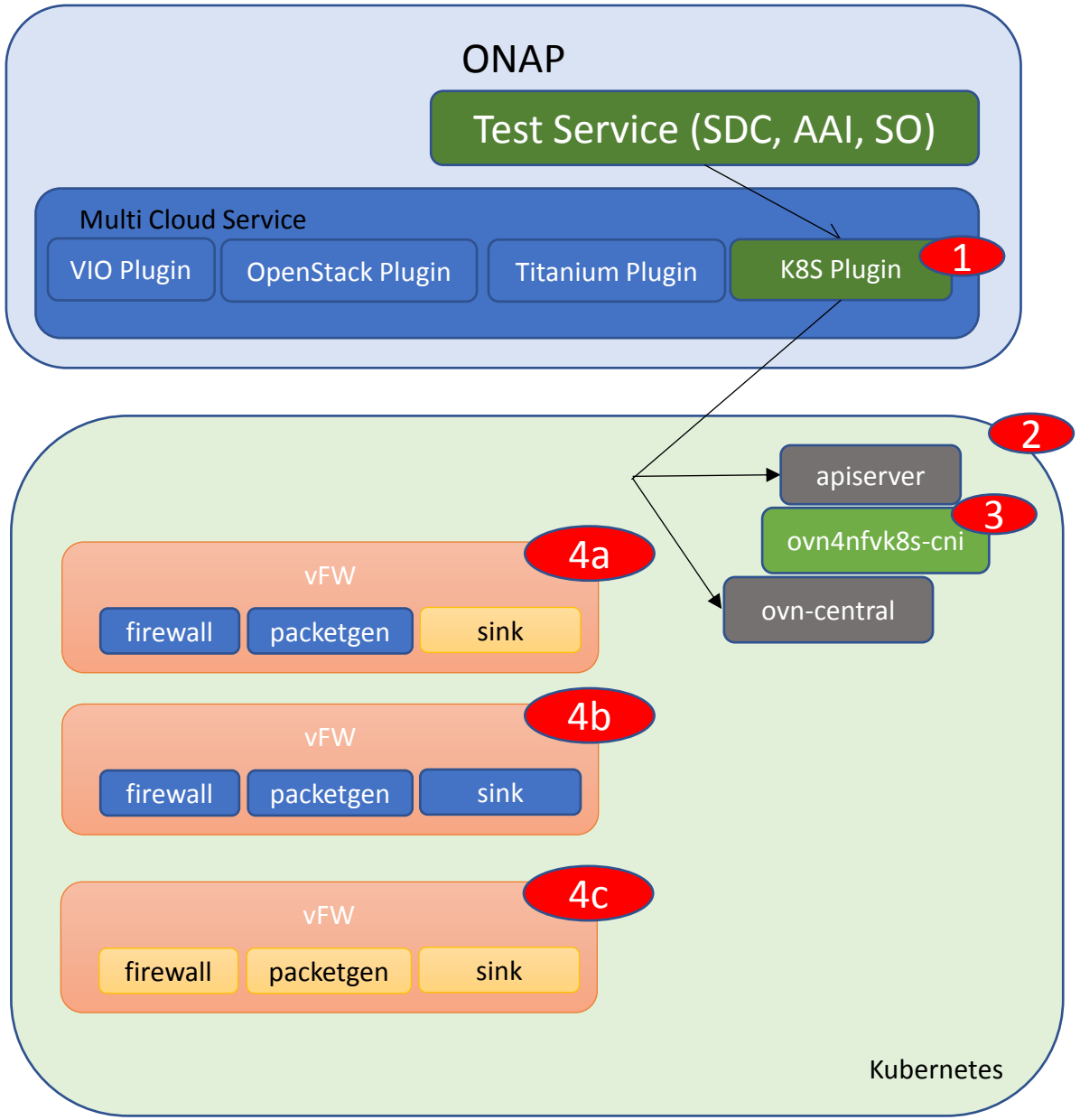
ONAP MultiCloud/K8s Casablanca

Victor Morales

https://about.me/electrocucaracha

Casablanca's Accomplishments



1. MultiCloud/K8S plugin (https://github.com/onap/multicloud-k8s/tree/master/src/k8splugin)
2. Kubernetes Reference Deployment (https://github.com/onap/multicloud-k8s/tree/master/vagrant)
3. OVN4NFVK8S (https://github.com/opnfv/ovn4nfv-k8s-plugin)
4. vFirewall Use case:
   a. Hybrid (https://github.com/onap/multicloud-k8s/blob/master/vagrant/tests/integration_vcFW.sh)
   b. VMs (https://github.com/onap/multicloud-k8s/blob/master/vagrant/tests/integration_vFW.sh)
   c. Containers (https://github.com/onap/multicloud-k8s/blob/master/vagrant/tests/integration_cFW.sh)

MultiCloud/K8S plugin

ONAP Multi-Cloud plugin written in Go programming language which offers an API for interacting with Cloud regions supporting Kubernetes.

