NWEN\_243 Project 1

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3. Testing Server and Client locally

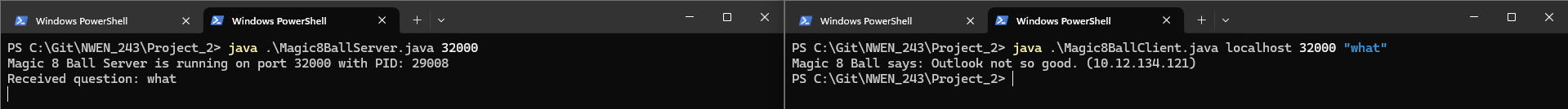


Figure : 1.jpg

7. Testing of Server and client on AWS Instances

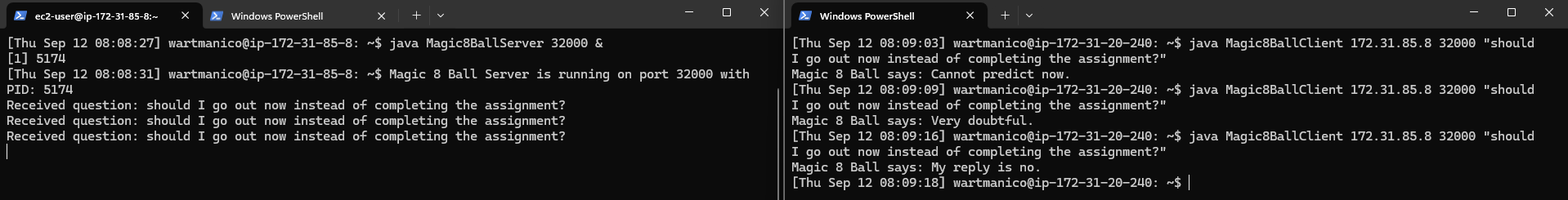


Figure : 2.jpg

8.2 Crontab setup

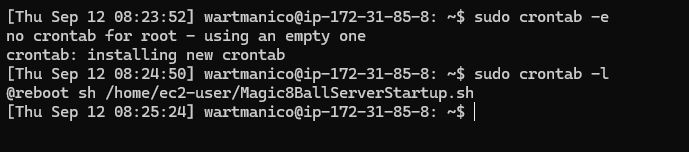


Figure : 3.jpg

Test after reboot:

