Locust Python load testing

CONCEPTS

A locustfile is plain Python: each User class is one simulated visitor running weighted tasks.

Locustfile User + tasks
↓ locust
Master spawns, aggregates
↓ --worker
Workers run the users
↓ HTTP
Target your system

Only load test systems you own or have written permission to test.

RUNNING

locust
Start the web UI (port 8089) using locustfile.py

locust -f *<file>*
Use a specific locustfile

locust -H *<url>*
Target host for all requests

Defaults can live in locust.conf, ~/.locust.conf or pyproject.toml ([tool.locust]). Env vars use LOCUST_<OPTION>, flags win over both.

HEADLESS

locust --headless -u *<n>* **-r** *<rate>* **-t** *<time>*
Fixed run without UI

-u / --users *<n>*
Peak number of simulated users

-r / --spawn-rate *<n>*
Users started per second

-t / --run-time *<time>*
Stop after this long

--exit-code-on-error *<code>*
Exit code when requests failed

REPORTS

--csv *<prefix>*
Write <prefix>_stats.csv and failures/ exceptions CSVs

REPORTS (cont.)

--html *<file>*
Write an HTML report at the end

DISTRIBUTED

locust --master
Start the master (no users run on it)

locust --worker
Start a worker, master on localhost

locust --worker --master-host *<host>*
Point a worker at a remote master

--expect-workers *<n>*
Headless master waits for n workers

locust --processes *<n>*
Fork master plus n workers locally

locust --worker --processes *<n>*
Fork only n workers on this machine

LOCUSTFILE

Minimal HttpUser

```
from locust import HttpUser, task,
between

class ShopUser(HttpUser):
    wait_time = between(1, 5)

    @task(3)
    def home(self):
        self.client.get("/")

    @task
    def item(self):
        self.client.get("/item/1")
```

@task(*<weight>***)**
Pick this task proportionally more often

wait_time = between(*<a>***, *<b>*)**
Random pause after each task

def on_start(self):
Per-user setup such as login

self.client.get(*<path>***, name=***<label>***)**
Group dynamic URLs in the stats

self.client.post(*<path>***, json=***<obj>***)**
POST a JSON body

catch_response=True
Decide pass/fail from the response