Requirements:

- Go 1.11
- Docker
- docker-compose

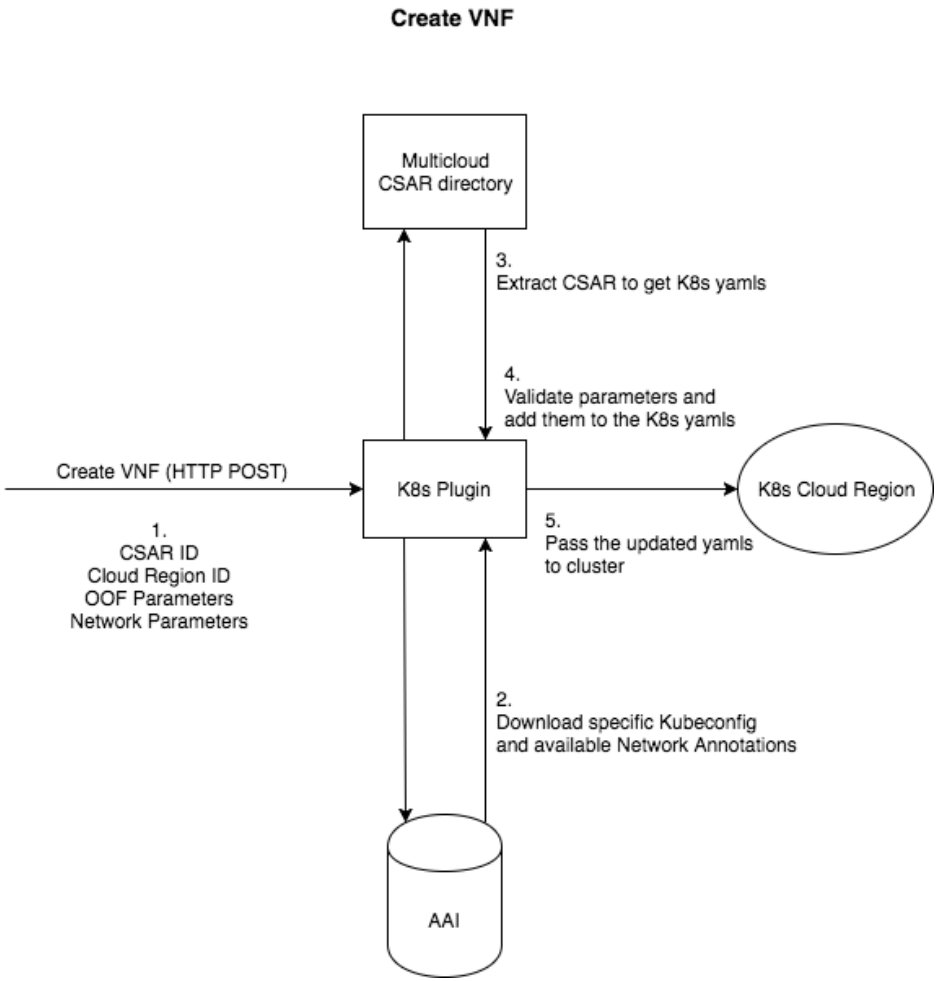
Installation:

```
$ mkdir -p /opt/{kubeconfig,consul/config}
$ cp $HOME/.kube/config /opt/kubeconfig/krd
$ export KUBE_CONFIG_DIR=/opt/kubeconfig
$ git clone https://git.onap.org/multicloud/k8s/
$ cd deployments
$ ./build.sh
$ docker-compose up -d
```

API

POST - /v1/vnf_instances/
GET - /v1/vnf_instances/{cloudRegionID}/{namespace}
DELETE - /v1/vnf_instances/{cloudRegionID}/{namespace}/{externalVNFID}
GET - /v1/vnf_instances/{cloudRegionID}/{namespace}/{externalVNFID}

