# Requirement

- Remote Java test on which we will assess the **quality of your coding.**
- Using the token (e13e627c49705f83cbe7b60389ac411b6f86fee7), you will be able to connect to our sandbox environment (wss://socket.uat.b2c2.net/quotes) once your IP is white-listed.
- Using our documentation (https://docs.b2c2.com/#b2c2-websocket-api, login: counterparty, pw: saINDIFECleAsTra).
- Replicate the behaviour of the Websocket as precisely as possible, in Java.
- The program should be a Websocket server exposing (at a minimum) the "subscribe" and "unsubscribe" features (which means that first, you should authenticate to our Websocket).
- Effectively you are writing a proxy to our service.
- We will pay special attention to:
  - Performance: scalability, latency, garbage generated
  - overall code quality and style.
- Don't use a framework like Spring.
- The total estimated time to build the small software is three hours and we'll be de-whitelisting your IP address after that time. You'll then have 30 minutes to do any final cleanup of your code before we'd please like it submitted to us via email.
- One other pointer: we've heard of issues supporting our authentication mechanism with some Java Websocket implementations. Suggest you use Netty.

Design
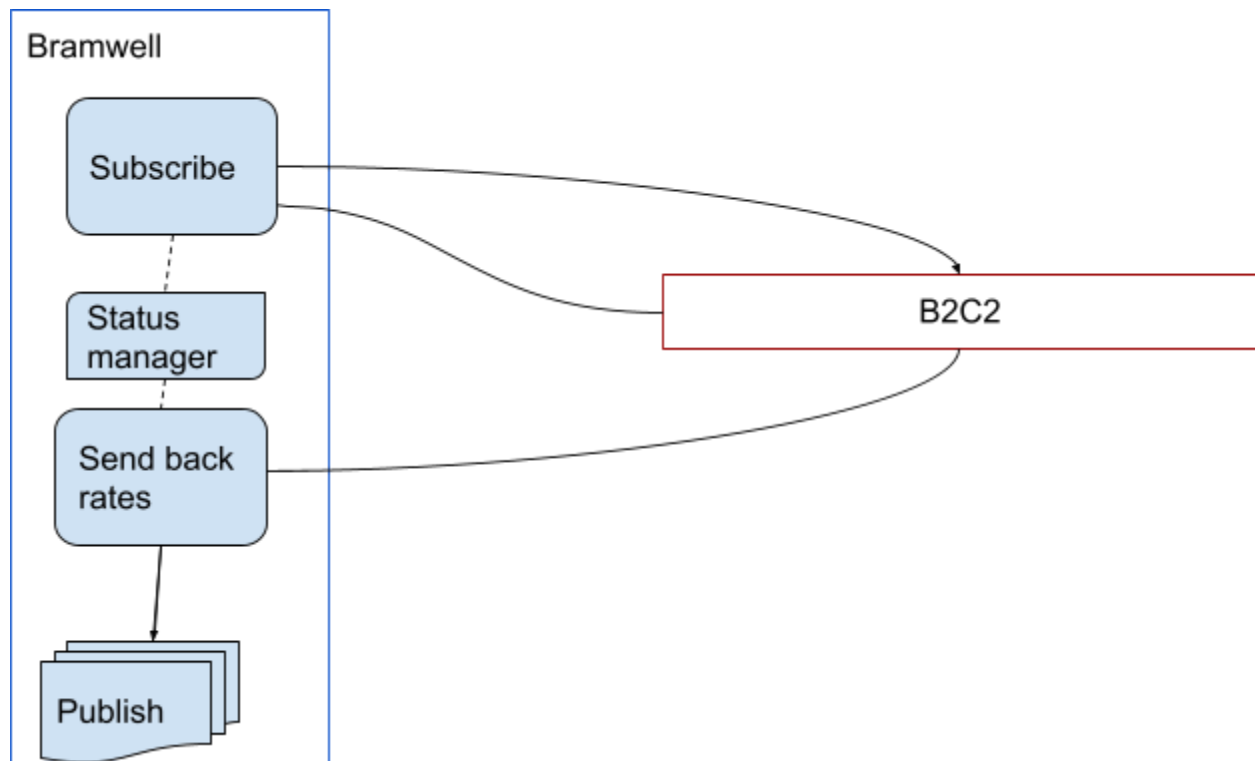
Considerations

- The B2C2 WebSocket API provides access to real time pricing for multiple layers of quantity (Maximum two by default, but can be increased on request)
- **UAT sandbox**: wss://socket.uat.b2c2.net/quotes
- The connection will be dropped if no message is sent within 60 seconds e.g. not being subscribed to any instrument.
- Only 2 concurrent Websocket connections allowed. New connections will result in the oldest being disconnected.
- Configure client to **automatically reconnect if disconnected.**
- 100/5mins Per IP Rate Limits: If you reach the per IP rate limit, you will receive a 403 HTTP response. Please slow down the rate of connection attempts.
- Rate Limits Subscription Requests: 80/second. If you reach a rate limit, you will receive an error code 3020 with message "Message burst rate limit exceeded".
- **List of all your tradable instruments GET** https://api.uat.b2c2.net/instruments/. Please ask your sales representative if you want access to more instruments.
- 30 minutes downtime every Wednesday 10am UTC for B2C2's scheduled maintenance. If more time is required we will be notified in advance. Subscribe to updates on B2C2's maintenance windows, and view the status of B2C2's components here: https://status.b2c2.com/ .

- TODO: webhook notifications for whenever B2C2 creates an incident, updates an incident, resolves an incident or changes a component status. https://status.b2c2.com/#
- Order execution: POST https://api.uat.b2c2.net/order/ . Tradable quote from FOK order or RFQ required to execute a trade.
- Available balances in the supported currencies GET https://api.uat.b2c2.net/balance/ . This shows the. Your account balance is the net result of all your trade and settlement activity. A positive number indicates that B2C2 owes you the amount of the given currency. A negative number means that you owe B2C2 the given amount.

Security
https://en.wikipedia.org/wiki/WebSocket