

# RANPM INSTLLATION DOCUMENT

First install docker:

- `sudo apt update`
- `sudo apt install apt-transport-https ca-certificates curl software-properties-common`
- `curl -fsSL https://download.docker.com/linux/ubuntu/gpg | sudo gpg --dearmor -o /usr/share/keyrings/docker-archive-keyring.gpg`
- `echo "deb [arch=$(dpkg --print-architecture) signed-by=/usr/share/keyrings/docker-archive-keyring.gpg] https://download.docker.com/linux/ubuntu $(lsb_release -cs) stable" | sudo tee /etc/apt/sources.list.d/docker.list > /dev/null`
- `sudo apt update`
- `sudo apt install docker-ce docker-ce-cli containerd.io`
- `sudo systemctl start docker`
- `sudo systemctl enable docker`

Second install docker-compose:

- `sudo curl -L "https://github.com/docker/compose/releases/latest/download/docker-compose-$(uname -s)-$(uname -m)" -o /usr/local/bin/docker-compose`
- `sudo chmod +x /usr/local/bin/docker-compose`
- `docker-compose --version`

Third install other prerequisites:

- `Helm, jq, openssl`
- `curl https://baltocdn.com/helm/signing.asc | gpg --dearmor | sudo tee /usr/share/keyrings/helm.gpg > /dev/null`
- `sudo apt-get install apt-transport-https --yes`
- `echo "deb [arch=$(dpkg --print-architecture) signed-by=/usr/share/keyrings/helm.gpg] https://baltocdn.com/helm/stable/debian/ all main" | sudo tee /etc/apt/sources.list.d/helm-stable-debian.list`
- `sudo apt-get update`
- `sudo apt-get install helm jq openssl`
- `# For Keytool (Install java)`
- `sudo apt install openjdk-21-jre-headless`
- `# Confirm the installations`
- `type openssl helm jq envsubst keytool`

Fourth clone ranpm file:

- `git clone "https://gerrit.o-ran-sc.org/r/nonrtric/plr/ranpm" && (cd "ranpm" && mkdir -p `git rev-parse --git-dir`/hooks/ && curl -Lo `git rev-parse --git-dir`/hooks/commit-msg https://gerrit.o-ran-sc.org/r/tools/hooks/commit-msg && chmod +x `git rev-parse --git-dir`/hooks/commit-msg)`

Fifth :

Build Https server:

- `cd ranpm/https-server`
- `./build.sh no-push`

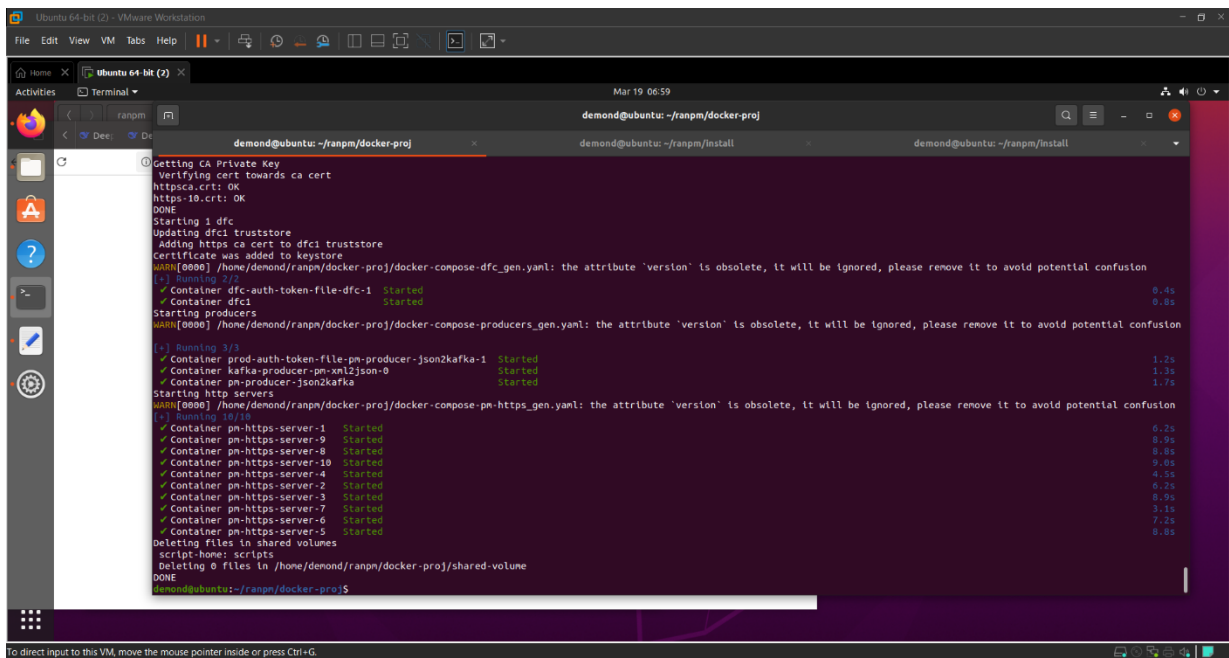
Build PM rApp

- `cd ranpm/pm-rapp`
- `./build.sh no-push`

Sixth:

- `cd ranpm/docker-proj`
- `sudo ./docker-setup.sh`

#It takes time to download images and starting containers at the end it should look like this:



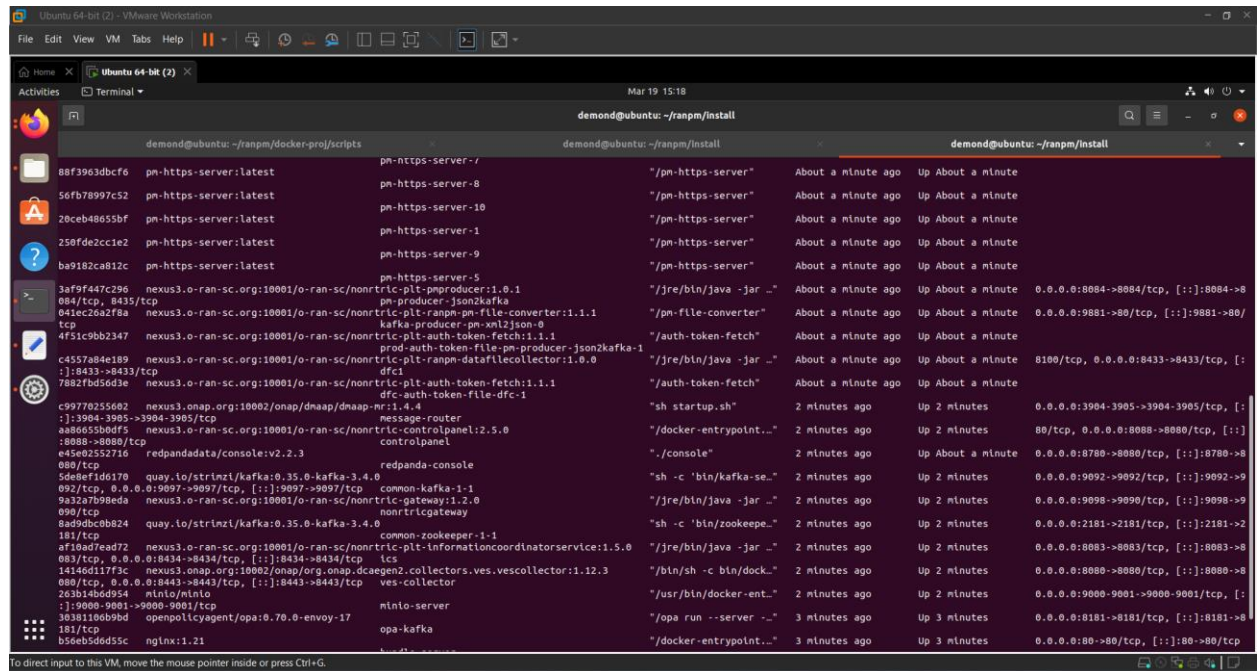
```
demond@ubuntu: ~/ranpm/docker-proj
Getting CA Private Key
Verifying cert towards ca cert
httpsca.crt: OK
https-10.crt: OK
DONE
Starting 1 dfc
Updating dfc1 truststore
Adding https ca cert to dfc1 truststore
Certificate was added to keystore
[warn][0000] /home/demond/ranpm/docker-proj/docker-compose-dfc_gen.yaml: the attribute 'version' is obsolete, it will be ignored, please remove it to avoid potential confusion
[+] Running 2/2
  Container dfc-auth-token-file-dfc-1 Started 0.4s
  Container dfc1 Started 0.8s
Starting producers
[warn][0000] /home/demond/ranpm/docker-proj/docker-compose-producers_gen.yaml: the attribute 'version' is obsolete, it will be ignored, please remove it to avoid potential confusion
[+] Running 3/3
  Container prod-auth-token-file-pn-producer-json2kafka-1 Started 1.2s
  Container kafka-producer-pn-sml2json-0 Started 1.3s
  Container pn-producer-json2kafka Started 1.7s
Starting http servers
[warn][0000] /home/demond/ranpm/docker-proj/docker-compose-pn-https_gen.yaml: the attribute 'version' is obsolete, it will be ignored, please remove it to avoid potential confusion
[+] Running 10/10
  Container pn-https-server-1 Started 6.2s
  Container pn-https-server-9 Started 8.9s
  Container pn-https-server-8 Started 8.8s
  Container pn-https-server-10 Started 9.8s
  Container pn-https-server-4 Started 4.5s
  Container pn-https-server-2 Started 6.2s
  Container pn-https-server-3 Started 8.9s
  Container pn-https-server-7 Started 3.1s
  Container pn-https-server-6 Started 7.2s
  Container pn-https-server-5 Started 8.8s
Deleting files in shared volumes
script-home: scripts
Deleting 0 files in /home/demond/ranpm/docker-proj/shared-volume
DONE
demond@ubuntu: ~/ranpm/docker-proj$
```

