

Install Jenkins:

Add repository:

```
sudo wget -O /etc/yum.repos.d/jenkins.repo \  
https://pkg.jenkins.io/redhat-stable/jenkins.repo  
sudo rpm --import https://pkg.jenkins.io/redhat-stable/jenkins.io.key
```

Add required dependencies for the jenkins package

```
sudo yum install java-11-openjdk
```

```
sudo yum install jenkins
```

```
sudo systemctl daemon-reload
```

Start Jenkins:

```
sudo systemctl enable Jenkins
```

```
sudo systemctl start Jenkins
```

Allow Firewall:

```
firewall-cmd --permanent --add-port=8080/tcp
```

```
firewall-cmd --reload
```

Unlocking Jenkins

Unlocking Jenkins

When you first access a new Jenkins instance, you are asked to unlock it using an automatically-generated password.

1. Browse to <http://serverip:8080> (or whichever port you configured for Jenkins when installing it) and wait until the **Unlock Jenkins** page appears.

Unlock Jenkins

To ensure Jenkins is securely set up by the administrator, a password has been written to the log (not sure where to find it?) and this file on the server:

```
/var/jenkins_home/secrets/initialAdminPassword
```

Please copy the password from either location and paste it below.

Administrator password

Continue

2. From the Jenkins console log output, copy the automatically-generated alphanumeric password (between the 2 sets of asterisks).

```
INFO: Pre-instantiating singletons in org.springframework.beans.factory.support.DefaultListableBeanFactory@24cf7404: defining beans [filter,legacy]; root of factory hierarchy
Sep 30, 2017 7:18:39 AM jenkins.install.SetupWizard init
INFO:
*****
*****
*****

Jenkins initial setup is required. An admin user has been created and a password generated.
Please use the following password to proceed to installation:

2f064d3663814887964b682940572567

This may also be found at: /var/jenkins_home/secrets/initialAdminPassword

*****
*****
*****

--> setting agent port for jnlp
--> setting agent port for jnlp... done
Sep 30, 2017 7:18:51 AM hudson.model.UpdateSite updateData
INFO: Obtained the latest update center data file for UpdateSource default
Sep 30, 2017 7:18:52 AM hudson.model.UpdateSite updateData
INFO: Obtained the latest update center data file for UpdateSource default
Sep 30, 2017 7:18:52 AM hudson.WebAppMain$3 run
INFO: Jenkins is fully up and running
Sep 30, 2017 7:18:52 AM hudson.model.DownloadService$Downloadable load
INFO: Obtained the updated data file for hudson.tasks.Maven.MavenInstaller
Sep 30, 2017 7:18:58 AM hudson.model.DownloadService$Downloadable load
INFO: Obtained the updated data file for hudson.tools.JDKInstaller
Sep 30, 2017 7:18:59 AM hudson.model.AsyncPeriodicWork$1 run
INFO: Finished Download metadata. 25,543 ms
```

Note:

- The command: `sudo cat /var/lib/jenkins/secrets/initialAdminPassword` will print the password at console.
- 3. On the **Unlock Jenkins** page, paste this password into the **Administrator password** field and click **Continue**.

Notes:

Configure Ansible:

Set hostname For master

```
#hostnamectl set-hostname master
```

```
#visudo
```

```
root    ALL=(ALL)    NOPASSWD: ALL # Add this line end of the file
```

Save and exit

Add Host Record:

```
cat /etc/hosts
```

```
127.0.0.1    localhost localhost.localdomain localhost4 localhost4.localdomain4
```

```
:::1        localhost localhost.localdomain localhost6 localhost6.localdomain6
```

```
192.168.44.135 node1
```

```
192.168.44.136 node2
```

Install Ansible:

```
#yum install epel-release -y
```

```
#yum install ansible -y
```

```
vi /etc/ansible/ansible.cfg
```

```
host_key_checking = False           #uncomment this line
```

Add Host to the Inventory File:

```
cat /etc/ansible/hosts
```

```
[test]
```

```
Node1 ansible_ssh_user=root ansible_ssh_pass=nopassG
```

