**Test Objective :**

* **Evaluate the behaviour of application when 1000 users logged in at the same time and validate if response times are within NFRs.**
* **Evaluate the behaviour of application when 10000 users making payments at the same time and validate if response times are within NFRs.**

**Test Approach:**

**Spike testing** will be used to simulate sudden burst of load on application concurrently to determine system performance and deterioration when there is a sudden high load. It also helps to determine the recovery time as system would need some time to stabilize

Rendezvous function can be used to simulate concurrency load on the application and perform login\place order transactions at the same time. Rendezvous function needs to be used before the targeted transactions and settings needs to be updated at the scenario level.

Load-runner -Performance testing tool has been used to simulate this scenario using web(http) protocol.

**Script Details :**

Sample script has been created with basic transactions Welcome, login, search and submit order transactions with all the required settings.

We can use 2 scripts for this execution.

1. Sample script with Rendezvous with load of 10,000 users to emulate scenario of 1000 concurrent logins and 10,000 concurrent payments.
2. Sample script without Rendezvous with base load of 50 users for a period of 2 hours.

As mentioned this is a sample script cannot be used for executions as this was created manually for assessment purpose.

**Scenario Details :**

Total number of users required : 10,050

Basic schedule, number mode

Ramp up period : 100 users gradually every 10 seconds.

Duration : 2 hours.

**Rendezvous settings :**

***Login - Transaction # 2:***  Release when 1000 Vusers arrive at the rendezvous select Timeout between Vusers: 120 seconds  
***Submit order Transaction #4 :*** Release when 10000 Vusers arrive at the rendezvous select Timeout between Vusers: 1500 seconds

By using above settings we should be able to simulate both the use cases and evaluate the behaviour of the application.

Note : Session timeout is assumed as 60 minutes.

**Parameter data settings:**

Host Url, User credentials and card details needs to be been parameterised in the script.

P\_ Host URL – Sequential\Once

P\_Username : Unique\Once

P\_Password :Sequential\Once

We need 10,000 unique user details to conduct test execution and valid card details to submit orders.

**Pre-requisites :**

* Application needs to be stable without any P1& P2 defects.
* APM tools (AppDynamics, CA Wily Introscope, sitescope ) are required to monitor server side metrics.
* Test data needs to be available for performing test executions.
* Test environment should be replica of production in terms of number of servers and capacity.
* Necessary support would be required from application team.