ANSIBLE FACTS

ansible all -m setup / all
ansible all -m setup -> facts.yml

OLD APPROACH:

ansible_distribution
ansible_default_ipv4.address

NEW APPROACH:

ansible_facts['distribution']
ansible_facts['default_ipv4']['address']

```
---
- name: Using Ansible Facts
  hosts: all
  tasks:
    - name: Print Facts
      debug:
        msg: Hello, this Machine is {{ ansible_distribution }} and the free memory is {{ ansible_mem
total_mb }}, the IP of this machine is {{ ansible_default_ipv4.address }} and the hostname is {{ ans
ible_facts['hostname'] }}
```

ANSIBLE LOOPS

Single Loop

```
---

- hosts: all
  tasks:
    - name: Copy files
      copy:
        src: "{{ item }}"
        dest: /
      loop:
        - a.txt
        - b.txt
        - c.txt
        - d.txt
```

Multiple Looping

```
---

- hosts: all
  tasks:
    - name: Copy files
      copy:
        src: "{{ item.src }}"
        dest: "{{ item.dest }}"
      loop:
        - src: a.txt
          dest: /etc
        - src: b.txt
          dest: /home
        - src: c.txt
          dest: /home
        - src: d.txt
          dest: /root
```

Small Tweak

Go to the home directory of the user

```
[control@control ~]$ vim .vimrc
```

```
set ai
set expandtab
set tabstop=2
set cursorcolumn
```

ANSIBLE CONDITIONALS

Usable Conditionals Operators:

1. ==
2. >
3. <
4. >=
5. <=
6. !=
7. **(fact/var) is defined**
8. **(fact/var) is not defined**
9. **Or**
10. **And**

```
---

name: To install Apache Webserver
hosts: all
tasks:
  - name: Install Apache on RHEL
    dnf:
      name: httpd
      state: latest
    when: ansible_distribution == "RedHat"

  - name: Install Apache on Ubuntu
    apt:
      name: apache2
      state: latest
    when: ansible_distribution == "Ubuntu"
```

```
---

name: To install Apache Webserver
hosts: all
tasks:
  - name: Install Apache on RHEL
    dnf:
      name: httpd
      state: latest
    when: ansible_distribution == "RedHat" and ansible_memtotal_mb > 2000

  - name: Install Apache on Ubuntu
    apt:
      name: apache2
      state: latest
    when: ansible_distribution == "Ubuntu"
```

```
---

- name: To install Apache Webserver
  hosts: all
  vars:
    - package: httpd
  tasks:
    - name: Install Apache on RHEL
      dnf:
        name: "{{ package }}"
        state: latest
      when: package is defined

    - name: Install Apache on Ubuntu
      apt:
        name: apache2
        state: latest
      when: ansible_distribution == "Ubuntu"
```

ANSIBLE HANDLERS

Creating a task which dependent on another task

```
---

name: To Setup Apache Webserver
hosts: all
tasks:
  - name: Install the package
    dnf:
      name: httpd
      state: present

  - name: Copy the config file
    copy:
      src: 1.conf
      dest: /etc/httpd/conf.d/1.conf
    notify: restart_service

  - name: Copy the content
    copy:
      src: website_content
      dest: /var/www/webserver/index.html

handlers:
  - name: restart_service
    service:
      name: httpd
      state: restarted
```

1.conf

```
<virtualhost *:80>
documentroot /var/www/html

</virtualhost>
```

JINJA TEMPLATES

{% %) : Control Statements (for, if etc.)
{# #) : Comments
{{ }) : Defining Variables and Facts

```
IP Address: {{ ansible_default_ipv4.address }}
Total Memory: {{ ansible_memtotal_mb }}
Distribution: {{ ansible_distribution }}
Hostname: {{ ansible_hostname }}
Package: {{ package }}

{#THIS IS A COMMENTED LINE#}

{% for number in range (0,11) %}
192.168.0.{{ number }}
{% endfor %}

{{ ansible_cmdline | to_nice_yaml }}
```

```
---

name: Generate Hardware Report
hosts: all
tasks:
  - name: Copy the report
    template:
      src: hardware_report
      dest: /
```