

# DEVOPS EXERCISE

Building the Docker Image(sshubuntu):

```
prabu@prabu-ROG-Strix-G513QM: /mnt/F2B61552B61518A5/studies/devops/exe21/app1$ sudo docker build . -t sshubuntu
Sending build context to Docker daemon 12.29kB
Step 1/20 : FROM ubuntu:latest
----> 216c552e5b8a
Step 2/20 : RUN apt-get -y update
----> Using cache
----> 0948b40242cc
Step 3/20 : RUN apt-get install -y openssh-server
----> Using cache
----> 375abab0c521
Step 4/20 : RUN apt-get install -y python3
----> Using cache
----> bf7620acbe9a
Step 5/20 : RUN apt-get install -y sudo
----> Using cache
----> 482d54e834bb
Step 6/20 : RUN apt-get install -y nodejs
----> Using cache
----> 0de42a647b3
Step 7/20 : RUN apt-get install -y net-tools
----> Using cache
----> 05ae805cf904
Step 8/20 : RUN apt-get -y install git
----> Using cache
----> 4b9ba476d39c
Step 9/20 : RUN echo 'root:root' |chpasswd
----> Using cache
----> 4262082cbeab
Step 10/20 : RUN useradd -m -d /home/exe21 -s /bin/bash -g root -G sudo -u 1001 exe21
----> Running in 07b533ad33ab
Removing intermediate container 07b533ad33ab
----> 55ed0b5a9e0f
Step 11/20 : RUN mkdir -p /home/exe21/.ssh
----> Running in cb07bc6dc84
Removing intermediate container cb07bc6dc84
----> dd303bdad15d
Step 12/20 : COPY ansible.pub /home/exe21/.ssh/authorized_keys
----> Running in 2296036eeca
----> ffbfd65e957f
Step 13/20 : RUN chown exe21:root /home/exe21/.ssh/authorized_keys && chmod 600 /home/exe21/.ssh/authorized_keys
----> Running in 2296036eeca
Removing intermediate container 2296036eeca
----> fc80b0b1f2ec
Step 14/20 : RUN service ssh start
----> Running in 41100f9f8ea3
* Starting OpenSSH Secure Shell server sshd
  ...done.
Removing intermediate container 41100f9f8ea3
----> 24ab23f07e52
Step 15/20 : ENV PORT=8894
----> Running in 6e01348895f7
Removing intermediate container 6e01348895f7
```

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Running the docker Image(exe214):

```
prabu@prabu-ROG-Strix-G513QM: /mnt/F2B61552B61518A5/studies/devops/exe21/app1$ sudo docker run -d --name exe214 sshubuntu
7d6d4cf0c07332e1659271291f63998ac272bf259f69122b3630f690b20fb58f
prabu@prabu-ROG-Strix-G513QM: /mnt/F2B61552B61518A5/studies/devops/exe21/app1$
```

SSHing into the container to check python installation:

```
prabu@prabu-ROG-Strix-G513QM: /mnt/F2B61552B61518A5/studies/devops/exe21/app1$ ssh -i ansible exe21@172.17.0.2
Welcome to Ubuntu 22.04.1 LTS (GNU/Linux 5.15.0-48-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.

To run a command as administrator (user "root"), use "sudo <command>".
See "man sudo_root" for details.

exe21@7d6d4cf0c073:~$ python
-bash: python: command not found
exe21@7d6d4cf0c073:~$ python3
Python 3.10.6 (main, Aug 10 2022, 11:40:04) [GCC 11.3.0] on linux
Type "help", "copyright", "credits" or "license()" for more information.
>>> exit()
exe21@7d6d4cf0c073:~$
```