#After that run the influxdb :

- cd ranpm/docker-proj
- sudo ./pmlog-setup.sh

#After successfully running check for the running container

- sudo docker ps -a



# The running containers show the port for each container, most important ports:

- Redpandas → 8780
- Influxdb → 8086
- Control-panel → 8088
- Keycloak → 8462
- Vescollector → 8080
- Minio → 9001

# To make a topic to view on redpandas which is the GUI of kafka server run the following commands:

- cd /ranpm/docker-proj/scripts
- sudo ./push-to-file-ready-topic.sh 1 2 3 4 5 #these numbers refers to <node-count> <num-of-events> <node-name-base> <file-extension> <num-servers>#
- sudo ./push-to-file-ready-topic.sh 1 2 3 4 5

#after running all of these go to the localhost of redpandas to view the topics :

Cluster > Topics

5 Total Topics 5 Total Partitions

Create Topic

Show internal topics

Name	Partitions	Replicas	CleanupPolicy	Size
collected-file	1	1	delete	1.68 KiB
file-ready	1	1	delete	3.23 KiB
json-file-ready-kp	1	1	delete	607 B
json-file-ready-kpadp	1	1	delete	668 B
pmreports	1	1	delete	4.61 KiB

Total 5 items < 1 > 50 / page

Redpanda Console (Platform Version v23.3) (built March 22, 2023) B887CD4

Example of files in topics :

localhost:8080/topics/collected-file?ps=1&s=50&ow=1#messages

Key Value Headers

12 items

```
{
  "productName": "RnNode",
  "vendorName": "Ericsson",
  "lastEpochMicrosec": 1742421166000000,
  "sourceName": "3-0",
  "startEpochMicrosec": 1742420826600000,
  "timeZoneOffset": "UTC+0100",
  "compression": "gzip",
  "fileFormatType": "org_3GPP_32_435#measCollect",
  "fileFormatVersion": "V10",
  "name": "3-0/A20250319_2137-0200-2352-0200_3-0-0-4",
  "changeIdentifier": "PM_MEAS_FILES",
  "objectStoreBucket": "rofiles"
}
```

0 0 3/19/2025, 3:37:49 PM [{"productName": "RnNode", "vendorName": "Ericsson", "lastEpochMicrosec": 1742422066000000, "sourceName": "3-0-"}]

