug

* Build the release version:

ninja -C out/Release

**Usage**

Run the built executable:

./out/Debug/websocket\_client # Debug build ./out/Release/websocket\_client # Release build

**Commands**

* Enter a WebSocket server URL or press Enter to use the default (wss://echo.websocket.events/.ws)
* Type a message and press Enter to send it to the server
* /disconnect - Disconnect from the current server
* /quit - Exit the application

**Supported WebSocket Servers**

This client has been tested with:

* wss://echo.websocket.events/.ws
* wss://piehost.com/websocket-tester
* wss://websocket.org/tools/websocket-echo-server

**Implementation Details**

The client uses:

* Boost.Beast for WebSocket protocol implementation
* Boost.ASIO for networking
* OpenSSL for secure connections
* Multiple threads for handling connections and user input