

Freestyle Job to deploy Django application

Prerequisites:

1. Jenkins Installed: Ensure Jenkins is installed and accessible.
2. Django App Repository: Your Django application's code is hosted on Git (e.g., GitHub, GitLab, or Bitbucket).
3. Target Server: A server (e.g., Azure VM) configured to host your Django application.

- To access the **backend virtual machine (VM)** from the **Jenkins VM** using SSH, follow these steps:

- **Configure the Jenkins VM**

- 1) **Switch to Jenkins User**

SSH into VM having jenkins and switch to jenkins user

```
sudo su - jenkins
```

- 2) **Generate SSH Key Pair (if not already available):**

```
ssh-keygen -t rsa -b 2048
```

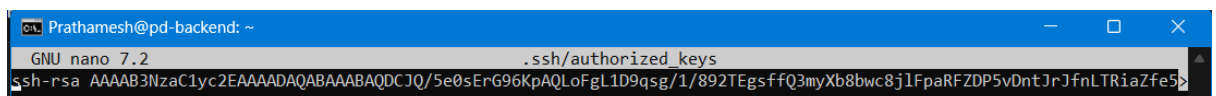
- 3) **Copy the Public Key**

From the generated rsa key pair copy the public key

```
cat ~/.ssh/id_rsa.pub
```

- 4) **Add the public key to the backend VM's**

```
~/.ssh/authorized_keys file:
```



```
Prathamesh@pd-backend: ~
GNU nano 7.2
~/.ssh/authorized_keys
ssh-rsa AAAAB3NzaC1yc2EAAAADAQABAAQDCJQ/5e0sErG96KpAQLoFgL1D9qsg/1/892TEgsffQ3myXb8bwc8j1FpaRFZDP5vDntJrJfnLTRiaZfe5
```

- 5) **Test Passwordless SSH:**

Verify you can SSH into the backend VM without a password:

```
ssh <backend-vm>@<backend-vm-ip>
```

- **Steps to Create the Freestyle Job:**

- 1. Create a New Freestyle Project**

- 1.1. Log in to Jenkins.
- 1.2. Click New Item.
- 1.3. Enter a name for your project (e.g., [Deploy_Django_App](#)).
- 1.4. Select Freestyle Project and click OK.


Dashboard > All > New Item

New Item

Enter an item name

fundoo_application

Select an item type

 **Freestyle project**
Classic, general-purpose job type that checks out from up to one SCM, executes build steps serially, followed by post-build steps like archiving artifacts and sending email notifications.

- 2. Configure Source Code Management**

- 2.1. In the job configuration, scroll to Source Code Management.
- 2.2. Select Git.
- 2.3. Enter your repository URL (e.g., <https://github.com/dprathamesh1408/fundoo-notes.git>).
- 2.4. Add credentials if the repository is private.
- 2.5. Specify the branch to build (e.g., [dev](#)).

Dashboard > fundoo_notes > Configuration

Configure

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

Source Code Management

☐ None

☒ **Git** ?

Repositories ?

Repository URL ? ✕

<https://github.com/dprathamesh1408/fundoo-notes.git>

Credentials ?

- none - ▼

+ Add

Advanced ▼

Add Repository

Branches to build ?

Branch Specifier (blank for 'any') ? ✕

*/dev

Add Branch

Save Apply

3. Add Build Steps

```
rsync -avz $WORKSPACE Prathamesh@20.211.40.139:/tmp
```

```
ssh Prathamesh@20.211.40.139 'sudo systemctl stop django_app.service'
```

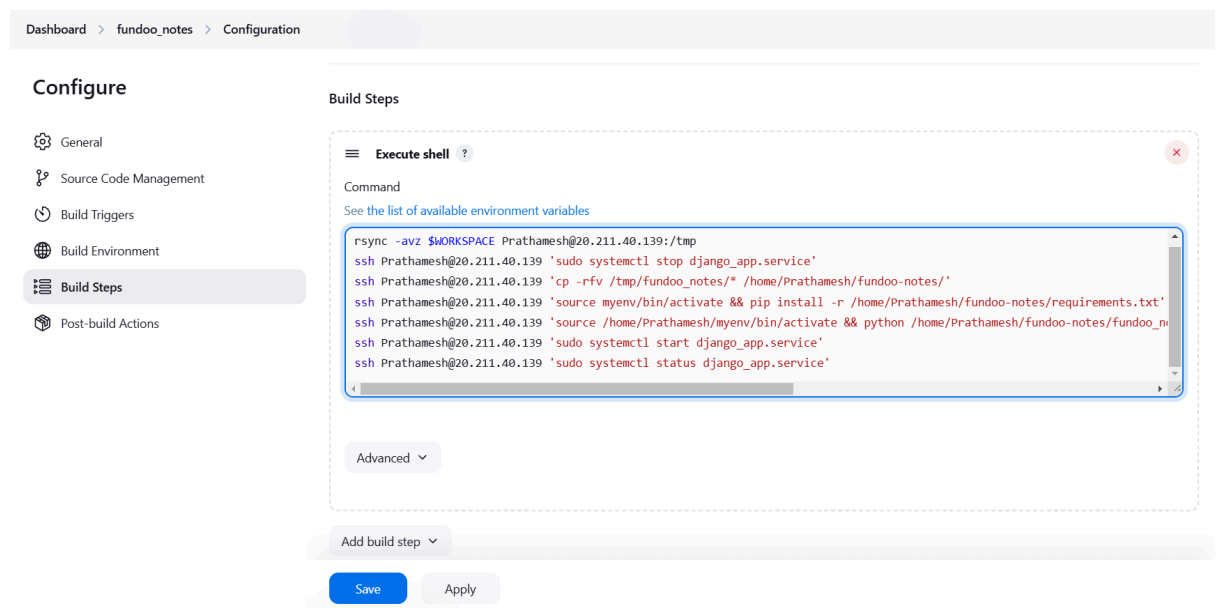
```
ssh Prathamesh@20.211.40.139 'cp -rfv /tmp/fundoo_notes/*  
/home/Prathamesh/fundoo-notes/'
```

```
ssh Prathamesh@20.211.40.139 'source myenv/bin/activate && pip install -r  
/home/Prathamesh/fundoo-notes/requirements.txt'
```

```
ssh Prathamesh@20.211.40.139 'source /home/Prathamesh/myenv/bin/activate  
&& python /home/Prathamesh/fundoo-notes/fundoo_notes/manage.py  
makemigrations && python  
/home/Prathamesh/fundoo-notes/fundoo_notes/manage.py migrate'
```

```
ssh Prathamesh@20.211.40.139 'sudo systemctl start django_app.service'
```

```
ssh Prathamesh@20.211.40.139 'sudo systemctl status django_app.service'
```



4. Build Job:

To run the job go back to job page and click on Build Now

Status

</> Changes

Workspace

Build Now

Configure

Delete Project

Rename

✓

fundoo_notes

Permalinks

- [Last build \(#10\), 2 days 6 hr ago](#)
- [Last stable build \(#10\), 2 days 6 hr ago](#)
- [Last successful build \(#10\), 2 days 6 hr ago](#)
- [Last failed build \(#8\), 2 days 6 hr ago](#)
- [Last unsuccessful build \(#8\), 2 days 6 hr ago](#)
- [Last completed build \(#10\), 2 days 6 hr ago](#)

Builds

Filter

30 November 2024

✓ #10 11:02 am

✓ #9 10:58 am