

Name: Abdelrhman Sayed Ibrahim

Course: Ansible

Track: DevOps - ITI

Make sure you can ssh into host 1 (using password)

```
Hello DevOps ~/.bashrc
○ abdo@abdo-Lenovo-Z50-70:~/ansible/day1$ ssh abdo@172.17.0.2
The authenticity of host '172.17.0.2 (172.17.0.2)' can't be established.
ED25519 key fingerprint is SHA256:+nuLCDJWVDcjes93HicVNRzFwTq3HlHFiAjIpGHYzW0.
This key is not known by any other names
Are you sure you want to continue connecting (yes/no/[fingerprint])? y
Please type 'yes', 'no' or the fingerprint: y
Please type 'yes', 'no' or the fingerprint: yes
Warning: Permanently added '172.17.0.2' (ED25519) to the list of known hosts.
abdo@172.17.0.2's password:
Welcome to Ubuntu 22.04.3 LTS (GNU/Linux 6.2.0-32-generic x86_64)

 * Documentation:  https://help.ubuntu.com
 * Management:    https://landscape.canonical.com
 * Support:       https://ubuntu.com/advantage

This system has been minimized by removing packages and content that are
not required on a system that users do not log into.

To restore this content, you can run the 'unminimize' command.

The programs included with the Ubuntu system are free software;
the exact distribution terms for each program are described in the
individual files in /usr/share/doc/*/copyright.

Ubuntu comes with ABSOLUTELY NO WARRANTY, to the extent permitted by
applicable law.

abdo@659ba17a8242:~$
```

## Generate SSH key pair on the control machine

```
● abdo@abdo-Lenovo-Z50-70:~/ansible/day1$ ssh-keygen -t rsa
Generating public/private rsa key pair.
Enter file in which to save the key (/home/abdo/.ssh/id_rsa): /home/abdo/.ssh/devops
Enter passphrase (empty for no passphrase):
Enter same passphrase again:
Your identification has been saved in /home/abdo/.ssh/devops
Your public key has been saved in /home/abdo/.ssh/devops.pub
The key fingerprint is:
SHA256:kUcXekNYf2lbQ7R4E73Ahzp3Km+LppXslhV3lSl+Qy8 abdo@abdo-Lenovo-Z50-70
The key's randomart image is:
+---[RSA 3072]---+
|      .O*.O++|
|      o.+ *O=*|
|      o o =.*B*|
|      o + =EBB|
|      S   o *oo|
|      ...O   |
|      +=     |
|      O+.O   |
|      .+O... |
+-----[SHA256]-----+
```

## Copy the public key to host 1

```
● abdo@abdo-Lenovo-Z50-70:~/.ssh$ ls
devops  devops.pub  known_hosts  known_hosts.old
● abdo@abdo-Lenovo-Z50-70:~/.ssh$ ssh-copy-id -i devops.pub abdo@172.17.0.2
/usr/bin/ssh-copy-id: INFO: Source of key(s) to be installed: "devops.pub"
/usr/bin/ssh-copy-id: INFO: attempting to log in with the new key(s), to filter out any
that are already installed
/usr/bin/ssh-copy-id: INFO: 1 key(s) remain to be installed -- if you are prompted now
it is to install the new keys
abdo@172.17.0.2's password:

Number of key(s) added: 1

Now try logging into the machine, with:  "ssh 'abdo@172.17.0.2'"
and check to make sure that only the key(s) you wanted were added.

○ abdo@abdo-Lenovo-Z50-70:~/.ssh$ █
```

```
abdo@659ba17a8242:~$ ls
abdo@659ba17a8242:~$ ls
abdo@659ba17a8242:~$ ls -a
.  ..  .bash_history  .bash_logout  .bashrc  .cache  .profile  .ssh
abdo@659ba17a8242:~$ cd .ssh/
abdo@659ba17a8242:~/.ssh$ ls
authorized_keys
abdo@659ba17a8242:~/.ssh$ cat authorized_keys
ssh-rsa AAAAB3NzaC1yc2EAAAADAQABAAQgQDfQfQTMVB9TTR+0dT5pEroumfQnWDXt0dGF6036I0jWX
np6S0uu3w3dZVuDVxqPNbDSsFQGv2GriRHetSrnuV2eIgcJxT/nP2+/S9e/gXsaI9agAl/0mboj+4i8sAKliBv
/AgPtCRF0aEfnixzjllhRWaeDBqP0j0jsSACDXgHA6u2nBsvZalkut/YTSfEKaGodX0/DVyov0QSMEZ/jkLyLp
g/lp2DlwsGvGaL037+Ahvif5W8X3IlAaghM9I6tLLBxIgtF9sKWktRLz7Ka/hNS30i2hmT9aZ/mnsd6LwP8Hkn
WQbrd0zbK7ygRnvMLkzFu+CvR0oj6whB8TM/L+u6onQRh/6feqqDRjd4wkTFfqw7D+DHyrGxGAaGGG3xcmgMRC
jwApVbfgU3mthTRoG4pvyTJjvAAK8jP/pgSWE8N9KcpI374mKnBZ1ZLYLxH8QD/bT4i3jclAboVzh26maZBHSF
8ljL4/BqTbdx00zoLCZwaGmp+nJWYz0A5GE= abdo@abdo-Lenovo-Z50-70
abdo@659ba17a8242:~/.ssh$ █
```

