SOP: AfyaSTAT INSTALLATION ON UBUNTU ENVIRONMENT

This is a technical user guide on the process of AfyaSTAT installation and configuration. 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

Last Update: 7th Aug 2021

AfyaSTAT Dependencies: The following dependencies are required for successful AfyaSTAT installation and operation. Ensure all of them are correctly installed:

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

1.

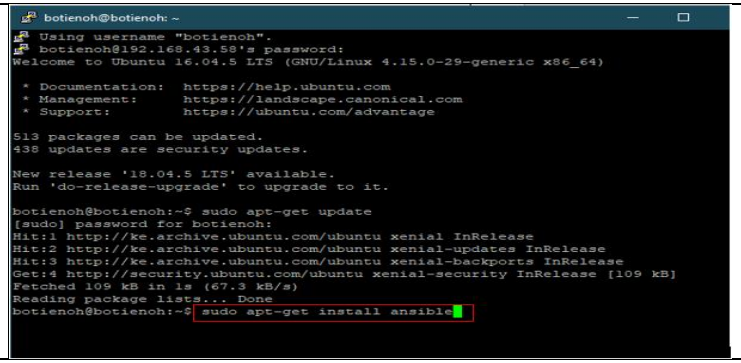
Installation of Ansible

i. Add Ansible ppa:
ii. Install Ansible:

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

sudo apt update

sudo apt install ansible
```



2.

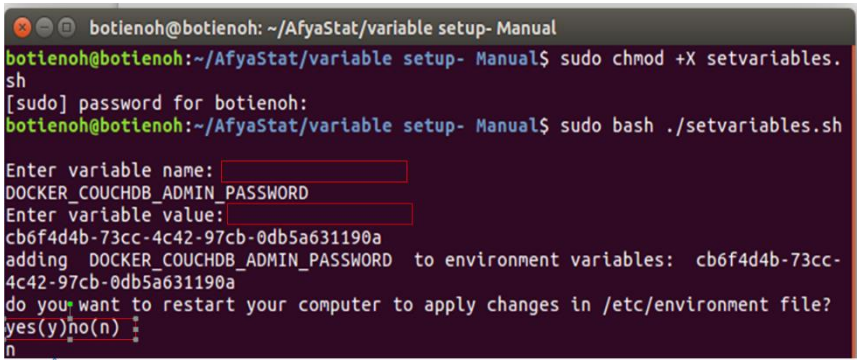
Set Environment Variable

Obtain the .bash script (**setvariables.sh** file) for setting up the environment variables. Copy the file to Home directory and make it executable by running the following command.

```
sudo chmod +x setvariables.sh
```

Execute the script using the following command

