Customer API Performance Analysis

To analyse the Customer API performance I've used several tools, such as Postman, JMeter, Django Silk. All of these were used to test out different things. The difference between querying purchases, concessions, and usages was very little, so I will not be distinguishing between those in this analysis.

To begin with, I've tested simple calls to the API using Postman. The first call to the API usually took about 600 – 700ms because HTTP and TLS handshakes were being performed to establish a safe connection. Consecutive calls usually took 200 – 300ms, which is not too bad, considering that we are using Pythonanywhere to host our API.

However, after loading the API with multiple requests at the same time, it started to show quite big delays. This was performed using JMeter. After running 10 requests at the same time, which is equivalent to 10 different users trying to query data at the same time, the responses took up to 500ms to start being received, and up to 2 seconds to be fully received. Loading the API with 100 requests at the same time, the responses took up to 10 seconds to start being received, and up to 20 seconds to be fully received. So apparently our API doesn't scale very well, however it is hosted on Pythonanywhere, so good results are not expected. Also, as our project is mainly a proof of concept, hence managing many requests at the same time is not going to be an issue for us.