## Make sure you can ssh into host 1 (using prv/pub)

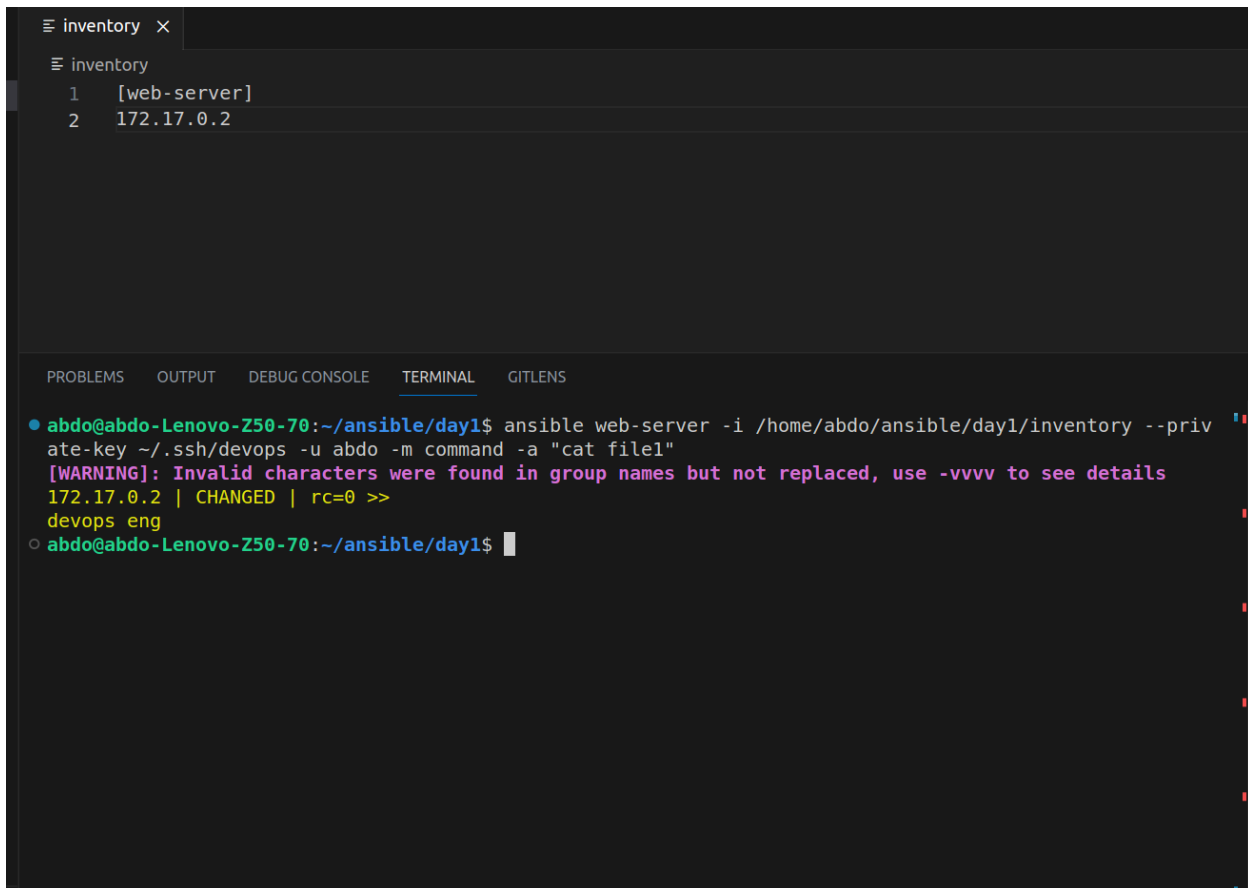
```
○ abdo@abdo-Lenovo-Z50-70:~/ssh$ ssh -i devops abdo@172.17.0.2
Welcome to Ubuntu 22.04.3 LTS (GNU/Linux 6.2.0-32-generic x86_64)

 * Documentation:  https://help.ubuntu.com
 * Management:    https://landscape.canonical.com
 * Support:       https://ubuntu.com/advantage

This system has been minimized by removing packages and content that are
not required on a system that users do not log into.

To restore this content, you can run the 'unminimize' command.
Last login: Thu Sep 14 11:54:45 2023 from 172.17.0.1
abdo@659ba17a8242:~$ pwd
/home/abdo
abdo@659ba17a8242:~$
```

