## Project 1-Course 2-Ashish Chakerwerti

1. Launch an EC2 instance using Terraform
2. Connect to the instance
3. Install Jenkins, Java and Python in the instance
4. terraform {
5. required\_providers {
6. aws = {
7. source = "hashicorp/aws"
8. version = "~> 3.27"
9. }
10. }
11. required\_version = ">= 0.14.9"
12. }
13. provider "aws" {
14. profile = "default"
15. region = "us-east-1"
16. }
17. # # Creation of VM in AWS
18. # - Security group
19. resource "aws\_security\_group" "allow\_SSH" {
20. name = "allow\_SSH1"
21. description = "Allow SSH inbound traffic"
22. # - INBOUND
23. ingress {
24. from\_port = 0
25. to\_port = 0
26. protocol = "-1"
27. cidr\_blocks = ["0.0.0.0/0"]
28. ipv6\_cidr\_blocks = ["::/0"]
29. }
30. # - OUTBOUND RULES
31. egress {
32. from\_port = 0
33. to\_port = 0
34. protocol = "-1"
35. cidr\_blocks = ["0.0.0.0/0"]
36. ipv6\_cidr\_blocks = ["::/0"]
37. }
38. }
39. # - key pair
40. resource "aws\_key\_pair" "deployer1" {
41. key\_name = "deployer-key11"
42. public\_key = "ssh-rsa AAAAB3NzaC1yc2EAAAADAQABAAABAQDkYCGWXuW7c3JoKYTKbQC5hrKevkNV5pYKTHD5"
43. }
44. resource "aws\_instance" "amzn-linux" {
45. ami = "ami-0c02fb55956c7d316"
46. instance\_type = "t3.micro"
47. key\_name = aws\_key\_pair.deployer1.key\_name
48. vpc\_security\_group\_ids = ["${aws\_security\_group.allow\_SSH.id}"]
49. tags = {
50. "Name" = "Linux-Node"
51. "ENV" = "Dev"
52. }
53. depends\_on = [aws\_key\_pair.deployer1]
54. }
55. ####### Ubuntu VM #####
56. resource "aws\_instance" "ubuntu" {
57. ami = "ami-04505e74c0741db8d"
58. instance\_type = "t3.micro"
59. key\_name = aws\_key\_pair.deployer1.key\_name
60. vpc\_security\_group\_ids = ["${aws\_security\_group.allow\_SSH.id}"]
61. tags = {
62. "Name" = "UBUNTU-Node"
63. "ENV" = "Dev"
64. }
65. # Type of connection to be established
66. connection {
67. type = "ssh"
68. user = "ubuntu"
69. private\_key = file("./ashish")
70. host = self.public\_ip
71. }
72. # Remotely execute commands to install Java, Python, Jenkins
73. provisioner "remote-exec" {
74. inline = [
75. "sudo apt update && upgrade",
76. "sudo apt install -y python3.8",
77. "wget -q -O - https://pkg.jenkins.io/debian-stable/jenkins.io.key | sudo apt-key add -",
78. "sudo sh -c 'echo deb http://pkg.jenkins.io/debian-stable binary/ > /etc/apt/sources.list.d/jenkins.list'",
79. "sudo apt-get update",
80. "sudo apt-get install -y openjdk-8-jre",
81. "sudo apt-get install -y jenkins",
82. "sudo apt-get install -y docker docker.io",
83. "sudo chmod 777 /var/run/docker.sock",
84. "sudo cat /var/lib/jenkins/secrets/initialAdminPassword",
85. ]
86. }
87. depends\_on = [aws\_key\_pair.deployer1]
88. }



