**MANAGING ANSIBLE FACTS**

Ansible facts are varaibles that are automatically discovered by Ansible on a managed host. Facts contain host-specfic information that can be used just like **regular varaibles in plays**, conditionals, loops, or any other statement that depends on a value collected from a managed host.

Some of the facts gathered for a managed host might include:

* The host name
* Kernel version
* Network interface
* IP address
* OS Version
* Various Env Variable
* Number of CPU
* Available or free memory
* Available Disk Space

Facts are a convenient way to retrieve the state of a managed host and to determine what action to take based on that state. For example:

* A server can be restarted by a conditional task which is run based on a fact containing the managed host’s current kernel version.
* MySQL configuration file can be customized depending on the available memory reported by a fact.
* IPv4 address used in the configuration file can be set based on the vaule of a fact**.**

Ad-hoc command to gather the facts

**#ansible all –m setup ……….gather facts from all host**



**Here all the gathered facts can be used as a regular variable inside the play without declaring this as avaraible.**

"ansible\_architecture": "x86\_64",

"ansible\_bios\_date": "04/01/2014",

"ansible\_bios\_version": "1.11.1-3.module+el8+2529+a9686a4d",

"ansible\_cmdline": {

"BOOT\_IMAGE": "(hd0,msdos1)/boot/vmlinuz-4.18.0-80.1.2.el8\_0.x86\_64",

"console": "ttyS0,115200n8",

"crashkernel": "auto",

"no\_timer\_check": true,

"ro": true,

"root": "UUID=884f47c9-a69d-4c5b-915d-6b7c9c74c923"

**How to call this as variable?**

**To get** "(hd0,msdos1)/boot/vmlinuz-4.18.0-80.1.2.el8\_0.x86\_64” we need to call BOOT\_IMAGE by below methods.

* **“{{ ansible\_cmdline. BOOT\_IMAGE }}”**
* **“{{ ansible\_facts.cmdline.BOOT\_IMAGE }}”**
* **ansible\_facts['ansible\_cmdline']['console']**

**Example:**

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- name: facts as variable

become: true

hosts: localhost

tasks:

- name: enter sometihn

user:

name: "{{ ansible\_facts.fqdn }}"

state: present

**Debug Module**

This module prints statements during execution and can be useful for debugging variables or expressions without necessarily halting the playbook. Useful for debugging together with the 'when:' directive.

**Options**

- **msg**

The customized message that is printed. If omitted, prints a generic message.

[Default: Hello world!]

type: str

- **var**

A variable name to debug.

Mutually exclusive with the `msg' option.

Be aware that this option already runs in Jinja2 context and has an implicit `{{ }}' wrapping, so you should not

be using Jinja2 delimiters unless you are looking for double interpolation.

[Default: (null)]

type: str

**Example**:

- **debug**:

**msg**: System {{ inventory\_hostname }} has gateway {{ ansible\_default\_ipv4.gateway }}

when: ansible\_default\_ipv4.gateway is defined

**inventory\_hostname** ::::: special variable …The inventory name for the ‘current’ host being iterated over in the play.

**ansible\_default\_ipv4.gateway …..fact varaible**

Every play runs the setup module automatically before the first task in order to gather facts. This is reported as the gathering facts task. By default it runs.

One way to see what facts are gathered hosts is to run a short playbook that gathers facts and uses the debug module module to print the vaule of the ansible\_facts variable.

Play to print the fact fact variable using debug module:



#ansible-playbook facts.yml >> /t

mp/file.txt ……it gathers all facts and store it in file.txt

**Example of Ansible facts**

* Short host name : **ansible\_facts.hostname**
* Fully qualified domain name: **ansible\_facts.fqdn**
* Main IPV4 address based on routing: **ansible\_facts.default\_ipv4.address**
* List of the namesof all network interface: **ansible\_facts.interfaces**
* Size os the /dev/vda1 disk partition: **ansible\_facts.devices.vda.partitions.vda.size**
* Version of current running kernel: **ansible\_facts.kernel**

**Turning Off Fact Gathering**

Sometimes you do not want to gather facts for your play. Because it might be that u are not using any facts and want to speed up the play or reduce load caused by the play on the managed hosts.

To disable fact gathering set gather\_facts=no

Playbook:

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- name: This play gathers no facts automatically

hosts: localhost

gather\_facts: no

Even if gather\_facts:no is set for a play you can manually gather facts at any time by running a task that uses the setup module

tasks:

* Name: Manually gather facts

Setup:

**Creating Custom Facts**