Add SSH key:

```
#ssh-keygen
```

```
#ssh-copy-id root@node1
```

Check Ansible Reachability:

#ansible --version

#ansible all --list-hosts #Check host list

#ansible all -m ping #Check client node reachability

#ansible node1 -m command -a "uptime"

Add Credentials in Jenkins Server:

Login to the Jenkins server:

Step1: Click : Manage Jenkins>Manage Credentials

The screenshot shows the Jenkins Dashboard. On the left sidebar, the 'Manage Jenkins' option is highlighted with a red rectangle. The main content area displays various system configuration and security options. Under the 'Security' section, the 'Manage Credentials' option is also highlighted with a red rectangle. The dashboard includes sections for Project Relationship, Build Queue, Build Executor Status, System Configuration, and Security.

Step 2:

Click global under **Stores scoped to Jenkins**

The screenshot shows the Jenkins Credentials page. The 'Stores scoped to Jenkins' section is visible, showing a table with columns for Store, Domains, and Name. The 'global' domain is highlighted with a red rectangle. The table lists three credentials: 'iqbal/*****', 'automation', and 'root'.

T	P	Store	Domains	ID	Name
		System	(global)	193d985e-37cb-4831-ba69-16b2b4b73922	iqbal/*****
		System	(global)	4be31fa3-f1ad-4503-9239-3b012e8f4d2a	automation
		System	(global)	74ea776d-5f53-4405-9eb0-06ddb9276fa2	root

Step 3:

Click Add Credentials:

Dashboard > Manage Jenkins > Credentials > System > Global credentials (unrestricted)

Global credentials (unrestricted)

+ Add Credentials

Credentials that should be available irrespective of domain specification to requirements matching.

ID	Name	Kind	Description
193d985e-37cb-4831-ba69-16b2b4b73922	igbal/*****	Username with password	
4be3ffa3-f1ad-4503-9239-3b02e8f4d2a	automation	SSH Username with private key	
74ea776d-5f53-4405-9eb0-06ddb9276fa2	root	SSH Username with private key	

