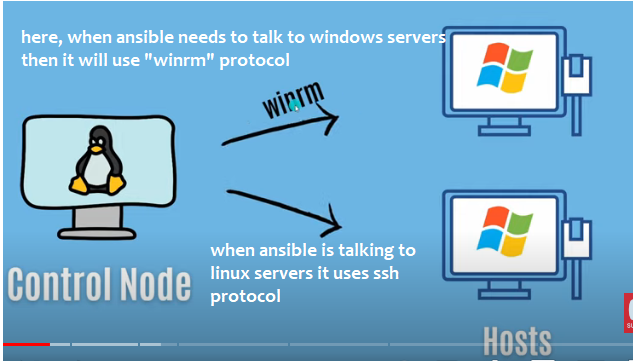


Ansible Is used to communicate with remote target servers like windows/linux/centos..

Ansible is used to communicate with remote linux servers using SSH

Ansible can communicate to windows server using winrm protocol



Ansible is agent less, when the source machine wants to connect to 10 machines, then on those 10 target machines, Ansible doesn’t need to be installed, hence Ansible is agent less, means ansible should only be on single source machine, no need Ansible installation on target machines,

### Why Ansible

1. Lets say u want to power on 10 machines /if u have to deploy code in 10 machines then u have to write a script and execute that script in 10 machines, here instead of writing that complex script

Ansible playbook (Ansible scripts) are easy to write and learn bec they are in YAML file

1. Ansible is agent less, Ansible agent need not to be installed on target machines, this source machine will connect via ssh, other orchestration tool needs ansible agents on target machines too

### What is Ansible

Ansible is an automation tool,

Uses of ansible

Example u wrote some script, and u have 100 target servers, if u want to execute that same script on all servers,

then choose ansible , just give all 100 target ipaddresses, ansible will execute that script in all 100 machines

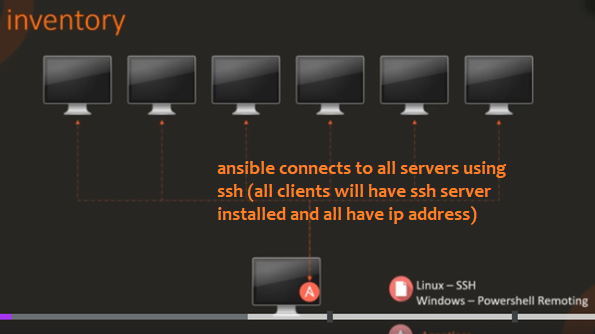
### Ansible installation

Ansible will communicate to all target servers using ssh , so if u want to work with ansible u have to install ssh server

So on current machine ansible must be there and on target machine ssh server must be installed on target machines

# How ansible works

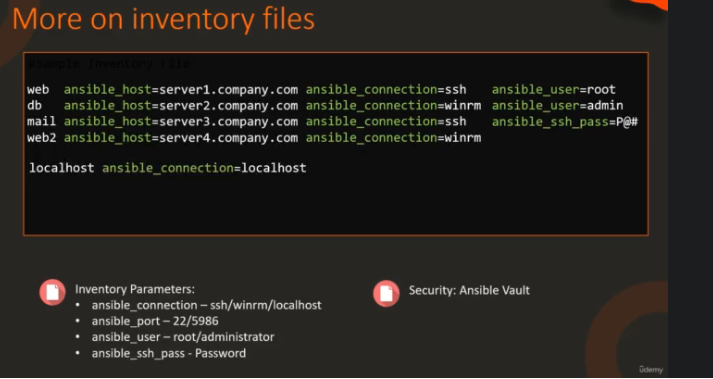
Using ip addresses of target machines+ ssh server on target machines, if target machine is not having the ipaddress then ansible cant connect to target machines,



## Inventory files

Inventory file contains the list of all target servers information to connect.