POST - /v1/vnf_instances/



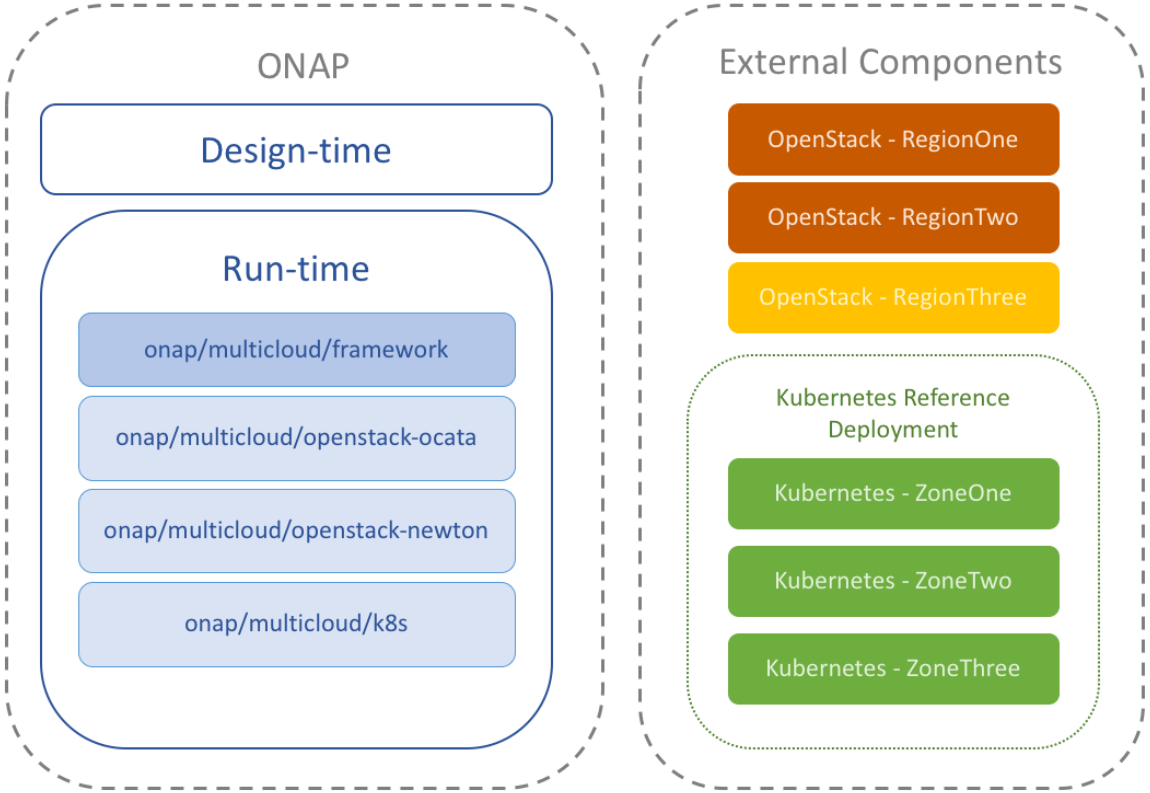
Kubernetes Reference Deployment (KRD)

Offers a reference for deploying a Kubernetes cluster that satisfies the requirements of [ONAP multicloud/k8s plugin]. Its ansible playbooks allow to provision a deployment on Bare-metal or Virtual Machines.

