

SOP: AfyaSTAT INSTALLATION ON UBUNTU USING AUTO INSTALLER

This is a technical user guide on the automated process of AfyaSTAT installation and configuration using an installation script. The document outlines the process as installed on Ubuntu Desktop and Ubuntu Server (Version 16.04).

Objective: To provide simplified guidance to users on how to install AfyaSTAT Application in Ubuntu environment.

Target audience: SI, Dev, M&E, HIS



Last Update: 6th Aug 2021

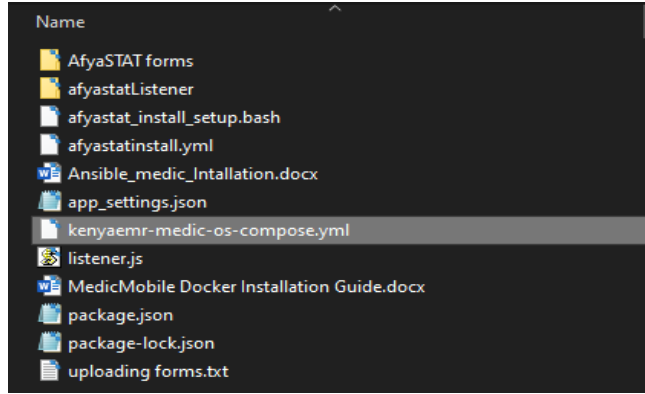
AfyaSTAT Dependencies:

The following dependencies are required for successful AfyaSTAT and will be automatically installed by the script.

- i. Docker-CE
- ii. Docker-Compose
- iii. Node JS
- iv. Python
- v. PM2
- vi. PIP
- vii. Medic configuration
- viii. Git

Other Requirements:

- Stable internet access
- AfyaStat Forms
- Functional KenyaEMR Instance (minimum version 17.3.4)

<p>Step 1: Obtain installation resources: Obtain correct AfyaSTAT installation resources and copy to Home folder/directory. Confirm the following resources:</p> <ol style="list-style-type: none"> i. Afyastat_install_setup.sh ii. Ansibleinstal.yml iii. kenyaemr-medic-os-compose.yml iv. listener.js v. app-settings.json vi. AfyaSTAT forms <p>The Installation folder should be name as AfyaStat while the folder containing the forms should be named as AfyaSTAT forms respectively.</p>	 <p style="text-align: center;">Content of the AfyaSTAT resources folder</p>
<p>Step 2: Set App-Settings configurations Edit the App Settings file:</p> <ul style="list-style-type: none"> • Open the app_settings.json file • Change all the base URLs to the IP Address of the KenyaEMR server. <i>e.g. "base_url": "http://192.168.1.4:8080/"</i> <p>NB: Due to the ssl issues, it is best to change the base URL to the IP Address of the machine even if the host is localhost.</p>	<pre> "outbound": { "cht_client_registration": { "relevant_to": "doc.type === 'contact' && doc.contact_type === 'universal_client' && "destination": { "base_url": "http://localhost:8080/", "auth": { "type": "basic", "username": "admin", "password_key": "kenyaemr" }, "path": "/openmrs/ws/rest/v1/edata/medicregistration" }, "mapping": { "registration": "doc", "timestamp": "doc.reported_date" } }, "cht_client_registration_update": { "relevant_to": "doc.type === 'contact' && doc.contact_type === 'universal_client' && "destination": { "base_url": "http://localhost:8080/", "auth": { "type": "basic", "username": "admin", "password_key": "kenyaemr" }, "path": "/openmrs/ws/rest/v1/edata/medicdemographicupdates" }, "mapping": { "demographicUpdate": "doc", "timestamp": "doc.reported_date" } } } </pre>

Step 3: Set Parameters in the installer script

Open the `afyatat_install_setup.sh` file and edit the following:

- `mysql_user`: This is username for mysql instance used by KenyaEMR
- `mysql_password`: Password for the same account as above

This will enable the script to automatically access **openmrs database** and update the global settings required for data exchange between KenyaEMR and AfyaSTAT.

NB: The username should be of the account with admin privileges on the database.

Save and close the file once done.