Key	Value	Headers	Compression	Transactional
None (0 B)	Json (380 B)	1	uncompressed	false

Key Value Headers

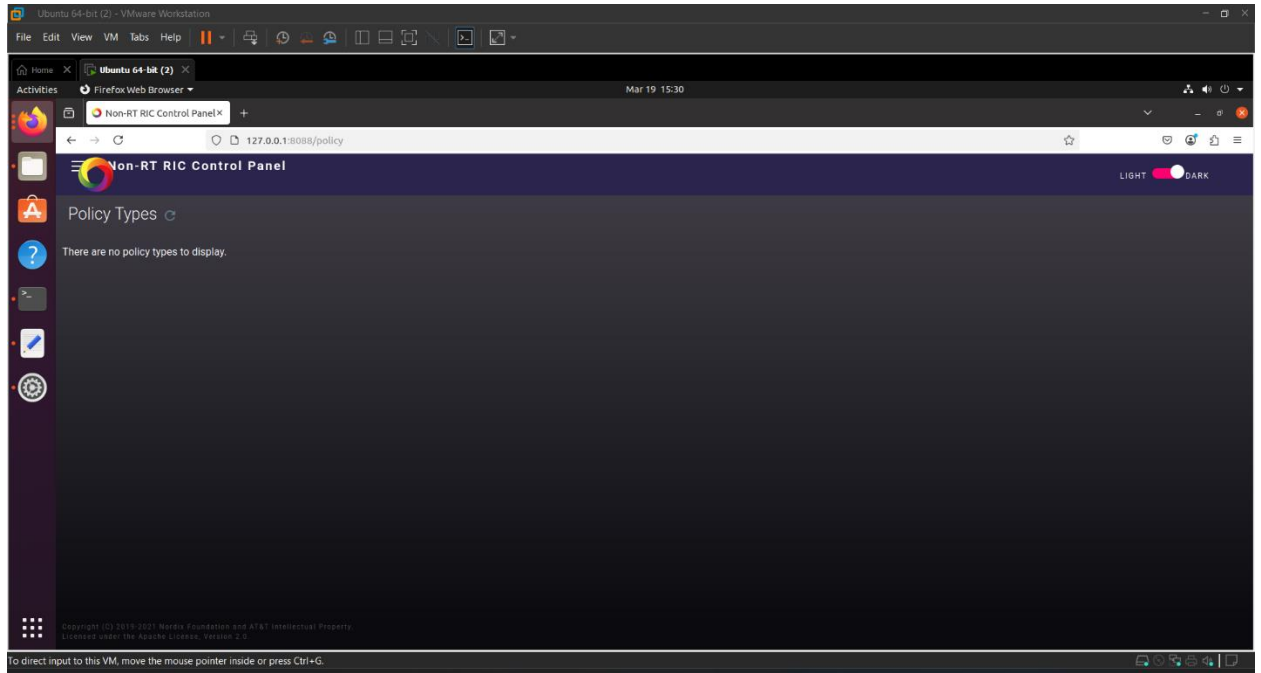
12 items

```
{
  "productName": "RnNode",
  "vendorName": "Ericsson",
  "lastEpochMicrosec": 1742420866000000,
  "sourceName": "3-0",
  "startEpochMicrosec": 1742421166000000,
  "timeZoneOffset": "UTC+0100",
  "compression": "gzip",
  "fileFormatType": "org_3GPP_32_435#measCollect",
  "fileFormatVersion": "V10",
  "name": "3-0/A20250319_2152-0200-2207-0200_3-0-1-4",
  "changeIdentifier": "PM_MEAS_FILES",
  "objectStoreBucket": "rofiles"
}
```

