Examples:

- https://github.com/o-ran-sc/nonrtric
- https://github.com/o-ran-sc/nonrtric-plt-rappmanager/tree/master/sample-rapp-generator/es-demo-rapp
- https://github.com/o-ran-sc/nonrtric-rapp-healthcheck

Some Notes:

- **Policy Data:** https://docs.o-ran-sc.org/projects/o-ran-sc-nonrtric-plt-a1policymanagementservice/en/latest/offeredapis/pms-api/index.html

- Use kubectl -n istio-nonrtric port-forward svc/policy-agent 18081:8081 to port forward swagger docs, view them here http://localhost:18081/swagger-ui/index.html#/Service%20Registry%20and%20Supervision/putService
    - This is to get the policy PUT and GET request formats
- Running commands inside specific pods
    - # namespace (change if yours differs)
    - NS=istio-nonrtric
    -
    - # grab the toolbox pod name (label app=toolbox from earlier)
    - POD=$(kubectl -n "$NS" get pod -l app=toolbox -o jsonpath='{.items[0].metadata.name}')
    -
    - # run both curls inside that pod
    - kubectl -n "$NS" exec -it "$POD" -- sh -lc '
    - echo "== services ==";
    - curl -s http://policy-agent:8081/a1-policy/v2/services; echo;
    -
    - echo "== policy-instances ==";
    - curl -s http://policy-agent:8081/a1-policy/v2/policy-instances; echo;
    - '
- **Exec into a specific pod**
    - `kubectl -n <namespace> exec -it <pod-name> -- <command and args>`
- **Find a pod by label**

```
kubectl -n <ns> get pod -l <key>=<value>
# First pod with that label:
POD=$(kubectl -n <ns> get pod -l app=myapp -o
jsonpath='{.items[0].metadata.name}')
kubectl -n <ns> exec -it "$POD" -- sh
```

- **Handy basics**
  - `# list pods (wide = show IP/node)`
  - `kubectl -n <ns> get pods -o wide`
  -
  - `# follow logs`
  - `kubectl -n <ns> logs -f <pod>`
  - `kubectl -n <ns> logs -f <pod> -c <container>   # multi-container pod`
  -
  - `# port-forward to your laptop (exposes a service locally)`
  - `kubectl -n <ns> port-forward svc/<service> 8080:8080`

Site Docs:
https://lf-o-ran-sc.atlassian.net/wiki/spaces/RICNR/pages/86802677/Release+K+-+Run+in+Docker
https://github.com/o-ran-sc/nonrtric
https://github.com/o-ran-sc/nonrtric-plt-rappmanager/tree/master
https://lf-o-ran-sc.atlassian.net/wiki/spaces/OAM/pages/14680087/OAM+Architecture

Useful Docs:
https://lf-o-ran-sc.atlassian.net/wiki/spaces/OAM/pages/14680148/NETCONF+YANG

Setup Docs (Used Ubuntu 24.04.1 on Windows):

A1 Setup:

Create New Repo:
mkdir nonrtric-docker && cd nonrtric-docker

Create application_configuration.json:
nano application_configuration.json

Paste Json:

```
{
  "config": {
    "ric": [
      {
        "name": "ric1",
        "baseUrl": "http://host.docker.internal:8085/",
        "managedElementIds": ["kista_1", "kista_2"]
```

```
    }
   ]
  }
}
```

Create a1-simulators.yaml:
nano a1-simulators.yaml

Paste:

```
version: '3'
services:
  ric1:
    image: nexus3.o-ran-sc.org:10004/o-ran-sc/a1-sim-std:1.1.3
    container_name: ric1
    networks:
      - nonrtric-docker-net
    ports:
      - "8085:8085"

networks:
  nonrtric-docker-net:
    external: true
```

Get Image:
https://nexus3.o-ran-sc.org/#browse/browse:docker.release:v2%2Fo-ran-sc%2Fnonrtric-plt-a1policymanagementservice%2Ftags%2F2.9.0

OR pull image:
docker pull
nexus3.o-ran-sc.org:10004/o-ran-sc/nonrtric-plt-a1policymanagementservice:2.9.0

Run Image:
docker run --rm -v <REPLACE_WITH_PATH>/application_configuration.json -p 8081:8081 -p 8433:8433 --network=nonrtric-docker-net --name=policy-agent-container
nexus3.o-ran-sc.org:10004/o-ran-sc/nonrtric-plt-a1policymanagementservice:2.9.0

Start Simulator:
docker run --rm --network=nonrtric-docker-net -p 8085:8085 -p 8185:8185 -e A1_VERSION=OSC_2.1.0 -e ALLOW_HTTP=true --name=ric1
nexus3.o-ran-sc.org:10002/o-ran-sc/a1-simulator:2.8.0

Test With:
curl http://localhost:8081/a1-policy/v2/rics

Should Get Something Like:

{"rics":[{"ric_id":"ric1","managed_element_ids":["kista_1","kista_2"],"state":"AVAILABLE","
policytype_ids":[""]}]}