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Lab Brief

Course: AWS Infrastructure Automation using Terraform

Terraform Config | Terraform CLI

(Create web server instance, Create Target Group, Create Load balancer)

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Learning Outcomes

1. Install and configure Terraform CLI

2. Defining Terraform configuration to manage AWS resources

3. Use Terraform CLI to automate provisioning of AWS resources

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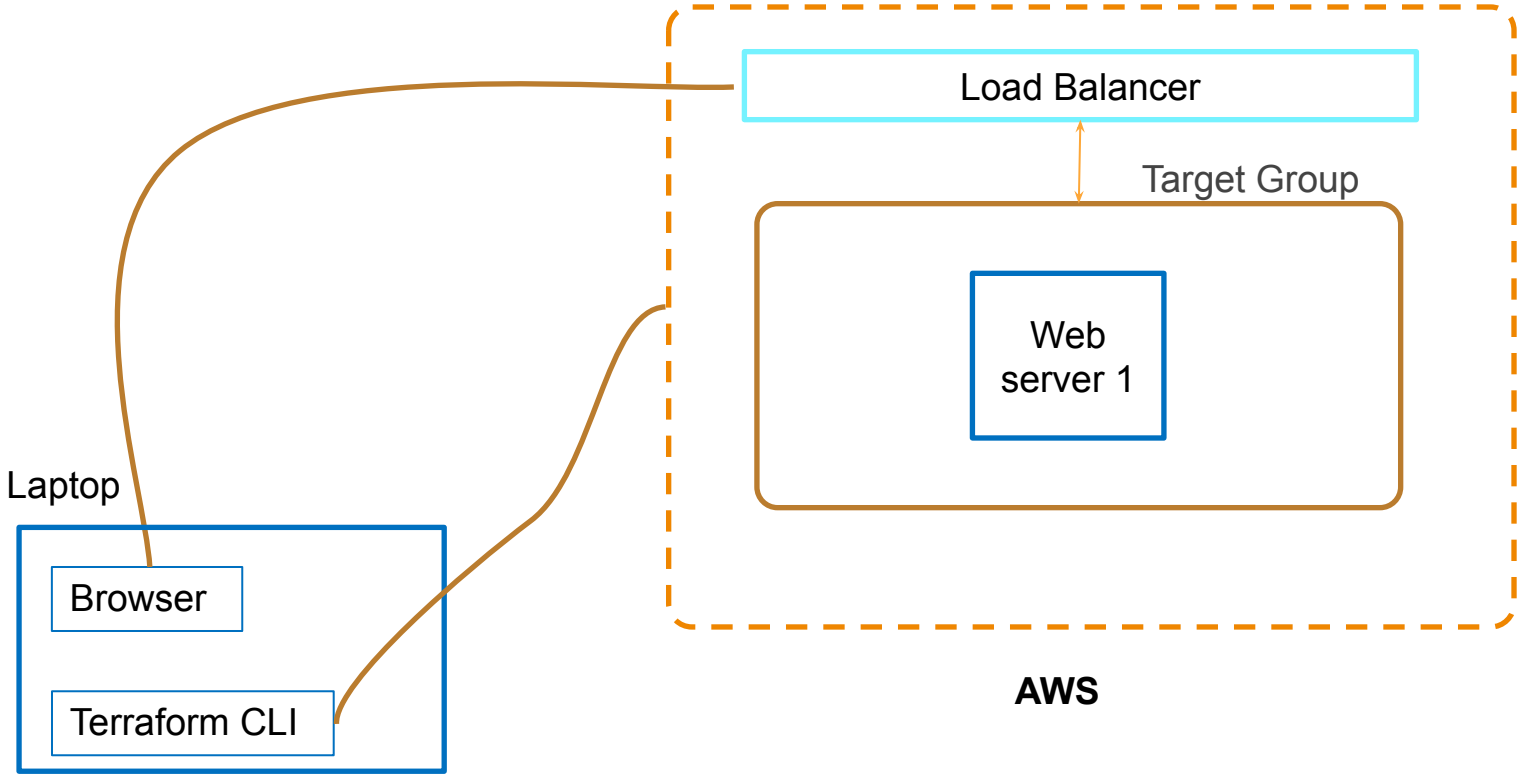
Final Goal



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How to do it ?

1. Install and configure Terraform CLI on your Laptop
2. Create Terraform configuration to create following resources
    - Required input variables
    - Web Server Security Group
    - Web Server
        i. AMI - Ubuntu Server 18.04 LTS
        ii. Type - t2.micro
        iii. Install apache web server using user data
    - Target group referring created web server
    - Application Load balancer
    - Listener referring load balancer and target group
    - Output variable to capture load balancer URL
3. Create resources using Terraform CLI

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Useful Links

1. Download Terraform CLI
    - https://www.terraform.io/downloads.html

2. Terraform CLI document reference
    - https://www.terraform.io/docs/cli-index.html

3. Terraform AWS provider Configuration
    - https://www.terraform.io/docs/providers/aws/index.html

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Grading Scheme

Task	Grade
How to do it ? - 1	60
How to do it ? - 2	30
TOTAL	**90**

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Resource Clean-Up

1. Cloud is always **pay per use model** and all resources/services that we consume are chargeable. Cleaning up when you've completed your lab or project is always necessary. This is true whether you're doing a lab or implementing a project at your workplace.

2. **After completing with the lab, make sure to delete each resource created in the reverse chronological order.**

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What is expected in your Solution Doc?

1. Your solution document must be in PDF format.
2. Your solution document MUST contain screenshots of all the main steps that you implemented from “How to do it?” section. Each of these screenshots should display expected details.
3. Make sure your AWS user id is visible in all of the screenshots.
4. Terraform CLI setup screenshots
5. Terraform configration content screenshots
6. Created AWS resources screenshots (SecurityGroup, Application Loadbalancer, ALB Listener, EC2 instance, ALB Target Group, LB browser access)
7. Terraform CLI Commands output screenshots

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How to submit your solution?

1. Navigate to the relevant course in Olympus. You can also access the submission link through “Ongoing Activities” section on your dashboard.

2. Create your lab solution document based on the guidelines in the previous slide.

3. Name your solution document appropriately in the format of:
<BATCH>_<FIRSTNAME>_<LASTNAME>_Lab_DevOps_CloudFormation;
   - e.g. PGPCCJUL18_VIJAY_DWIVEDI_ Lab_DevOps_CloudFormation.pdf
   - e.g. pgpccjul18_vijay_dwivedi_ Lab_DevOps_CloudFormation.pdf

4. Upload your solution document and hit submit.

5. Try to submit your solution at least 2 hours before the deadline to avoid any last minute anomalies.

***Note**: If you wish to make modifications to your submitted solution, you can resubmit your solution document “within the submission window” and mark your comments accordingly.*

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