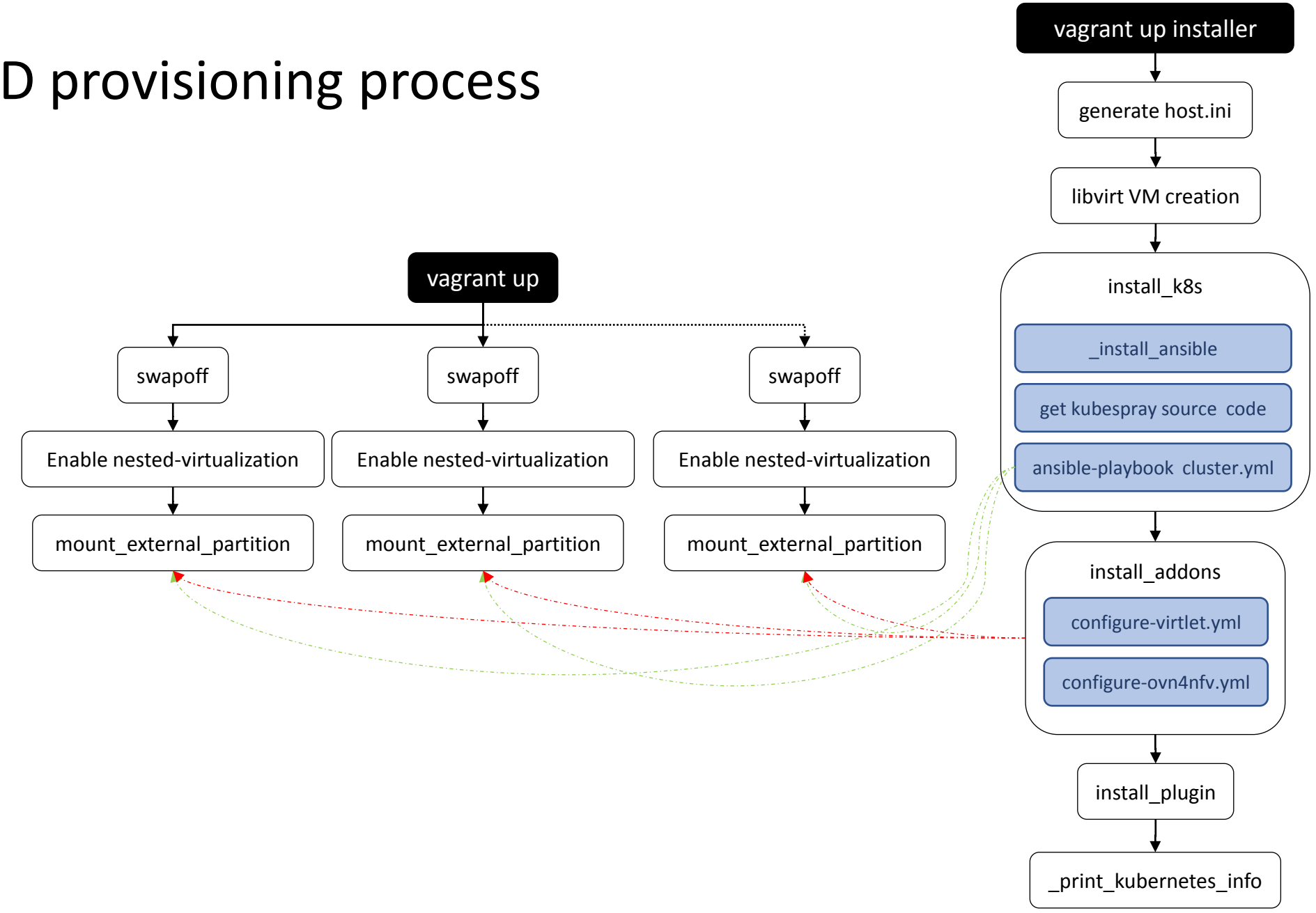
VAGRANT

kubernetes

ANSIBLE



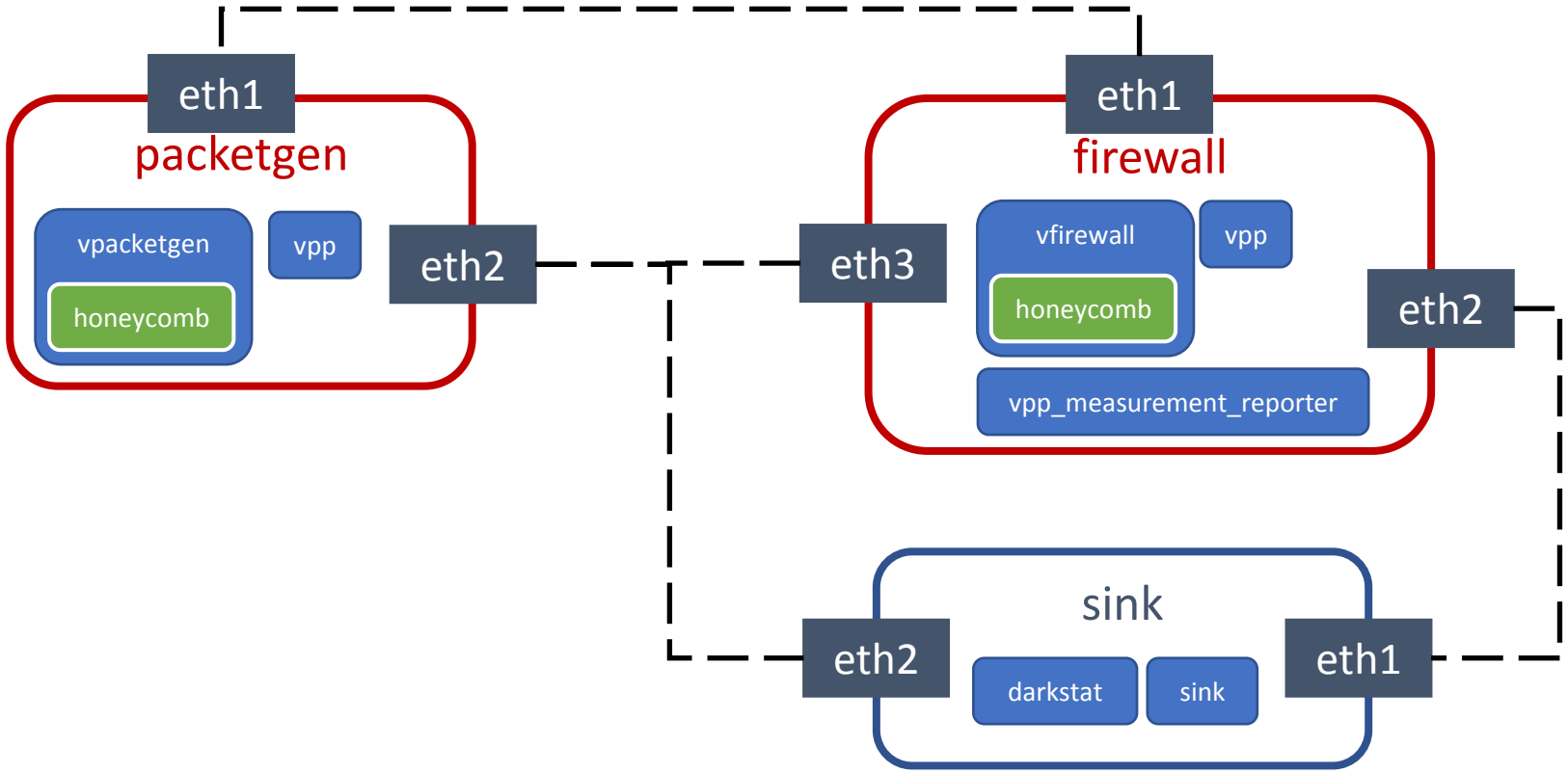
