



# ADHOC Commands Exercise :

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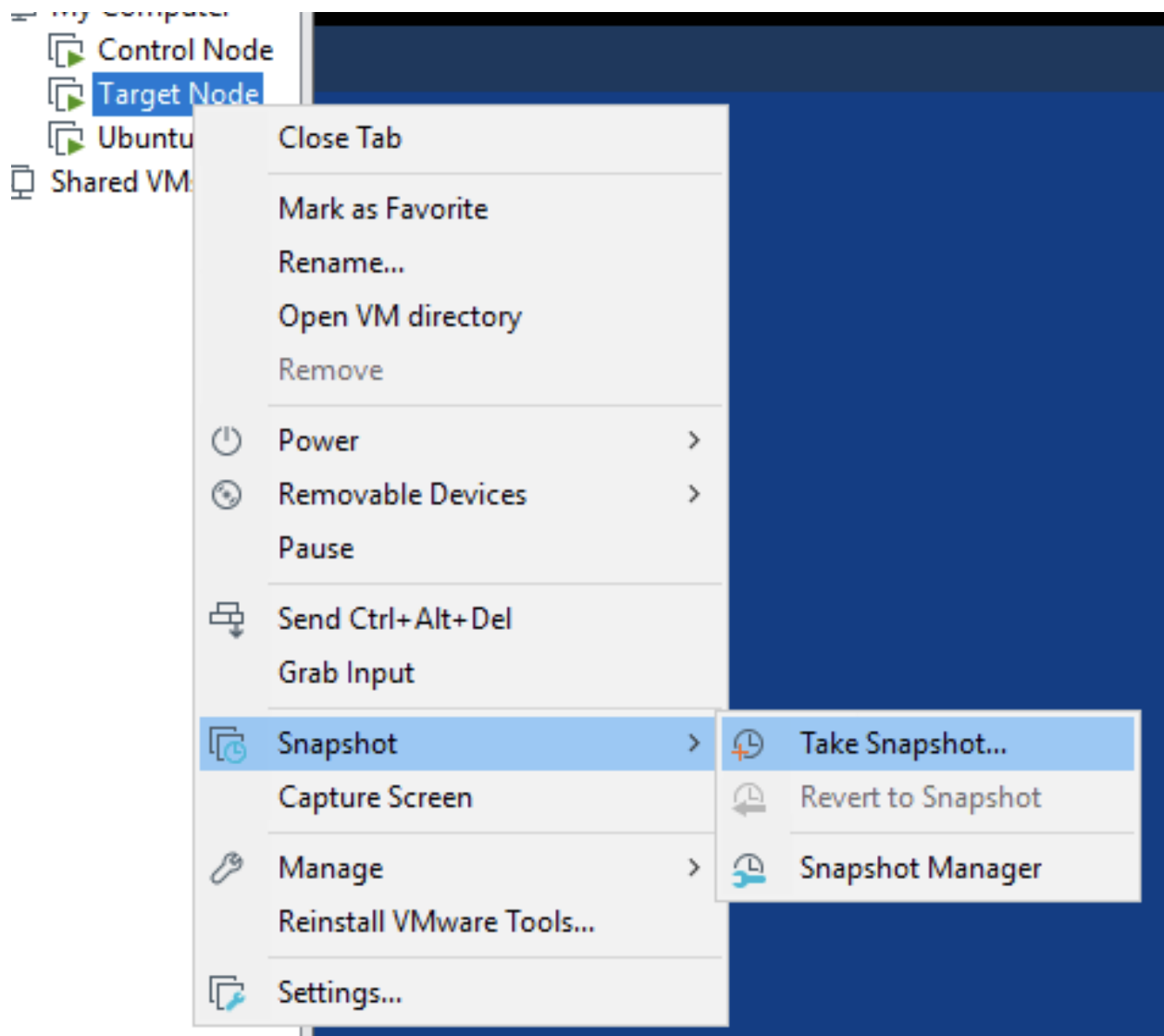
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## Snapshot your VMs