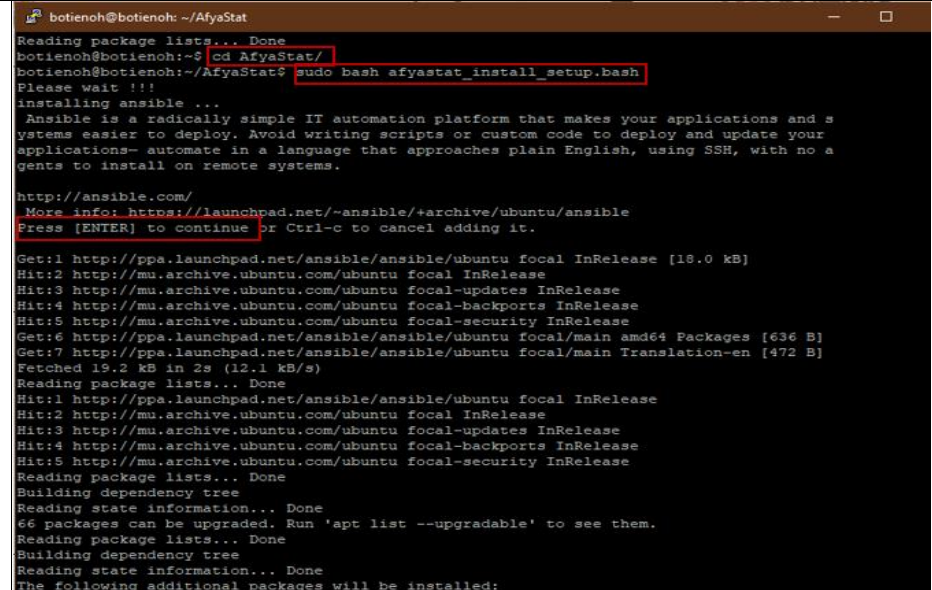
```
# MySQL settings
mysql_user="username"
mysql_password="password"
mysql_base_database="openmrs"
mysql_information_schema_database="information_schema"
echo "Updating openmrs global properties"
```

Step 4: Execute the AfyaSTAT installation script

- Open the terminal window (Ctrl+ Alt+T)-
- Run the `afyatat_install_setup.sh` by executing the following command:

```
sudo bash afyatat_install_setup.sh
```

- This process might take a few minutes depending on computer speed and might need a stable internet connectivity. Please wait till the process completes.
- Wait for the installer to execute while responding appropriately to the prompts on the screen i.e. Pressing **ENTER** when required and pressing **"Y"** when prompted to continue.



```
botienoh@botienoh: ~/AfyaStat
Reading package lists... Done
botienoh@botienoh:~$ cd AfyaStat/
botienoh@botienoh:~/AfyaStat$ sudo bash afyatat_install_setup.bash
Please wait !!!
Installing ansible ...
Ansible is a radically simple IT automation platform that makes your applications and s
ystems easier to deploy. Avoid writing scripts or custom code to deploy and update your
applications- automate in a language that approaches plain English, using SSH, with no a
gents to install on remote systems.

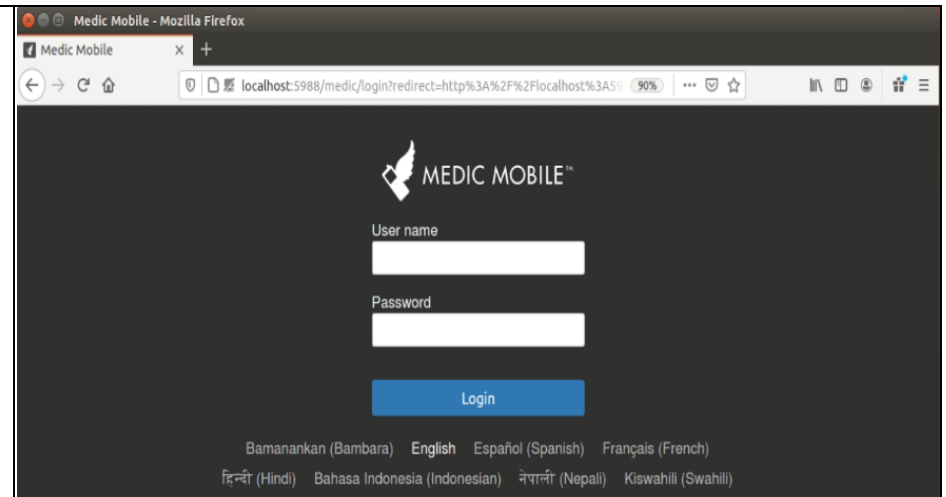
http://ansible.com/
More info: https://launchpad.net/~ansible/+archive/ubuntu/ansible
Press (ENTER) to continue or Ctrl-c to cancel adding it.

Get:1 http://ppa.launchpad.net/ansible/ansible/ubuntu focal InRelease [18.0 kB]
Hit:2 http://mu.archive.ubuntu.com/ubuntu focal InRelease
Hit:3 http://mu.archive.ubuntu.com/ubuntu focal-updates InRelease
Hit:4 http://mu.archive.ubuntu.com/ubuntu focal-backports InRelease
Hit:5 http://mu.archive.ubuntu.com/ubuntu focal-security InRelease
Get:6 http://ppa.launchpad.net/ansible/ansible/ubuntu focal/main amd64 Packages [636 B]
Get:7 http://ppa.launchpad.net/ansible/ansible/ubuntu focal/main Translation-en [472 B]
Fetched 19.2 kB in 2s (12.1 kB/s)
Reading package lists... Done
Hit:1 http://ppa.launchpad.net/ansible/ansible/ubuntu focal InRelease
Hit:2 http://mu.archive.ubuntu.com/ubuntu focal InRelease
Hit:3 http://mu.archive.ubuntu.com/ubuntu focal-updates InRelease
Hit:4 http://mu.archive.ubuntu.com/ubuntu focal-backports InRelease
Hit:5 http://mu.archive.ubuntu.com/ubuntu focal-security InRelease
Reading package lists... Done
Building dependency tree
Reading state information... Done
66 packages can be upgraded. Run 'apt list --upgradable' to see them.
Reading package lists... Done
Building dependency tree
Reading state information... Done
The following additional packages will be installed:
```

