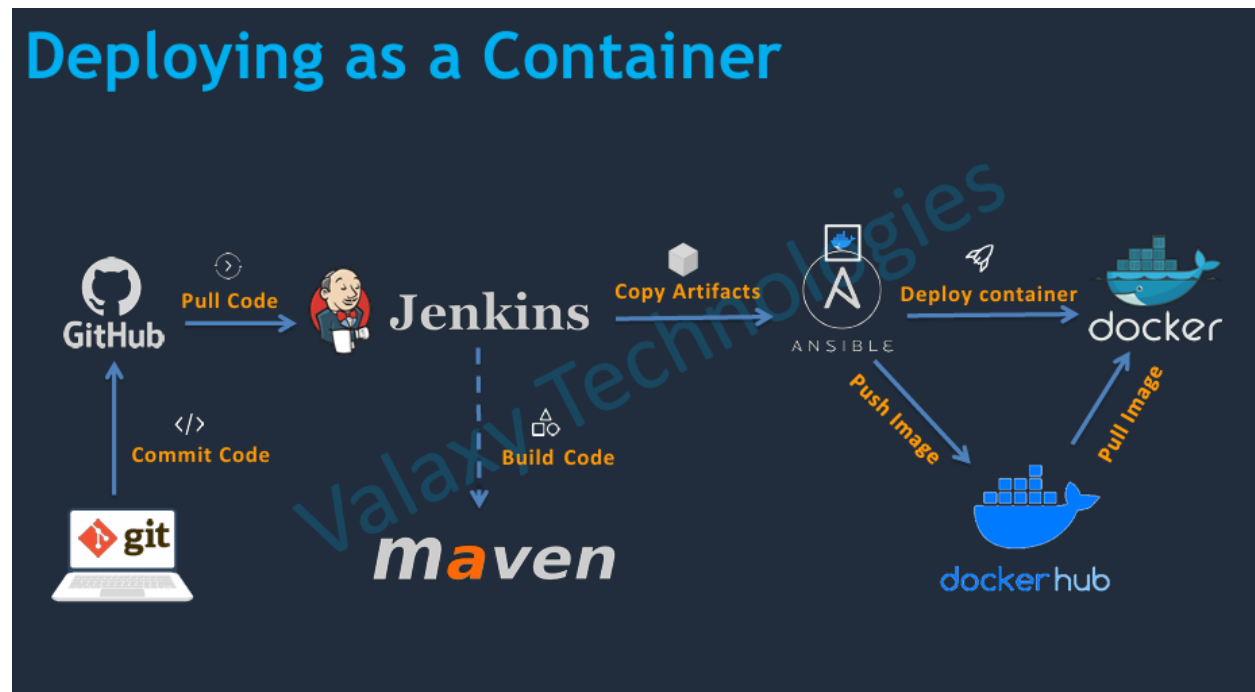


Deploying as a Container



Prepare Ansible Server

- Setup **EC2** instance
- Setup **hostname**
- Create **ansadmin** user
- Add user to **sudoers** file
- Generate **ssh keys**
- Enable **password based** login
- Install **ansible**



```

No packages needed for security; 7 packages available
Run "sudo yum update" to apply all updates.
[ec2-user@ip-172-31-8-110 ~]$
[ec2-user@ip-172-31-8-110 ~]$
[ec2-user@ip-172-31-8-110 ~]$ sudo su -
Last login: Fri May 17 04:12:35 UTC 2024 on pts/0
[root@ip-172-31-8-110 ~]#
[root@ip-172-31-8-110 ~]#
[root@ip-172-31-8-110 ~]#
[root@ip-172-31-8-110 ~]# hostnamectl set-hostname ansible-server
[root@ip-172-31-8-110 ~]#
[root@ip-172-31-8-110 ~]#
[root@ip-172-31-8-110 ~]# bash
[root@ansible-server ~]#
[root@ansible-server ~]#
[root@ansible-server ~]#
[root@ansible-server ~]#
[root@ansible-server ~]# useradd ansadmin
[root@ansible-server ~]# passwd ansadmin
Changing password for user ansadmin.
New password:
BAD PASSWORD: The password is shorter than 8 characters
Retype new password:
passwd: all authentication tokens updated successfully.
[root@ansible-server ~]#
[root@ansible-server ~]#
[root@ansible-server ~]# ls
[root@ansible-server ~]#
[root@ansible-server ~]#
[root@ansible-server ~]# vim /etc/sudoers
[root@ansible-server ~]#
[root@ansible-server ~]# vim /etc/ssh/sshd_config
[root@ansible-server ~]#
[root@ansible-server ~]#
[root@ansible-server ~]# systemctl restart sshd

