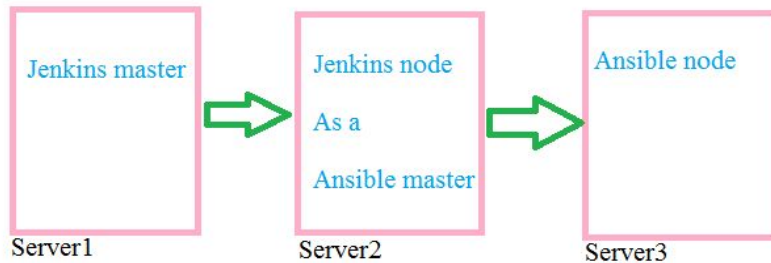


Project no:2

Q: Install tomcat server in ansible node through jenkins node using jenkins master?

This case we need 3 servers



Pre requisites:

Server1:

- Take server ubuntu 16.04
- Update the server(apt-get update)
- Install java
- Install maven
- Install git
- Install jenkins
- Create user and give visudo permission for that user
- Give ssh permission
- Restart ssh(service ssh restart)

Server2:

- Take server ubuntu 16.04
- Update server
- Install java
- Install maven
- Install git
- Create user and give visudo permission for that user
- Give ssh permission
- Restart ssh(service ssh restart)
- Configure ansible

Move to the user

\$ ssh-keygen

\$ ssh-copy-id <Ansible private ip>

\$ mkdir jenkins

\$ cd jenkins

Pull data which is available in git(tomcat available data in git)

Server3:

Take server ubuntu 16.04

Update server

Create user and give visudo permission for that user

Give ssh permission

Restart ssh(service ssh restart)

Plugins:

- **After installation completion go to jenkins master server and install plugins(ARTIFACTORY & ANSIBLE & PARAMETERIZED TRIGGER & BUILD PIPELINE)**
- **ARTIFACTORY PLUGIN FOR JFROG COMMUNICATION.**
- **ANSIBLE PLUGIN FOR ANSIBLE NODE COMMUNICATION.**
- **PARAMETERIZED TRIGGER FOR VARIABLE PURPOSE**
- **BUILD PIPELINE FOR SEE THE JOB PIPELINE FLOW**

JFROG:

Jfrog

RedHat 8

t2.medium

PreRequisites:

Need Redhat 8 server

Instance type (t2.medium)

Port no:8081(custom Tcp)

Update the instance(yum)

Install java(yum install java-1.8.0-openjdk-devel)

Install wget

Configure Rpm:

```
wget https://bintray.com/jfrog/artifactory-pro-rpms/rpm -O bintray-jfrog-artifactory-pro-rpms.repo;
```

```
sudo mv bintray-jfrog-artifactory-pro-rpms.repo /etc/yum.repos.d/;
```

```
yum install jfrog-artifactory-pro
```

#After configuration type below command

```
systemctl start artifactory.service
```

Step2:

1. (Manage nodes)

- After all configuration process move to jenkins master and open in webbrowser
- Configure node
- Manage jenkins/manage node

The screenshot displays the Jenkins 'New Node' configuration interface. On the left, there are navigation links: 'Back to Dashboard', 'Manage Jenkins', 'New Node', and 'Configure'. Below these are sections for 'Build Queue' (showing 'No builds in the queue') and 'Build Executor Status' (showing '1 Idle' and '2 Idle'). The main configuration area on the right includes the following fields:

- Name:** mynode1
- Description:** (empty)
- # of executors:** 1
- Remote root directory:** /home/gowtham/jenkins
- Labels:** mynode1
- Usage:** Use this node as much as possible
- Launch method:** Launch agent agents via SSH
- Host:** 172.31.88.73
- Credentials:** - none - (with an error message: 'The selected credentials cannot be found')
- Host Key Verification Strategy:** Non verifying Verification Strategy

An 'Advanced...' button is located at the bottom right of the configuration area.