Put the IP of host 1 in the inventory file and use the inventory file path in your ad-hoc command instead of using the IP hard-coded



The screenshot shows an IDE with two main panels. The top panel displays an Ansible inventory file named 'inventory' with the following content:

```
inventory
1  [web-server]
2  172.17.0.2
```

The bottom panel is a terminal window showing the execution of an Ansible ad-hoc command. The command is:

```
abdo@abdo-Lenovo-Z50-70:~/ansible/day1$ ansible web-server -i /home/abdo/ansible/day1/inventory --private-key ~/.ssh/devops -u abdo -m command -a "cat file1"
```

The output of the command is:

```
[WARNING]: Invalid characters were found in group names but not replaced, use -vvvv to see details
172.17.0.2 | CHANGED | rc=0 >>
devops eng
```

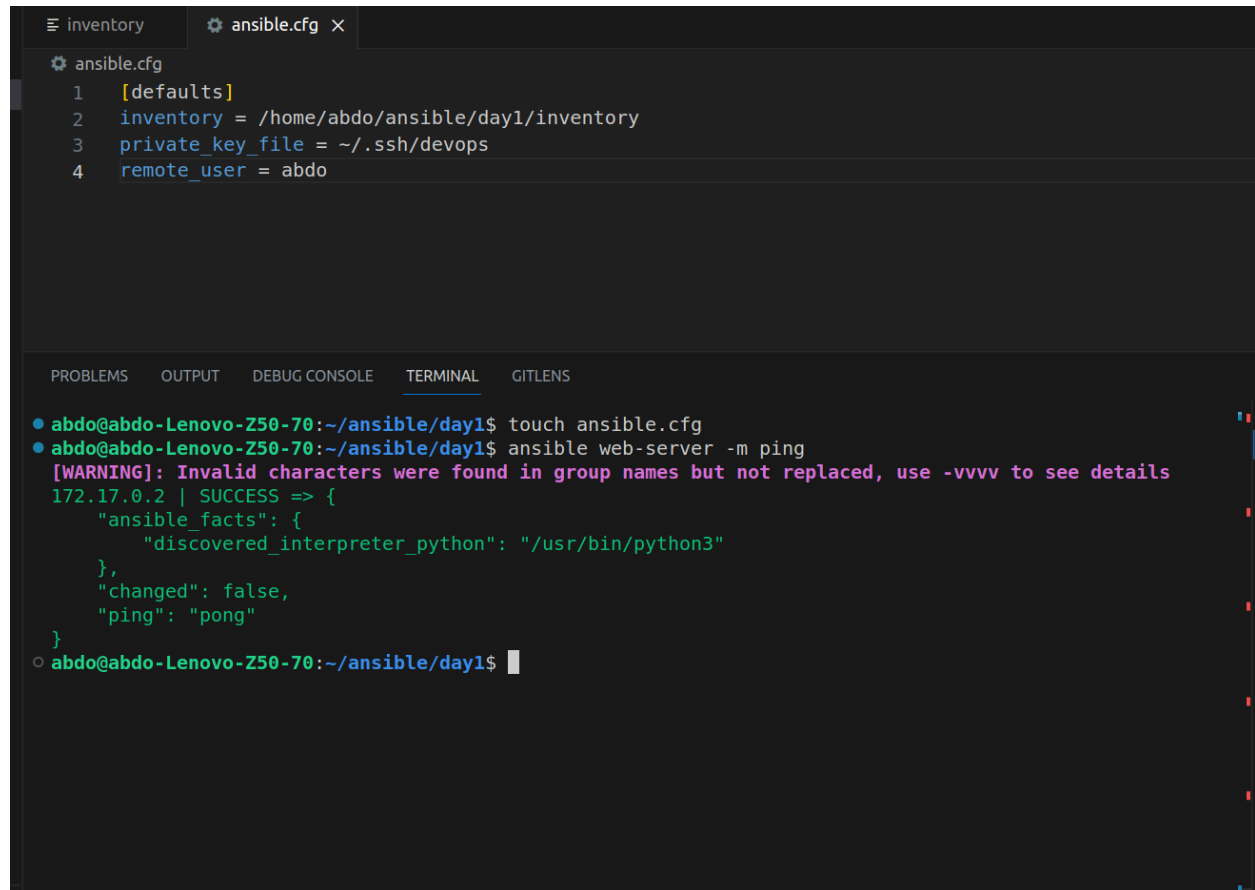
The terminal window also shows the prompt for the next command:

```
○ abdo@abdo-Lenovo-Z50-70:~/ansible/day1$
```

Create the configuration file

Insert some values in the configuration file

Run the minimized ad-hoc command



The screenshot shows a code editor with two tabs: 'inventory' and 'ansible.cfg'. The 'ansible.cfg' tab is active, displaying the following content:

```
1 [defaults]
2 inventory = /home/abdo/ansible/day1/inventory
