**A Step by step Patient Biometric Service Installation Guide**

**Patient Biometrics Services Installation:**

1. Copy and paste **sudo apt install libgtk2.0-dev** on the terminal and execute, this requires internet and is installed once
2. Copy and paste **sudo apt install libusb-0.1-4:amd64** //always comes with Ubuntu 16 but you can run it
3. Change directory to **linux3**, then copy and paste **make install** and execute //Locate the folder linux3 and drag to the terminal. Now remove delete the open and close quotes and

// To return to the root directory, type cd to change directory from **linux3** director to the root.

1. Copy and paste sudo groupadd SecuGen and execute
2. Copy and paste sudo gpasswd -a myUserID SecuGen // Before you execute the command, replace the myUserID with the computer name. You can identify the computer name by copying the name before the @ sign at the command prompt
3. Now you are to create a text file using the command line. You have to change directory by using the command cd /etc/udev/rules.d/ copy, paste and execute
4. Use the command sudo touch 99SecuGen.rules to create a text file with file name 99SecuGen.rules'. After that, type cd to return to the root directory.
5. Type the command sudo chmod 777 /etc/udev/rules.d/99SecuGen.rules to grant permission to the files 99SecuGen.rules
6. Open the file 99SecuGen.rules following the path /computer/etc/udev/rules.d/99SecuGen.rules

(through the GUI not command line). Once you open the text file copy the code below and paste. After that, save the file and close it.

ATTRS{idVendor}=="1162", ATTRS{idProduct}=="0320", SYMLINK+="input/fdu03-%k", MODE="0660", GROUP="SecuGen"

ATTRS{idVendor}=="1162", ATTRS{idProduct}=="0322", SYMLINK+="input/sdu03m-%k", MODE="0660", GROUP="SecuGen"

ATTRS{idVendor}=="1162", ATTRS{idPcd

roduct}=="0330", SYMLINK+="input/fdu04-%k", MODE="0660", GROUP="SecuGen"

ATTRS{idVendor}=="1162", ATTRS{idProduct}=="1000", SYMLINK+="input/sdu03p-%k", MODE="0660", GROUP="SecuGen"

ATTRS{idVendor}=="1162", ATTRS{idProduct}=="2000", SYMLINK+="input/sdu04p-%k", MODE="0660", GROUP="SecuGen"

ATTRS{idVendor}=="1162", ATTRS{idProduct}=="2200", SYMLINK+="input/u20-%k", MODE="0660", GROUP="SecuGen"

ATTRS{idVendor}=="1162", ATTRS{idProduct}=="2201", SYMLINK+="input/upx-%k", MODE="0660", GROUP="SecuGen"

ATTRS{idVendor}=="1162", ATTRS{idProduct}=="2203", SYMLINK+="input/u10-%k", MODE="0660", GROUP="SecuGen"

KERNEL=="uinput", MODE="0660", GROUP="SecuGen"

1. After you have saved and closed the file above, type reboot at the prompt to restart the computer.

**Driver Installation:**

After the computer has rebooted, use the up arrow key to reuse the command that you used above to open the linux3 folder

1. At the command prompt, copy and paste cp libjnisgfplib.so.3.8.5.fdu03\_rename libjnisgfplib.so.3.8.5 and execute the command
2. Copy and paste make uninstall install on the command prompt and execute
3. Copy the command below and execute at the command prompt

sudo cp libsgfdu07.so.1.0.0 /usr/lib

sudo cp libsgfdu06.so.1.0.0 /usr/lib

sudo cp libsgfdu05.so.1.0.2 /usr/lib

sudo cp libsgfdu04.so.1.0.4 /usr/lib

sudo cp libsgfdu03.so.2.0.7 /usr/lib

sudo cp libsgfplib.so.3.8.5 /usr/lib

sudo cp libsgfpamx.so.3.5.2 /usr/lib

sudo cp libjnisgfplib.so.3.8.5 /usr/lib

sudo cp libpysgfplib.so.1.0.1 /usr/lib

sudo cp libsgnfiq.so.1.0.0 /usr/lib

sudo cp libsgimage.so.1.0.0 /usr/lib

sudo cp libnxsdk.so /usr/lib

sudo cp sgfdu05mlp.dat /usr/lib

sudo /sbin/ldconfig /usr/lib

1. After you have executed the query above, change directory from Linux3 to the root using the cd
2. Run the command sudo chmod 777 /opt // copy, paste and execute
3. Run the command sudo chmod 777 /etc/systemd/system // copy, paste and execute
4. Run the command sudo groupadd -r biometricapp -// copy, paste and execute
5. Copy the nmrs-deploy from the systemtemp/FOLDEER/nmrs-deploy folder and paste it in the opt folder under computer folder
6. Open the Aplication file under /opt/nmrs-deploy/config/application and configure the following

* Replace the database username with openmrs
* Replace the openmrs username with openmrs,
* Replace the password with openmrs password that is found in the Runtime Properties file located in OpenMRS folder.
* Replace the app.dbport from 3306 to 3316,

(Use the Enterprise DB login details here)

1. Copy the nmrs-biometric.service file from the installation folder systemtemp/FOLDER/nmrs-biometric.service' and paste in folder '/etc/systemd/system' under the computer folder.
2. Open the nmrs-biometric.service file in (/etc/systemd/system) and rename the user with the computer name
3. Run the command sudo chown -R biometricuser:biometricapp /opt/nmrs-deploy/ // copy command and paste, then change the name 'biometricuser' to the computer name and execute
4. Copy and paste sudo systemctl daemon-reload // execute pasted command
5. Copy and paste sudo systemctl start nmrs-biometric.service // execute pasted command
6. Copy and paste sudo systemctl enable nmrs-biometric.service // execute pasted command
7. Copy and paste systemctl status nmrs-biometric.service // execute pasted command to determine the status of your installation.

**Cockpit Installation:**

1. At Ubuntu command prompt, type **sudo apt install cockpit** and execute
2. After installation, you run cockpit by typing localhost:9090 and execute
3. Enter login detail (use computer login detail)
4. If you successfully login to cockpit, choose service
5. Next you choose NMRS Biometrics Services
6. At top right screen you will see options either to stop, restart, etc.