

22

Week 21
May
Monday (142-223)

Week	18	19	20	21	22
Monday	1	8	15	22	29
Tuesday	2	9	16	23	30
Wednesday	3	10	17	24	31
Thursday	4	11	18	25	
Friday	5	12	19	26	
Saturday	6	13	20	27	
Sunday	7	14	21	28	

*② PlayBook:-

8.30

9.00 Adhoc commands are only capable
9.30 of working on only one module and
10.00 one set of argument.

10.30 When we want to perform complex
11.00 configuration management activities,
11.30 adhoc commands will be difficult to
12.00 manage.

12.30 In such scenarios, we use playbooks.
13.00

13.30 Playbook is the combination of Plays.
14.00 Each play is designed to do some
14.30 activity on the managed nodes.
15.00

15.30 These plays are created to work
16.00 on single host or a group of hosts or
16.30 all the hosts.

17.00

17.30 The main advantage of playbooks is
18.00 reusability.

Evening

* It is created by using YAML File.

Meetings	✓	Things To Do	✓	Important Calls	✓
	<input type="checkbox"/>		<input type="checkbox"/>		<input type="checkbox"/>
	<input type="checkbox"/>		<input type="checkbox"/>		<input type="checkbox"/>
	<input type="checkbox"/>		<input type="checkbox"/>		<input type="checkbox"/>
	<input type="checkbox"/>		<input type="checkbox"/>		<input type="checkbox"/>

Week	June 11
Monday	5 12 19 26
Tuesday	6 13 20 27
Wednesday	7 14 21 28
Thursday	1 8 15 22 29
Friday	2 9 16 23 30
Saturday	3 10 17 24
Sunday	4 11 18 25

2017
May
(143-222) Tuesday 23

On the Controller Node we are making one folder called playbook and in that folder we do operations.

↳ mkdir playbook
↳ cd playbook

① ~~Ex~~ I want to Install git & clone a repo.
vi playbook1.yml

- name: Install git & clone a repo.
hosts: all
tasks:
- name: Install git
apt:
name: git
state: present
update_cache: yes
- name: cloning a repo
git:
repo: https://github.com/Malik097/
malik.git
dest: /home/ubuntu/newrepo
...

- * ↳ To check syntax
ansible-playbook playbook1.yml --syntax-check
- * ↳ To run the playbook
ansible-playbook playbook1.yml -b

24

Week 21
May
Wednesday (144-221)

Week	18	19	20	21	22
Monday	1	8	15	22	29
Tuesday	2	9	16	23	30
Wednesday	3	10	17	24	31
Thursday	4	11	18	25	
Friday	5	12	19	26	
Saturday	6	13	20	27	
Sunday	7	14	21	28	

- ② Ex. ②:- vi playbook2.yml
- ③ Ex. ③:- vi playbook3.yml
- ④ Ex. ④:- vi playbook4.yml.

9.30

* Types of Variables:-

10.30

These are 3 types of Variables.

11.30

- ① Global scope Variable - Highest priority
- ② Host scope Variable
- ③ Play scope Variable - Least priority

13.30

① Global Scope Variable:-

Ex:-

15.30

- name: Install Software packages

16.00

hosts: all

16.30

tasks:

17.00

- name: Install tree

17.30

apt:

18.00

name: tree

Eyening

state: present

update_cache: yes

Info

...
If we run the above playbook 10 times
then the tree package will install 10 times.
Then playbook is not reusable.

	June '17						
Week	22	23	24	25	26		
Monday	5	12	19	26			
Tuesday	6	13	20	27			
Wednesday	7	14	21	28			
Thursday	1	8	15	22	29		
Friday	2	9	16	23	30		
Saturday	3	10	17	24			
Sunday	4	11	18	25			

2017
May
(145-220) Thursday 25

African Freedom (Zambia), Ascension of Jesus (Botswana)

: We make some small changes to the code.

③ Edit: vi playbooks.yml

10.00 ---
10.30 - name: Install Software packages
11.00 hosts: all
11.30 tasks:
12.00 - name: Install/Uninstall/Update
12.30 apt:
13.00 name: "{{ a }}"
13.30 state: "{{ b }}"
14.00 update_cache: "{{ c }}"
14.30 ...