3 private_key_file = ~/.ssh/devops
4 remote_user = abdo
```

Below the code editor is a terminal window with the following output:

```
● abdo@abdo-Lenovo-Z50-70:~/ansible/day1$ touch ansible.cfg
● abdo@abdo-Lenovo-Z50-70:~/ansible/day1$ ansible web-server -m ping
[WARNING]: Invalid characters were found in group names but not replaced, use -vvvv to see details
172.17.0.2 | SUCCESS => {
  "ansible_facts": {
    "discovered_interpreter_python": "/usr/bin/python3"
  },
  "changed": false,
  "ping": "pong"
}
○ abdo@abdo-Lenovo-Z50-70:~/ansible/day1$
```

insert the correct values in the configuration file

Example: `ansible all -m command -a "whoami"`

```
inventory  ansible.cfg x
ansible.cfg
2 inventory = /home/abdo/ansible/day1/inventory
3 private_key_file = ~/.ssh/devops
4 remote_user = abdo
5
6
7 [privilege_escalation]
8 become = true
9 become_ask_pass = true
10 become_method = sudo
11 become_user = root

PROBLEMS  OUTPUT  DEBUG CONSOLE  TERMINAL  GITLENS

    "rc": 127
  }
● abdo@abdo-Lenovo-Z50-70:~/ansible/day1$ ansible web-server -m command -a "whoami"
BECOME password:
[WARNING]: Invalid characters were found in group names but not replaced, use -vvvv to see details
172.17.0.2 | CHANGED | rc=0 >>
root
```