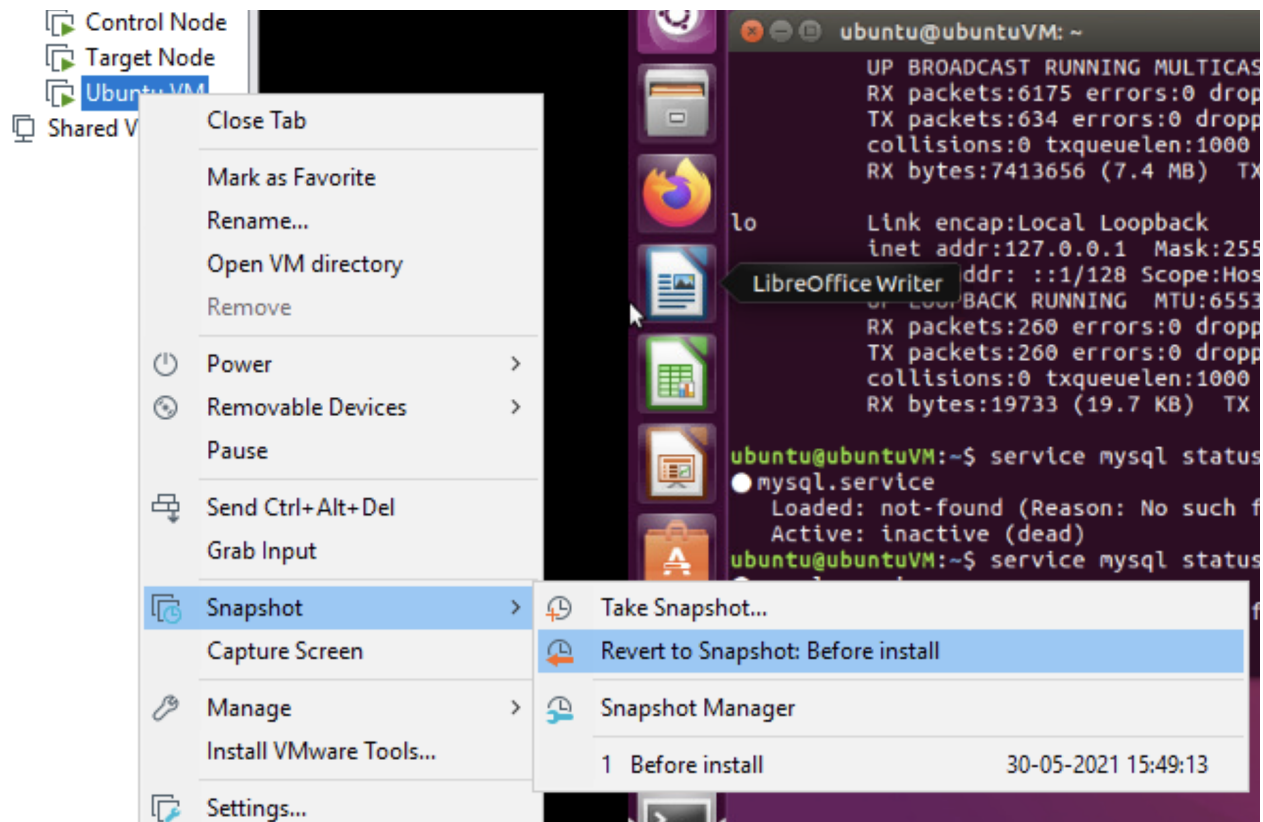
Take snapshot of Target and ubuntu VMs , before executing any install or config change on client nodes( Centos & Ubuntu nodes ) it is good practise to take snapshot.

You can Name snapshot as per your needs , I have named it here as "Before Install"



