

## Automating Infrastructure using Terraform.

1. First of all we need to setup Terraform in our lab for that go to Hashicorp website and in that select Linux.
2. By following the given command, setup the Terraform. (The commands are given in source code file).
3. Now we need to create EC2 instance for that we need to install AWS CLI, for this just use
  - `pip install awscli`
4. To check whether its installed or not use,
  - `aws --version`
5. Use,
  - `sudo apt update`
6. Now create new directory ec2 using **`mkdir ec2`**
7. Now create **`creds.tf`** file for providing credential in order to connect to AWS. Create it in **`ec2`**. (**`creds.tf`** file code is given in source code file).
8. Provide proper **Access key, Secret key and token**.
9. Now create **`main.tf`** and write the configuration required to create EC2 instance. (Code is given in Source code file).
10. Then use **`terraform init`**  
It will download all the plugins on our local.
11. Use **`terraform plan`**  
It will show what changes are going to happen.
12. And finally use **`terraform apply`**  
It will create EC2 instance for us and you can cross check it in AWS lab.
13. Now connect to it and use **`sudo yum install java`**  
It will install Java in it.
14. Use **`sudo yum install python`**  
It will install Python in it.
15. Now in order to download Jenkins I used following steps,
  - i. Run the command to update all the packages.  
**`sudo yum update`**
  - ii. Check if java is installed or not using the command  
**`java -version`**  
If java is not installed, install using the following command  
**`sudo yum install java-1.8.0-openjdk`**
  - iii. Now, to download the latest Jenkins package  
**`sudo wget -O /etc/yum.repos.d/jenkins.repo https://pkg.jenkins.io/redhat/jenkins.repo`**
  - iv. \*\*To enable the installation of the package, import the key file from Jenkins-CI:  
**`sudo rpm --import https://pkg.jenkins.io/redhat-stable/jenkins.io.key`**
  - v. Install Jenkins on the EC2 instance

```
sudo yum install jenkins
```