**deploy k8s upgrade with ansible**

## **First time deploying ansible**

**1) Create /etc/hosts with the hosts required**

**2) Create your ansible.cfg, an example below:**

**--------------------------**

[defaults]

nocows=True

inventory=inventory

remote\_user=automation

roles\_path=/usr/share/ansible/roles:./roles

host\_key\_checking = false

deprecation\_warning = false

[privilege\_escalation]

become=True

become\_ask\_pass=False

become\_method=sudo

become\_user=root

**--------------------------**

**3) Create your inventory file, an example below:**

**--------------------------**

[k8s\_controllers]

controller01

[k8s\_nodes]

node01

node02

[all:children]

k8s\_controllers

k8s\_nodes

**--------------------------**

**4) Adhoc Ansible commands to create user 'automation' on local and remote nodes, run it as root. An example below**

**--------------------------**

#!/bin/bash

echo StrictHostKeyChecking=no > $HOME/.ssh/config

chmod 0600 $HOME/.ssh/config

yum install -y ansible-collection-community-general vim-enhanced sshpass

ansible -u root -b -k -m user -a "name=automation comment='Automation user' generate\_ssh\_key=yes shell=/bin/bash groups=wheel password={{ 'devops' | password\_hash('sha512') }}" -i inventory localhost:all

ansible -u root -b -k -m authorized\_key -a "user=automation state=present key=\"{{ lookup('file', '/home/automation/.ssh/id\_rsa.pub') }}\" " -i inventory all

ansible -u root -b -k -m copy -a "content='automation ALL=(root) NOPASSWD:ALL' dest=/etc/sudoers.d/automation" -i inventory all

ansible -u root -b -k -m lineinfile -a "path=/home/automation/.ssh/config line=StrictHostKeyChecking=no owner=automation group=automation mode='0600' create=yes" -i inventory all

echo "set ai nu cuc cul et ts=2 sw=2" > $HOME/.vimrc

echo "

alias ap='ansible-playbook '

alias aps='ansible-playbook --syntax-check '

alias apc='ansible-playbook --check '

# function to look up examples only using keywords, ie 'aex user'

function aex(){

ansible-doc $1|sed -n -e '/EXAM/,/RET/ p'

}

" >> $HOME/.bashrc

source $HOME/.bashrc

source $HOME/.vimrc

**--------------------------**

**5) Check you can run ansible commands with remote user automation.**

**My current user is vagrant so I need -k to ask password for automation user as that is the users stated in ansible.cfg:**

**[automation@controller01 ~]$ ansible -m ping k8s\_nodes -k**

**If you plan on running k8s upgrades, I suggest login with the right user, ie automation, create the inventory and ansible.cfg file and run ansible -m ping k8s\_nodes (no need to ask for user, inventory or password) . Once that is successful, you can begin creating playbooks.**

**The ‘aex’ function is to get examples on CLI, ie aex user**

## ***Ansible already deployed***

1. **The yml file for the k8s node upgrades is written having in mind to run it against one node at a time as you are not going to drain all nodes at the same time… Hence the node name is to be passed onto the script as an extra argument, otherwise the script will fail:**

**[automation@controller01 ~]$ ansible-playbook k8snodes\_upgrade.yml --extra-vars "target=node01"**