- The above "Remote root directory" path is ansible master path
- Host is jenkins node as a ansible master "private ip"
- Change host key verification strategy is "Non verifying verification strategy"

2. Create a job for install maven and deploy .war file in jfrog

Deploy1_Maven_Install ▾ ▶

General Source Code Management Build Triggers Build Environment Artifactory Configuration More Details Build

Post-build Actions

Description

[Plain text] [Preview](#)

- ☐ Discard old builds
- ☐ GitHub project
- ☐ This build requires lockable resources
- ☐ This project is parameterized
- ☐ Throttle builds
- ☐ Disable this project
- ☐ Execute concurrent builds if necessary
- ☒ Restrict where this project can be run

Label Expression

[Label mynode1](#) is serviced by 1 node. Permissions or other restrictions provided by plugins may prevent this job from running on those nodes.

[Advanced...](#)

Deploy1_Maven_Install ▾ ▶

General **Source Code Management** Build Triggers Build Environment Artifactory Configuration More Details Build

Post-build Actions

Source Code Management

☐ None
☒ Git

Repositories

Repository URL

Credentials [Add](#)

[Advanced...](#)
[Add Repository](#)

Branches to build

Branch Specifier (blank for 'any')

[Add Branch](#)

Repository browser

Build Environment

☒ Delete workspace before build starts

Advanced...

☐ Use secret text(s) or file(s) 

☐ Provide Configuration files 

☐ Abort the build if it's stuck

☐ Add timestamps to the Console Output

☐ Ant/Ivy-Artifactory Integration

☒ Generic-Artifactory Integration

Artifactory Configuration

Download and upload by ☐ Specs ☒ Legacy patterns (deprecated)

Upload Details

Artifactory upload server

Target Repository

Different Value

Refresh Repositories

☐ Override default credentials

Published Artifacts

Deploy1_Maven_Install

GeneralSource Code ManagementBuild TriggersBuild EnvironmentArtifactory ConfigurationMore DetailsBuild

Post-build Actions

Execute shell

Command

```
echo "this is maven project installation"
echo ".war file will save in jfrog UAT repository"
```

See [the list of available environment variables](#)

Advanced...

Invoke top-level Maven targets

Maven Version(Default)

Goalsinstall

Advanced...

Add build step

Deploy1_Maven_Install

GeneralSource Code ManagementBuild TriggersBuild EnvironmentArtifactory ConfigurationMore DetailsBuild

Post-build Actions

Post-build Actions

Trigger parameterized build on other projects

Build Triggers

Projects to buildDeploy2_install tomcat

Trigger when build isStable

Trigger build without parameters

Predefined parameters

Parametersgowtham=\${BUILD_NUMBER}

Use TextParameterValue if property contains newline

Add Parameters

3. Create job for **install tomcat in ansible node**

Deploy2_install tomcat

General Source Code Management Build Triggers Build Environment Build Post-build Actions

☒ This project is parameterized

String Parameter

Name

Default Value

Description

[Plain text] [Preview](#)

☐ Trim the string

Add Parameter

☐ Throttle builds

☐ Disable this project

☐ Execute concurrent builds if necessary

☒ Restrict where this project can be run

Label Expression

Deploy2_install tomcat

General **Source Code Management** Build Triggers Build Environment Build Post-build Actions

Source Code Management

☐ None

☒ Git

Repositories

Repository URL

Credentials [Add](#)

[Advanced...](#)

[Add Repository](#)

Branches to build

Branch Specifier (blank for 'any')

[Add Branch](#)

Repository browser

General

Source Code Management

Build Triggers

Build Environment

Build

Post-build Actions

Build

Execute shell

Command

```
cd /home/gowtham/jenkins/Jenkin_Tomcat
git pull

echo "upstream job build no is:$BUILD_NUMBER"
echo "downstream job build no is:$gowtham"
```

See [the list of available environment variables](#)

Advanced...

General

Source Code Management

Build Triggers

Build Environment

Build

Post-build Actions

Invoke Ansible Playbook

Playbook path

Inventory

☐ Do not specify Inventory☒ File or host list

File path or comma separated host list

☐ Inline content

Host subset

Credentials

Vault Credentials

Deploy2_install tomcat ▾ ▶

GeneralSource Code ManagementBuild TriggersBuild EnvironmentBuildPost-build Actions

Unbuffered stdout☒

Colorized stdout☐

Extra Variables

X

Keynewbuild

Value\$gowtham

Hidden variable in build log☐

Add Extra Variable

Additional parameters

Add build step ▾

Deploy2_install tomcat ▾ ▶

GeneralSource Code ManagementBuild TriggersBuild EnvironmentBuildPost-build Actions

