

Cloud WorkBench

Infrastructure-as-Code Based Cloud Benchmarking

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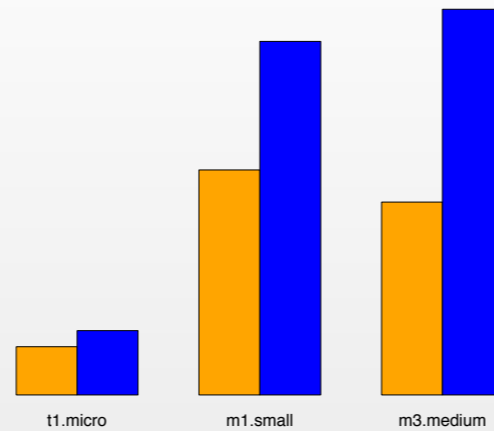


Motivation

Infrastructure-as-a-Service (IaaS)



Google Compute Engine



Problem

Manual Benchmarking

- Time-consuming
- Error-prone

Cloud WorkBench

The screenshot displays the Cloud WorkBench interface. At the top, the 'WorkBench' logo and a 'Sign out' link are visible. The main header shows the execution details: 'Execution from 30. May 2014 00:00 of www-app-compile [aws-eu-large]'. Below this, three large colored boxes provide a summary: a green box labeled 'FINISHED' with a checkmark, a blue box labeled '6 minutes' for 'Benchmark Duration', and an orange box labeled '15 minutes' for 'Execution Duration'. A left sidebar contains navigation options: 'Dashboard', 'BENCHMARK' (Definitions, Executions, Schedules), and 'OTHERS' (Virtual Machines). The main content area shows a timeline for '30. May 2014' with several steps, each marked with a green checkmark: '00:00 Created', '00:00 Started preparing' (with a terminal log view), '00:08 Finished preparing', '00:09 Started running', and '00:15 Finished postprocessing'. On the right, there are control buttons for 'Start Execution' and 'Delete', and summary cards for '1 Virtual Machine' (aws, default, i-da30f39a) and 'Schedule' (15 3,7,11,15,19,23 * * *).

WorkBench Sign out

Dashboard Execution from 30. May 2014 00:00 of www-app-compile [aws-eu-large]

FINISHED Status

6 minutes Benchmark Duration

15 minutes Execution Duration

Start Execution

Delete

1 Virtual Machine

aws default i-da30f39a

Schedule

15 3,7,11,15,19,23 * * *

— 15 minutes past 3am, 7am, 11am, 3pm, 7pm, and 11pm of every day

Edit Schedule Activate Schedule

Metrics

+ Create New Metric Definition

Served CPU Type (nominal)

Timeline:

- 00:00 Created
- 00:00 Started preparing
- 00:08 Finished preparing
- 00:09 Started running
- 00:15 Finished postprocessing

```
compile-benchmark.rb
[2014-05-29T22:08:47+00:00] INFO: cookbook_file[/usr/local/cloud-benchmark/cloudscale-compile-benchmark.rb] owner changed to 1000
[2014-05-29T22:08:47+00:00] INFO: cookbook_file[/usr/local/cloud-benchmark/cloudscale-compile-benchmark.rb] group changed to 1000
[2014-05-29T22:08:47+00:00] INFO: template[/usr/local/cloud-benchmark/start.sh] created file /usr/local/cloud-benchmark/start.sh
[2014-05-29T22:08:47+00:00] INFO: template[/usr/local/cloud-benchmark/start.sh] updated file contents /usr/local/cloud-benchmark/start.sh
[2014-05-29T22:08:47+00:00] INFO: template[/usr/local/cloud-benchmark/start.sh] owner changed to 1000
[2014-05-29T22:08:47+00:00] INFO: template[/usr/local/cloud-benchmark/start.sh] group changed to 1000
[2014-05-29T22:08:47+00:00] INFO: template[/usr/local/cloud-benchmark/start.sh] mode changed to 755
[2014-05-29T22:08:47+00:00] INFO: Chef Run complete in 188.462181994 seconds
[2014-05-29T22:08:47+00:00] INFO: Running report handlers
[2014-05-29T22:08:47+00:00] INFO: Report handlers complete
```

Cloud WorkBench

The screenshot displays the Cloud WorkBench dashboard for an execution on May 30, 2014. The interface includes a sidebar with navigation options like Dashboard, BENCHMARK (Definitions, Executions, Schedules), and OTHERS (Virtual Machines). The main area shows a 'FINISHED' status with a duration of 6 minutes. A terminal window displays log output for a benchmark script, including file creation and execution steps. On the right, there are controls for starting and deleting the execution, and a section for '1 Virtual Machine' with its schedule and metrics.



Infrastructure-as-Code



Open Source

<https://github.com/sealuzh/cloud-workbench>