Here web,db,mail are the aliases to the server, now ansible will connect to all server urls mentioned in the inventory files



Here if u see parameter “ansible\_connection=ssh” means the

1. Ansible host connects with remote Ubuntu server then it will use ssh protocol,
2. If Ansible is connecting to target windows machine then it uses winrm protocol

### **Sample inventory files**

Create an inventory file with 1 target machine



#<alias of target machine> ansible\_host=<ipaddress of host> ansible\_ssh\_pass=<passoword>

Target1 ansible\_host=192.168.1.114 ansible\_ssh\_pass=osboxes.org

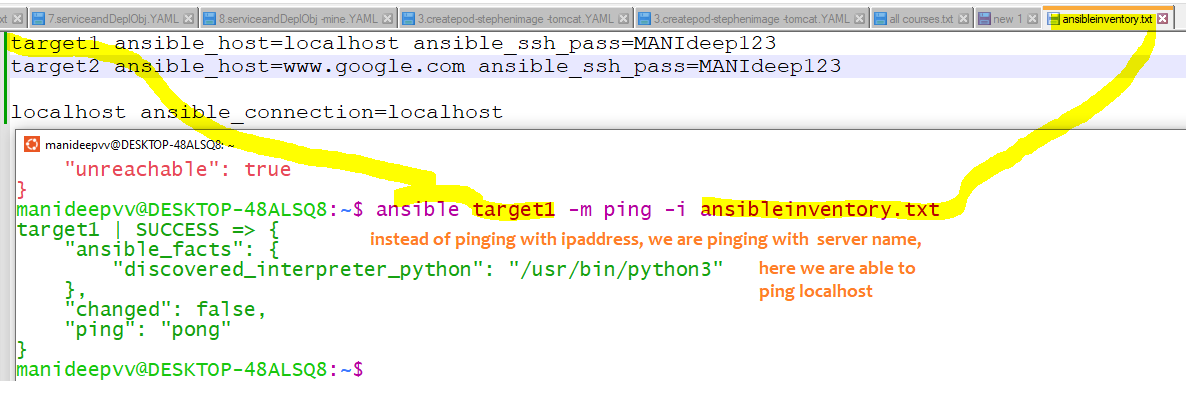
Target2 ansible\_host=192.168.1.115 ansible\_ssh\_pass=osboxes.org

To ping a particular server in the inventory file

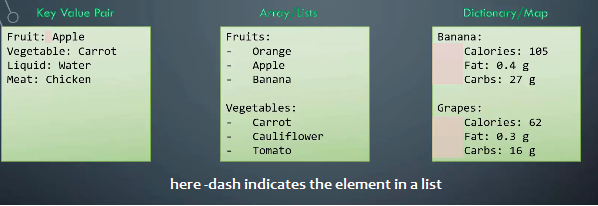
Generally there are many server names-urls present in the inventory file

ansible target1 –m ping –i inventory.txt

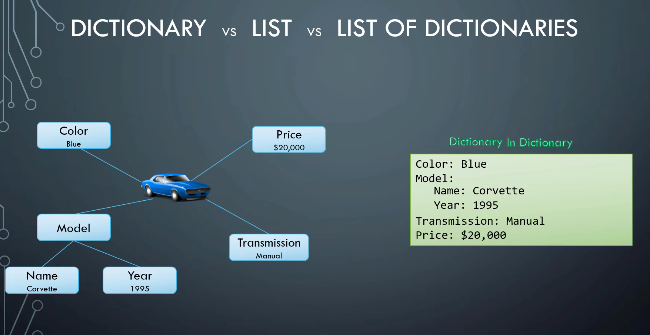
here “target1” is the alias name of the server(which we would have mentioned in the inventory.txt file) is the server alias, inventory.txt is the file where all these entries are present



# Yaml standards



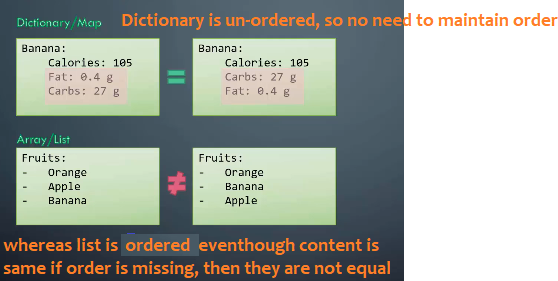
## Dictionary inside a dictionary



Actually, key-value pairs is nothing but a dictionary,

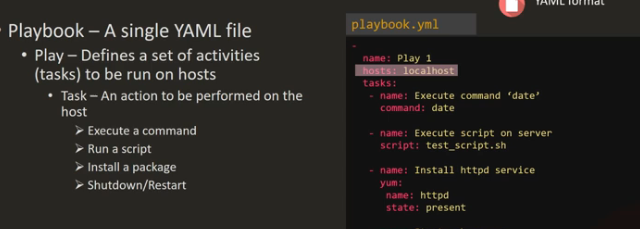
Here inside model object we have another small dictionary

