Week10

Lab10

Armant Touche
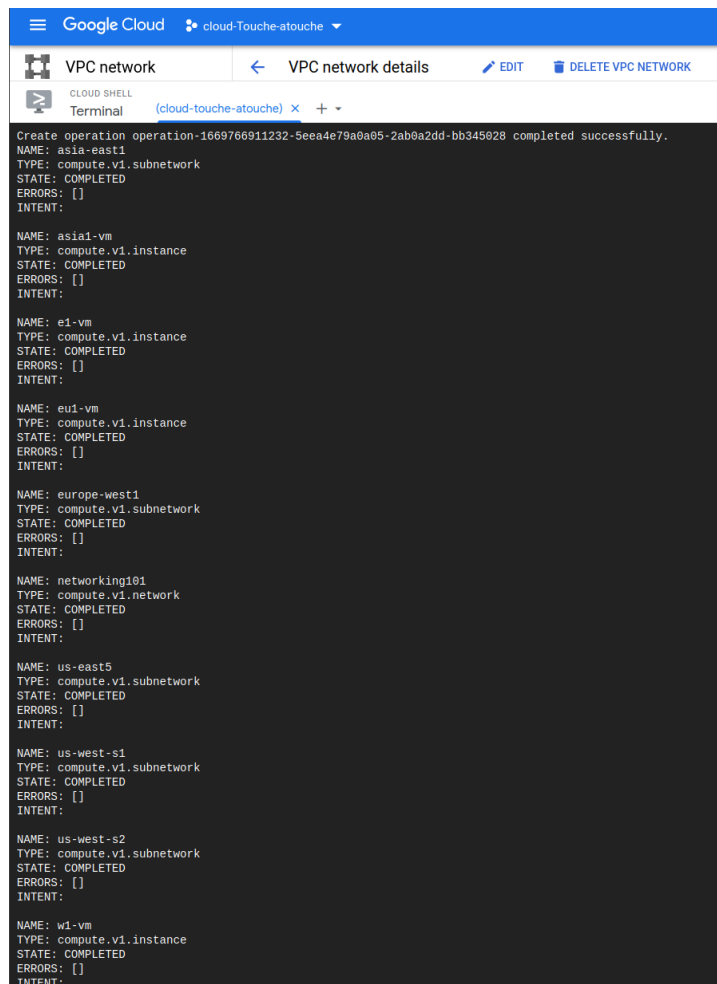
Class/Instructor: CS430P/ Dr. Wu-Chang
Date: 12/05/22

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- ☐ Part 1: Networks and VMs
- ☐ Deployment specification
- ☐ Network specification
- ☐ Subnetwork deployment specification
- ☐ Deployment
    - ☐ **Take a screenshot of the output to include in your lab notebook. How many networks, subnetworks, and VM instances have been created?**

- - 1 Virtual Private Cloud network
- - 5 Subnetworks
- - 5 VM instances on Compute Engine

☐ **Visit the web console for VPC network and show the network and the subnetworks that have been created. Validate that it has created the infrastructure in the initial figure. Note the lack of firewall rules that have been created.**

☐ **Visit the web console for Compute Engine and show all VMs that have been created, their internal IP addresses and the subnetworks they have been instantiated on. Validate that it has created the infrastructure shown in the**

initial figure.

☐ **Click on the ssh button for one of the VMs and attempt to connect. Did it succeed?**
- No, because in our VPC network, we did add an ingress rule to allow TCP forwarding netblock to the SSH port (port=22).

☐ Firewall deployment

☐ Update deployment

    ☐ **Take a screenshot that indicates the new rules have been deployed**
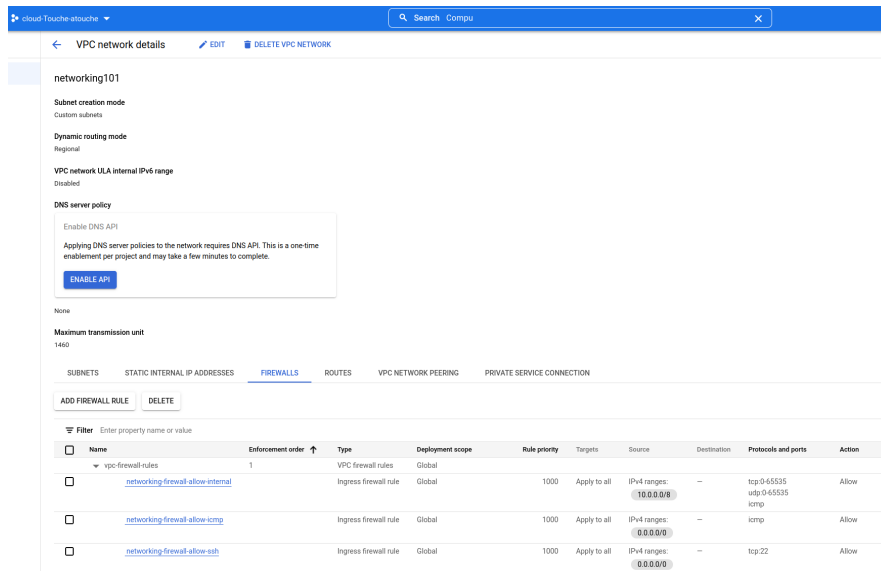
☐ Latency deployment

