

# Kafka Automation with Ansible

- Ansible is a configuration management & deployment tool similar to puppet & chef
- Ansible definition : A communication device that transforms data faster than light
- Ansible built on top of python language, ansible uses YAML (yet another mark up language) to automate the tasks
- when YAML scripts are executed, python converts those into shell scripts and run them on the remote machines

More info: <https://valdhaus.co/writings/ansible-vs-shell-scripts/>

## Ansible installation

- ❖ Debian distribution : `sudo apt-get ansible`
- ❖ Rpm distribution: install epel repository and then install ansible – `sudo yum install ansible`
- ❖ If you are using redhat 7 OS ,I have developed a script under kafka-scripts to install ansible and epel

**Check this link to install epel repository on RHEL/centOS**

<http://www.tecmint.com/how-to-enable-epel-repository-for-rhel-centos-6-5/>

- In **kafka-scripts** directory ignore all .yaml files & templates
- You need to work with .sh files , ansible.cfg , inventory, keys
- Although, we execute the shell scripts the code inside the shell is ansible execution command

## Kafka scripts execution

1) Copy kafka-scripts directory to your linux machine home directory

2) `sh ./ansible-install.sh`

to install ansible in rpm we must have epel package and python 2.x,  
This script download & install epel pack and install ansible

3) `sudo vi inventory`

- add hostname, ip addresses ,ssh username, ssh password/private key
  - ex: `kafka1 ansible_ssh_host=172.0.0.0 ansible_ssh_username =ec2-user ansible_ssh_password/ansible_private_key=xyz`
  - if username and password/private key are common for all nodes then no need to add them very time to each host, keep them in **ansible.cfg file**
- for reference : see the default inventory content
- Note: Don't change the host naming convention let it be zook1, kafka1, kafka2 . . . as I created some dependencies using these conventions
- kafka-scripts -> keys -> ssh private key (AWS) file undo read mode for group and others – `sudo chmod -R 700 keys`

4) `sh ./java-install.sh`

this installs open jdk in all the nodes

- 5) `sh ./zookeeper-install.sh`  
installs the zookeeper in the home directory
- 6) `sh ./zookeeper-start.sh`  
zookeeper starts  
to check it – “telnet zookeeper-ip 2181”
- 7) `sh ./zookeeper-stop.sh`  
stops zookeeper
- 8) `sh ./kafka-install.sh`  
installs kafka on the ip addresses specified in home directory
- 9) `sh ./kafka-start.sh`  
starts kafka
- 10) `sh ./kafka-stop.sh`
- 11) `sh ./create-topic.sh`
- 12) `sh ./describe-topic.sh`
- 13) `sh ./list-topics.sh`

**Note** if you are using private key (AWS) instead of SSH password for logging to nodes, then private key file should not have read permission for group and other ,I added those changes in the script so the files stored under keys directory will have read permissions only for owner . Ignore this if you are using ssh password for login