Additional parameters

Add build step ▾

Post-build Actions

Build other projects

X

Projects to buildwinnode_maven

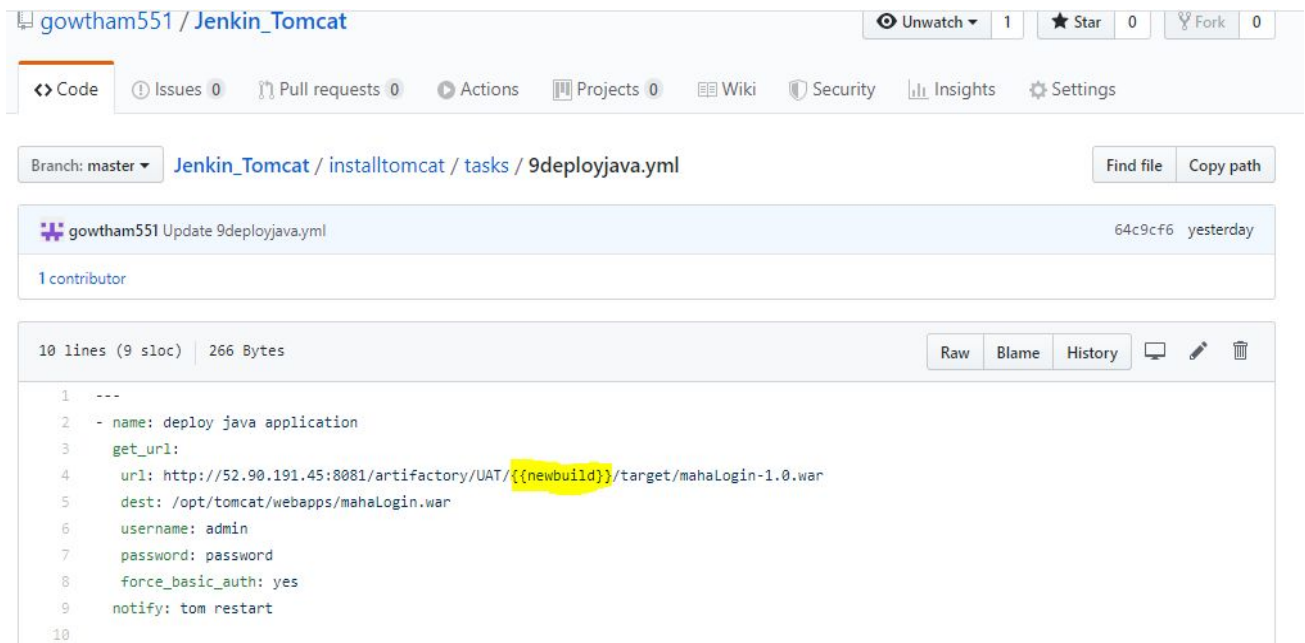
☒ Trigger only if build is stable

☐ Trigger even if the build is unstable

☐ Trigger even if the build fails

Add post-build action ▾

Give the variable name new build in Git repository deployjava.yml



The screenshot shows a GitHub repository page for 'Jenkin_Tomcat'. The file '9deployjava.yml' is selected, showing its content. The file is 10 lines long (9 sloc) and 266 Bytes. The content is a YAML configuration for a Jenkins job. The 'url' field contains a placeholder variable '{{newbuild}}' which is highlighted in yellow. The 'dest' field is '/opt/tomcat/webapps/mahaLogin.war'. The 'username' is 'admin', 'password' is 'password', 'force_basic_auth' is 'yes', and 'notify' is 'tom restart'.

```
1 ---
2 - name: deploy java application
3   get_url:
4     url: http://52.90.191.45:8081/artifactory/UAT/{{newbuild}}/target/mahaLogin-1.0.war
5     dest: /opt/tomcat/webapps/mahaLogin.war
6     username: admin
7     password: password
8     force_basic_auth: yes
9     notify: tom restart
10
```

Step3:

Windows Node

Pre Requisites:

Microsoft Windows Server 2016 Base

Install chocolatey

Set-ExecutionPolicy Bypass -Scope Process -Force; iex ((New-Object
System.Net.WebClient).DownloadString('https://chocolatey.org/install.ps1'))

In reality we will use **EIP** so no need to configure every time

Install java

Install maven

Install google chrome

Not secure 54.225.173.103:8080/configure

Google YouTube Net Banking Amazon Web Servi... linux and scripting I... Aws DevOps jira

configuration

de1

Default view all

Restrict project naming

Jenkins Location

Jenkins URL http://54.225.173.103:8080/

System Admin e-mail address address not configured yet <nobody@nowhere>

Serve resource files from another domain

Resource root URL

Without a resource root URL, resources will be served from the main domain with Content-Security-Policy set.