## Running the playbook on docker container (app214) as user exe21:(O1 and O2)

```
prabu@prabu-ROG-Strix-G513QM:/mnt/F2B61552B61518A5/studies/devops/exe21/app1$ ansible-playbook -i host -b -v sample-playbook.yaml
[WARNING]: Ansible is being run in a world writable directory (/mnt/F2B61552B61518A5/studies/devops/exe21/app1), ignoring it as an ansible.cfg source. For more information see
https://docs.ansible.com/ansible/devel/reference_appendices/config.html#cfg-in-world-writable-dir
No config file found; using defaults

PLAY [sample playbook] *****

TASK [Gathering Facts] *****
ok: [app21]

TASK [check up time] *****
changed: [app21] => {"changed": true, "cmd": ["uptime"], "delta": "0:00:00.002020", "end": "2022-10-26 06:21:38.046727", "msg": "", "rc": 0, "start": "2022-10-26 06:21:38.044707", "stderr_l
ines": [], "stdout": " 06:21:38 up 19:51,  0 users,  load average: 1.11, 1.38, 1.38", "stdout_lines": [" 06:21:38 up 19:51,  0 users,  load average: 1.11, 1.38, 1.38"]}

TASK [check git version] *****
changed: [app21] => {"changed": true, "cmd": ["git", "--version"], "delta": "0:00:00.001676", "end": "2022-10-26 06:21:38.213291", "msg": "", "rc": 0, "start": "2022-10-26 06:21:38.211615", "stderr": "",
"stderr_lines": [], "stdout": "git version 2.34.1", "stdout_lines": ["git version 2.34.1"]}

PLAY RECAP *****
app21                : ok=3    changed=2    unreachable=0    failed=0    skipped=0    rescued=0    ignored=0

prabu@prabu-ROG-Strix-G513QM:/mnt/F2B61552B61518A5/studies/devops/exe21/app1$
```

```
prabu@prabu-ROG-Strix-G513QM:/mnt/F2B61552B61518A5/studies/devops/exe21/app1$ ansible-playbook -i host -b -v sample-playbook.yaml
[WARNING]: Ansible is being run in a world writable directory (/mnt/F2B61552B61518A5/studies/devops/exe21/app1), ignoring it as an ansible.cfg source. For more information see
https://docs.ansible.com/ansible/devel/reference_appendices/config.html#cfg-in-world-writable-dir
No config file found; using defaults

PLAY [sample playbook] *****

TASK [Gathering Facts] *****
ok: [app21]

TASK [check up time] *****
changed: [app21] => {"changed": true, "cmd": ["uptime"], "delta": "0:00:00.002095", "end": "2022-10-26 06:22:07.931344", "msg": "", "rc": 0, "start": "2022-10-26 06:22:07.929249", "stderr_l
ines": [], "stdout": " 06:22:07 up 19:51,  0 users,  load average: 0.89, 1.30, 1.35", "stdout_lines": [" 06:22:07 up 19:51,  0 users,  load average: 0.89, 1.30, 1.35"]}

TASK [check git version] *****
changed: [app21] => {"changed": true, "cmd": ["git", "--version"], "delta": "0:00:00.001667", "end": "2022-10-26 06:22:08.098102", "msg": "", "rc": 0, "start": "2022-10-26 06:22:08.096435", "stderr": "",
"stderr_lines": [], "stdout": "git version 2.34.1", "stdout_lines": ["git version 2.34.1"]}

PLAY RECAP *****
app21                : ok=3    changed=2    unreachable=0    failed=0    skipped=0    rescued=0    ignored=0

prabu@prabu-ROG-Strix-G513QM:/mnt/F2B61552B61518A5/studies/devops/exe21/app1$
```

