



ANSIBLE

AD-HOC COMMANDS

❖ ANSIBLE AD HOC COMMANDS:

- ad hoc command uses the `/usr/bin/ansible command-line tool` to automate a single task on one or more managed nodes. These are quick and easy, but they are not reusable.
- ad hoc commands are great for tasks you **repeat rarely**.
E.g.: To power off all the machines, you could execute a quick one-liner in Ansible without a playbook.
- It is used to **reboot servers, copy files, manage packages and users**, and much more.

```
$ansible [pattern] -m [module] -a "[module options]"
```

Here:

-m: Module

-a : Module Option

➤ ANSIBLE MODULE:

- A module is a reusable, standalone script that Ansible runs on your behalf, either locally or remotely.
- Modules interact with your local machine, an API, or a remote system to perform specific tasks like changing a database password or spinning up a cloud instance.

```
$ansible --list-hosts webservers : List webservers group
```

To list all Modules:

```
$ansible-doc -l
```

```
$ansible-doc yum [Details of yum module]
```

```
$ansible -m ping webservers / $ansible -m ping all [ Testing Environment]
```

❖ USE CASES FOR AD HOC TASKS:

REBOOT SERVERS:

- The default module for the ansible command-line utility is the **ansible.builtin.command** module. You can use an ad hoc task to call the command module and reboot all web servers at a time.

```
$ansible webservers -a "/sbin/reboot"
```

```
$ansible webservers -a "/sbin/reboot" -f 10 [By default Ansible uses only 5 simultaneous processes. To reboot the webservers with 10 parallel forks]
```

```
$ansible webservers -a "/sbin/reboot" -f 10 -u username --become --ask become-pass
```

(or)

```
-K [Rebooting probably requires privilege escalation]
```

MANAGING FILES:

- An ad hoc task can harness the power of Ansible and SCP to transfer many files to multiple machines in parallel.

To transfer a file directly to all servers in the [webservers] group:

```
$ansible webservers -m ansible.builtin.file -a "dest=/tmp/java mode=600 state=touch"
```

```
$ansible webservers -m ansible.builtin.copy -a "src=/opt/script.sh dest=/tmp/"
```

```
$ ansible webservers -m ansible.builtin.file -a "dest=/tmp/ mode=600 owner=raju group=developers"
```

```
$ansible webservers -m ansible.builtin.file -a "dest=/world/asia/india/ap/vskp mode=755 owner=raju group=developers state=directory"
```

```
$ansible webservers -m ansible.builtin.file -a "dest=/world/asia/india/ap/vskp state=absent" [Delete a directory]
```

```
$ansible webservers -a "free -m" [To check Ram size]
```

```
$ansible webservers -a "df -h"
```

SHELL MODULE:

```
$ansible webservers -m shell -a "cat /etc/passwd|grep -i raju" -b -K
```

```
$ansible webservers -m shell -a "cat /proc/meminfo|head -2"
```

MANAGING PACKAGES:

- Task to install, update, or remove packages on managed nodes using a package management module such as yum. Package management modules support common functions to install, remove, and generally manage packages.

```
$ansible webservers -m ansible.builtin.yum -a "name=httpd state=present"
```

```
ansible webservers -m ansible.builtin.yum -a "name=httpd state=present" --  
limit "*.4" [any node that ends with a .4 IP address.]
```

```
$ansible webservers -m ansible.builtin.yum -a "name=httpd-2.4  
state=present" --limit "webservers:!172.6.7.80"
```

```
$ansible webservers -m ansible.builtin.yum -a "name=httpd state=absent"
```

MANAGING SERVICES:

- Ensure a service is started on all webservers:

```
$ansible webservers -m ansible.builtin.service -a "name=httpd state=started"
```

```
$ansible webservers -m ansible.builtin.service -a "name=httpd  
state=restarted"
```

```
$ansible webservers -m ansible.builtin.service -a "name=httpd  
state=stopped"
```

MANAGING USERS AND GROUPS:

- You can create, manage, and remove user accounts on your managed nodes with ad hoc tasks:

```
$ansible all -m ansible.builtin.user -a "name=jai password=<crypted password here>"
```

```
$ansible all -m ansible.builtin.user -a "name=foo state=absent"
```

GATHERING FACTS:

- Facts represent discovered variables about a system. You can use facts to implement conditional execution of tasks but also just to get ad hoc information about your systems.
- To see all facts:

```
$ansible all -m ansible.builtin.setup
```

CHECK MODE:

- In check mode, Ansible does not make any changes to remote systems. Ansible prints the commands only. It does not run the commands.
- Enabling check mode (**-C or --check**) in the bellow command means Ansible does not actually create or update the **/home/ram/script.sh** file on any remote systems.

```
$ansible all -m copy -a "content=Hello dest=/home/ram/script.sh" -C
```