



ANSIBLE



Introduction to **Ansible**

Introduction to Ansible

Expected Learning



ANSIBLE

➔ **Ansible Introduction**

➔ **Ansible Playbook**

➔ **YAML**

➔ **Ansible Installation and Configuration**

➔ **Ansible Inventory**



What Is Ansible?

Infrastructure As Code



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Agent Less

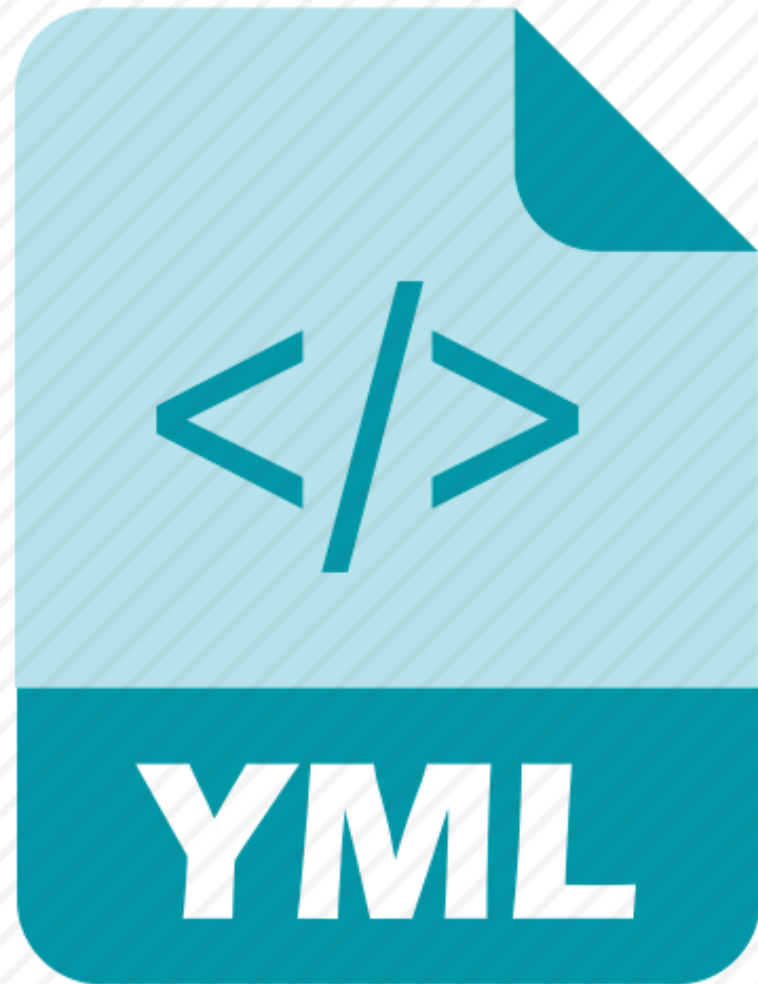
Written In Python

Uses Playbooks

Python Lists

```
>>yaml.load("""  
-Mango  
-Orange  
-Grapes  
-Water melon  
""")
```