```

Login as ansadmin

```

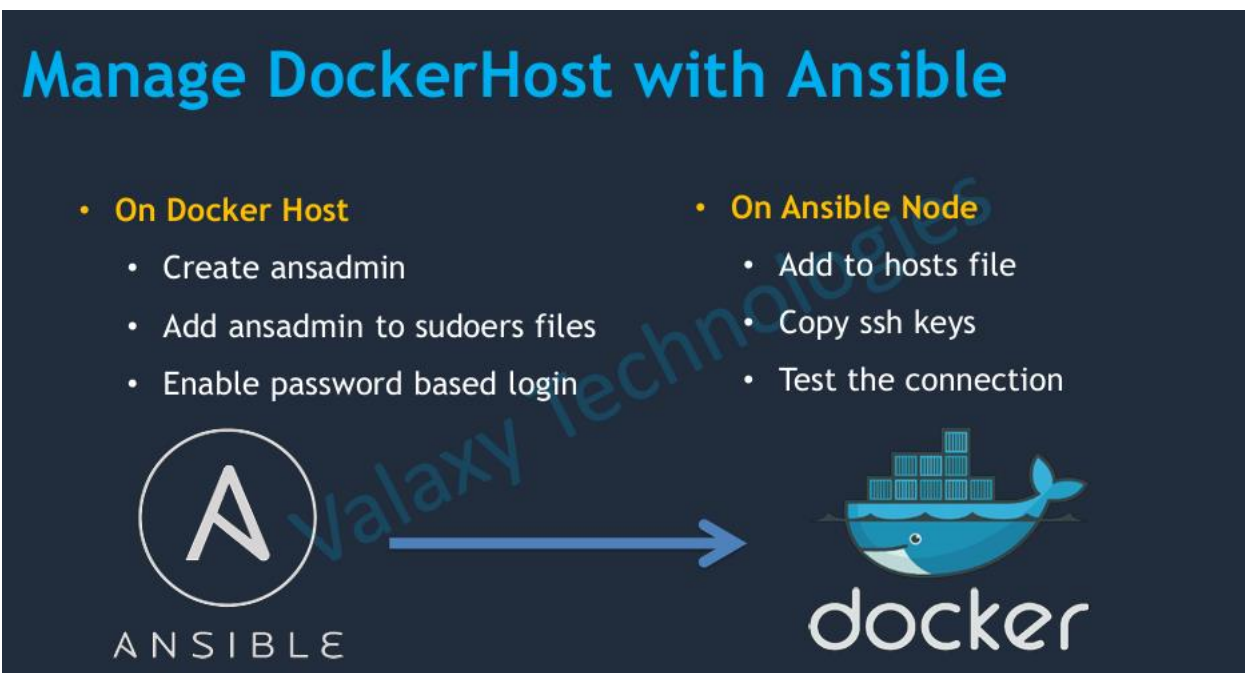
[ansadmin@ansible-server ~]$
[ansadmin@ansible-server ~]$ ssh-keygen
Generating public/private rsa key pair.
Enter file in which to save the key (/home/ansadmin/.ssh/id_rsa):
Created directory /home/ansadmin/.ssh/.
Enter passphrase (empty for no passphrase):
Enter same passphrase again:
Your identification has been saved in /home/ansadmin/.ssh/id_rsa.
Your public key has been saved in /home/ansadmin/.ssh/id_rsa.pub.
The key fingerprint is:
SHA256:5X9Y318QIK2ibKLzWjgNPuOP2oCFCfXkN9aEbX9d3g ansadmin@ansible-server
The key's randomart image is:
+--[RSA 2048]-----+
|      ..oo..      |
|      .+          |
|    .+.+.o+      |
|    .oo+..+.oE   |
|    .5+o.o .+    |
|    o.+. . . .   |
|    +.+.o . .   |
|    .oB .+       |
|    .+..+.       |
+---[SHA256]-----+
[ansadmin@ansible-server ~]$
[ansadmin@ansible-server ~]$ ls -la
total 12
drwx----- 3 ansadmin ansadmin 74 May 17 11:01 .
drwxr-xr-x 4 root root 38 May 17 10:53 ..
-rw-r--r-- 1 ansadmin ansadmin 18 Jul 15 2020 .bash_logout
-rw-r--r-- 1 ansadmin ansadmin 193 Jul 15 2020 .bash_profile
-rw-r--r-- 1 ansadmin ansadmin 231 Jul 15 2020 .bashrc
drwx----- 2 ansadmin ansadmin 38 May 17 11:01 .ssh
[ansadmin@ansible-server ~]$ cd .ssh
-bash: cd: .ssh: No such file or directory
[ansadmin@ansible-server ~]$ cd .ssh/
[ansadmin@ansible-server .ssh]$ ls
id_rsa id_rsa.pub
[ansadmin@ansible-server .ssh]$
[ansadmin@ansible-server .ssh]$ cat id_rsa.pub
ssh-rsa AAAAB3NzaC1yc2EAAAADAQABAAQBAQDfP6CufX25BaxRo+XPbk1RjkrCPXPCEuby05uB6bgCCBF6kuyv3ZLr6P7q1/6c0K1ogRHWj91xcZkka17EXp6Cyp6Gge1+43jPH7bS0XXzLbEZ+j+X7ZZqH1xEV2pwmLE2Lr5wv8xP8BnunpukjV8rpEqF7Cc6d+Nju3TTH2Wendu1vnnLYHZQ5/rUBjeJweGF4E1YyaZvn02d8jH12WTFjkaN2o4g5E6b12RV1sLSaADKAQLKEtq3s90+140d5Swozez9qR050WysUhw7b1PpZC1ARh0huvx7zuItX20Lqrmebj5x8I1e1qBp01uYdwYFou7nbthDXc3Jfn7 ansadmin@ansible-server
[ansadmin@ansible-server .ssh]$
[ansadmin@ansible-server .ssh]$