KRD provisioning process



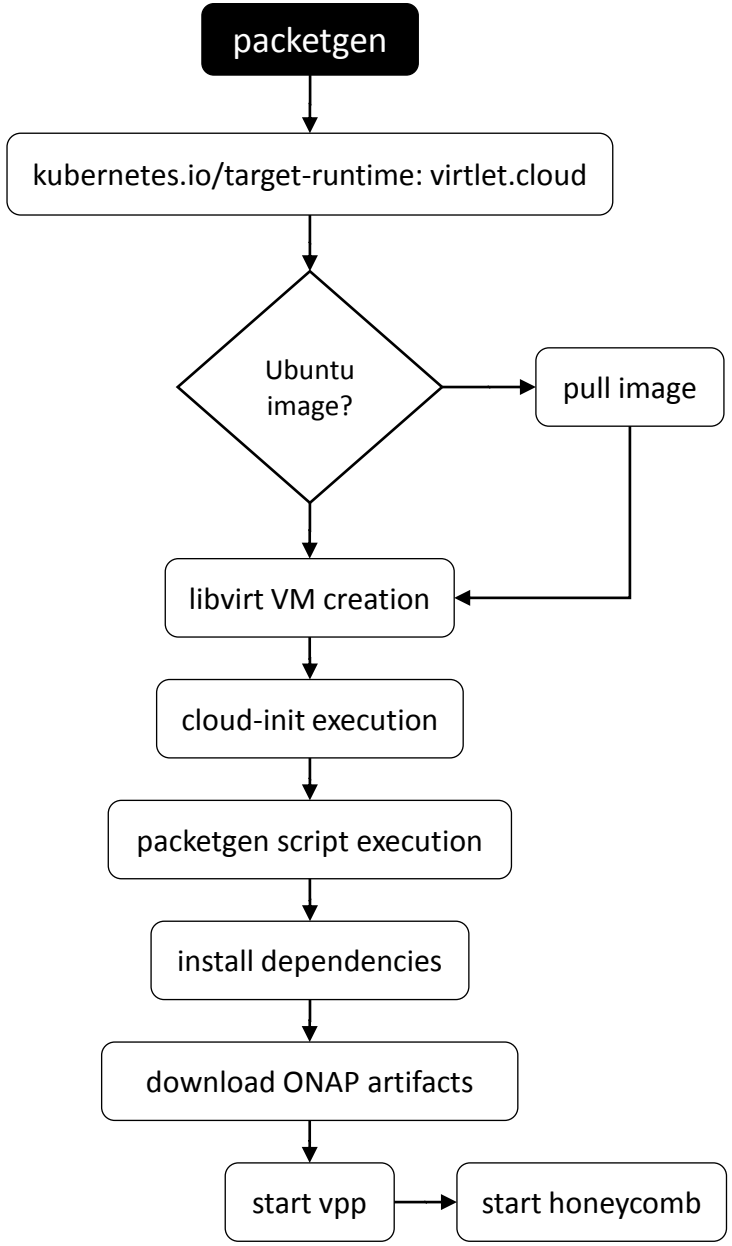
vFirewall ONAP Use Case