☐ Latency measurements

    ☐ **Measured latency**

- us-west1 to us-east5 measured latency (min) is 49.891 ms
- us-west1 to europe-west1 measured latency (min) is 136.463 ms
- us-west1 to asia-east1 measured latency (min) is 115.822 ms
- us-east5 to europe-west1 measured latency (min) is 97.019 ms
- us-east5 to asia-east1 measured latency (min) is 169.233 ms
- europe-west1 to asia-east1 measured latency (min) is 250.023 ms

☐ Part 2: Scaling via Instance Groups and Load Balancing

☐ Firewall rule for HTTP

☐ Instance templates

☐ Health Check

☐ Managed Instance Group (europe-west1-mig)

☐ Managed Instance Group (us-east5-mig)

☐ Test groups
  ☐ **Are the instances in the same availability zone or in different ones?**
    - They are in the same Region but not same availability zones
  ☐ **List all availability zones that your servers show up in for your lab notebook.**
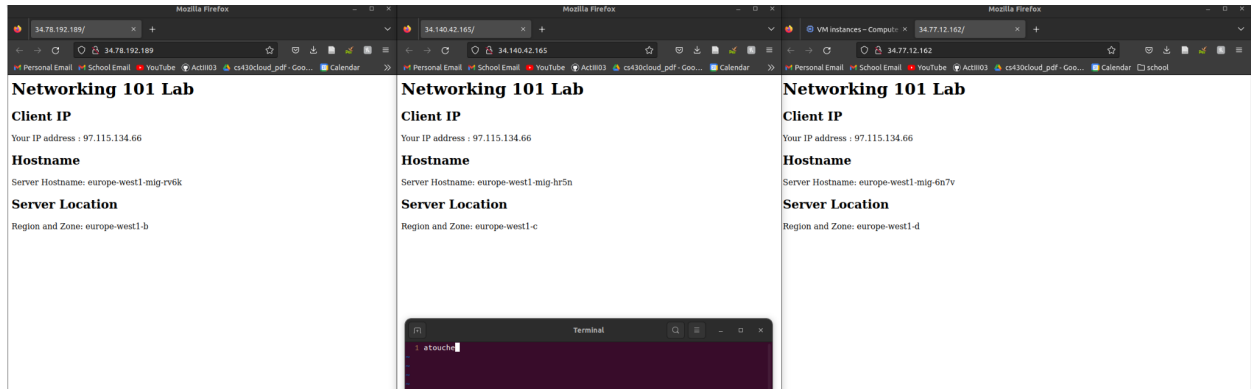
☐ HTTP load balancer
☐ HTTP load balancer
☐ Test load balancer
  ☐ **Which availability zone does the server handling your request reside in?**
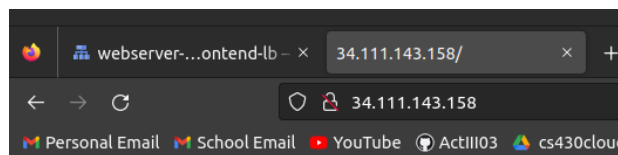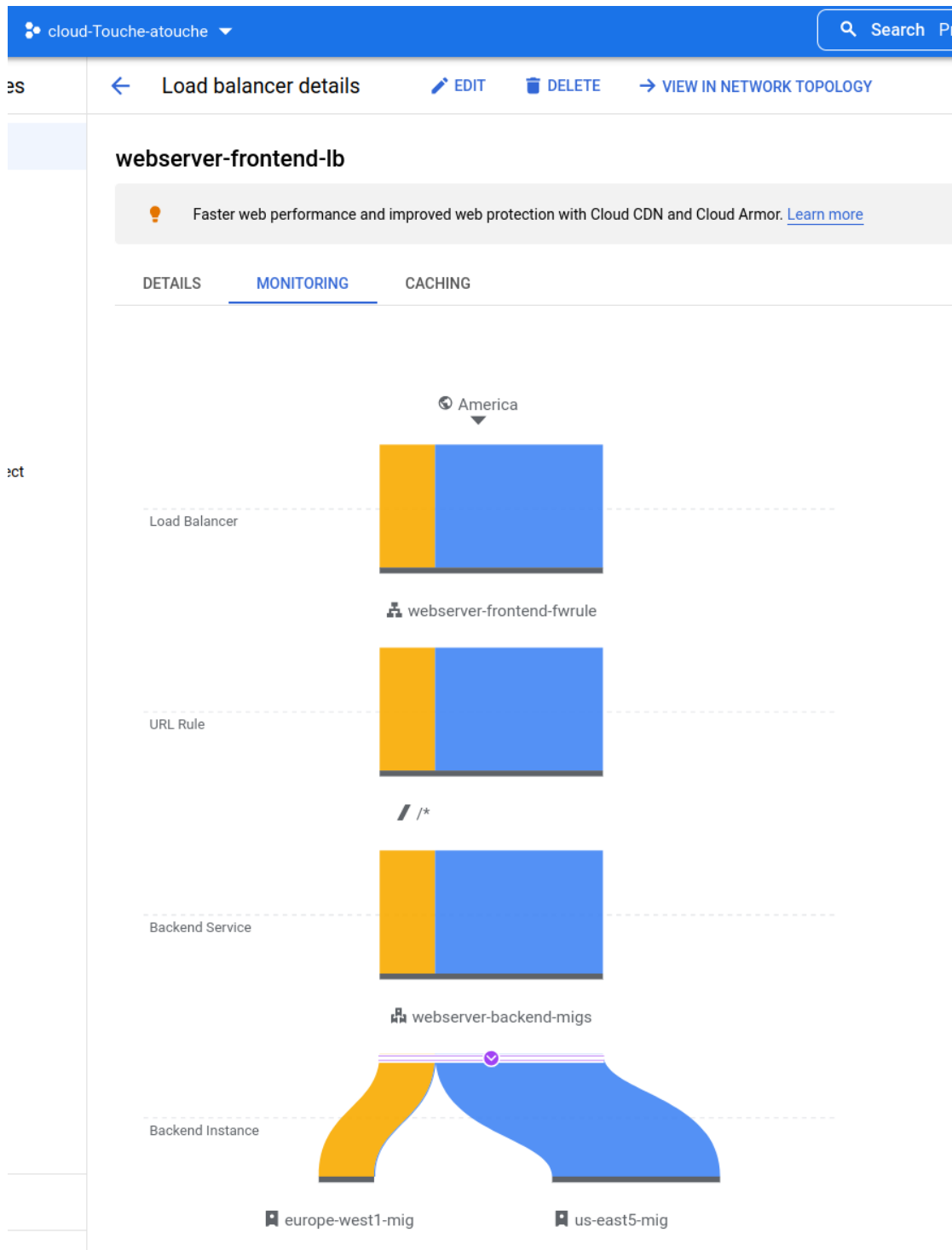

