

Lab 6 – Observing Autoscaling on the Cloud

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Steps Performed

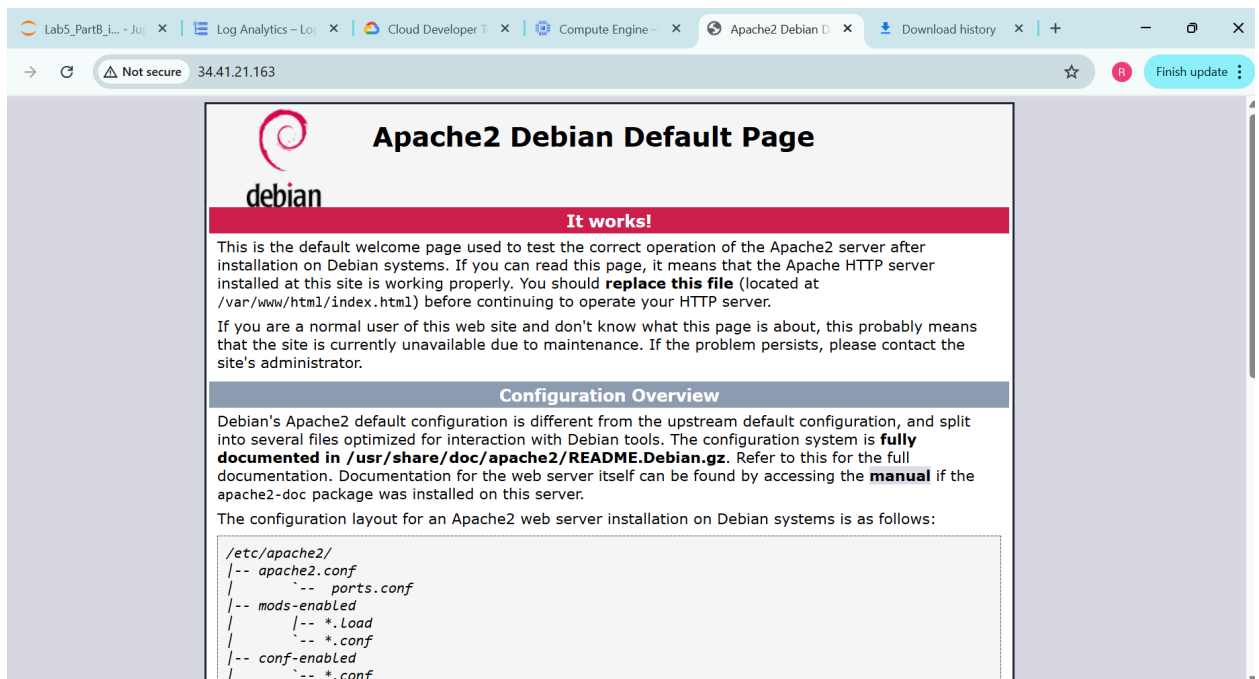
1. Prerequisites and Setup

- Google Cloud project with billing enabled.
- Compute Engine API active.
- Necessary IAM permissions available.

2. Instance Template Creation

- Created **autoscaling-web-app-template**.
- Machine type: **e2-medium** (2 vCPU, 4 GB memory).
- Boot disk: Debian GNU/Linux 12 (10 GB).
- Enabled HTTP traffic in firewall rules.
- Startup script installed Apache web server.

3. Screenshot: Apache default page verified



4. Managed Instance Group (MIG) Creation

- Created **autoscaling-web-app-mig** using the template.

- Autoscaling enabled: min 1, max 3 instances.
- Target metric: CPU utilization (75%).

5. Screenshot: Autoscaling – 3 VM instances

The screenshot shows the Google Cloud Console interface for VM instances. The left sidebar lists various services, with 'VM instances' selected. The main panel displays a table of VM instances managed by an autoscaling group. The table includes columns for Status, Name, Zone, Recommendations, In use by, Interruption status, and Connect options. Three instances are shown, all in a 'Running' state and managed by 'autoscaling'. A fourth instance, 'lab5-notebook', is also listed but is not part of the autoscaling group.

Status	Name	Zone	Recommendations	In use by	Interr	Connect
Running	autoscaling-web-app-mig-3j47	us-central1-c	autoscaling	autoscaling	10.128 (nic0)	SSH
Running	autoscaling-web-app-mig-k03g	us-central1-f	autoscaling	autoscaling	10.128 (nic0)	SSH
Running	autoscaling-web-app-mig-w4xr	us-central1-b	autoscaling	autoscaling	10.128 (nic0)	SSH
Running	lab5-notebook	eu-west-1-b			10.132 (nic0)	SSH

6. Testing Autoscaling

- Verified Apache default page loaded on external IP.
- Observed automatic scale-out and scale-in based on CPU load.

7. Logs Collection

- Opened **Logs Explorer** in GCP Console.
- Exported scaling events as a **JSON file**. This file includes timestamps, instance IDs, and scaling actions.

Notes

- Only one VM was tested; no additional setup required.
- JSON file contains all recorded scaling events for the lab demonstration.