Creating a new container (app215) and running the playbook on both containers:(O3 and O5)

```
prabu@prabu-ROG-Strix-G513QM: /mnt/F2B61552B61518A5/studies/devops/exe21/app1$ ansible-playbook -i host -b -v sample-playbook.yaml
[WARNING]: Ansible is being run in a world writable directory (/mnt/F2B61552B61518A5/studies/devops/exe21/app1), ignoring it as an ansible.cfg source. For more information see
https://docs.ansible.com/ansible/devel/reference_appendices/config.html#cfg-tt-in-world-writable-dir
Do not log file names using defaults

PLAY [sample playbook] *****

TASK [Gathering Facts] *****
ok: [app22]
ok: [app21]

TASK [check uptime] *****
changed: [app21] => {"changed": true, "cmd": ["uptime"], "delta": "0:00:00.002037", "end": "2022-10-26 06:32:14.319234", "msg": "", "rc": 0, "start": "2022-10-26 06:32:14.317197", "stderr": "", "stderr_l
ines": [], "stdout": " 06:32:14 up 20:02, 0 users, load average: 1.17, 0.84, 1.01", "stdout_lines": [" 06:32:14 up 20:02, 0 users, load average: 1.17, 0.84, 1.01"]}
changed: [app22] => {"changed": true, "cmd": ["uptime"], "delta": "0:00:00.001816", "end": "2022-10-26 06:32:14.202939", "msg": "", "rc": 0, "start": "2022-10-26 06:32:14.318878", "stderr": "", "stderr_l
ines": [], "stdout": " 06:32:14 up 20:02, 0 users, load average: 1.17, 0.84, 1.01", "stdout_lines": [" 06:32:14 up 20:02, 0 users, load average: 1.17, 0.84, 1.01"]}

TASK [check git version] *****
changed: [app21] => {"changed": true, "cmd": ["git", "--version"], "delta": "0:00:00.001733", "end": "2022-10-26 06:32:14.503525", "msg": "", "rc": 0, "start": "2022-10-26 06:32:14.501792", "stderr": "",
"stderr_lines": [], "stdout": "git version 2.34.1", "stdout_lines": ["git version 2.34.1"]}
changed: [app22] => {"changed": true, "cmd": ["git", "--version"], "delta": "0:00:00.001766", "end": "2022-10-26 06:32:14.515723", "msg": "", "rc": 0, "start": "2022-10-26 06:32:14.513957", "stderr": "",
"stderr_lines": [], "stdout": "git version 2.34.1", "stdout_lines": ["git version 2.34.1"]}

PLAY RECAP *****
app21                : ok=3    changed=0    unreachable=0    failed=0    skipped=0    rescued=0    ignored=0
app22                : ok=3    changed=0    unreachable=0    failed=0    skipped=0    rescued=0    ignored=0

prabu@prabu-ROG-Strix-G513QM: /mnt/F2B61552B61518A5/studies/devops/exe21/app1$
```

```
prabu@prabu-ROG-Strix-G513QM: /mnt/F2B61552B61518A5/studies/devops/exe21/app1$ ansible-playbook -i host -b -v sample-playbook.yaml
[WARNING]: This file is being run in a world writable directory (/mnt/F2B61552B61518A5/studies/devops/exe21/app1), ignoring it as an ansible.cfg source. For more information see
https://docs.ansible.com/ansible/devel/reference_appendices/config.html#cfg-in-world-writable-dir
we config file found, using defaults

PLAY [sample playbook] *****

TASK [Gathering Facts] *****
ok: [app21]
ok: [app22]

TASK [check up time] *****
changed: [app22] => {"changed": true, "cmd": ["uptime"], "delta": "0:00:00.001067", "end": "2022-10-26 06:31:20.287913", "msg": "", "rc": 0, "start": "2022-10-26 06:31:20.286046", "stderr": "", "stderr_l
ines": [], "stdout": " 06:31:20 up 20:01, 0 users, load average: 0.93, 0.73, 0.99", "stdout_lines": [" 06:31:20 up 20:01, 0 users, load average: 0.93, 0.73, 0.99"]}
changed: [app21] => {"changed": true, "cmd": ["uptime"], "delta": "0:00:00.002198", "end": "2022-10-26 06:31:20.291894", "msg": "", "rc": 0, "start": "2022-10-26 06:31:20.291754", "stderr": "", "stderr_l
ines": [], "stdout": " 06:31:20 up 20:01, 0 users, load average: 0.93, 0.73, 0.99", "stdout_lines": [" 06:31:20 up 20:01, 0 users, load average: 0.93, 0.73, 0.99"]}

TASK [check git version] *****
changed: [app21] => {"changed": true, "cmd": ["git", "--version"], "delta": "0:00:00.001096", "end": "2022-10-26 06:31:20.472919", "msg": "", "rc": 0, "start": "2022-10-26 06:31:20.471315", "stderr": "",
"stderr_lines": [], "stdout": "git version 2.34.1", "stdout_lines": ["git version 2.34.1"]}
changed: [app22] => {"changed": true, "cmd": ["git", "--version"], "delta": "0:00:00.001661", "end": "2022-10-26 06:31:20.478922", "msg": "", "rc": 0, "start": "2022-10-26 06:31:20.477261", "stderr": "",
"stderr_lines": [], "stdout": "git version 2.34.1", "stdout_lines": ["git version 2.34.1"]}

PLAY RECAP *****
app21      : ok=3    changed=2    unreachable=0    failed=0    skipped=0    rescued=0    ignored=0
app22      : ok=3    changed=2    unreachable=0    failed=0    skipped=0    rescued=0    ignored=0

prabu@prabu-ROG-Strix-G513QM: /mnt/F2B61552B61518A5/studies/devops/exe21/app1$
```