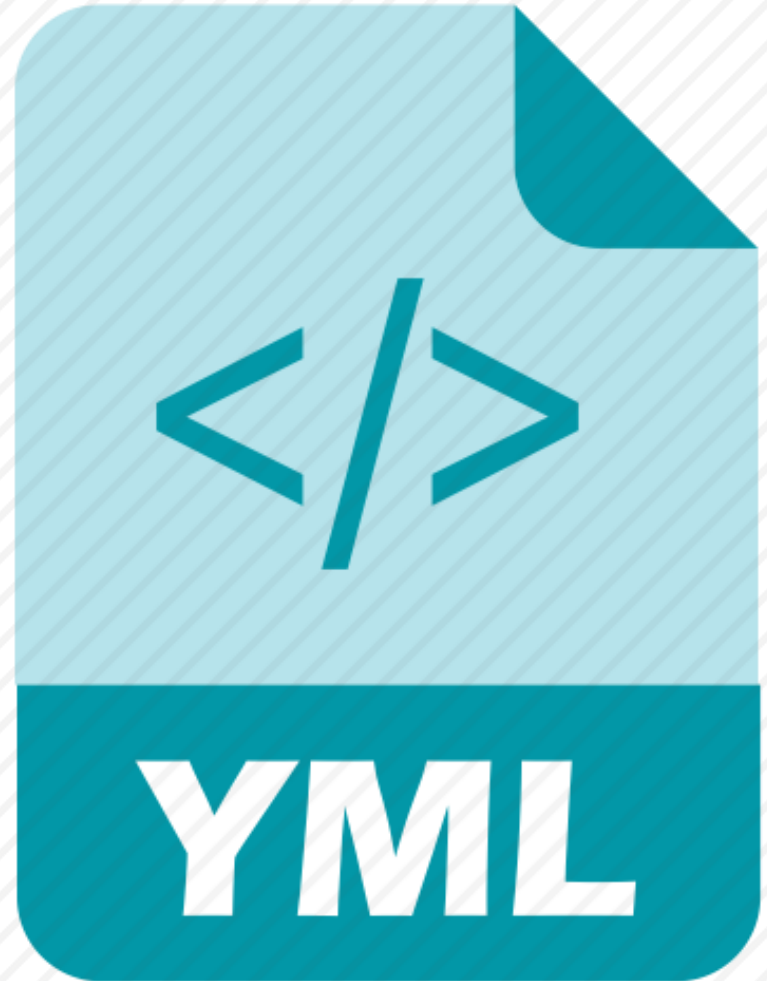
Output:
['Mango', 'Orange', 'Grapes', 'Water
melon']



Python Dictionaries

```
.>>yaml.load("""  
Mango: Yellow  
Orange: Orange  
Grapes: Purple  
Water melon: Green  
""")
```

Output:
{ 'Orange': 'Orange', 'Mango':
'Yellow', 'Grapes': 'Purple', 'Water
melon': 'Green' }

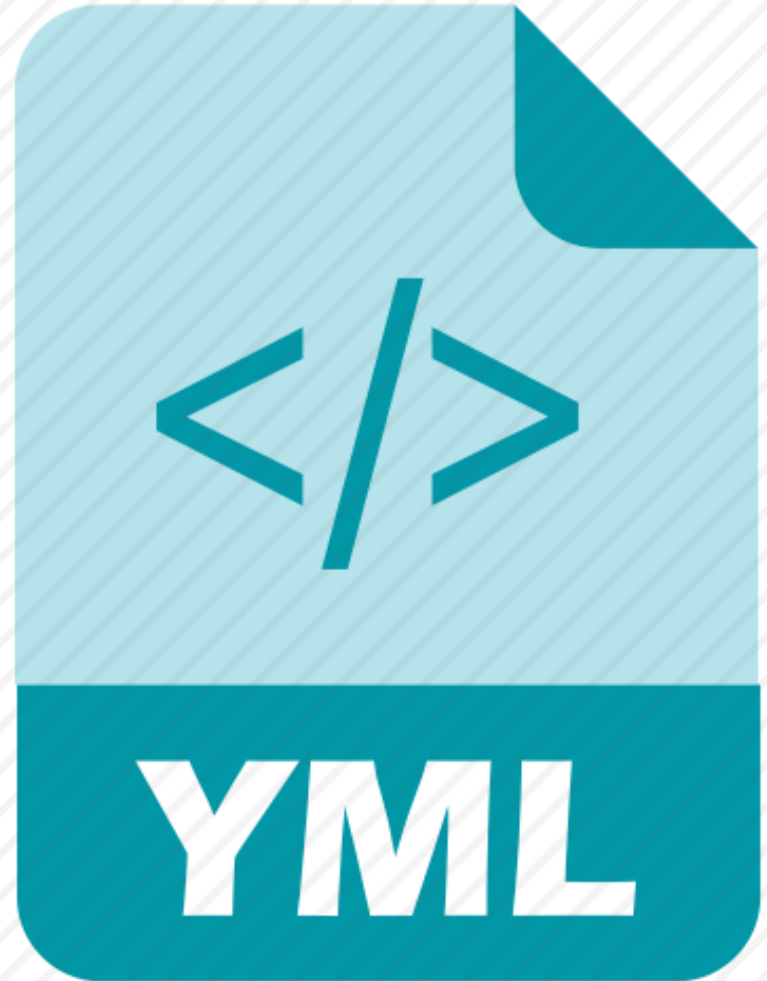


Complex Data Structures

```
>>yaml.load("""  
Foods:  
-eggs  
-pizza  
Drinks:  
- water  
- vodka  
""")
```