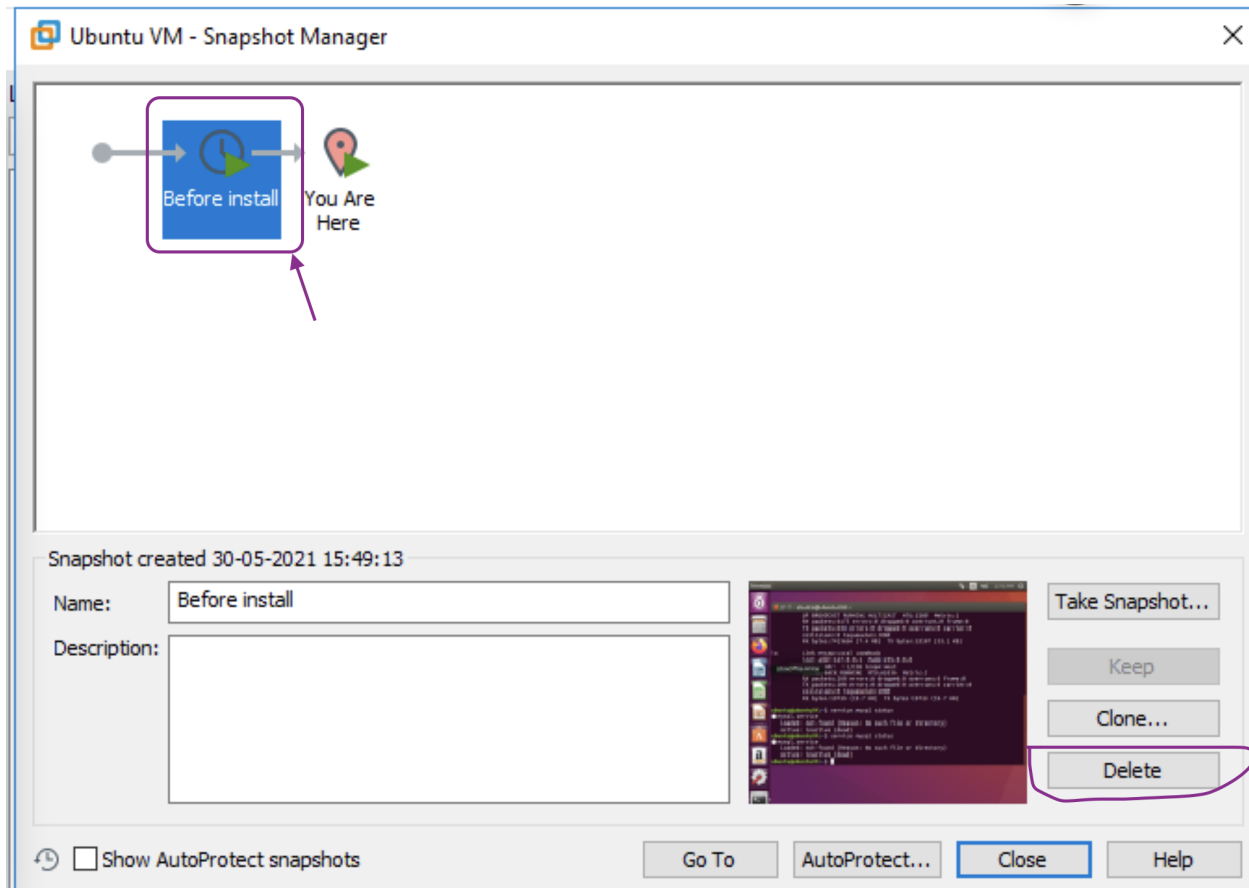
## Revert snapshot of your VMs

Once you executed all the commands, to bring it back to the original state of OS we need to revert the snapshot.



Once after you reverted the snapshot we need to delete the snapshot.

Goto Snapshot Manager option click on the Before install snapshot and click on delete option. Delete should be done only after your revert the snapshot to discard the recent changes and recover to the old original state of VM.



## SSH Key authentication setup

```
On Control Node:
$ ssh-keygen
Go with defaults this will generate id_rsa (private key) and id_rsa.pub (public key)

Copy public key to Centos Node
$ ssh-copy-id target@192.168.184.145
Copy public key to Ubuntu Node
$ ssh-copy-id ubuntu@192.168.184.143
```

## Inventory File

Create a inventory file with name "**inventory**" Use your CentOS & Ubuntu nodes IP address.

```
[linux]
centos ansible_host=192.168.184.145 ansible_user=target
```

```
ubuntu ansible_host=192.168.184.143 ansible_user=ubuntu
```

```
To view Inventory in json format  
$ ansible-inventory <inventory filename> --list
```

## Modules

### SETUP Module

To gather facts about a node, this helps in fetching dynamic facts like ( version, distribution etc.. ) and use it for checking conditions in playbooks.

```
**On Control node**  
To run it on group linux ( includes both Centos and ubuntu VMs )  
ansible linux -i inventory -m setup  
  
To run it on only centos  
ansible centos -i inventory -m setup
```

### FILE Module

```
Creating Directory using File module:  
ansible centos -i inventory -m file -a "path=/tmp/dir state=directory mode='0755'"  
  
Delete Complete Directory  
ansible centos -i inventory -m file -a "dest =/tmp/dir state = absent"
```

### COMMAND Module

```
To reboot all servers in inventory with parallel forks of 10  
  
ansible all -i inventory -a "/sbin/reboot" -f 10
```

### SHELL Module

Ansible Shell module is designed to work only with Linux based Machines and not Windows. For windows you should use win\_shell module

Executing Shell command usermode

```
ansible centos -i inventory -m shell -a "usermod -ag admin test_user"
```

Combining two commands in single ones using shell module

```
ansible centos -i inventory -m shell -a "chmod 666 filename && chown user:group filename"
```

Executing command that involves pipe, redirection like shell functions

```
ansible centos -i inventory -m shell -a "df -h | awk '{print $6 " " : " $4}' > /tmp/fsinfo.txt"
```

Execute a shell script

```
ansible centos -i inventory -m shell -a "script.sh >> output.txt"
```

*Now try to run the command that involves pipe or redirection using command module and register the result.*

## YUM/APT Package Module

Install using yum or apt based on OS flavour

Install httpd service

```
ansible centos -i inventory -m yum -a "name=httpd state=present"
```

Remove httpd service

```
ansible centos -i inventory -m yum -a "name=httpd state=absent"
```

## USER Module

Manage user accounts using this module

Create a user 'admin' and add to 'wheel' group

```
ansible centos -i inventory -m user -a "name=admin password=admin group=wheel"
```

Remove a user 'admin'

```
ansible centos -i inventory -m user -a "name=admin state=absent remove=yes"
```

## SERVICE Module

Manage services using this module

Starting a service httpd

```
ansible centos -i inventory -m service -a "name=httpd state=started"
```

Stopping a service httpd

```
ansible centos -i inventory -m service -a "name=httpd state=stopped"
```

Restart service httpd

```
ansible centos -i inventory -m service -a "name=httpd state=restarted"
```