```

Now, install ansible

```
[root@ansible-server ~]# amazon-linux-extras install ansible2
Topic ansible2 has end-of-support date of 2023-09-30
Installing ansible
Loaded plugins: extras_suggestions, langpacks, priorities, update-motd
Cleaning repos: amzn2-core amzn2extra-ansible2 amzn2extra-docker amzn2extra-kernel-5.10
17 metadata files removed
6 sqlite files removed
0 metadata files removed
Loaded plugins: extras_suggestions, langpacks, priorities, update-motd
amzn2-core
amzn2extra-ansible2
amzn2extra-docker
amzn2extra-kernel-5.10
(1/9): amzn2-core/2/x86_64/group_gz
(2/9): amzn2-core/2/x86_64/updateinfo
(3/9): amzn2extra-docker/2/x86_64/primary_db
(4/9): amzn2extra-kernel-5.10/2/x86_64/updateinfo
(5/9): amzn2extra-docker/2/x86_64/updateinfo
(6/9): amzn2extra-ansible2/2/x86_64/updateinfo
(7/9): amzn2extra-ansible2/2/x86_64/primary
(8/9): amzn2extra-kernel-5.10/2/x86_64/primary_db
(9/9): amzn2-core/2/x86_64/primary_db
Resolving Dependencies
--> Running transaction check
--> Package ansible.noarch 0:2.9.23-1.amzn2 will be installed
--> Processing Dependency: sshpass for package: ansible-2.9.23-1.amzn2.noarch
--> Processing Dependency: python-paramiko for package: ansible-2.9.23-1.amzn2.noarch
--> Processing Dependency: python-keyczar for package: ansible-2.9.23-1.amzn2.noarch
--> Processing Dependency: python-httplib2 for package: ansible-2.9.23-1.amzn2.noarch
--> Processing Dependency: python-crypto for package: ansible-2.9.23-1.amzn2.noarch
--> Running transaction check
```