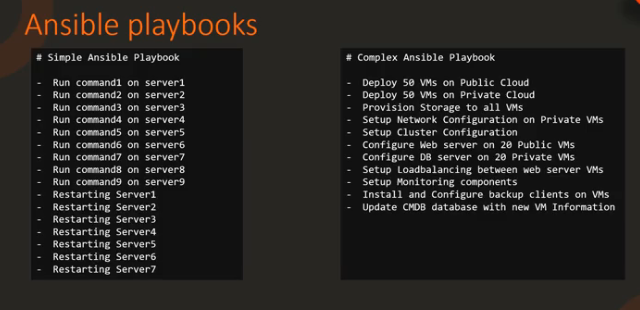
## Dictionary vs list

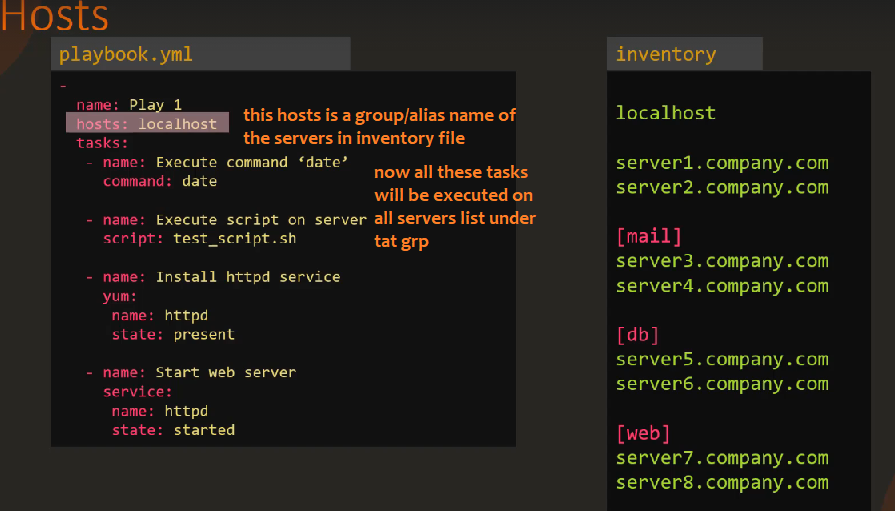


Example:- if we mention tasks as a list, in same order that tasks will be executed, because list is ordered, whereas dictionary is un-ordered

# Playbooks







Sample playbook files



attached sample playbook and sample inventory file



Issue while executing with ssh pass

Generally, the inventory files contains ssh passwords, whereas in prod or in kodekloud when u execute a playbook with an inventory

File contains a password u will get below error then execute this command (export ANSIBLE\_HOST\_KEY\_CHECKING=False)

After executing this command u will be able to successfully run the playbook file

Issue while executing the playbook

 "FAILED! Using a SSH password instead of a key in not possible because Host Jey checking is enabled..."

