COMMUNICATIONS
APPLICATION GROUP

Slevin's Guide to Setting up FreeTAKServer

(Confirmed working as of 3/28/2024) by @Slevin

- Flash SD card with Ubuntu 22.04.4 LTS (64-BIT)
- Boot up and run updates:
  - sudo apt-get update
  - sudo apt-get upgrade
- Reboot
  - My system had another update available:
  - sudo apt full-upgrade
- Reboot
- If your system is slow to boot up because of scanning for networks, edit this:
  - For RPI: sudo nano /etc/netplan/50-cloud-init.yaml
  - For regular PC: sudo nano /etc/netplan/00-installer-config.yaml
  - Comment out "optional: true" in netplan
- **OPTIONAL STEP IF YOU'RE PLANNING ON USING ZEROTIER**
  - Install ZeroTier client (if desired):

    curl -s https://install.zerotier.com | sudo bash

    sudo systemctl enable zerotier-one

    sudo zerotier-cli join YOUR ZT NETWORK ID

- Reboot and run the FTS ZeroTouch Installer (ZTI):
  - This command is for inserting a custom IP address into the install routine:
  - wget -qO - bit.ly/freetakhub2 | sudo bash -s -- --ip-addr 123.45.678.910
- Reboot and check for any updates:
  - sudo apt-get update
  - sudo apt-get upgrade
  - On my system there was an update for Ansible
- Reboot and check to see if FTS is running:
  - sudo systemctl status fts
  - sudo systemctl status fts-ui
  - On my system both were loaded but inactive (dead)
    - Check the RPi Restart policy for FTS:

            - sudo systemctl cat fts.service
        - Check that the FTS service is enabled:
            - sudo systemctl is-enabled fts.service
- If you had service startup errors and need to check the FTS service error log, go here:
    - /var/log/fts/fts-stderr.log
- Otherwise, restart the FTS services manually:
    - sudo systemctl start fts
    - sudo systemctl start fts-ui
- Check the **config.py** file (FTS-UI system configuration file) to see if your system's IP address is correct. There are three places: IP, APPIP and WEBMAPIP. The file is located here:
    - sudo nano /root/fts.venv/lib/python3.11/site-packages/FreeTAKServer-UI/config.py
- Check the **mainconfig.py** file (FTS-UI main
    - sudo nano /root/fts.venv/lib/python3.11/site-packages/FreeTAKServer/core/configuration/MainConfig.py
        - For QR code error, edit line 380:
        - Replace the line with this:
            - config_file = str(os.environ.get('FTS_CONFIG_PATH', MainConfig._defaults["yaml_path"]["default"]))
- If you are not able to edit the file due to permissions violation, you can do the following:
    - Change permissions for the folder containing the config file: /root/
        - sudo su -
        - chmod -R 777 /root/
- Go to Node-RED in a web browser:
    - IP address:1880
    - Do you have errors? If yes, reinstall Node-RED
- To reinstall Node-RED, go to your CLI:
    - Reinstall Node-RED, upgrading to version 20:
        - bash <(curl -sL https://raw.githubusercontent.com/node-red/linux-installers/master/deb/update-nodejs-and-nodered) --node20
    - Enable Node-RED service:
        - sudo systemctl enable nodered.service
    - Start Node-RED service:
        - sudo systemctl start nodered.service
    - Check Node-RED service status:
        - sudo systemctl status nodered.service
        - sudo systemctl is-enabled nodered.service
        - sudo systemctl cat nodered.service
- Log back into Node-Red from web browser:
    - Click Hamburger menu right upper corner and select Manage palette
    - Select install and search for "node-red-contrib-web-worldmap" and click install
    - When complete, click on Deploy or "restart flows" and it should complete without errors
    - Double click on FTH Config:
        - Add your IP address to FTH_FTS_URL and FTH_FTS_VIDEO_URL

        - Click Done button
        - May need to restart flows
- At this point you should have a working WebMap in the FTS Web-UI
- To adjust your timezone:
    - SSH to your server, and from the CLI:
    - Find your timezone:
        - timedatectl list-timezones
    - Update your timezone:
        - sudo timedatectl set-timezone [your time zone]
        - Example: sudo timedatectl set-timezone America/Los_Angeles

QR code fix

*Issue: FTSConfig.yaml file is in the incorrect location. On RPi file was here: /opt/FTSConfig.yaml when it should be here: /opt/fts/FTSConfig.yaml

Contents were also incorrect and can be replaced entirely with this:

Edit FTSConfig.yaml and replace contents with this:

Addresses:

FTS_DP_ADDRESS: ip

FTS_USER_ADDRESS: ip

FileSystem:

FTS_DB_PATH: /opt/fts/FTSDataBase.db

FTS_MAINPATH: /root/fts.venv/lib/python3.11/site-packages/FreeTAKServer

FTS_LOGFILE_PATH: /opt/fts/Logs

System:

FTS_NODE_ID: pa0q8zakeh7q39v77elklp39ajbr3922

FTS_CONNECTION_MESSAGE: This is a new message from the yaml

Notes:

export FTS_CONFIG_PATH

FTS_CONFIG_PATH="/opt/FTSConfig.yaml"

sudo cp /opt/FTSConfig.yaml /opt/fts/FTSConfig.yaml

sudo /root/fts.venv/bin/python3 -m FreeTAKServer.controllers.services.FTS

sudo nano /opt/fts/FTSConfig.yaml

sudo nano user_management_blueprint.py

systemctl cat fts.service

If you are running a desktop system and you see this issue, you should run:

$ systemctl disable --now systemd-networkd.service

This will disable systemd-networkd and associated units, including systemd-networkd-wait-online.service. NetworkManager and systemd-networkd should not be running at the same time. On desktop, NetworkManager is the default network stack.