15.00 To run this playbook by passing values
15.30 to the variables

* ↳ ansible-playbook playbooks.yml --extra-vars
16.00 "a=git b=present c=no" -b ↓
17.00 Extra variables

18.00 The above cmd will Install git on all nodes.
Evening We can also run the same playbook with
different values.

* ↳ ansible-playbook playbooks.yml --extra-vars
"tomcat8 b=present c=yes" -b

- | Meetings | Things To Do | Important Calls |
|--------------------------|--------------------------|--------------------------|
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

26 Week 21
May Friday (146-219)

Week	18	19	20	21	22
Monday	1	8	15	22	29
Tuesday	2	9	16	23	30
Wednesday	3	10	17	24	31
Thursday	4	11	18	25	
Friday	5	12	19	26	
Saturday	6	13	20	27	
Sunday	7	14	21	28	

② Play Scope Variable:-

It is defined within the playbook and they can affect only in one single play.

⑥ Ex:- Vi Playbook6.yml

```
- name: Installing Apache2 Using PlayScope Variables
hosts: all
vars:
  - a: apache2
  - b: present
  - c: yes
tasks:
  - name: Installing apache2
    apt:
      name: "{{ a }}"
      state: "{{ b }}"
      update_cache: "{{ c }}"
    ...
```

* Ansible-playbook playbook6.yml -b

It will install the apache2 package.

* We can also run this with below cmd.

* Ansible-playbook playbook6.yml --extra-vars "a=apache2 b=present c=yes" -b

tdee

Things To Do	Important Cues
<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>

June 17						
Week	22	23	24	25	26	
Monday	5	12	19	26		
Tuesday	6	13	20	27		
Wednesday	7	14	21	28		
Thursday	1	8	15	22	29	
Friday	2	9	16	23	30	
Saturday	3	10	17	24		
Sunday	4	11	18	25		

2017
May
(147-218) Saturday 27

Start of Ramdan (UAE)

1.00 The previous cmd will install "tree"
1.30 bcoz global scope variable has the
2.00 higher privileges.
2.30

Note: Ex:- vi playbook6.yml

11.00 The above playbook works like an
11.30 template who's default behaviour is
12.00 to install "apache2". But we can
12.30 by-pass that behaviour and make
13.00 it work in some other software
13.30 by passing the variables as "extra vars".
14.00

* `ansible-playbook playbook6.yml --extra-vars
"a=git b=absent c=yes" -b`

15.30 The above cmd will uninstall "git" SUNDAY 28
from all the nodes bcoz "GSV" has
the power like root.

Meetings	✓ Things To Do	✓ Important Calls
	<input type="checkbox"/>	<input type="checkbox"/>

29 Week 22
May
Monday (149-216)

Week	18	19	20	21	22
Monday	1	8	15	22	29
Tuesday	2	9	16	23	30
Wednesday	3	10	17	24	31
Thursday	4	11	18	25	
Friday	5	12	19	26	
Saturday	6	13	20	27	
Sunday	7	14	21	28	

Spring Bank Holiday (United Kingdom), Memorial Day (United States)

③ Host Scope Variable:-

8.30

9.00 I'm adding 3 more nodes

9.30

10.00 : Now, we've 1 controller node and
10.30 6 managed nodes.

11.00

11.30 Now, establishing passwordless
12.00 connection betw controller and
12.30 node-4, node-5 & node-6.

13.00

13.30 On Node-4

14.00

14.30 ↳ Sudo passwd ubuntu

15.00

15.30 ↳ Sudo vim /etc/ssh/sshd_config
16.00 changing password authentication yes
16.30

17.00 :wq! ↳

17.30

18.00 ↳ sudo service ssh restart

Evening ↳ exit

On Controller Node

↳ ssh-copy-id ubuntu@Priv. IP of Node-4

Repeating this for Node-5 & Node-6. ✓

Things To Do	Important Calls
<input type="checkbox"/>	<input type="checkbox"/>

Week	22	23	24	25	26
Monday	5	12	19	26	
Tuesday	6	13	20	27	
Wednesday	7	14	21	28	
Thursday	1	8	15	22	29
Friday	2	9	16	23	30
Saturday	3	10	17	24	
Sunday	4	11	18	25	

2017
May
(150-215) Tuesday 30

8.00 Now, we need to add the info of
8.30 managed nodes in the inventory/hosts
9.00 file.
9.30

10.00 ↳ cd /etc/ansible

10.30 ↳ ls

11.00 ↳ sudo vi hosts

11.30 Adding the pri. IP of Node-4,5,8,6
12.00 so that the controller can connect
12.30 to managed nodes.

13.00

13.30 To See all the Nodes

14.00 ↳ ansible all -a 'free'

14.30

* Grouping of Inventory/Hosts file:-

15.30

16.00 We can do grouping using "group-name"

16.30

17.00 To do grouping

17.30

18.00 ↳ Sudo vim /etc/ansible/hosts
Evening [Webserver]

Pri. IP of Any 2 Nodes

[dbserver]

Pri. IP of Any 2 Nodes

Meetings [testserver] Things To Do

✓ Important Calls

Pri. IP of Any 2 Nodes.