### **Executing a playbook**

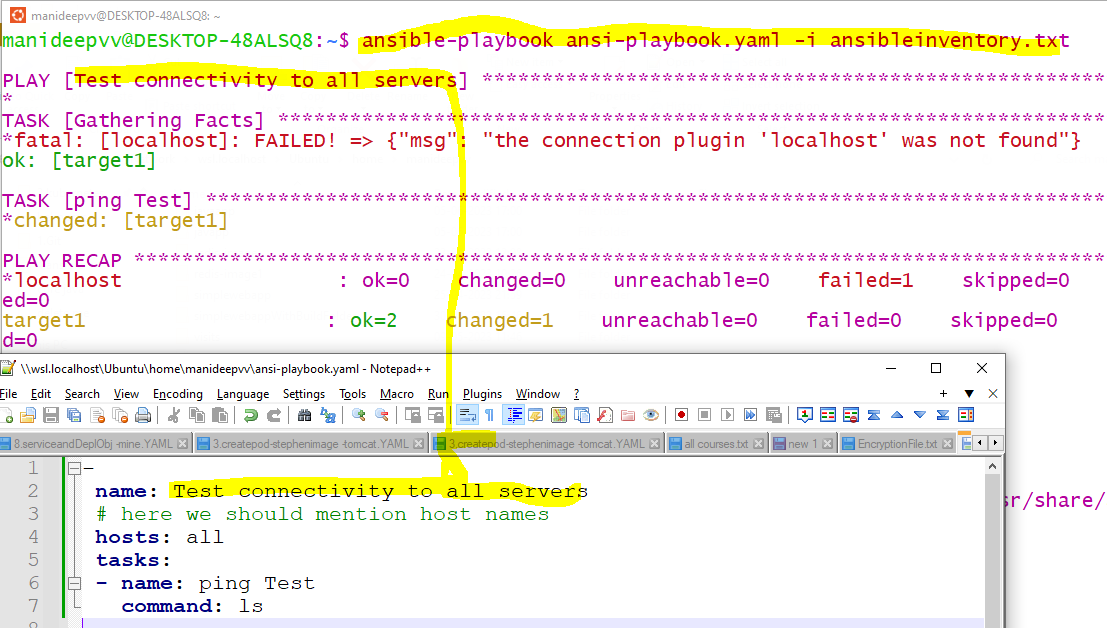
If u don’t know type “ansible-playbook --help”

Command:- “ansible-playbook <playbook file name> -i <inventory-file-name>”

**Here providing inventory file name is mandatory**,

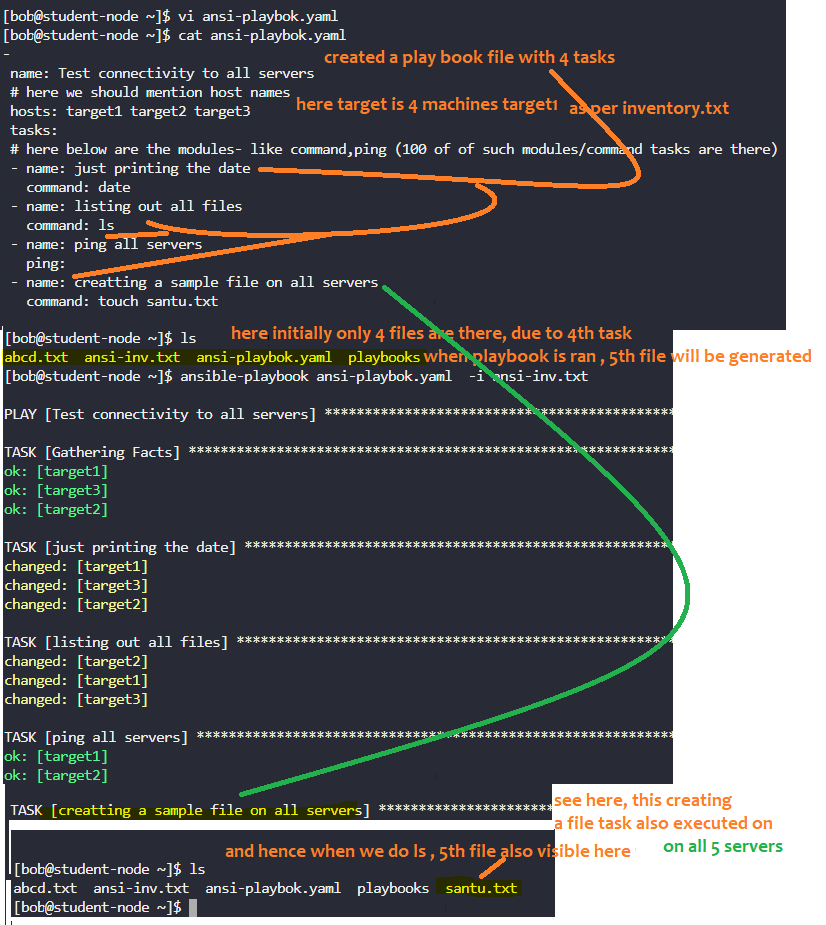
Because in ansible-playbook we will mention the hostname, but the actual host address will be present only in the inventory files