Integrate Docker with Ansible



On Docker machine perform above step

```
[root@docker ~]# useradd ansadmin
[root@docker ~]# passwd ansadmin
Changing password for user ansadmin.
New password:
BAD PASSWORD: The password is shorter than 8 characters
Retype new password:
passwd: all authentication tokens updated successfully.
[root@docker ~]#
[root@docker ~]#
[root@docker ~]# vim /etc/sudoers
[root@docker ~]#
[root@docker ~]#
[root@docker ~]# grep Password /etc/ssh/sshd_config
PasswordAuthentication yes
#PermitEmptyPasswords no
#PasswordAuthentication no
# PasswordAuthentication. Depending on your PAM configuration,
# PAM authentication, then enable this but set PasswordAuthentication
[root@docker ~]#
[root@docker ~]# █
```

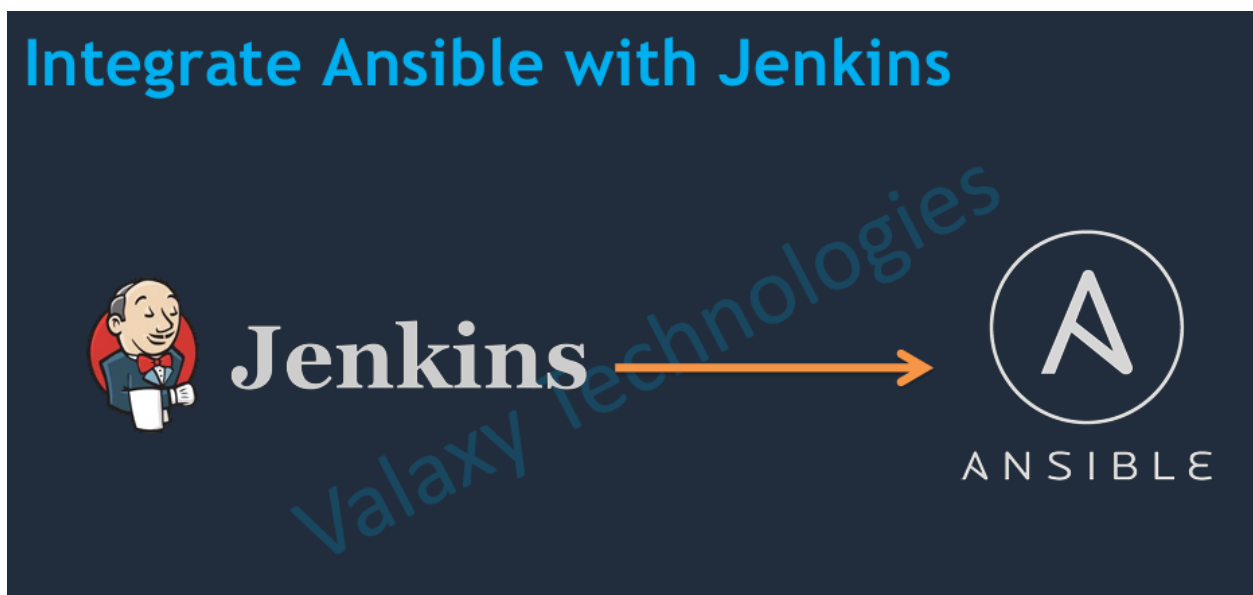
Check on docker machine ansadmin user

Check the ansible command if it's working or not

```
[ansadmin@ansible-server ~]$ ansible all -m ping
[WARNING]: Platform linux on host 172.31.36.247 is using the discovered Python interpreter at /usr/bin/python, but
https://docs.ansible.com/ansible/2.9/reference_appendices/interpreter_discovery.html for more information.