```
sudo bash ./setvariables.sh
```



Set the following variables as prompted namely:

- Variable name:
- Value:

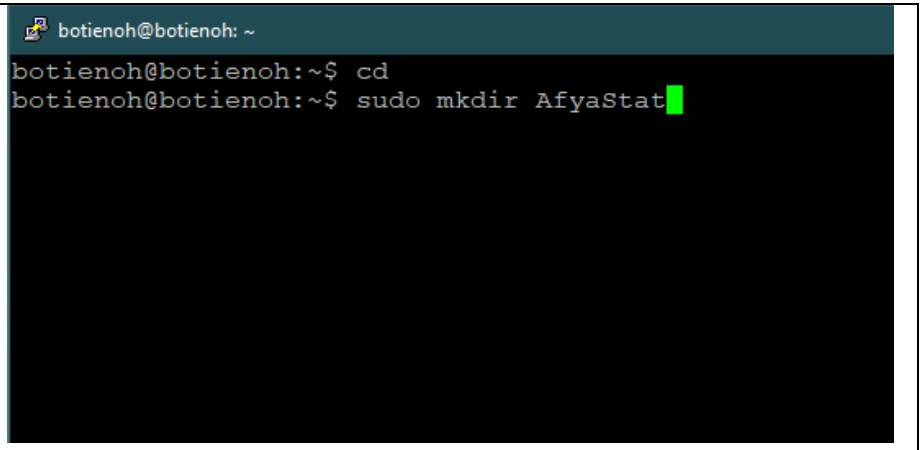
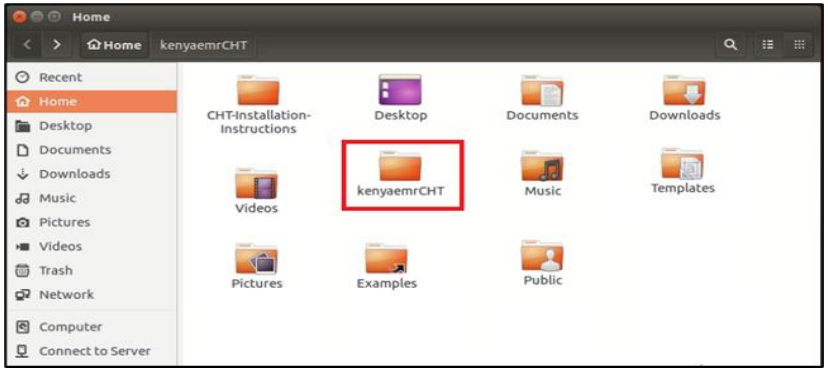
When prompted to restart the machine, **select No (n)** and re-execute the script until all the three variables are set. The variables are:

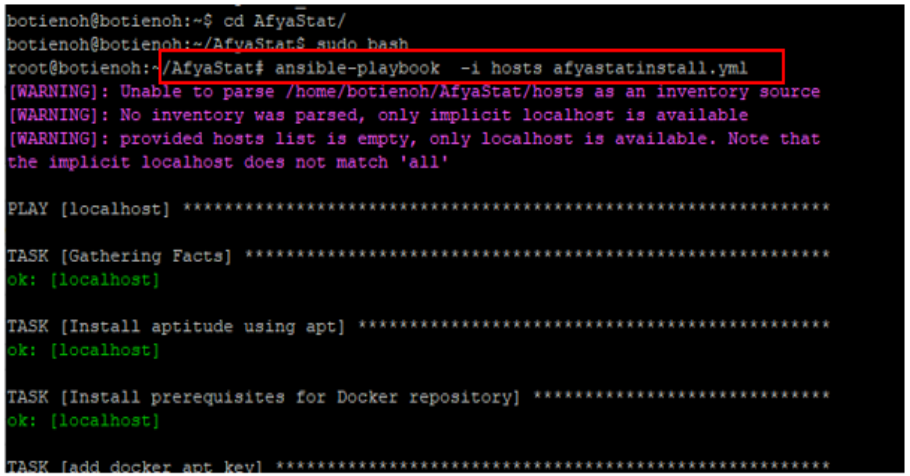
Variable Name	Value
DOCKER_COUCHDB_ADMIN_PASSWORD	cb6f4d4b-73cc-4c42-97cb-0db5a631190a
COUCH_URL	http://medic:cb6f4d4b-73cc-4c42-97cb-0db5a631190a@localhost:5988/medic
COUCH_NODE_NAME	nonode@nohost

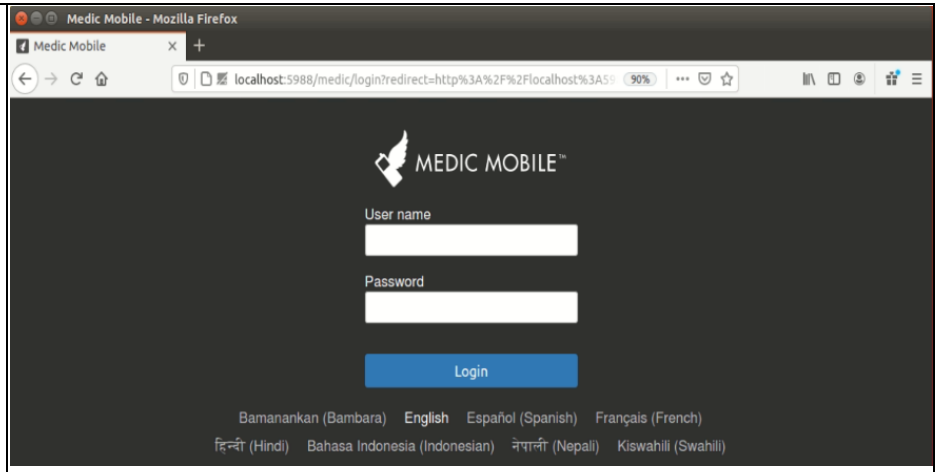
Once all the three variables are set and prompted to restart machine, select Yes (y) and press enter. Wait for the computer to reboot.

<table>
<tr><td rowspan="2">3.</td><td>Copy necessary files into a folder created in the home directory

A: Ubuntu Server:

i. Navigate to home folder:
<code>cd</code> [ENTER]
ii. Create a folder in home directory:
<code>sudo mkdir AfyaStat</code> [ENTER]
iii. Copy the content of AfyaStat installer into the new AfyaStat directory created. Navigate into source folder (afya_install)
<code>sudo cp -R *.* AfyaStat</code> [ENTER]
iv. Grant all access rights to the AfyaStat directory:
<code>sudo chmod -R 755 AfyaStat</code> [ENTER]</td><td> 
</td></tr>
<tr><td>B: Ubuntu Desktop:
v. Navigate to home folder
vi. Create a folder in home directory: Name it AfyaStat
vii. Copy the content of AfyaStat installer into the new AfyaStat directory created. Navigate into source folder (afya_install)
<code>sudo cp -R *.* AfyaStat</code> [ENTER]
viii. Grant all access rights to the AfyaStat directory:
<code>sudo chmod -R 755 AfyaStat</code> [ENTER]</td><td> 
</td></tr>
</table>

4.	**Execute Ansible playbook** Execute this command inside the AfyaStat directory. i. Launch the terminal window **ii.** Navigate to Afyastat directory `cd AfyaStat` **[ENTER]** iii. Execute the Ansible script: `sudo ansible-playbook -i hosts` **`filename.yml`** ***(afyastatinstall.yml** file should exist inside the AfyaStat folder*) This process might take a few minutes depending on computer speed and might need a stable internet connectivity. Please wait till the process completes.	

5.	**Finish up the installation and launch AfyaSTAT**
	
	A. Restart Docker container and Haproxy
	Return to Home: Type `cd` [**ENTER**]
	
	`sudo docker restart haproxy`
	
	`sudo docker restart medic-os`
	
	Check the logs to ensure everything works ok.
	`sudo docker logs -f medic-os`
	
	If CouchDB fails to start correctly, go to Troubleshooting section for possible solutions
	
	B. Restart the Listner:
	
	Navigate into AfyaStat folder and execute the following scripts.
	`sudo pm2 stop listener.js`
	`sudo pm2 flush`
	`sudo pm2 start listener.js`
	
	C. Use below command to check logs:
	`sudo docker logs -f medic-os`
	
	D. Launch the AfyaSTAT application
	
	Access the application on this link: *https://localhost:7200/*
	(Mozilla Firefox browser is most preferred.)
		
		
		NB: Please accept the security exception warning by the browser due to non-recognized https license.

6. i **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. 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 above.

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)

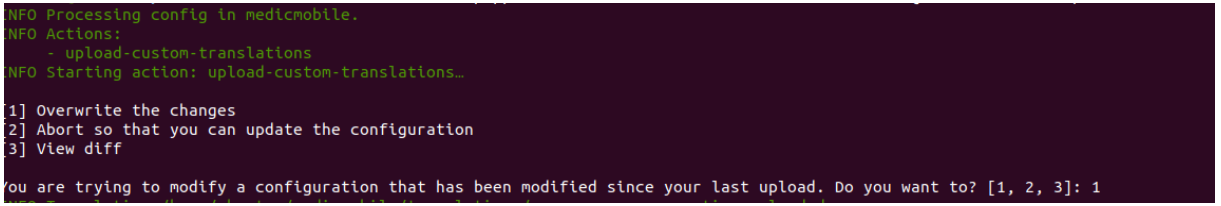
d) Check if there is port conflict with :5988 by running this command: `sudo lsof -i : 5988`
Consider killing IPV6 process and restart **haproxy** and **medic-os**

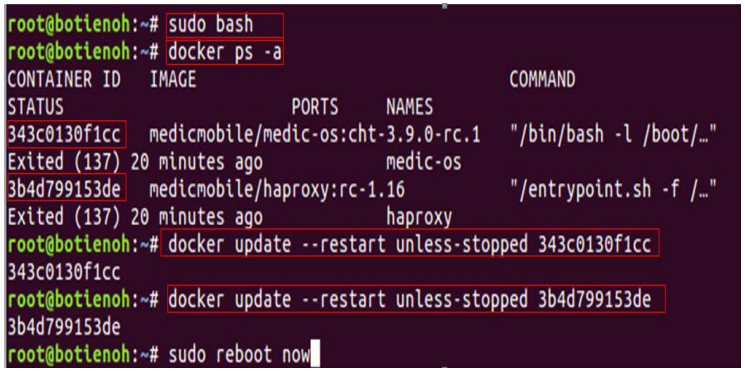
6. ii	**Clear any previous docker deployments (Optional).**
	This step applies only to instances where there was a previous attempt to install **Afyastat** on the current server. Otherwise skip if this is a fresh installation.
	`sudo docker stop haproxy`
	`sudo docker ps -all`
	`sudo docker stop medic-os`
	`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`	

SECTION 2: UPLOADING FORMS & APPLICATION SETTINGS INTO AfyaSTAT

1	**Install Medic**
	Execute the following set of commands to install the medic configurations.
		`sudo npm install -g medic-conf`
		
		`sudo python -m pip install git+https://github.com/medic/pyxform.git@medic-conf1.17#egg=pyxform-medic`

2	**Edit the App Settings file:**
	
	• Open the ***app_settings.json*** file
	
	• Change all the base URLs to the IP Address of the KenyaEMR server.
	e.g. base URL http://192.168.1.4:8080/
	
	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.
		"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"
		}
		},

	Uploading App Settings and forms: Navigate into the afyaSTAT forms folder and run the following script to upload the app settings run the following command in the terminal. Wait for the script to upload all the required forms.	`sudo medic-conf --url=https://medic:cb6f4d4b-73cc-4c42-97cb-0db5a631190a@localhost:7200 upload-app-settings delete-all-forms upload-app-forms upload-contact-forms upload-resources upload-custom-translations --accept-self-signed-certs`  **NB**: Select 1 when prompted to confirm modification of the cnfiguration and press **ENTER**
3	**Setting up AfyaSTAT configurations** Refer to the link provided to access the configuration guide for both KenyaEMR and AfyaSTAT side. It is recommended to complete configurations on the AfyaSTAT side before proceeding to KenyaEMR side.	**Link to Configuration file:** https://drive.google.com/file/d/17mYPEhfY1rdmvpyCBkvylHAUc-yj6ZTQ/view?usp=sharing

4	**Setting medic-os and listener to auto restart on reboot**
	 
	
		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
		Reboot when done.

THE END