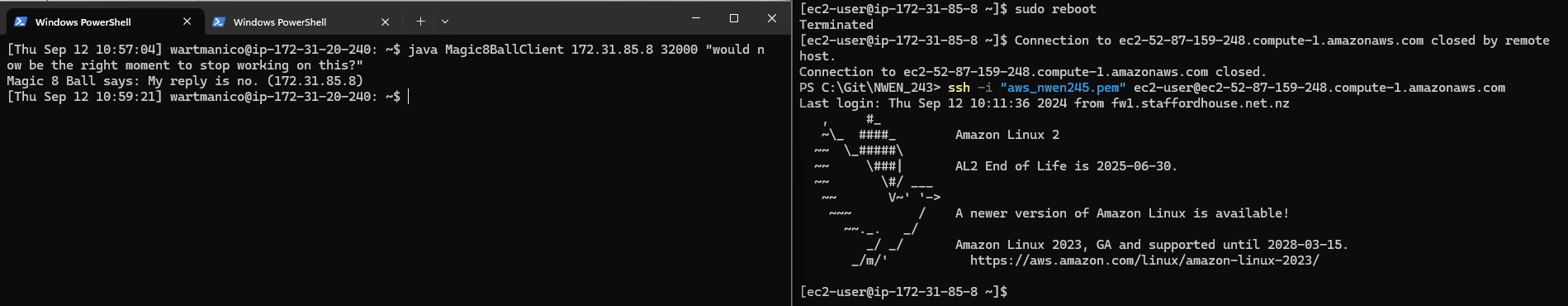


Figure : 4.jpg

8.4 Creating and running the Image

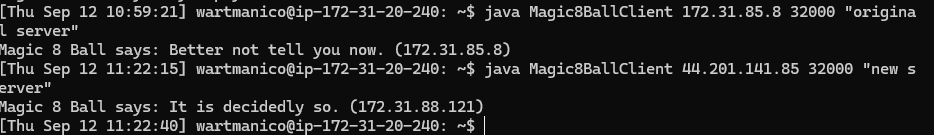


Figure : 5.jpg

A screenshot of a computer

Description automatically generated

Figure : 6.jpg

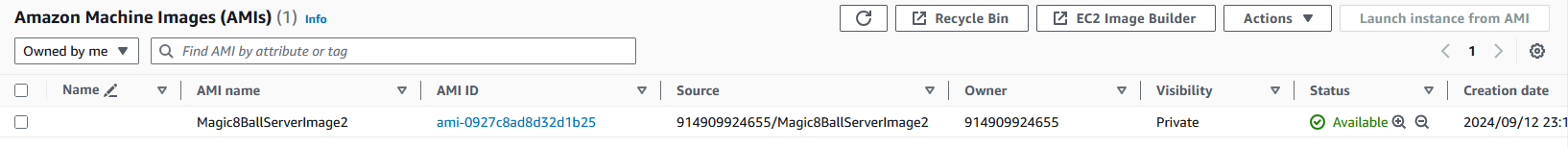
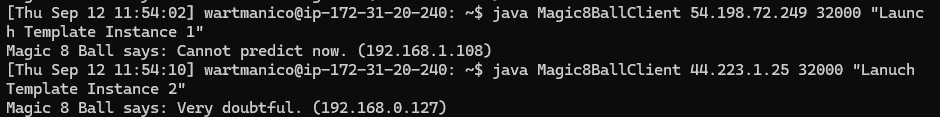
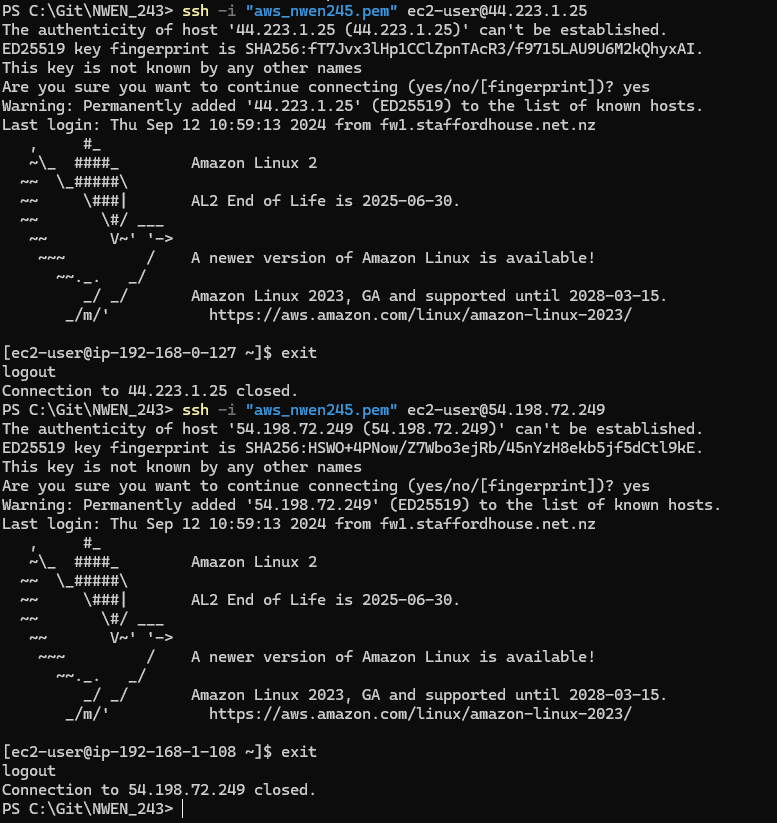


Figure : 7.jpg

Part II

Launch Templates





Instance Test with Load balancer



7. Question 1

New instances are created until the desired minimum is met again (in my case this is 2 instances:

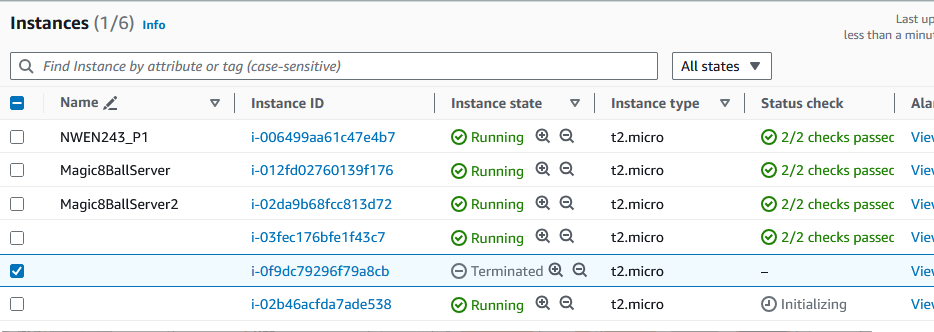


Figure : Instance termination

As can be seen in Figure 8, I have terminated an automatically created Instance and instead of it another Instance has been created automatically by the autoscaler.

