

EE4221 ACF Lab 6 - Scale and Load Balance Your Architecture

This worksheet supplements the lab activities and provides additional checkpoints to verify your learning outcomes. Extended tasks are provided to guide students to explore more in-depth knowledge. Follow the instructions below to complete each checkpoint and explain your results in the lab report.

Part A – ACF Lab 6: Task 1 to 5

Checkpoint 1:

(Lab Task 1 to Task 2) Show the health check settings of your load balancer. What is the minimal duration (approximated no. of seconds) it takes to consider an instance as healthy and unhealthy respectively?

Checkpoint 2:

(Lab Task 3 to Task 4) How do you verify if the load balancer is working properly that it evenly distributes the load to the two EC2 instances in the target group? Explain your answer.

Checkpoint 3:

(Lab Task 5) Demonstrate that the average CPU utilization goes beyond 60% under the load test and six instances are added to the Lab Auto Scaling Group after a period of time (scaling out).

Skip Task 6. Do not terminate Web Server 1. It will be used in Checkpoint 5.

Part B – Extended Tasks

Checkpoint 4:

Stop the load test and let the average CPU utilization go down until the **AlarmLow** is triggered. Demonstrate that the average CPU utilization goes below 42% and only two instances are left in the Lab Auto Scaling Group after a period of time (scaling in).

Checkpoint 5:

You are asked to split the web traffic by reconfiguring the load balancer (and possibly other relevant components) such that all load test requests are forwarded to **Web Server 1** while the rest of the traffic will still be forwarded to **LabGroup**. Explain the steps you take to split the traffic and how you verify the result in detail.