**KubeEdge – edge core installation on Raspberry Pi 4b**

1. Flush OS on Raspberry Pi with Ubuntu Server 20.04.02 LTS

* Need to use a SD card smaller than 32GB in size, larger SD card will not be able to format and write the OS on it
* Use Raspberry Pi imager to write Ubuntu server on the SD card
* Configure wifi networking following this page:

<https://ubuntu.com/tutorials/how-to-install-ubuntu-on-your-raspberry-pi#3-wifi-or-ethernet>

1. Install edge core on the Pi:
2. To install Ubuntu 20.04 server on Raspberry pi, follow this page:

<https://ubuntu.com/download/raspberry-pi>

1. To setup wifi connection, follow this page:

<https://raspberrypi.stackexchange.com/questions/111722/rpi-4-running-ubuntu-server-20-04-cant-connect-to-wifi>

1. Setup root login, add password, and install all edge core libraries – follow the KE install GCP document.
2. From home network, add port forwarding to Pi’s local IP 192.168.1.160 (this could change) with port 22:22
3. Install go by downloading from here (arm version only):

$ wget <https://golang.org/dl/go1.16.linux-arm64.tar.gz>

1. Cgroup issue on start:

<https://ubuntu.com/tutorials/how-to-kubernetes-cluster-on-raspberry-pi#4-installing-microk8s>

1. Install motion for video streaming through RPi’s camera

On Cloud Core:

1. Create certificates and keys, and copy to edge node

$ cd $GOPATH/src/github.com/kubeedge/kubeedge/build/tools

$ ./certgen.sh genCertAndKey edge

$ scp -r /etc/kubeedge/certs root@173.22.148.144:/etc/kubeedge/

$ scp -r /etc/kubeedge/ca root@173.22.148.144:/etc/kubeedge/

1. Keadm init with public IP:

$ keadm init --advertise-address=35.202.129.137 --kubeedge-version=1.5.0 --kube-config=/root/.kube/config