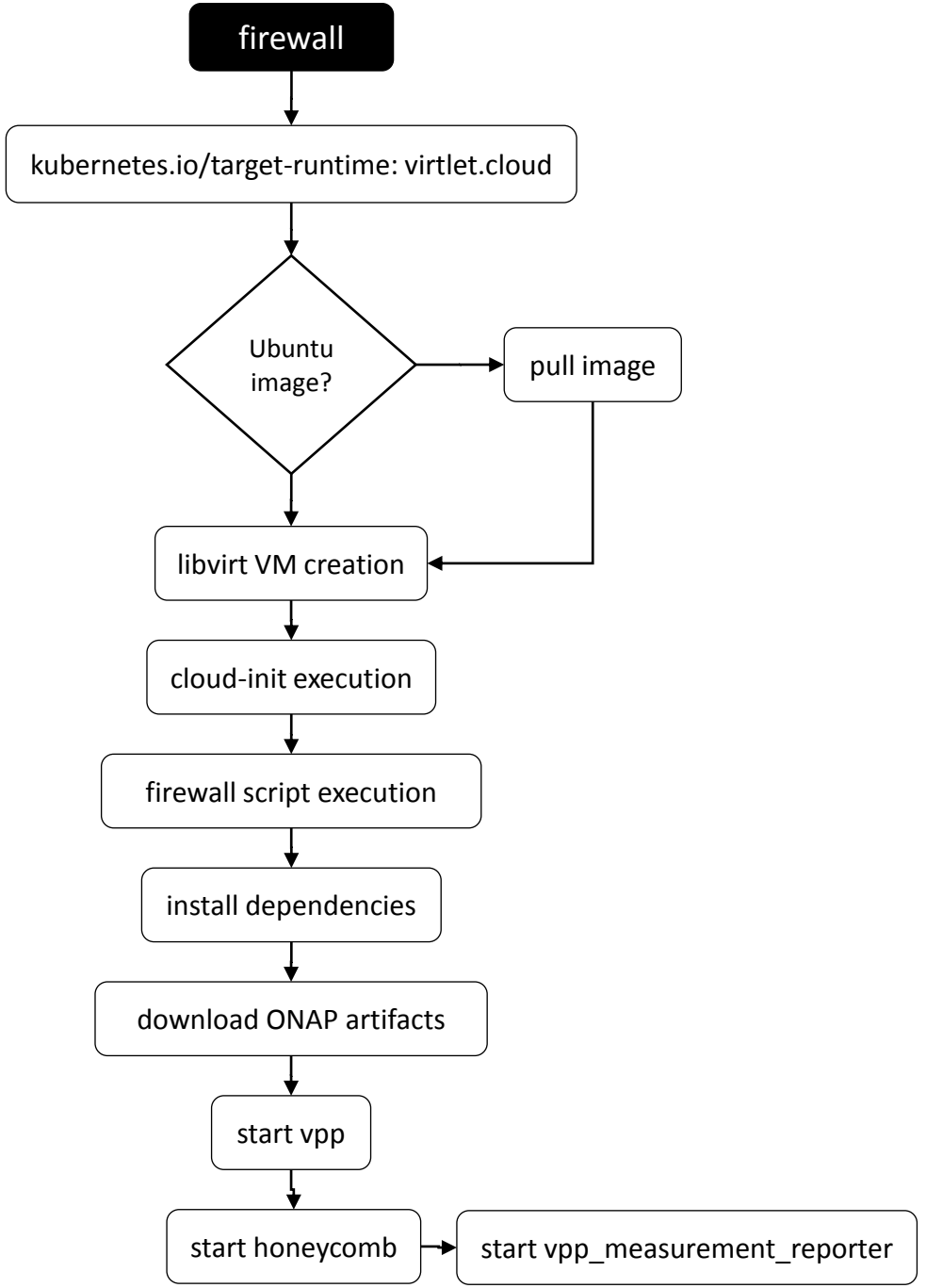
It is composed of three virtual functions (VFs):