Global properties

If you will configure windows node first adjust in manage jenkins/configure global security
Select **Random Button**

Configure Global Security

Matrix-based security

Project-based Matrix Authorization Strategy

Markup Formatter

Markup Formatter Plain text

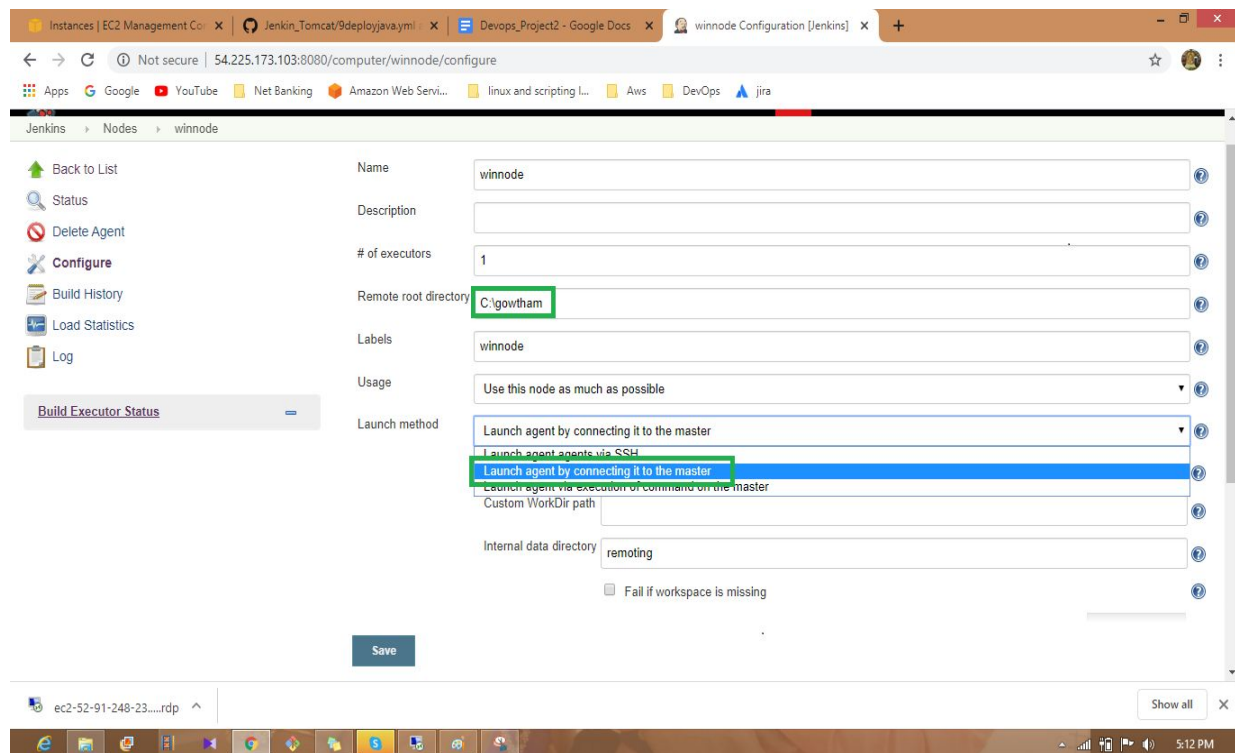
Treats all input as plain text. HTML unsafe characters like < and & are escaped to their respective character entities.

Agents

TCP port for inbound agents Fixed : Random Disable

Agent protocols...

After completion of the above step move to **manage jenkins/manage nodes**



Here Remote root directory path **windows host “.jar”** file configured path
For windows node launch method we have to select **“2nd option”**

- Here windows node configuration we have 2 processes
 1. .jar format
 2. .jnlp format (java ws ./slave.agent.jnlp)