



## **ANSIBLE INSTALLATION**

- Ansible is an **agentless automation tool** that you install on a single host (**control node**).
- Control node can manage an entire fleet of machines and other devices (**managed nodes**) remotely with **SSH, PowerShell** remoting, and numerous other transports, all from a simple command-line interface with no databases or daemons required.

### **CONTROL NODE REQUIREMENTS:**

- UNIX-like machine with **Python 3.9** or newer installed.
- Windows under a Windows Subsystem for Linux (WSL) distribution.

### **MANAGED NODE REQUIREMENTS:**

- Does not require Ansible to be installed, but requires Python 2.7, or 3.5 - 3.11 to run Ansible **library code**.
- The managed node also needs a **user account** that can SSH to the node with an interactive **POSIX shell**.

## **INSTALLING ON AWS EC2-RHEL9**

### **STEP 1: Launching 3 RHEL9 Servers**

**In SG:** SSH-22

**Add Boot Strap:** #!/bin/bash

yum update -y

yum install vim net-tools -y

### **STEP 2: Connect Instances with Putty or MobaXterm or Win Terminal**

## **MASTER (CONTROL-NODE) SETUP:**

### **STEP1: Setting up Hostname.**

#hostname Master

#vim /etc/hostname

Master

### **STEP2: Mapping Hostname to IP-Address**

#vim /etc/hosts

172.31.1.200 Master

172.31.2.101 Node1

172.31.3.102 Node2

### **STEP3: Update Hostname**

#bash

#### **STEP4: Changing SSH Configuration**

```
#vim /etc/ssh/sshd_config  
    PasswordAuthentication yes  
#systemctl restart sshd
```

#### **STEP5: Create a Normal User**

```
#useradd raju  
#passwd raju
```

#### **STEP6: Setting SUDO Configuration for user raju**

```
#visudo or #vim /etc/sudoers  
    raju    ALL=(ALL)    NOPASSWD: ALL
```

#### **STEP7: Setting Password less Authentication for user raju**

```
#su - raju  
$ssh-keygen  
$cd ~/.ssh  
$ls  
$ssh-copy-id raju@Agent1  
$ssh-copy-id raju@Agent2  
$ssh raju@Agent1  
$exit  
$ssh raju@Agent2  
$exit
```

## **STEP8: Setting Extra Packages for Enterprise Linux (EPEL) repository**

```
$sudo yum install https://dl.fedoraproject.org/pub/epel/epel-release-latest-8.noarch.rpm
```

(or)

```
$sudo dnf install https://dl.fedoraproject.org/pub/epel/epel-release-latest-9.noarch.rpm
```

## **STEP9: Installing Ansible Package**

```
$sudo yum update -y
```

```
$sudo yum repolist
```

```
$sudo yum install ansible -y
```

```
$ansible --version
```

## **STEP10: Changing Host File Permissions**

```
$cd /etc/ansible
```

```
$ls -l
```

```
$sudo chmod 777 hosts
```

## **NODE1 SETUP:**

### **STEP1: Setting up Hostname**

```
#hostname Node1
```

```
#vim /etc/hostname
```

```
Node1
```

### **STEP2: Mapping Hostname to IP-Address**

```
#vim /etc/hosts
```

```
172.31.2.101    Node1
```

```
172.31.1.200    Master
```

### **STEP3: Update Hostname**

```
#bash
```

### **STEP4: Changing SSH Configuration**

```
#vim /etc/ssh/sshd_config  
PasswordAuthentication yes  
#systemctl restart sshd
```

### **STEP5: Create a Normal User**

```
#useradd raju  
#passwd raju
```

### **STEP6: Setting SUDO Configuration for user raju**

```
#visudo or #vim /etc/sudoers  
raju    ALL=(ALL)    NOPASSWD: ALL
```

## **NODE2 SETUP:**

### **STEP1: Setting up Hostname**

```
#hostname Node2  
#vim /etc/hostname  
Node2
```

### **STEP2: Mapping Hostname to IP-Address**

```
#vim /etc/hosts  
172.31.2.101    Node2  
172.31.1.200    Master
```

### **STEP3: Update Hostname**

```
#bash
```

### **STEP4: Changing SSH Configuration**

```
#vim /etc/ssh/sshd_config
```

```
    PasswordAuthentication yes
```

```
#systemctl restart sshd
```

### **STEP5: Create a Normal User**

```
#useradd raju
```

```
#passwd raju
```

### **STEP6: Setting SUDO Configuration for user raju**

```
#visudo or #vim /etc/sudoers
```

```
    raju    ALL=(ALL)    NOPASSWD: ALL
```