

edX Load Tests

Introduction And Current Status

Troy Sankey

September 5, 2017

Introduction

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- ▶ Uses the Locust load testing tool.

Why Load Test?

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- ▶ Performance-sensitive code changes.
- ▶ Major version changes of dependencies.

Overview Of Writing Tests

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3. Write startup (`on_start()`) function.
4. Write instructions for seeding test data.

locustfile.py

```
1  class ChatTasks(TaskSet)
2      @task(3)
3      def send_message():
4          print("sending a message.")
5      @task(8)
6      def get_emoji():
7          print("getting list of emoji.")
8
9  class ServiceTasks(TaskSet):
10      tasks = {
11          ChatTasks: 1,
12          SearchTasks: 2,
13      }
14
15  class ServiceUser(HttpLocust):
16      task_set = ServiceTasks
17      min_wait = 1000
18      max_wait = 5000
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User Experience

- ▶ No browser, no javascript, no good measure of user experience.
- ▶ Focus on the system response, not the users.

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Settings

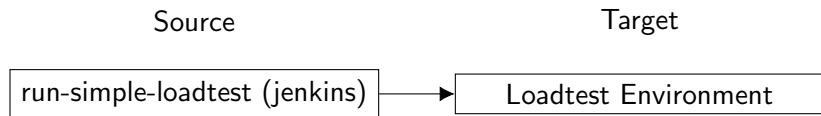
- ▶ Each load test is configurable via a YAML file.
- ▶ Use `helpers.settings`.
- ▶ The Jenkins job (`run-simple-loadtest`) will use settings specified by a job parameter.

Overview Of Running Load Tests

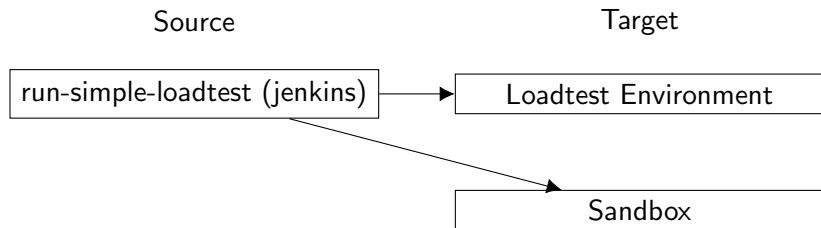
Target

Loadtest Environment

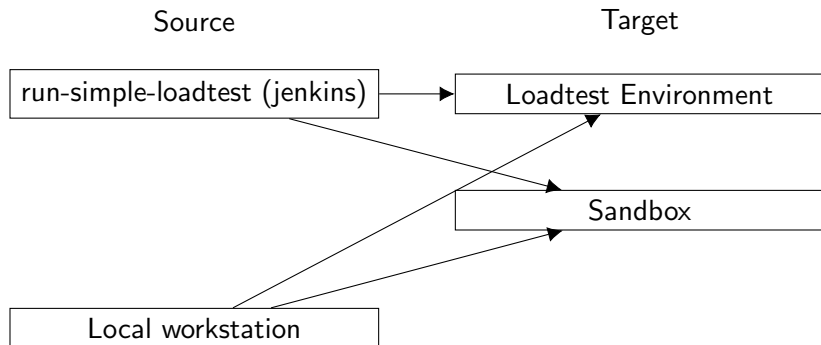
Overview Of Running Load Tests



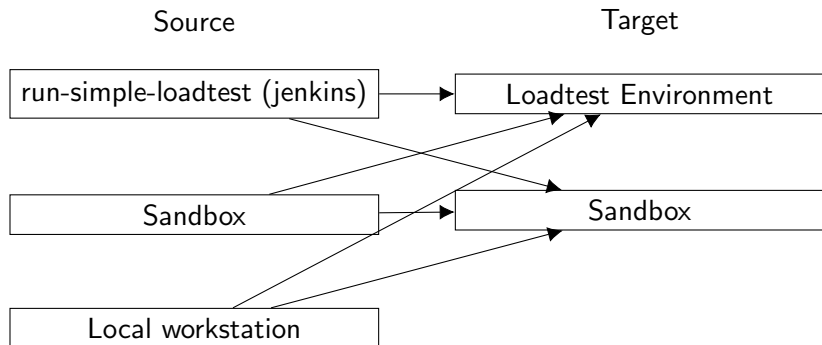
Overview Of Running Load Tests



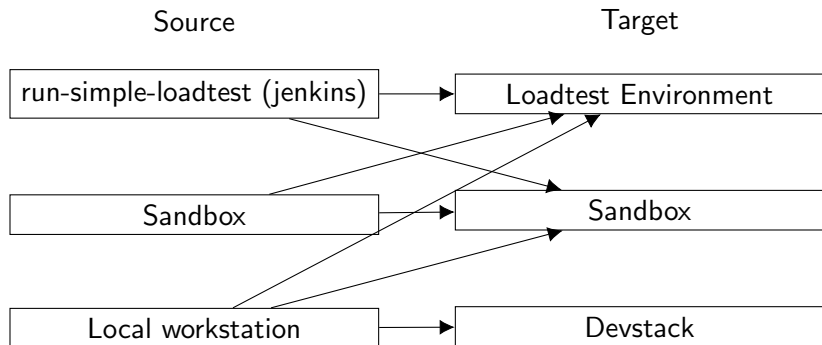
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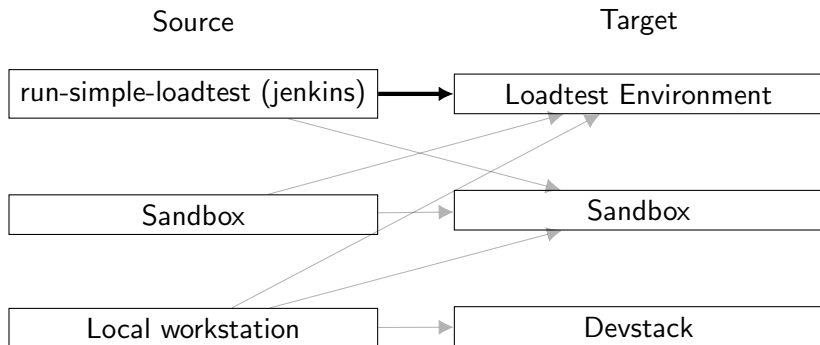
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Evaluating Load Test Runs

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 **Build #48 (Jul 3, 2017 9:03:06 PM)**

 [Build Artifacts](#)

 [log.txt](#) 10.09 MB  [view](#)

 [summary.yml](#) 540 B  [view](#)

 Failed to determine ([log](#))

 Started by user [Troy Sankey](#)

 Rebuilds build [#45](#)



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- ▶ Custom metrics in edx-platform: make use of the custom metrics middleware for peering into application behavior.

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- ▶ Continuous deployment \Rightarrow continuous deletion of system metrics!

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- ▶ If you want/need real distributed load testing, demand it!

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- ▶ New endpoints will need to be added as new tasks.

For fun: Real browser load testing

- ▶ `pip install realbrowserlocusts`, then subclass `PhantomJSLocust` in your locustfile.
- ▶ Could make certain tests more realistic (AJAX calls actually happen).
- ▶ Potentially far more resource intensive on the client side