Exercise 4_5 – 30 mins.

PTFL-4.2.4 (K4) Create load profiles derived from operational profiles for given performance testing objectives

Scenario:

An international travel website has embarked on a project to upgrade the flight booking functionality of its website. The current booking engine is slow and cumbersome.

Operational Profiles

1. Customer booking a round-trip flight with no exceptions. In this profile, the user load is consistent at around 500 users at any given time of day or night.
2. Flight sale on a given day. In this profile, the user load may sharply increase to 1,000 concurrent users.
3. Flight sale on a given day or other period. In this profile the user load gradually increases to 1,500 concurrent users and last for 3 to 4 hours.

Performance Test Objectives

User and Stakeholder Performance Test Objectives

1. Validate that the checkout process must be simple in terms of customer instructions and the steps needed to add items and make payment.
2. Validate that for peak load times with 1,000 users in the search/booking process concurrently:

   a. The total booking and checkout time must be two minutes or less
   b. The time needed to complete a flight search with a given origin and destination must be 1 second or less
   c. The time needed to select a flight must be 1 seconds or less
   d. The time needed for credit card authorization must be 3 seconds or less
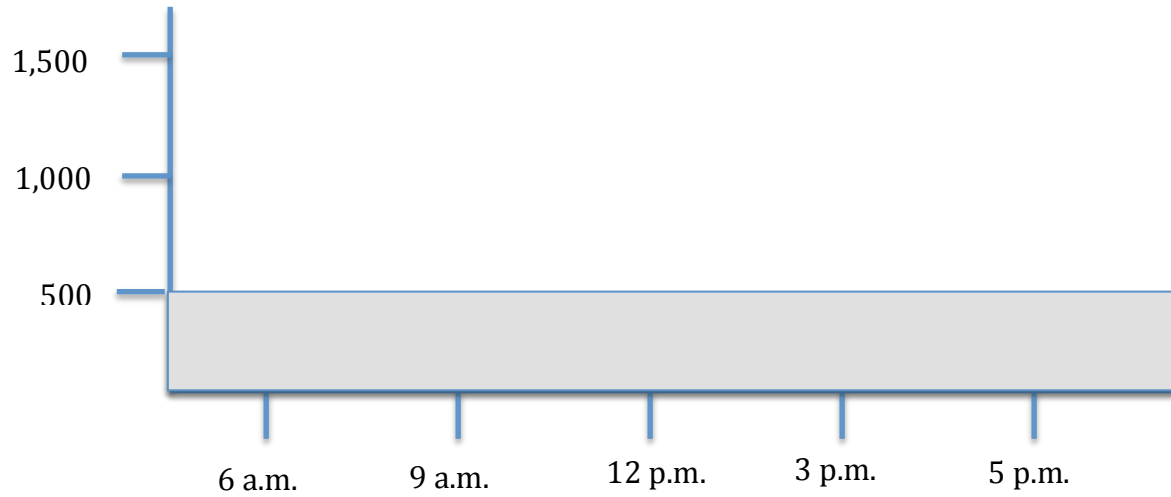   e. The time needed to send a confirmation e-mail must be 5 minutes or less

Technical Performance Test Objectives

1. Validate that the performance of the currency conversion API is 1 second or less at high load levels.
2. Validate that the flight booking functionality integration with participating airlines flight inventory and pricing database has no delays.
3. Validate error handing is correct and efficient in the event the airlines' API is unavailable or experiencing delays.
4. Validate that the encryption of data in transit and at rest does not increase response times more than 1 ms.
5. Validate that the response time for the currency conversion process must be 500 ms or less.
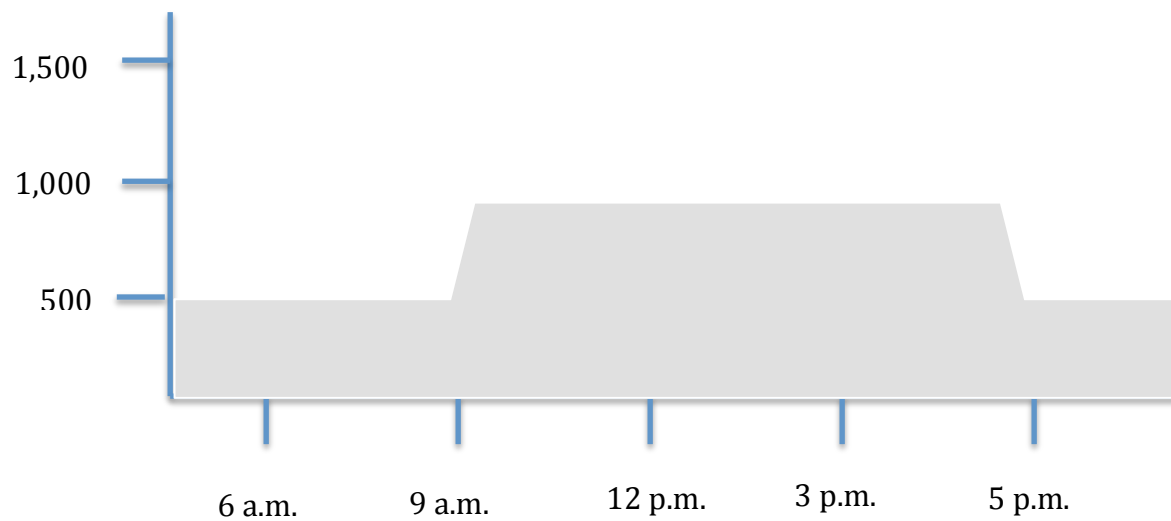
Exercise 4_5

Create load profiles derived from operational profiles for the given performance testing objectives from the following perspectives:

Normal Load (Operational Profile 1)

Spiked Load (Operational Profile 2)

Exercise 4_5

Ramped (Operational Profile 3)