172.31.36.247 | SUCCESS => {
  "ansible_facts": {
    "discovered_interpreter_python": "/usr/bin/python"
  },
  "changed": false,
  "ping": "pong"
}
[ansadmin@ansible-server ~]$
```

```
[ansadmin@ansible-server ~]$
[ansadmin@ansible-server ~]$ ansible all -m command -a uptime
[WARNING]: Platform linux on host 172.31.36.247 is using the discovered Python interpreter at /usr/bin/python, but
https://docs.ansible.com/ansible/2.9/reference_appendices/interpreter_discovery.html for more information.
172.31.36.247 | CHANGED | rc=0 >>
  11:31:38 up 1 day,  4:07,  2 users,  load average: 0.00, 0.00, 0.00
[ansadmin@ansible-server ~]$
```

Integrate Ansible with Jenkins.



Configure Ansible host machine into jenkins

SSH Server

Name ?

ansible-server

Hostname ?

172.31.8.110

Username ?

ansadmin

Remote Directory ?

☐ Avoid sending files that have not changed ?

Advanced

☐ Avoid sending files that have not changed ?

Advanced

Edited

☒ Use password authentication, or use a different key ?

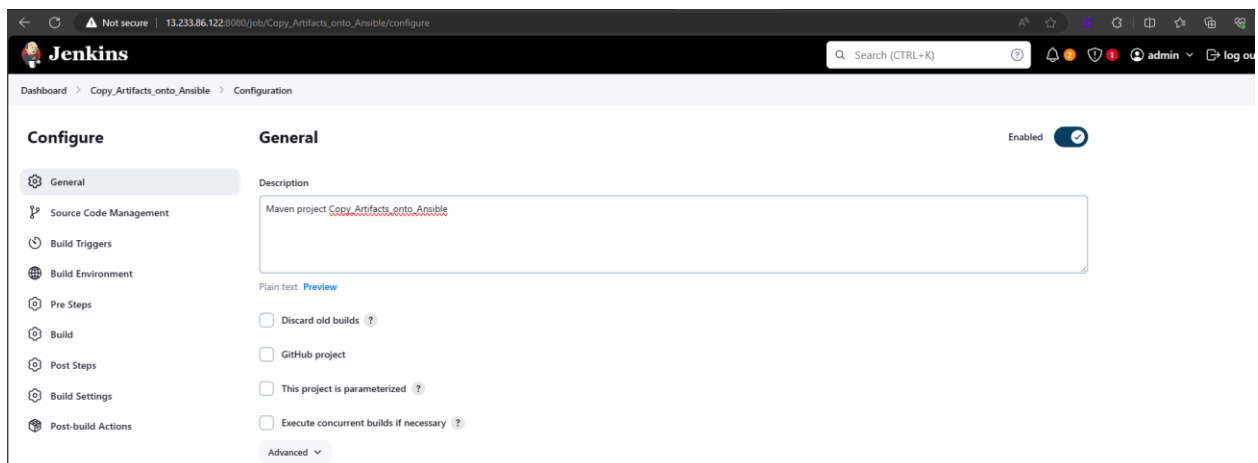
Passphrase / Password ?

Path to key ?

Create docker directory giving chown permission.

```
[ansadmin@ansible-server ~]$ cd /opt/
[ansadmin@ansible-server opt]$
[ansadmin@ansible-server opt]$ ls
aws  rh
[ansadmin@ansible-server opt]$
[ansadmin@ansible-server opt]$ sudo mkdir docker
[ansadmin@ansible-server opt]$
[ansadmin@ansible-server opt]$ ls -la
total 0
drwxr-xr-x  5 root root  41 May 17 11:41 .
dr-xr-xr-x 18 root root 257 May 17 04:11 ..
drwxr-xr-x  4 root root  33 May  3 23:45 aws
drwxr-xr-x  2 root root   6 May 17 11:41 docker
drwxr-xr-x  2 root root   6 Aug 16 2018 rh
[ansadmin@ansible-server opt]$
[ansadmin@ansible-server opt]$
[ansadmin@ansible-server opt]$ sudo chown ansadmin:ansadmin docker
[ansadmin@ansible-server opt]$
[ansadmin@ansible-server opt]$ ls -la
total 0
drwxr-xr-x  5 root      root      41 May 17 11:41 .
dr-xr-xr-x 18 root      root      257 May 17 04:11 ..
drwxr-xr-x  4 root      root      33 May  3 23:45 aws
drwxr-xr-x  2 ansadmin ansadmin   6 May 17 11:41 docker
drwxr-xr-x  2 root      root       6 Aug 16 2018 rh
[ansadmin@ansible-server opt]$
[ansadmin@ansible-server opt]$
```

Now, create Jenkins Job



Configure

General

Source Code Management

Build Triggers

Build Environment

Pre Steps

Build

Post Steps

Build Settings

Post-build Actions

Git ?

Repositories ?

Repository URL ?

https://github.com/bunty4200/Udemy-hello-world.git

Credentials ?

- none -

+ Add +

Advanced ▾

Add Repository

Branches to build ?

Branch Specifier (blank for 'any') ?

*/master

Add Branch

Branches to build ?

Post-build Actions

Send build artifacts over SSH ?

SSH Publishers

SSH Server

Name ?

ansible-server

Advanced ▾

Transfers

Transfer Set

Source files ?

❗ Either Source files, Exec command or both must be supplied

Files to upload to a server.

The string is a comma separated list of includes for an Ant fileset eg. '**/*.jar' (see [Patterns](#) in the Ant manual).
The base directory for this fileset is the workspace.

(from [Publish Over SSH](#))

Configure

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

SSH Server

Name ?

ansible-server

Advanced ▾

Transfers

Transfer Set

Source files ?

webapp/target/*.war

Files to upload to a server.

The string is a comma separated list of includes for an Ant fileset eg. `"/**/*.jar"` (see [Patterns](#) in the Ant manual).
The base directory for this fileset is the workspace.

(from [Publish Over SSH](#))

Remove prefix ?

webapp/target

Remote directory ?

//opt//docker

Exec command ?

❗ Either Source files, Exec command or both must be supplied

Status

</> Changes

📄 Console Output

✓ Edit Build Information

🗑 Delete build '#1'

📁 Git Build Data

↻ Redeploy Artifacts

📄 Test Result

🔍 See Fingerprints

✓ #1 (May 17, 2024, 11:51:44 AM)



No changes.



Started by user [admin](#)



Revision: 4f96f2b2261e49e198923134d8154824dd1f8fdc
Repository: <https://github.com/bunty4200/Udemy-hello-world.git>
• refs/remotes/origin/master



[Test Result](#) (no failures)

Module Builds

- ✓ [Maven Project](#) 1.6 sec
- ✓ [Server](#) 6 sec
- ✓ [Webapp](#) 2.2 sec

```
[ansadmin@ansible-server opt]$ ls -la
total 0
drwxr-xr-x  5 root    root    41 May 17 11:41 .
dr-xr-xr-x 18 root    root   257 May 17 04:11 ..
drwxr-xr-x  4 root    root    33 May  3 23:45 aws
drwxr-xr-x  2 ansadmin ansadmin  6 May 17 11:41 docker
drwxr-xr-x  2 root    root     6 Aug 16  2018 rh
[ansadmin@ansible-server opt]$
[ansadmin@ansible-server opt]$ ls
aws  docker  rh
[ansadmin@ansible-server opt]$
[ansadmin@ansible-server opt]$ cd docker/
[ansadmin@ansible-server docker]$ ls
webapp.war
[ansadmin@ansible-server docker]$
[ansadmin@ansible-server docker]$
[ansadmin@ansible-server docker]$
```