

Integrate Jenkins with terraform

For this project we are going to use the **regular jenkins**.

- ❖ Modify the following in your terraform script so that you can have the most updated java jdk container

```
echo "Install Java JDK 8"  
yum remove -y java  
#yum install -y java-1.8.0-openjdk  
sudo yum install java-11-openjdk
```

- ❖ Run the terraform life cycle after modification and provision the regular Jenkins
- ❖ Double check to make sure terraform is installed by the script

Run the command

Which terraform

- ❖ Go to jenkins console and in the section of plugins, get the following,
- ❖ Terraform plugin – install without restart
- ❖ Cloudbee aws credentials plugin – install without restart
- ❖ Go to global tool configuration and configure terraform path that you just downloaded
- ❖ Path of terraform (obtain this by running the command # which terraform)
- ❖ My path is /usr/bin/terraform
- ❖ Give terraform a name, for example **terraform-11**
- ❖ Uncheck automatically install box
- ❖ This will create a place to enter the path where terraform is in your jenkins terminal

- ❖ For my case the path is: **/usr/bin/**
- ❖ Do not include **terraform** in the path
- ❖ **Apply and save**
- ❖ Go to new item and create a terraform jenkins declarative pipeline
 - ❖ Save and run it

Credentials

You can do this in two ways

- ❖ Since terraform is in **jenkins instance** provisioned on aws, we can use **IAM role** to give terraform access to deploy resources in your aws account.
- ❖ The second method is by using **cloudbee aws credentials plugin**
- ❖ Integrate Jenkins with ansible
- ❖ We are going to use the regular jenkins again to save time
- ❖ We are going to start by creating a server on aws.
- ❖ Go to aws console and create an instance
- ❖ Open port: 22
- ❖ Open port: 80
- ❖ Go to jenkins terminal and make sure ansible is installed
- ❖ Run the command

Which ansible

and the path where ansible is installed should be available

- ❖ Make sure you can ssh to the installed instance on aws (**be sure to enable the allocation of ip address during the process of configuring your server**)
- ❖ Make sure your private key is hidden from the public by running `chmod 400 (name of your pemkey)`
- ❖ Go to manage plugins and install the ansible plugin – install without restart.

❖ Go to global tool configuration and configure ansible

Ansible

Ansible installations

[Add Ansible](#)

Ansible

Name

Required

Path to ansible executables directory

☒ Install automatically [?](#)

[Delete Ansible](#)

[Add Ansible](#)

List of Ansible installations on this system

❖ Uncheck install automatically box

❖ Fill the information and save

❖ It is time to create a new job

❖ Let us write the jenkins-ansible declarative pipeline script

❖ Use snippet generator to create the playbook declarative command

Steps

Sample Step

ansiblePlaybook: Invoke an ansible playbook [?](#)

ansiblePlaybook

Ansible tool

Playbook file path in workspace

Inventory file path in workspace

SSH connection credentials [Add](#)

Vault credentials [Add](#)

☐ Use become

Become username

❖ Add the playbook space

- ❖ Add inventory file path
- ❖ Ssh connection credentials
- ❖ Select SSH Username with private key

Global credentials (unrestricted)

Kind: SSH Username with private key

Scope: Global (Jenkins, nodes, items, all child items, etc)

ID: private-key

Description: private-key

Username: ec2-user

☐ Treat username as secret

Private Key: ☐ Enter directly

Passphrase:

- ❖ Enter the ssh key directly

Private Key

☒ Enter directly

Key:

```

WTbd+QK8gBtDugHa05X+m1SuIgzhaDin8S13m7Ob3IQ7ROSSwa1HOAwonwAZ1ydc
egkwEjzQOQkn+0IZVShPhAzLDZ8r9ttz5TtOIWhiH5kw0NEYUwL4lyrcxv7Y9qZl
WkJILqmBEvfH3mgHzudxgKwP8Itv3N1crdUPSI0pLJRNKINRen59
-----END RSA PRIVATE KEY-----

```

Passphrase:

Very Important

Task to start at

Number of parallel processes to use

☒ Disable the host SSH key check ✓

☐ Colorized output

Extra parameters

[Generate Pipeline Script](#)

- ❖ Disable ssh key. Otherwise, it is going to fail
- ❖ The click generates pipeline script

Extra parameters

[Generate Pipeline Script](#)

Global Variables

There are many features of the Pipeline that are not steps. These are often exposed via global variables, which are not supported by the snippet generator. See the [Global Variables Reference](#) for details.

[Generate Pipeline Script](#)

```
ansiblePlaybook.credentialsId: 'private-key', disableHostKeyChecking: true, installation: 'ansible2', inventory: 'dev.inv', playbook: 'apache.yml'
```

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- ❖ Copy and take the generated script to the ansible pipeline
- ❖ Build your job