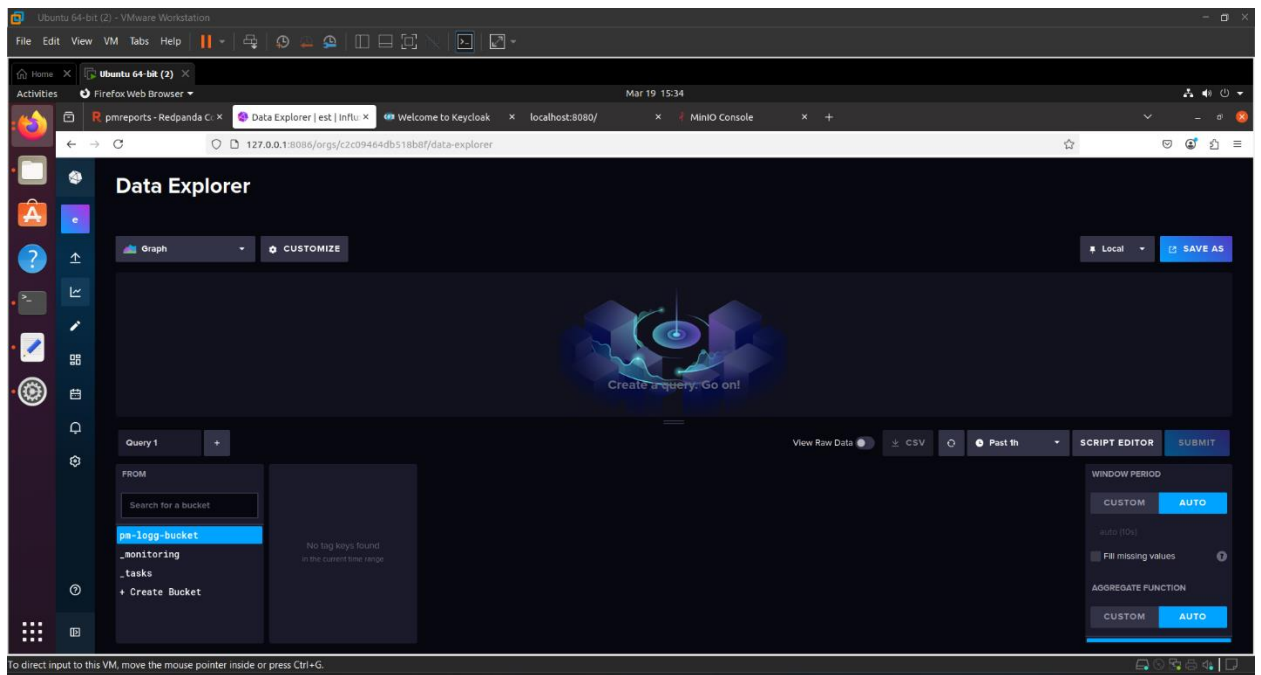
Total 2 items < 1 > 20 / page

# you can access different containers now to view the project:

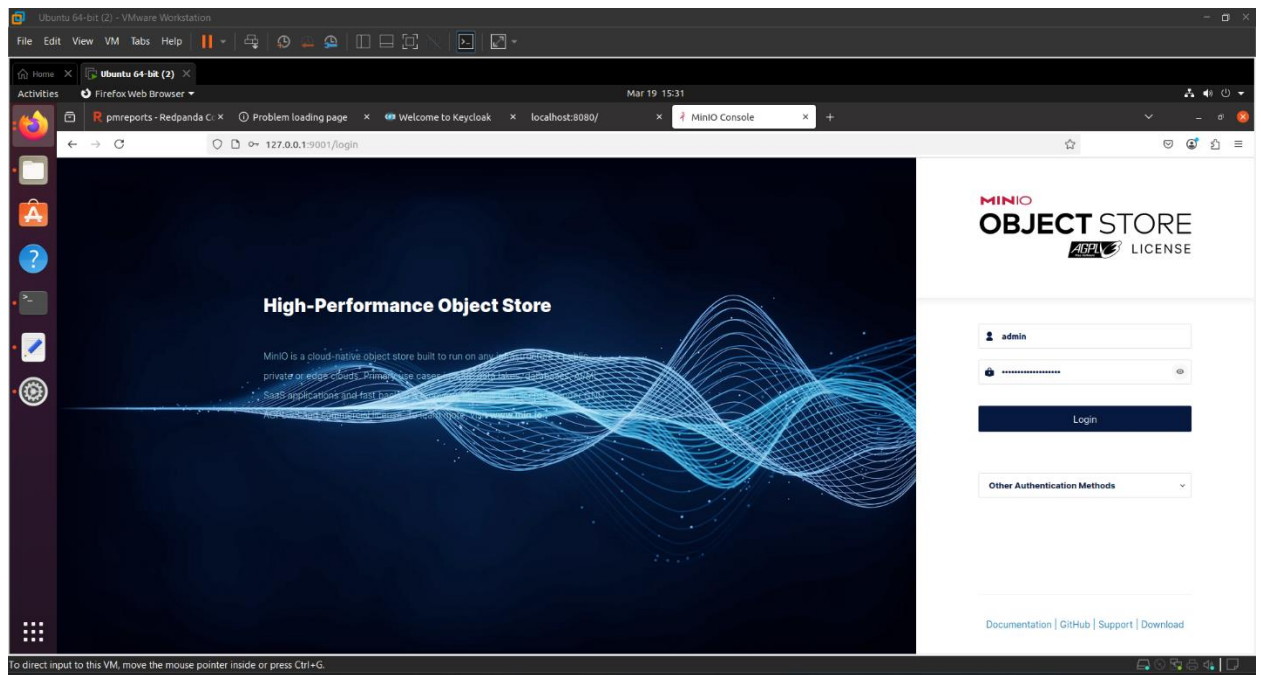
- control pannel :