Output:

```
{ 'foods': ['eggs', 'pizza'], 'drinks':  
['water', 'vodka']}
```



```
yaml.load("""  
---  
-name: Install WordPress, MySQL, Nginx and PHP-FPM  
hosts: wordpress-server  
remote_user: root  
# remote_user: user  
# become: yes  
# become_method: sudo  
  
roles:  
-common  
-mysql  
-nginx  
-php-fpm  
-wordpress  
""")
```



Output:

```
{'remote_user': 'root', 'hosts': 'wordpress-server', 'name': 'Install WordPress, MySQL, Nginx  
and PHP-FPM', 'roles': ['common', 'mysql', 'nginx', 'php-fpm', 'wordpress']}
```

Validate YAML

- <http://www.yamllint.com/>

YAML Lint

Paste in your YAML and click "Go" - we'll tell you if it's valid or not, and give you a nice clean UTF-8 version of it. Optimized for Ruby.

```
1 ---
2 -
3   hosts: wordpress-server
4   name: "Install WordPress, MySQL, Nginx and PHP-FPM"
5   remote_user: root
6   - test: something
7   roles:
8     - common
9     - mysql
10    - nginx
11    - php-fpm
12    - wordpress
13
14
15
16
17
18
19
20
21
```

Go

(<unknown>): did not find expected key while parsing a block mapping at line 3 column 3

YAML Lint

Paste in your YAML and click "Go" - we'll tell you if it's valid or not, and give you a nice clean UTF-8 version of it. Optimized for Ruby.

```
1 ---
2 -
3   hosts: wordpress-server
4   name: "Install WordPress, MySQL, Nginx and PHP-FPM"
5   remote_user: root
6   roles:
7     - common
8     - mysql
9     - nginx
10    - php-fpm
11    - wordpress
12
13
14
15
16
17
18
19
20
21
```

Go

Valid YAML!



- ↪ Three VMs (Linux)
- ↪ One Ansible host
- ↪ Two test hosts
- ↪ Minimal system requirements



<http://go.tetranoodle.com/ansible>



DEMO

Ansible Environment Set Up

```
$ sudo apt-get install software-properties-common
```

```
$ sudo apt-add-repository ppa:ansible/ansible
```

```
$ sudo apt-get update
```

```
$ sudo apt-get install ansible
```





DEMO

Ansible Installation

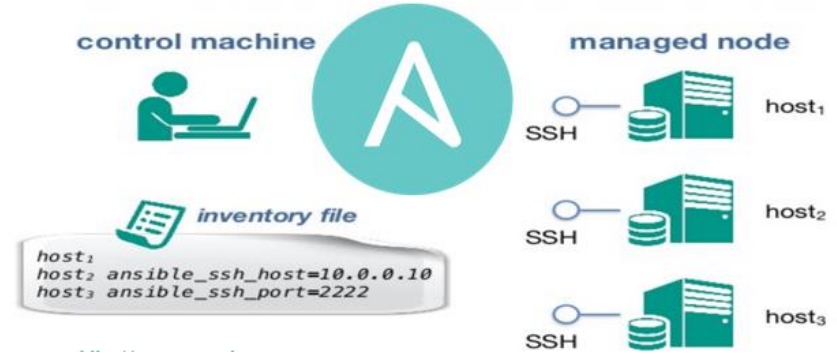


- ↪ `ANSIBLE_CONFIG` (an environment variable)
- ↪ `ansible.cfg` (in the current directory)
- ↪ `.ansible.cfg` (in the home directory)
- ↪ `/etc/ansible/ansible.cfg`



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Ansible Configuration File



- ➔ /etc/ansible/hosts
 - ➔ INI format
- ➔ Host Variables
- ➔ Group Variables
- ➔ Group of Group





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Ansible Inventory