Icons: S M L

Step 4:

```
cat .ssh/id_rsa
```

```
-----BEGIN RSA PRIVATE KEY-----
```

```
MIIIEowIBAAKCAQEA4kgevsYUWTv4u3ERWq9/KTNIdYkNwkKBGw/2zrvoMF98venK
tyopRSTSpGnQ2ulL2FfwuBBP3MNFEDXPg7kfc8DrILVWOC9JQefSBti4CqO1qdQG
EF0Jssmdcs4ZqR+erq6n3U1TBdbzBkgxgC/0gzgdgUmZ3sQ5XqENwHyeolM/sx5b
7gOS0XfoYmFuYxgbEbF5/0cMyVQBryK93+UaurEpVFTFsl68i/bcQSBfm+sTz7GU
ogaJjXTnlmuMEv+zzY/vlo5mBxtiB8Rxe9al+hYk3UDgbAZ3erN+aIM3ZIZ6RJyw
IAfyCImqeyx4WlnDcXloZEi6kL7su0nYt2hVWQIDAQABAoIBAQCQ6GCQCSdk0cwC
tXDlo1SKnOXNJxyhh5dILLv+nkUeHTg0InEIBT7yoZcnZQA0AGzqub5VEVUjahYJ
unwOvdGPfj8fN1Vkm5uNUhik+8o4PgiLHIVXy0z3qrdimuvB65biBMVJKkh9I95/
6mGQ1qT+F0SF1A1upDidCgRVfTjVd8f0sArM9w0YvmUbE0+f1K18idKyO9qj1VVu
oHIWXtXXnWFpXLABuQD1by/zOefmcqymBSGKAZAoOJB4rTvJvXtfvA+syxI7JaL/
SFRDITLe56nk2Rfopr9QRvdP8Fh6Otr7rE/igLlqvYDv+NbOVL58CxmKg7RcxQLb
JRUYQY84BAoGBAPpnCm/JLMseQgx3r6GX5CXirNqaV/y7ez6FKOS7W2CINIbnnna
LMNY2CUngRWp0yU/nOwBULEuFpODmTpScLEchSV2sJcfw1I7/yi1CFsCIYg/fTtt
EJ1K8EfFAOMzT6vS7g/7jg/VzaaogqWzBby87q91kKTxIMQg9oiDMadBAoGBAOdX
C5AUmjWTbxA2jGFBjUxD4cF2popVSrQhW0bg5be78d0Nm8LkARYBjwcECEj2IITT
qstXLvXtVeTz/TpCNNPf7y2H9XTuYkcjsLf+YkOAegU605c5apCfoU0nRxwswNhl
UbeN7kkRRZDoMNLcJ6shoXJLM6wLZvzMta0qzwAZAoGAKxoriLx3Umt8SI0+Prd
Uc63EIUh2FtHq0AM5282IWCb58V9xsnQZLvZUOP3zfvSlZnSmCINy4HkbvX7HTft
```

```
n/8JyD4a/ZiBFZmwPUCUNJ40SXCSTntkPb8VhzUZBwLhFvGS+vtRI9aotKRTANTF
Cwz2hQtWn53Z/ryx0yPKG0ECgYAOYsDJAV++dKOR8APnwoixXLRfosgGJEerVJtr
rz1LKwtZLNQBXO53mgQPFHwhyJ5LsrwBTZIMKsew9YtCjWZNiq1lhHOsWyVbB/cE
1+rtn9MtclYzVnNGtidhoba/S2zLGjz+z09HADXlyzMizH48WN2nZ0t5AHCVN2OL
/lowmQKBgBZw/PTD4EFgQgqUUf2WsOnGIUpFEZ3KMMcX1UQAbsJTdwm3rlvgTdO/
ilxMrTmshbB2++zt4xluddQwvd9z2/PvnPWDzGIwlbZa6epoylFe/tpQvF6s23nK
Tn0bDQfE5SRLu0sAiNAWhazdf9rKVjMd+jaTxW1f4dEgmjZVpRI7
-----END RSA PRIVATE KEY-----
```

SSH Username with private key

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

ID ?

Description ?

Username
root

☐ Treat username as secret ?

Private Key
☒ Enter directly

Key
-----BEGIN RSA PRIVATE KEY-----
MIIEpAIBAAKCAQEAIAFYCImpgyx4wLnDcK1oZE16kl7su0nyt2hVWQID4Q48AoIBAQCG6QCQCSdk8cuC
YKD1o15k0NDQxyhMSdLLv+nKUeHTg0InE1BT7yoZcnZQ48Agzqu85VEVUjahYJ
umwDvSPFjg8TCLVkmSdK1k+8u4PgLUtLVyBc3grdLmuv86S6EBN7Xkshh195/
-----END RSA PRIVATE KEY-----

Passphrase

Create

Install Ansible Plugin:

Click> Manage Jenkins>Plugin Manger> Available

Search Ansible

Dashboard > Manage Jenkins > **Plugin Manager**

↑ Back to Dashboard
⚙️ Manage Jenkins

Plugin Manager

Updates **Available** Installed Advanced

🔍 ansible

Install	Name	Released
<input type="checkbox"/>	Ansible Tower 0.16.0 This plugin connects Jenkins with Ansible Tower	2 yr 5 mo ago

Install without restart Download now and install after restart Update information obtained: 49 min ago **Check now**

Add Webhook in GitHub:

Login GitHub

Step 1:

<https://github.com/>

Step 2:

Go to the repository and click Setting:

👤 lqbalkhan319 / **bhw** Public
forked from neera007/bangladeshhealthwatch

<> Code Pull requests Actions Projects Wiki Security Insights **Settings**

General

Access
Collaborators
Moderation options

Code and automation
Branches
Tags
Actions
Webhooks
Environments
Codespaces
Pages

Security
Code security and analysis
Deploy keys
Secrets

Integrations
GitHub apps
Email notifications

General

Repository name
bhw **Rename**

☐ **Template repository**
Template repositories let users generate new repositories with the same directory structure and files. [Learn more](#).