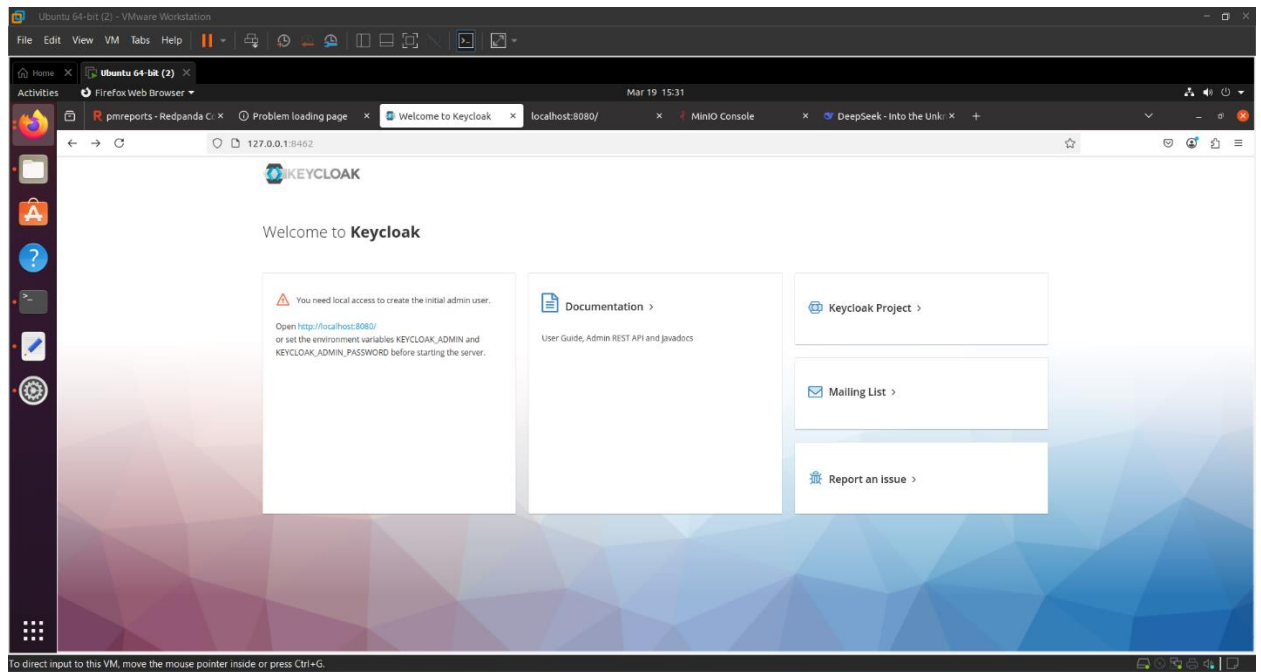
- influxdb:



- minio:



- keycloak:



- VEScollector:

