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Lab Exercise 11– Configure Ansible Setup in Linux

Objective:

To configure Ansible Setup for Linux Environment.

- **Amazon Linux 2:**
 - Update package lists: `sudo yum update`

```
ec2-user@ip-172-31-36-190 ~]$ sudo su
[root@ip-172-31-36-190 ec2-user]# wget https://dl.fedoraproject.org/pub/epel/epel-release-latest-7.noarch.rpm
--2024-04-17 04:33:53-- https://dl.fedoraproject.org/pub/epel/epel-release-latest-7.noarch.rpm
Resolving dl.fedoraproject.org (dl.fedoraproject.org)... 38.145.60.23, 38.145.60.24, 38.145.60.22
Connecting to dl.fedoraproject.org (dl.fedoraproject.org)|38.145.60.23|:443... connected.
HTTP request sent, awaiting response... 200 OK
Length: 15608 (15K) [application/x-rpm]
Saving to: 'epel-release-latest-7.noarch.rpm'

100%[=====>] 15,608      61./KB/s   in 0.2s

2024-04-17 04:33:54 (61./KB/s) - 'epel-release-latest-7.noarch.rpm' saved [15608/15608]

[root@ip-172-31-36-190 ec2-user]# yum install epel-release-latest-7.noarch.rpm
Loaded plugins: extras_suggestions, langpacks, priorities, update-motd
Examining epel-release-latest-7.noarch.rpm: epel-release-7-14.noarch
Marking epel-release-latest-7.noarch.rpm to be installed
Resolving Dependencies
--> Running transaction check
--> Package epel-release.noarch 0:7-14 will be installed
--> Finished Dependency Resolution

Dependencies Resolved

=====
Package                Arch          Version           Repository        Size
=====
Installing:
epel-release            noarch        7-14              /epel-release-latest-7.noarch 25 k
Transaction Summary
=====
Install 1 Package
Total size: 25 k
Installed size: 25 k
Is this ok [y/d/N]: y
Downloading packages:
Running transaction check
Running transaction test
Transaction test succeeded
Running transaction
  Installing : epel-release-7-14.noarch
  Verifying  : epel-release-7-14.noarch

Installed:
epel-release.noarch 0:7-14

Complete!
[root@ip-172-31-36-190 ec2-user]# yum update -y
Loaded plugins: extras_suggestions, langpacks, priorities, update-motd
Existing lock /var/run/yum.pid; another copy is running as pid 3757.
Another app is currently holding the yum lock; waiting for it to exit...
The other application is: yum
Memory : 303 M RSS (597 MB VSZ)
Started: Wed Apr 17 04:34:41 2024 - 00:06 ago
State : Running, pid: 3757
Another app is currently holding the yum lock; waiting for it to exit...
```

- Install Python and pip (package installer): `sudo yum install python python-pip`

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```
Verifying : python-simplejson-3.2.10-1.amzn2.0.2.x86_64
Installed:
  python2-lockfile.noarch 1:0.11.0-17.el7                                python2-simplejson.x86_64
Replaced:
  python-lockfile.noarch 1:0.9.1-4.amzn2                                python-simplejson.x86_64

Complete!
[root@ip-172-31-36-190 ec2-user]# yum install git python python-pip openssl -y
Loaded plugins: extras_suggestions, langpacks, priorities, update-motd
amzn2-core
229 packages excluded due to repository priority protections
Package python-2.7.18-1.amzn2.0.8.x86_64 already installed and latest version
```

- Install Ansible using pip: `pip install ansible`
- **Amazon Linux 1:**
 - Update package lists: `sudo apt update`
 - Add the Ansible repository: `sudo apt-add-repository -y ppa:ansible/ansible`

```
st login: Wed Apr 17 04:33:06 2024 from ec2-13-233-177-5.ap-south-1.compute.amazonaws.com
#_
~\#### Amazon Linux 2
~~\_#####\
~~~~\###| AL2 End of Life is 2025-06-30.
~~~~\#/
~~~~V~'-'>
~~~~A newer version of Amazon Linux is available!
~~~~.-./
~~~~/_/_/
~/m/'-_/ Amazon Linux 2023, GA and supported until 2028-03-15.
https://aws.amazon.com/linux/amazon-linux-2023/

c2-user@ip-172-31-36-190 ~]$ sudo su
oot@ip-172-31-36-190 ec2-user|# vi /etc/ansible/hosts
oot@ip-172-31-36-190 ec2-user|# adduser ansible
```

-
- Update package lists again: `sudo apt update`
- Install Ansible: `sudo apt-get install ansible`
-

3. Additional Configurations:

- **User and Permissions:**
 - Create a user specifically for Ansible tasks.
 - Grant sudo access to this user.
- **SSH Keys:**

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- Generate an SSH key pair on your local machine.

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- Copy the public key to the `authorized_keys` file on the AWS instance for the Ansible user.

- **Inventory File:**

- Create a file (e.g., /etc/ansible/hosts) to define your AWS instances you want to manage with Ansible.

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```
[ec2-user@ip-172-31-36-190 ~]$ sudo su
[root@ip-172-31-36-190 ec2-user]# vi /etc/ansible/hosts
[root@ip-172-31-36-190 ec2-user]# adduser ansible
[root@ip-172-31-36-190 ec2-user]# passwd ansible
Changing password for user ansible.
New password:
BAD PASSWORD: The password contains the user name in some form
Retype new password:
Sorry, passwords do not match.
New password:
Retype new password:
passwd: all authentication tokens updated successfully.
[root@ip-172-31-36-190 ec2-user]#
```

- ~~ \###| AL2 End of Life is 2025-06-30.
~~ \#/
~~ V~'-'>
~~~ / A newer version of Amazon Linux is available!  
~~~.-. /  
~~~.-. / Amazon Linux 2023, GA and supported until 2028-03  
~~~.-. /m/'- / <https://aws.amazon.com/linux/amazon-linux-2023/>

```
ec2-user@ip-172-31-45-217 ~]$ sudo su
oot@ip-172-31-45-217 ec2-user]# adduser ansible
oot@ip-172-31-45-217 ec2-user]# passwd ansible
anging password for user ansible.
w password:
type new password:
sswd: all authentication tokens updated successfully.
oot@ip-172-31-45-217 ec2-user]#
```

- Specify hostnames or IP addresses of the instances in the file.

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```
Press ENTER or type command to continue
[No write since last change]
/bin/bash: wq: command not found

shell returned 127

Press ENTER or type command to continue
[ansible@ip-172-31-45-217 home]$ service ssh restart
Redirecting to /bin/systemctl restart ssh.service
Failed to restart ssh.service: The name org.freedesktop.PolicyKit1 was not provided by any .service files
See system logs and 'systemctl status ssh.service' for details.
[ansible@ip-172-31-45-217 home]$ vi /etc/ssh/sshd_config
[ansible@ip-172-31-45-217 home]$ sudo su
[root@ip-172-31-45-217 home]# ^C
[root@ip-172-31-45-217 home]# vi /etc/ssh/sshd config
[root@ip-172-31-45-217 home]# ssh service restart
ssh: Could not resolve hostname service: Name or service not known
[root@ip-172-31-45-217 home]# service sshd restart
Redirecting to /bin/systemctl restart sshd.service
[root@ip-172-31-45-217 home]#
```

```
[root@ip-172-31-36-190 home]# su - ansible
last login: Wed Apr 17 05:57:29 UTC 2024 on pts/0
[ansible@ip-172-31-36-190 ~]$ ssh-copy-id ansible@172.31.45.217
/usr/bin/ssh-copy-id: INFO: Source of key(s) to be installed: "/home/ansible/.ssh/id_rsa.pub"
/usr/bin/ssh-copy-id: INFO: attempting to log in with the new key(s), to filter out any that are already installed
/usr/bin/ssh-copy-id: INFO: 1 key(s) remain to be installed -- if you are prompted now it is to install the new keys
Permission denied (publickey,gssapi-keyex,gssapi-with-mic).
[ansible@ip-172-31-36-190 ~]$ ssh-copy-id ansible@172.31.45.217
/usr/bin/ssh-copy-id: INFO: Source of key(s) to be installed: "/home/ansible/.ssh/id_rsa.pub"
/usr/bin/ssh-copy-id: INFO: attempting to log in with the new key(s), to filter out any that are already installed
/usr/bin/ssh-copy-id: INFO: 1 key(s) remain to be installed -- if you are prompted now it is to install the new keys
ansible@172.31.45.217's password:

Number of key(s) added: 1

Now try logging into the machine, with: "ssh 'ansible@172.31.45.217'"
and check to make sure that only the key(s) you wanted were added.

[ansible@ip-172-31-36-190 ~]$ ssh ansible@172.31.45.217
last login: Wed Apr 17 06:08:59 2024
      _   _          _ 
     / \   \       / \
    /___\   \_   _/_ ___\
   /___/_____\___/_____\
  /___/_____/_/_____/
 /___/_____/_____/_____/
/_/_____/_____/_____/_____/

        Amazon Linux 2

ALZ End of Life is 2025-06-30.

A newer version of Amazon Linux is available!

Amazon Linux 2023, GA and supported until 2028-03-15.
https://aws.amazon.com/linux/amazon-linux-2023/

[ansible@ip-172-31-45-217 ~]$
```