

Soak Testing & Stress Testing

Soak testing is also called Endurance Testing

Here you test your application which is exposed to normal or moderate load for a given period of time.

You can Detect Issues like

- Memory Leaks
- Database Connections Leakage
- Performance Degradation over time
- Slow response time to time
- 100 users sends request continuously for 8 hours.

Stress Testing is to send more request to your system beyond its capacity to check how it fails or recovers.

detect issues like:

- Breaking point of the application
- how its recovering from high traffic or how it fails
- error handling happens under a pressure.

Ramp up to 5000 users in 30 seconds to see the server fails or not.

Let's Set up Locust for Stress Testing

install it via pip command: `pip install locust`

check the version: `locust --version`

once you can see the version create file: locustfile.py

```
from locust import HttpUser,task,between
```

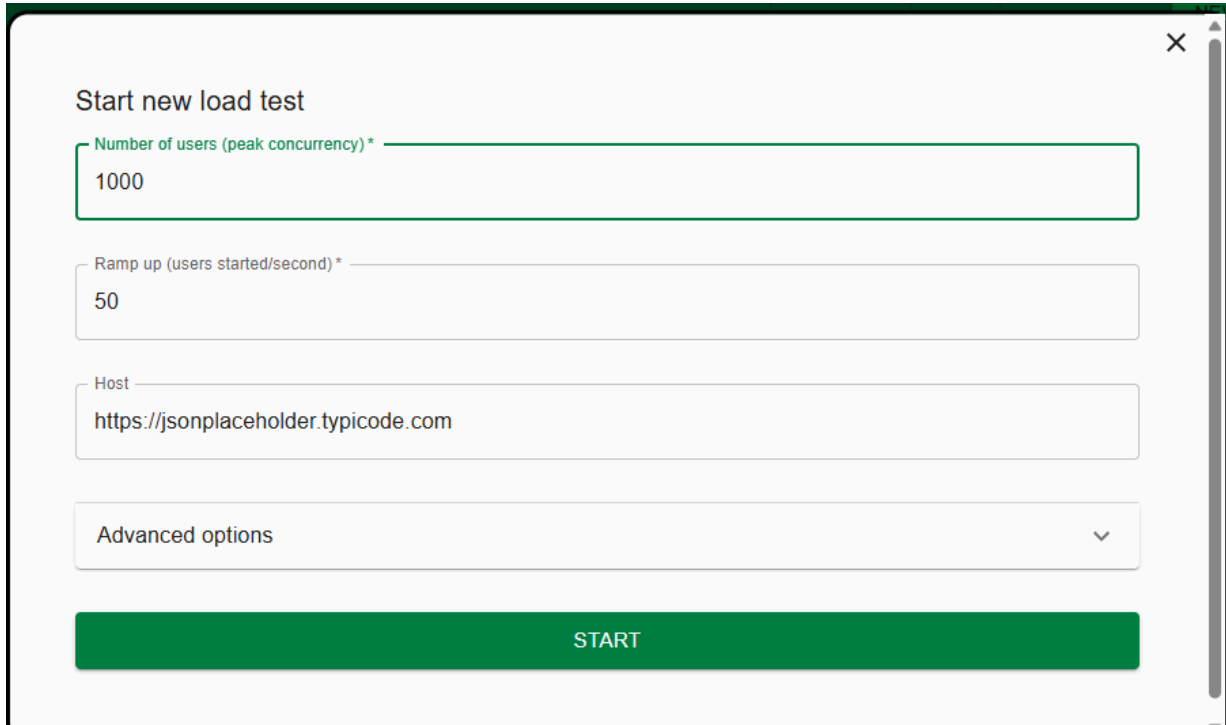
```
class MyStressTestUser(HttpUser):  
    wait_time = between(1,2)  
    @task  
    def get_posts(self):  
        self.client.get('/posts')
```

Save the file and let's run it.

locust -f locustfile.py

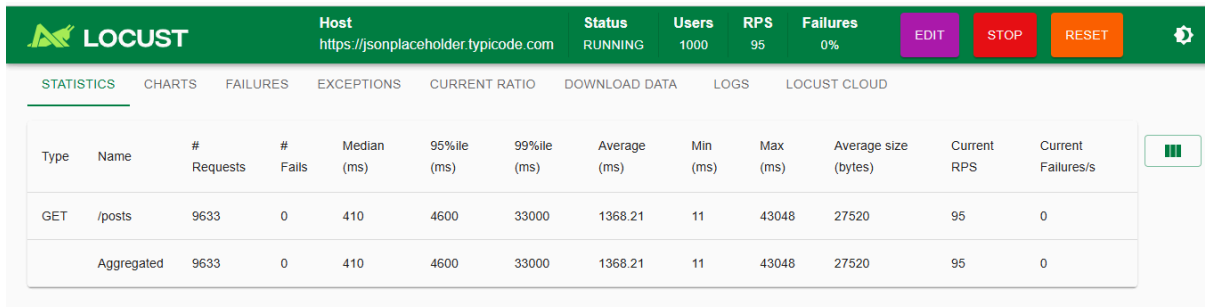
```
D:\PhysicsWalla\Devops-March\stress-testing-locust>locust -f locustfile.py
[2025-06-07 11:07:19,327] DESKTOP-4F8ELLU/INFO/locust.main: Starting Locust 2.37.9
[2025-06-07 11:07:19,330] DESKTOP-4F8ELLU/INFO/locust.main: Starting web interface at http://localhost:8089, press enter to open your default browser.
[2025-06-07 11:08:20,486] DESKTOP-4F8ELLU/INFO/locust.runners: Ramping to 100 users at a rate of 50.00 per second
[2025-06-07 11:08:21,660] DESKTOP-4F8ELLU/INFO/locust.runners: All users spawned: {"MyStressTestUser": 100} (100 total users)
```

open this url in browser: <http://localhost:8089/>



The screenshot shows the 'Start new load test' form in the Locust web interface. It includes input fields for 'Number of users (peak concurrency)*' (set to 1000), 'Ramp up (users started/second)*' (set to 50), and 'Host' (set to <https://jsonplaceholder.typicode.com>). There is an 'Advanced options' dropdown menu and a large green 'START' button at the bottom.

click on Start



The screenshot shows the Locust web interface with the 'STATISTICS' tab selected. The top bar displays the Locust logo, host URL, status (RUNNING), and user count (1000). The main table shows statistics for the GET /posts endpoint.

Type	Name	# Requests	# Fails	Median (ms)	95%ile (ms)	99%ile (ms)	Average (ms)	Min (ms)	Max (ms)	Average size (bytes)	Current RPS	Current Failures/s
GET	/posts	9633	0	410	4600	33000	1368.21	11	43048	27520	95	0
Aggregated		9633	0	410	4600	33000	1368.21	11	43048	27520	95	0

check Charts, Logs, Exceptions, failures etc..