8. Question 2

Before:

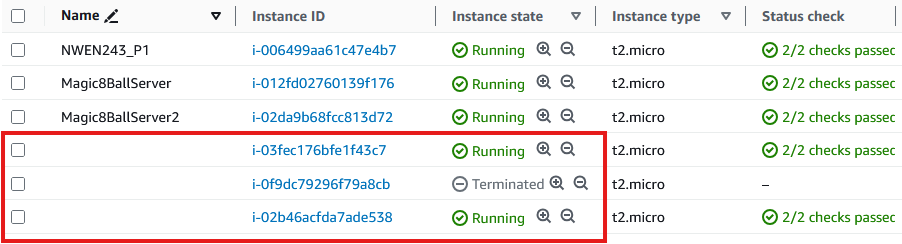


Figure : Before adjunsting settings

Adjustment I made:

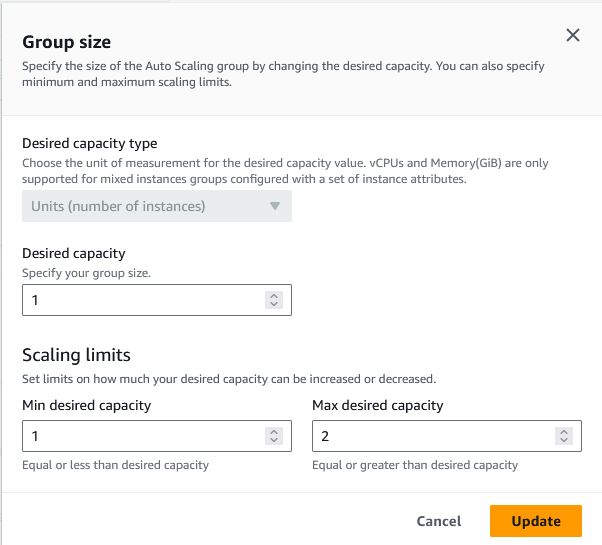


Figure : Adjusting of the settings

After:

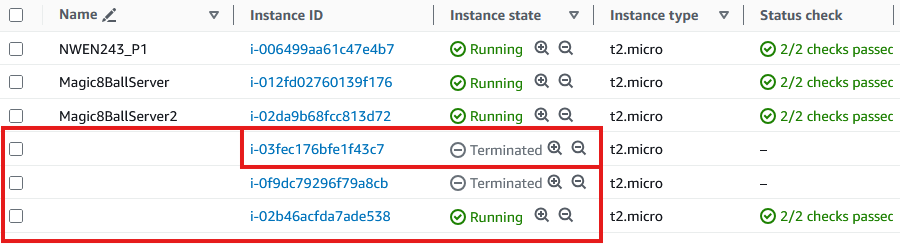


Figure : after adjusting the settings

9. Monitoring

Target Group:

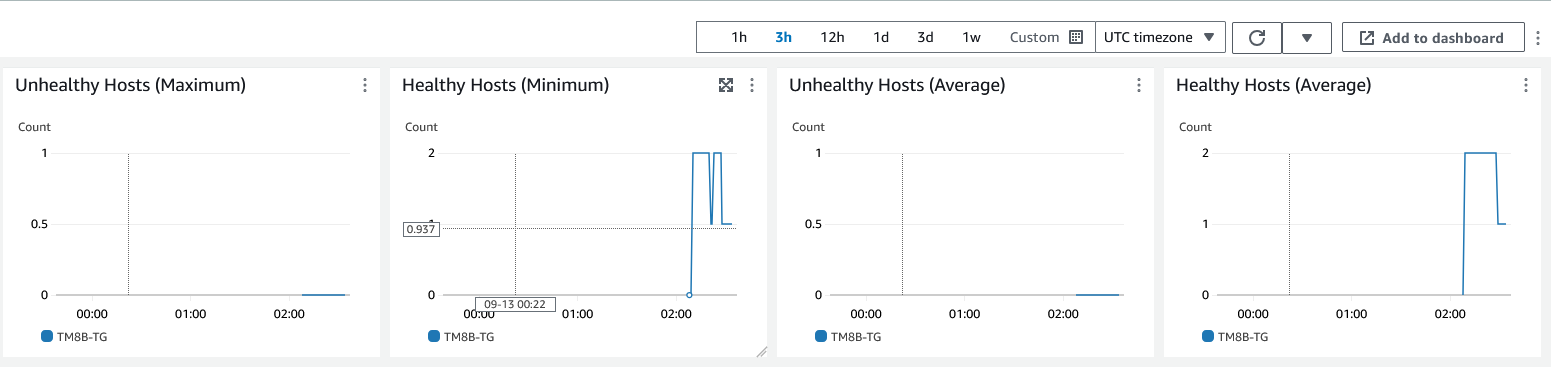


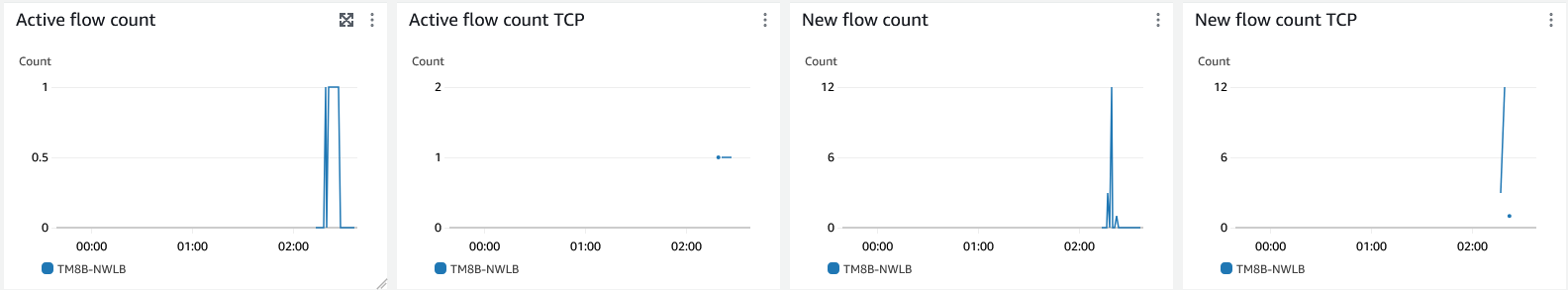
Figure : Target Group Monitoring

There are no unhealthy hosts and never have been. This is to be expected, as the complexity of the instances is very minimal and I did not add any additional health checks like Application monitoring or similar.

The most interesting thing here is the “Healthy Hosts (Minimum)” chart. First 2 Instances are created which can be seen by the line rising to 2. After that the line drops to 1. This is where I terminated one of the instances and the line rising back to 2 is where the autoscaling created another instance to match the requirements made in the settings. After that the line drops back to 1 where I adjusted the Autoscaling to 1 Max Host, which lead to the Autoscaler terminating one Instance.

The remaining two plots just display averages of the things just described. This would be interesting in a larger setup where there are tens or hundreds of hosts involved. In this case there isn’t really anything interesting to be said about them.

Load Balancer:

A screenshot of a computer

Description automatically generatedA screenshot of a graph

Description automatically generated

Figure : Load Balancer Monitoring

The Load balancer Monitoring is different in a way that it does not list the available hosts, but the traffic that is incoming. The Spikes that can be seen on the charts are my client tests where I executed the TM8B client application on my local machine with the load balancer DNS name as Server. These requests are directed trough the load balancer to an available Instance and this traffic is monitored here.

These charts are especially interesting in analysing times of the day where there is high and low traffic.

10. Question 3

As described above both of these monitorings have different uses although it can be useful to overlay them in larger scaled setups. For example if mor instances are supposed to be launched when there is high traffic both of these monitorings together can give insights in the proper function or in the other case dysfunction of the setup created.

The displayed data is very intuitive to understand with these charts. When there are a lot of requests the TCP monitoring spikes and if hosts are instanciated or terminated this can be seen in the Target Group monitoring.