☐ **Require contributors to sign off on web-based commits**
Enabling this setting will require contributors to sign off on commits made through GitHub's web interface. Signing off is a way for contributors to affirm that their commit complies with the repository's terms, commonly the [Developer Certificate of Origin \(DCO\)](#). [Learn more about signing off on commits](#).

Social preview
Upload an image to customize your repository's social media preview.
Images should be at least 640×320px (1280×640px for best display).
[Download template](#)

General

Access

Collaborators

Moderation options

Code and automation

Branches

Tags

Actions

Webhooks

Environments

Codespaces

Pages

Security

Code security and analysis

Deploy keys

Secrets

Integrations

GitHub apps

Email notifications

Webhooks / Add webhook

We'll send a POST request to the URL below with details of any subscribed events. You can also specify which data format you'd like to receive (JSON, x-www-form-urlencoded, etc). More information can be found in [our developer documentation](#).

Payload URL *

http://192.168.44.133:8090/github-webhook/

Content type

application/json

Secret

Which events would you like to trigger this webhook?

☒ Just the push event.

☐ Send me everything.

☐ Let me select individual events.

☒ Active

We will deliver event details when this hook is triggered.

Add webhook

Create Chain Job:

Create Job 1:

Dashboard > All >

Enter an item name

pull-static-website

Required field

Freestyle project

This is the central feature of Jenkins. Jenkins will build your project, combining any SCM with any build system, and this can be even used for something other than software build.

Maven project

Build a maven project. Jenkins takes advantage of your POM files and drastically reduces the configuration.

Pipeline

Orchestrates long-running activities that can span multiple build agents. Suitable for building pipelines (formerly known as workflows) and/or organizing complex activities that do not easily fit in free-style job type.

Multi-configuration project

Suitable for projects that need a large number of different configurations, such as testing on multiple environments, platform-specific builds, etc.

Folder

Creates a container that stores nested items in it. Useful for grouping things together. Unlike view, which is just a filter, a folder creates a separate namespace, so you can have multiple things of the same name as long as they are in different folders.

Multibranch Pipeline

Creates a set of Pipeline projects according to detected branches in one SCM repository.

Organization Folder

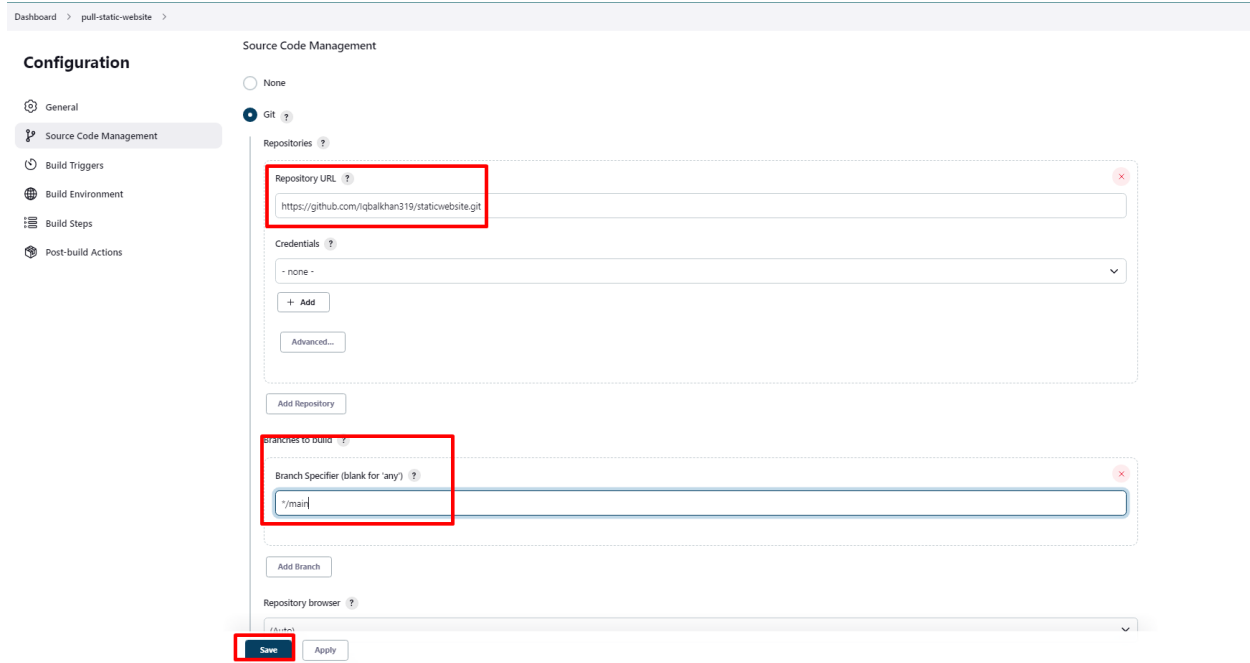
Creates a set of multibranch project subfolders by scanning for repositories.