    - us-eact5-c

☐ Siege! (Part 1)

    ☐ **Take a screenshot of the initial traffic distribution**
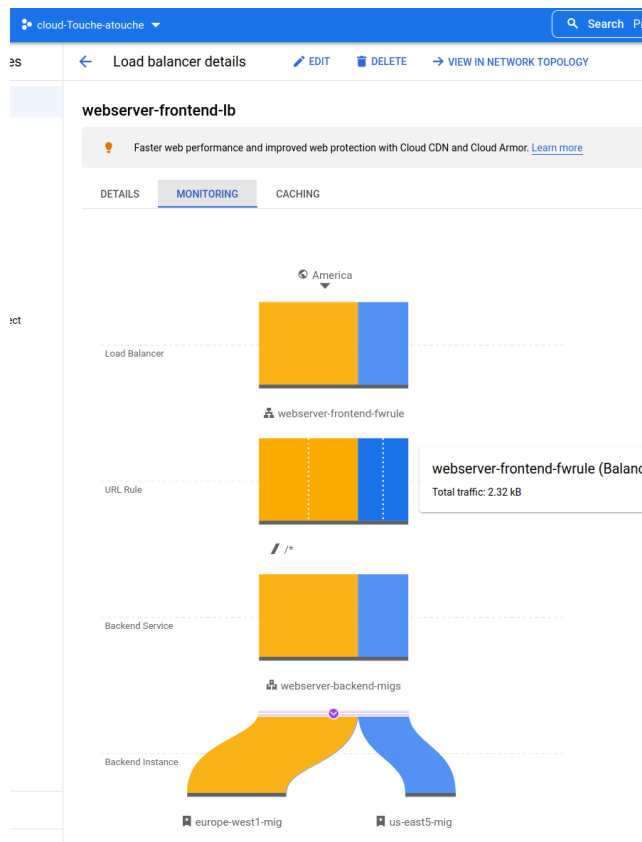
☐ **Take a screenshot of the UI as additional instances are brought up and show that the traffic distribution shifts**

☐ Siege! (Part 2)

☐ **Show a screenshot of the final traffic distribution.**

☐ Clean-up