hosts: target1 target2 target3 hence giving inventory file is also mandatory



2. Exec a playbook with code

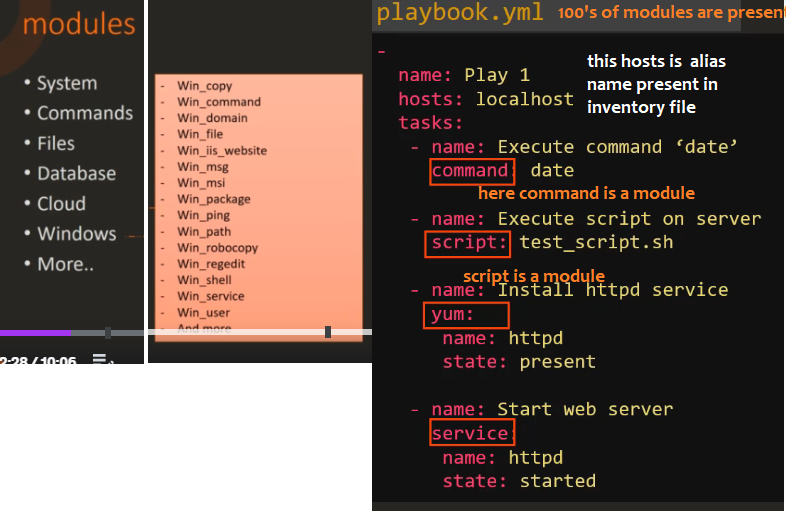




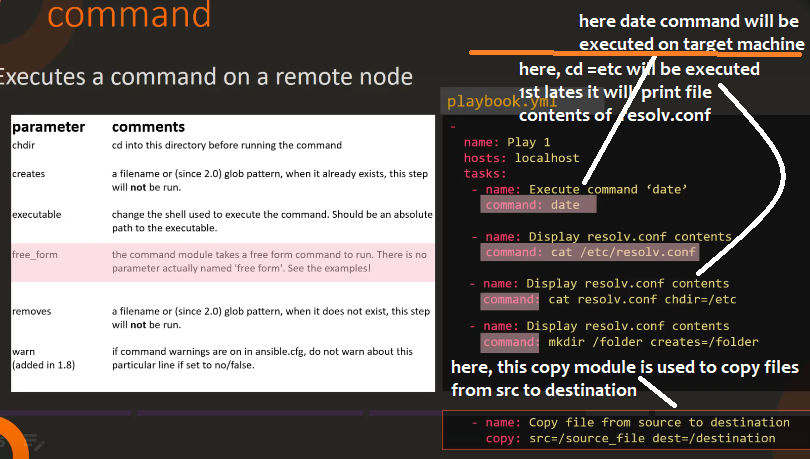
# Modules

The different actions run by those tasks are called modules, 100’s of modules are present

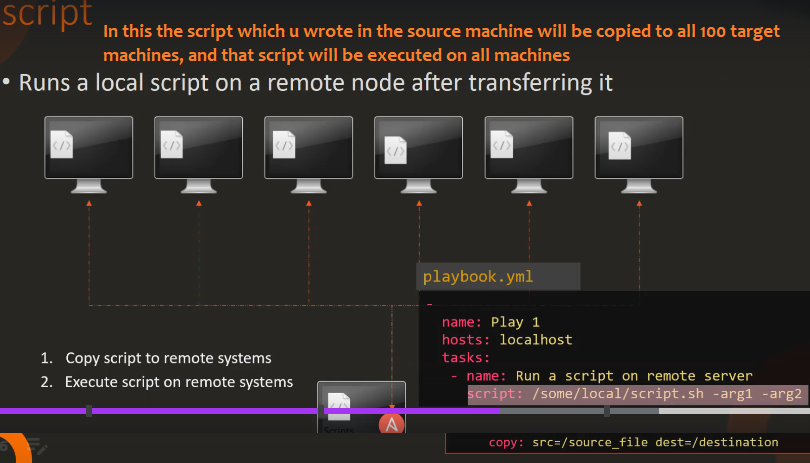
Example modules like –script,



Command module



Script module



Service module

