An **Ansible ad-hoc command** is a **one-time command** used to perform a quick task on remote systems without writing a full playbook.

**🧾 What is an Ad-Hoc Command?**

* It’s a **simple, direct command** you run from the terminal.
* Used for **quick tasks** like restarting a service, copying a file, checking uptime, or installing a package.
* Ideal for **testing**, **troubleshooting**, or **small-scale operations**.

**🛠️ Example Use Cases**

| **Task** | **Ad-Hoc Command** |
| --- | --- |
| Check if hosts are reachable | ansible all -m ping |
| Reboot all servers | ansible all -m reboot --become |
| Install nginx | ansible all -m apt -a "name=nginx state=present" --become |
| Copy a file | ansible all -m copy -a "src=/tmp/file dest=/tmp/file" |
| Run a shell command | ansible all -m shell -a "uptime" |

**🔄 Ad-Hoc vs Playbook**

| **Feature** | **Ad-Hoc Command** | **Playbook** |
| --- | --- | --- |
| Purpose | One-time tasks | Reusable automation |
| Format | CLI command | YAML file |
| Complexity | Simple | Complex workflows |
| Reusability | No | Yes |

Here’s a more **complete list of Ansible ad-hoc command options**, including some **less commonly used but powerful flags** — especially those related to **authentication, privilege escalation, and connection control**.

**🔐 Authentication & Privilege Options**

| **Option** | **Description** | **Example** |
| --- | --- | --- |
| -k | Ask for **SSH password** | ansible all -m ping -k |
| --ask-pass | Same as -k (alternative form) | ansible all -m ping --ask-pass |
| -K | Ask for **sudo password** | ansible all -m shell -a "apt update" --become -K |
| --ask-become-pass | Same as -K | ansible all -m shell -a "apt update" --become --ask-become-pass |
| --ask-vault-pass | Prompt for **Ansible Vault password** | ansible-playbook secrets.yml --ask-vault-pass |

**⚙️ Execution & Connection Control**

| **Option** | **Description** | **Example** |
| --- | --- | --- |
| -f or --forks | Number of parallel processes (default: 5) | ansible all -m ping -f 10 |
| -T | Timeout for SSH connection (in seconds) | ansible all -m ping -T 30 |
| --timeout | Same as -T | ansible all -m ping --timeout 30 |
| --private-key | Use a specific SSH private key | ansible all -m ping --private-key ~/.ssh/id\_rsa |
| --ssh-common-args | Extra SSH options | ansible all -m ping --ssh-common-args='-o StrictHostKeyChecking=no' |

**📦 Inventory & Targeting**

| **Option** | **Description** | **Example** |
| --- | --- | --- |
| -i | Specify inventory file | ansible all -i hosts.ini -m ping |
| --limit | Limit to specific host/group | ansible all -m ping --limit web1 |
| --list-hosts | Show which hosts would be targeted | ansible all --list-hosts |

**🧪 Debugging & Testing**

| **Option** | **Description** | **Example** |
| --- | --- | --- |
| --check | Dry run (check mode) | ansible all -m apt -a "name=nginx state=latest" --check --become |
| --diff | Show file differences when changed | ansible all -m copy -a "src=hosts dest=/etc/hosts" --diff --become |
| -v, -vv, -vvv, -vvvv | Increase verbosity | ansible all -m ping -vvv |

**🧰 Miscellaneous**

| **Option** | **Description** | **Example** |
| --- | --- | --- |
| --tags | Run only tasks with specific tags (playbooks only) | ansible-playbook site.yml --tags "install" |
| --skip-tags | Skip tasks with specific tags | ansible-playbook site.yml --skip-tags "debug" |
| --start-at-task | Start playbook at a specific task name | ansible-playbook site.yml --start-at-task="Install Nginx" |