If you want to create a new item from other existing, you can use this option:

Copy from

OK

autocomplete



Step 2: Ready Server

Create a playbook for ready sever:

Log in to the Jenkins server:

```
cat /playbook/readyservice.yaml
```

```
- name: This is my first playbook
```

```
hosts: test
```

```
tasks:
```

```
- name: Install apache
```

```
  yum:
```

```
    name: httpd
```

```
    state: latest
```

```
- name: Start apache service
```

```
  service:
```

```
    name: httpd
```

```
    state: started
```

```
    enabled: yes
```

- name: Enable http traffic in the the firewall

firewalld:

service: http

permanent: yes

state: enabled

Create Job:

Create new freestyle job:

Build Triggers

☐ Trigger builds remotely (e.g., from scripts) ?

☒ Build after other projects are built ?

Projects to watch

pull-static-website

☒ Trigger only if build is stable

☐ Trigger even if the build is unstable

☐ Trigger even if the build fails

☐ Always trigger, even if the build is aborted

☐ Build periodically ?

☐ GitHub hook trigger for GITScm polling ?

☐ Poll SCM ?

Build Steps

≡

Invoke Ansible Playbook

×

Playbook path ?

/playbook/readysrvr.yaml

Inventory

☒ Do not specify inventory

☐ File or host list

☐ Inline content

Host subset ?

Credentials ?

root

+ Add

Vault Credentials ?

- none -

+ Add

☐ become ?

☐ sudo ?

Advanced...

Save

Apply

Step 3:

Create deploy job

Create a deploy playbook.

```
cat /playbook/deploycode.yaml
```

```
---
```

```
- name: Deploy Source Code
```

```
hosts: test
```

```
tasks:
```

```
- name: Copy Source Code
```

```
copy:
```

```
src: /var/lib/jenkins/workspace/pull-static-website/
```


```
dest: /var/www/html/
```


```
...
```

Configuration


 General

 Source Code Management

 Build Triggers

 Build Environment

 Build Steps

 Post-build Actions

Build Triggers

☐ Trigger builds remotely (e.g., from scripts) ?

☒ Build after other projects are built ?

Projects to watch

readyserver

☒ Trigger only if build is stable

☐ Trigger even if the build is unstable

☐ Trigger even if the build fails

☐ Always trigger, even if the build is aborted

☐ Build periodically ?

☐ GitHub hook trigger for GITScm polling ?

☐ Poll SCM ?

Configuration

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

Build Steps

Invoke Ansible Playbook

Playbook path ?

/playbook/deploycode.yaml

Inventory

☒ Do not specify Inventory

☐ File or host list

☐ Inline content

Host subset ?

Credentials ?

root

+ Add

Vault Credentials ?

- none -

+ Add

☐ become ?

☐ sudo ?

Advanced...

Save

Apply