Launch the AfyaSTAT Instance

Access the application on this link: <https://localhost:7200/>
(Mozilla Firefox browser is most preferred.)

NB: Please accept the security exception warnings by the browser due to non-recognized https license.



Setting medic-os and listener to auto restart on reboot

```

root@botienoh:~# sudo bash
root@botienoh:~# docker ps -a
CONTAINER ID   IMAGE                                PORTS      NAMES      COMMAND
STATUS
343c0130f1cc   medicomobile/medic-os:cht-3.9.0-rc.1  "/bin/bash -l /boot/..."
Exited (137) 20 minutes ago          medic-os
3b4d799153de   medicomobile/haproxy:rc-1.16         "/entrypoint.sh -f /..."
Exited (137) 20 minutes ago          haproxy
root@botienoh:~# docker update --restart unless-stopped 343c0130f1cc
343c0130f1cc
root@botienoh:~# docker update --restart unless-stopped 3b4d799153de
3b4d799153de
root@botienoh:~# sudo reboot now

```

Configuring medic-os to start listener.js on system reboot

```

sudo bash
docker ps -a
docker update --restart unless-stopped medic_os_container_id (obtained from the command above)
docker update --restart unless-stopped haproxy_id_container_id (obtained from the command above)

```

Configuring pm2 to start listener.js on system reboot

- i. Navigate into the folder with listener.js
- ii. Configure pm2 to start on reboot by issuing the command `pm2 startup`. This will automatically detect the default service used by the system and will generate appropriate command to add pm2 to the service. Please note that the command should be executed without sudo in order to capture the correct user
- iii. If the current user is not sudo, please switch users using `sudo su username`.
- iv. Copy and execute the code as is.
- v. Execute `sudo pm2 start listener.js` to start the script
- vi. Execute `sudo pm2 save` to add the script to the list of those to be started on reboot
- vii. Reboot when done.

TROUBLESHOOTING

TROUBLESHOOTING AFYASTAT INSTALLATION

Try the following if your instance of Afyastat fails to start. You can identify the issue by checking the medic-os logs. Here are possible errors

i. Retry the script:

Reboot and try rerunning the script one more time using the above steps.

Ensure the Operating system environment is compatible with the version of AfyaSTAT you are trying to install

ii. CouchDB failed to start properly.

a) Check if the environment variables are set password is set correctly

```
echo $DOCKER_COUCHDB_ADMIN_PASSWORD
echo $COUCH_URL
echo $COUCH_NODE_NAME
```

NB: where the settings are incorrectly set, clear all the docker container for **haproxy** and **medic-os** and reboot.

- Manually update the variables correctly
- Re-install docker container for medic-os by executing the following command:
`sudo docker-compose -f kenyaemr-medic-os-compose.yml up -d`
- Proceed from step 5 [on this user guide](#).

b) Check to make sure CouCHDB password is set under haproxy section in the .yml file

c) Try Restarting haproxy and medic-os

```
sudo docker start haproxy
sudo docker start medic-os Wait for a couple of minutes (5min max)
```

d) Check if there is port conflict with :5988 by running this command: `sudo lsof -i : 5988`
Consider killing IPV6 process and restart **haproxy** and **medic-os**

Clear any previous docker deployments (Optional).

This step applies only to instances where there was a previous attempt to install **Afyastat** on the current server. Otherwise skip if this is a fresh installation.

```
sudo docker stop haproxy
sudo docker ps -all
sudo docker stop medic-os
sudo docker rm medic-os
sudo docker rm haproxy
sudo docker volume list
sudo docker volume rm medic-data
sudo docker system prune -a --volumes
```

Try manual installation using this guide: [Manual AfyaSTAT installer](#) guide.

THE END