- **Packet generator**: Sends packets to the traffic sink through the firewall. This includes a script that periodically generates different volumes of traffic.
- **Firewall**: Reports the volume of traffic passing though to the ONAP DCAE collector.
- **Traffic sink:** Displays the traffic volume that lands at the sink using the link http://192.168.20.250:667 through your browser and enable automatic page refresh by clicking the "Off" button. You can see the traffic volume in the charts.



VMs Provisioning

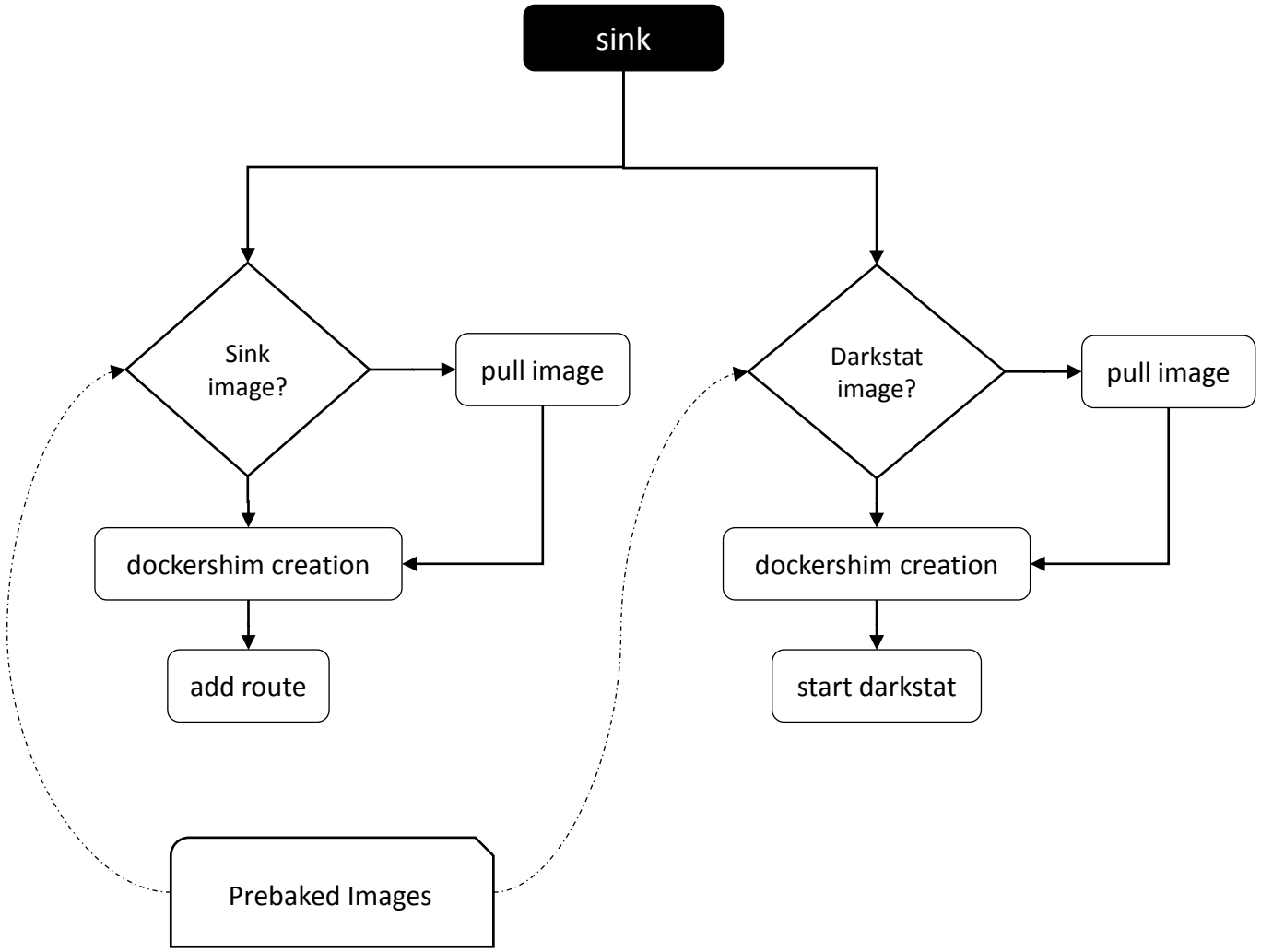




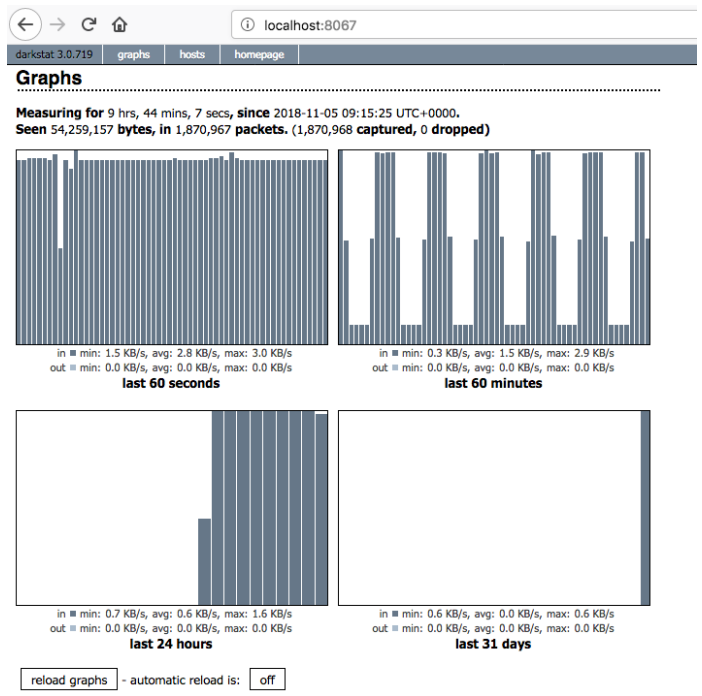
https://github.com/electrocucaracha/vFW-demo

Containers Provisioning

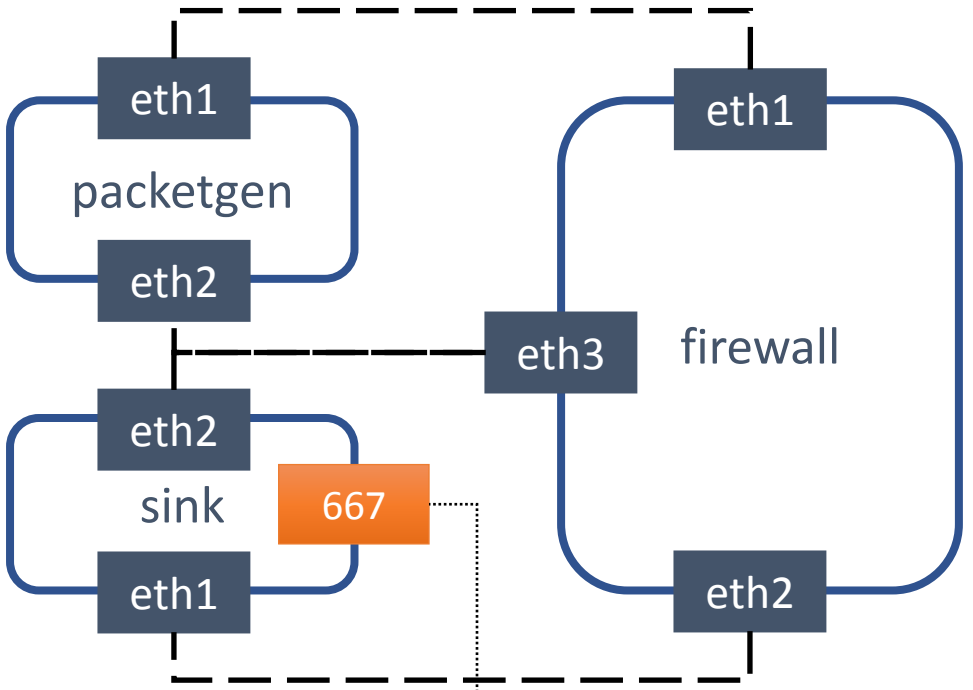
https://github.com/electrocucaracha/cFW-demo



localhost



kubernetes



10.10.10.3 30667

172.25.103.9 8067

x.x.x.x

Q & A