**Introduction:**

This is a sample case study to do load test using JMETER on a REST API server running on an application server.

The Sample-REST-API is a rest API server which accepts http requests from Users. Users can sign-up, login and access profile.

**Contents:**

The **sample-rest-api** (<https://github.com/Sravan48/sample-rest-api>) is the repository in GIT.

This repo contains following contents,

* **sample-rest-api** is a springs project and which exposes rest-end points
  + Create .war file
  + Deploy .war file in any application server (used JBOSS)
    - Import project into eclipse
    - Add server runtime environment in eclipse
    - Add sample-rest-api project to server runtime environment
    - Deploy the project and start server
* **sample-rest-api/scripts** contain the database schema
  + Database name is given as **casestudy** and username & password are root
* **Sample-rest-api/jmeter** contain the jmeter test cases
  + Load test case for HTTP GET
  + Load test case for HTTP GET using timers
  + Load test case for HTTP POST request
  + Load test case for Database
  + All above test cases contain load visualization graphs

**Test Plan:**

Hosted sample-rest-api server on AWS EC2 micro-instance (free tire), installed mysql on same EC2 instance.

Tested all below test cases on this EC2 instance, which produced following throughputs,

* Load test case for HTTP GET
  + Max load without fail – 1200 Req/Sec
  + Fails after Max Load – 1400 Req/Sec
* Load test case for HTTP GET using timers
  + Max load without fail – 600 Req/Sec
  + Fails after Max Load – 700 Req/Sec
* Load test case for HTTP POST request
  + Max load without fail – 300 Req/Sec
  + Fails after Max Load – 400 Req/Sec
* Load test case for Database
  + Max load without fail – 25 Req/Sec
  + Fails after Max Load – 30 Req/Sec
* All above test cases contain load visualization graphs
  + Visualizations are embedded in JMeterCaseStudy.jmx