L
E
Z

31 Week 22
May
Wednesday (151-214)

Week	18	19	20	21	22
Monday	1	8	15	22	29
Tuesday	2	9	16	23	30
Wednesday	3	10	17	24	31
Thursday	4	11	18	25	
Friday	5	12	19	26	
Saturday	6	13	20	27	
Sunday	7	14	21	28	

★ ↳ ansible testserver - a 'free'
It runs only on testserver m/cs.

8.30
9.00
★ ↳ ansible all - a 'free'
It will run on all m/cs.

10.00
10.30
Note:- We can perform grouping
on groups.

11.30

12.00

12.30

13.00

13.30

14.00

14.30

15.00

15.30

16.00

16.30

17.00

17.30

18.00

Evening

Meetings

✓ Things To Do

✓ Important Calls

✓

1

Week 22
June
Thursday (152-213)

Week	22	23	24	25	26
Monday	5	12	19	26	
Tuesday	6	13	20	27	
Wednesday	7	14	21	28	
Thursday	1	8	15	22	29
Friday	2	9	16	23	30
Saturday	3	10	17	24	
Sunday	4	11	18	25	

Madaraka Day (Kenya)

8.00 Host Scope Variable:- Host Scope Variable

8.30
9.00 are classified into 2 types

9.30
① Variables to work on group of hosts.

10.30
② Variables to work on single host.

11.30
① Variables to work on group of hosts:-

12.00 It is designed to work on group of hosts.

13.00 It is defined in a folder called
14.00 group-vars.

15.00
15.30 - This group-vars folder should be
16.00 present in the same folder where
16.30 all the playbooks are present.

17.00
17.30 - In this group-vars folder, we should
18.00 create a file whose name should be
Evening same as group-name in Inventory/host file.

↳ Playbook \$ ↳ mkdir group-vars

Meetings	Things To Do	✓ Important Calls	✓
		<input type="checkbox"/>	<input type="checkbox"/>
		<input type="checkbox"/>	<input type="checkbox"/>
		<input type="checkbox"/>	<input type="checkbox"/>
		<input type="checkbox"/>	<input type="checkbox"/>

Week	27	28	29	30
Monday	31	1	10	17
Tuesday	2	4	11	18
Wednesday	5	12	19	26
Thursday	6	13	20	27
Friday	7	14	21	28
Saturday	1	8	15	22
Sunday	2	9	16	23

2017
June
(153-212) Friday

2

8.00 creating a file with same name in
8.30 the group-vars folder

9.00

9.30 ↳ vi webserver

10.00

10.30 a: Zeeshan

11.00 b: Amazon123

11.30 c: /home/ubuntu

12.00 d: 5773

12.30 e: /bin/bash

13.00 :wq ↳

13.30

14.00 ↳ cd ..

⑦ Ex:- vi Playbook7.yml

15.00 ---

15.30 - name: Using HostScope Variable

16.00 hosts: webserver

16.30 tasks:

17.00 - name: User Creation

17.30 User:

18.00 name: "{{ a }}"

Evening password: "{{ b }}"

home: "{{ c }}"

uid: "{{ d }}"

shell: "{{ e }}"

Meetings ... ✓ Things To Do ✓ Important Calls ✓

* ↳ ansible-playbook playbook7.yml -b
It runs on m/c which is present in
webserver.

3

Week 22
June
Saturday (154-211)

Week	22	23	24	25	26
Monday	5	12	19	26	
Tuesday	6	13	20	27	
Wednesday	7	14	21	28	
Thursday	1	8	15	22	29
Friday	2	9	16	23	30
Saturday	3	10	17	24	
Sunday	4	11	18	25	

Martyrs' Day (Uganda), King's Birthday (Malaysia)

8.00 Let's add few more variables.

8.30

9.00 Vim webserver

9.30

10.00 a: Zeeshan

10.30 b: Amazon123

11.00 c: /home/ubuntu/Zeeshan

11.30 d: 5773

12.00 e: /bin/bash

12.30 f: maven

13.00 g: present

13.30 h: No

⑧ Ex- vi playbook8.yml

15.00 - name: Using Host Scope Variable

15.30 hosts: webserver

4 SUNDAY tasks:

- name: Installing maven

apt:

name: "{{f}}"

state: "{{g}}"

update_cache: "{{h}}"

...

* ↳ ansible-playbook playbook8.yml -b

It will install maven on m/cs whose IP is present in webserver.

