

CoinPanel Backend Challenge

CoinPanel is a trading automation platform, that triggers orders based on price conditions. For example, the user specifies that he wants to sell BTC at \$50,000, and the automation triggers the order when the specified price is reached.

Please provide an architecture of a trading automation system which have to fulfill the following criterion

- 1) Realtime market data ingestion
 - a) Main system(WebSocket) and backup system if socket goes down(via methods available in exchange API) to ensure continuous data
- 2) Trading automation to evaluate market data and execute trades
 - a) Have to be able to handle hundreds of thousands of trades that are being monitored
- 3) Avoid issues around IP limit bans (e.g. If one rest API call has a weight of 5, each IP has a limit of 1200 weight per minute(240 requests). How do you propose to design so that it will scale when reaching the IP rate limit)
<https://github.com/binance/binance-spot-api-docs/blob/master/rest-api.md#ip-limits>
- 4) Notification system to trigger after automation has made a decision.

Please use Google Cloud components to design the above architecture and draw the diagram using draw.io

Example crypto exchange API to use: <https://github.com/binance/binance-spot-api-docs>

Please also consider performance requirements for fast UI response to users.

Contact deniz@coinpanel.com for questions and sending the challenge result.