What Is Ansible Inventory?

Hello Everyone

Welcome to CloudAffaire and this is Debjeet.

In the last blog post, we have discussed some basic concepts of Ansible. We have also learned how to install and configure Ansible.

<https://cloudaffaire.com/ansible-introduction/>

In this blog post, we will discuss Ansible Inventory. We will also learn different aspect of inventory through a demo.

What is Ansible Inventory?

Ansible works against multiple systems in your infrastructure at the same time. It does this by selecting portions of systems listed in Ansible’s inventory, which defaults to being saved in the location /etc/ansible/hosts. You can specify a different inventory file using the -i <path> option on the command line. Not only is this inventory configurable, but you can also use multiple inventory files at the same time and pull inventory from dynamic or cloud sources or different formats (YAML, ini, etc).

Ansible Inventory Demo:

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## Ansible: Inventory ##

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## Systems used for this demo

# hostnames ip os role

# --------- ------------ -------- ------------

# system1 192.168.0.10 Centos 7 Control Node

# system2 192.168.0.20 Centos 7 Managed Node One

# system3 192.168.0.30 Centos 7 Managed Node Two

#########################

## Default Inventory ##

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## Default inventory location

sudo cat /etc/ansible/hosts

## Add new entry to the host file

sudo vi /etc/ansible/hosts

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[remote]

192.168.0.20

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:wq

## list all inventory

ansible-inventory --list

## Test if inventory is working

ansible remote -m shell -a "hostname"

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## Custom Inventory ##

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## You can specify custom inventory file using the -i <path> option on the command line.

## Create custom inventory files

vi myinventory1

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[remote]

192.168.0.20

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:wq

vi myinventory2

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[remote]

192.168.0.30

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:wq

## Use custom inventory files

ansible remote -m shell -a "hostname" -i /home/debjeet/myinventory1 -i /home/debjeet/myinventory2

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## Groups and subgroups ##

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## Hosts in the inventory can be classified in groups and subgroups.

## Single host can be member of multiple groups and sub-groups

## Create groups and subgroups in inventory

sudo vi /etc/ansible/hosts

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[localserver]

192.168.0.10

[remoteserver]

192.168.0.20

192.168.0.30

[systems:children]

localserver

remoteserver

[prod:children]

systems

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:wq

## Test by executing an ad-hoc command

## Will be executed in all three systems

ansible -m command -a "df -h" prod

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## Pattern ##

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## Inventory also supports pattern, you can combine multiple host with similar pattern

## pattern: [start:end:gap]

sudo vi /etc/ansible/hosts

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[systems]

192.168.0.[10:30:10]

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:wq

## Test the inventory by executing an ad-hoc command

## Will be executed against 192.168.0.10, 192.168.0.20 and 192.168.0.30

ansible -m command -a "df -h" systems

###################################

## Host with non standard port ##

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## Ansible supports non-standard port <host>:<port>

## If u want to try, on system2 (192.168.0.20), Open /etc/ssh/sshd\_config file and

## look for line Port 22 and change line to Port 2222. Restart sshd.

sudo vi /etc/ansible/hosts

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[remote]

192.168.0.20:2222

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:wq

## Test the inventory by executing an ad-hoc command

ansible -m command -a "df -h" remote

#########################################

## Change host connection properties ##

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## Apart from port, ansible also supports multiple host connection argument

## For complete argument list https://docs.ansible.com/ansible/latest/user\_guide/intro\_inventory.html

sudo vi /etc/ansible/hosts

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remote ansible\_host=192.168.0.20 ansible\_port=2222 ansible\_connection=ssh ansible\_user=debjeet

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:wq

## Execute an ad-hoc command to test

ansible -m command -a "df -h" remote

Hope you have enjoyed this article. In the next blog post, we will discuss Ansible Dynamic Inventory.

To get more details on Ansible, please refer below Ansible documentation.

<https://docs.ansible.com/>