Meetings	Things to Do	Important Calls
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Week	27	28	29	30
Monday	31	3	10	17
Tuesday	4	11	18	25
Wednesday	5	12	19	26
Thursday	6	13	20	27
Friday	7	14	21	28
Saturday	1	8	15	22
Sunday	2	9	16	23

2017
June
(156-209) Monday 5

Holy Spirit Monday (Greece)

② Variables to work on Single host:-

- It is designed to work on Single hosts.
- It is defined in a folder host-vars
- This host-vars folder should be created in the same folder where all the playbooks are present.

↳ Playbook \$ ↳ mkdir host-vars

↳ cd host-vars.

↳ vi Priv IP of Any m/c

a: firewalld

b: Present

c: Yes

:wq! ↴

17.30

18.00

Evening

Meetings	✓	Things To Do	✓	Important Calls	✓
	<input type="checkbox"/>		<input type="checkbox"/>		<input type="checkbox"/>
	<input type="checkbox"/>		<input type="checkbox"/>		<input type="checkbox"/>
	<input type="checkbox"/>		<input type="checkbox"/>		<input type="checkbox"/>
	<input type="checkbox"/>		<input type="checkbox"/>		<input type="checkbox"/>

6

Week 23
June
Tuesday (157-208)

Week	22	23	24	25	26
Monday	5	12	19	26	
Tuesday	6	13	20	27	
Wednesday	7	14	21	28	
Thursday	1	8	15	22	29
Friday	2	9	16	23	30
Saturday	3	10	17	24	
Sunday	4	11	18	25	

⑨

Ex: `vi playbook9.yml`

8.30

9.00

9.30

- name : Using Host Scope Variable
- hosts: Poi. IP of m/c
- tasks:

10.00

10.30

11.00

11.30

- name : Installing Software
- apt :

12.00

name: "ssaggg"

12.30

Present: "ggbbgg"

13.00

update_cache: "ggccgg"

13.30

...

14.00

:wq +

14.30

★

`ansible-playbook playbook9.yml`
It will run on the m/c whose IP is used.

15.00

16.00

16.30

17.00

17.30

18.00

Evening

Meetings

✓ Things To Do

✓ Important Calls

✓



Week	27	28	29	30
Monday	31	3	10	17
Tuesday		4	11	18
Wednesday		5	12	19
Thursday		6	13	20
Friday		7	14	21
Saturday		1	8	15
Sunday		2	9	16

2017
June
(158-207) Wednesday

7

~~Imp~~ * Implementing Loops:-

9.00 Modules in ansible can be executed
9.30 multiple times by using Loops.
10.00

⑩ Edit Vi playbook10.yml

```

11.00
12.30 --- -
12.00 - name: Installing Software & packages
13.00 hosts: dbserver
13.30 tasks:
14.00   - name: Installing software
14.30     apt:
15.00       name: "{{ item }}"
15.30       state: present
16.00       update_cache: no
16.30     with_items:
17.00       - tree
17.30       - git
18.00       - tomcat8
18.00       - apache2
Evening ...

```

* ↳ ansible-playbook playbook10.yml
It'll install all the S/Ws one by one in the dbserver.

Meetings	✓	Things To Do	✓	Important Calls	✓
	<input type="checkbox"/>		<input type="checkbox"/>		<input type="checkbox"/>
	<input type="checkbox"/>		<input type="checkbox"/>		<input type="checkbox"/>
	<input type="checkbox"/>		<input type="checkbox"/>		<input type="checkbox"/>
	<input type="checkbox"/>		<input type="checkbox"/>		<input type="checkbox"/>

8

Week 23
June
Thursday (159-206)

Week	22	23	24	25	26
Monday	5	12	19	26	
Tuesday	6	13	20	27	
Wednesday	7	14	21	28	
Thursday	1	8	15	22	29
Friday	2	9	16	23	30
Saturday	3	10	17	24	
Sunday	4	11	18	25	

Week	27	28	29	30
Monday	31	3	10	17
Tuesday	5	12	19	26
Wednesday	6	13	20	27
Thursday	7	14	21	28
Friday	1	8	15	22
Saturday	2	9	16	23
Sunday				30

⑪ Ex:- vi playbook11.yml

Requirement:-

Tomcat8 needs to be Installed

git needs to be Uninstall

apache2 needs to be updated

Tree needs to be install & update cache.

12.00

12.30

⑫ Ex:-12 vi playbook12.yml

Requirement

14.30

To Create multiple users & files/directory in user's home directory.

16.00

16.30

17.00

17.30

18.00

Evening

- 8.00
8.30
9.00
9.30
10.00
10.30
11.00
11.30
12.00
12.30
13.00
13.30
14.00
14.30
15.00
15.30
16.00
16.30
17.00
17.30
18.00
Evening

Meetings

✓ Things To Do

✓ Important Calls

✓

Meetings

