Grader stack

Multiple servers behind a load balancer provide scalability and redundancy. Scaling without load balancer makes one server access point and others only posting results.

GET exercises

POST answers

POST results asynchronously

Apache – Web front end Passes requests to Python WSGI.

Celery – Python task queue Grades answers.

Django – Python application server Serves requests for exercise contents and answers. RabbitMQ – Message broker
Stores queued answers. A broker
can be set by URL so either one
shared queue or independent
queue for each grader can be used.

Sandboxed system via shell scripts

expaca

Runs answer code and compares output to that of a model answer.

JUnit etc

Runs tests against answer code.