

NOKIA



CONTAINERlab

Running networking labs with Docker User Experience

Roman Dodin

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WHOIS

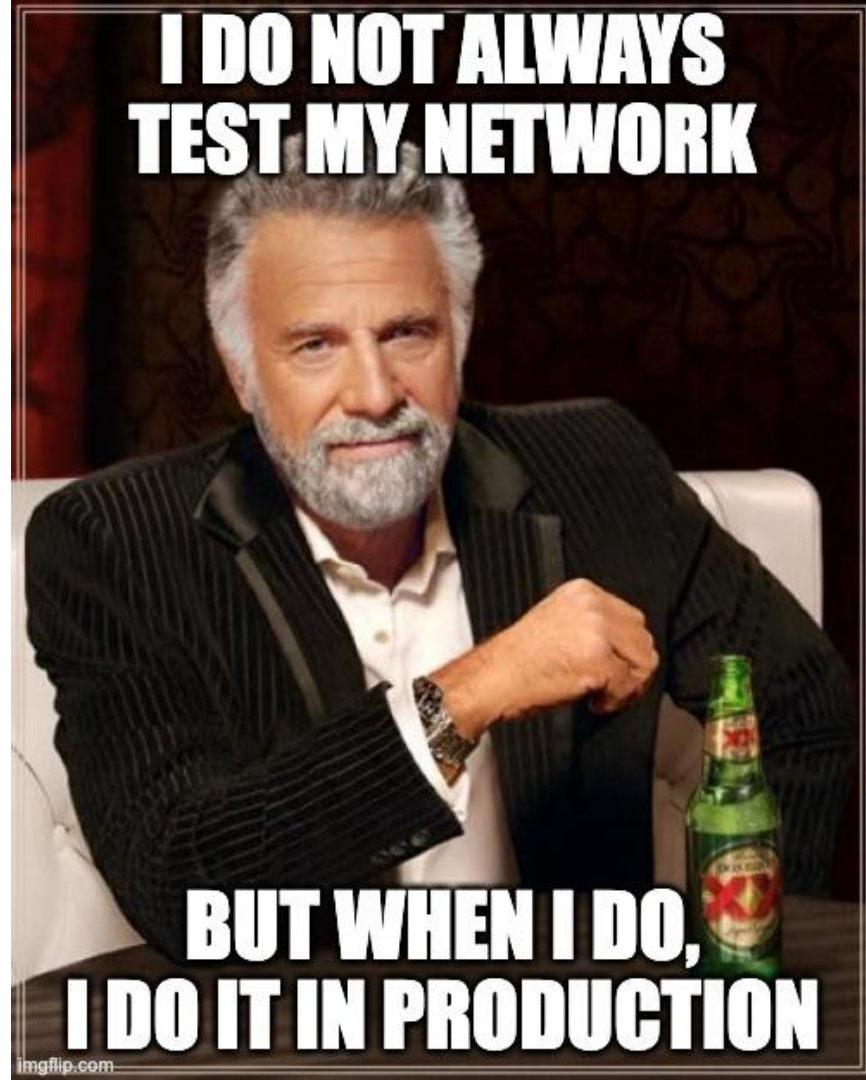
Hey, Je m'appelle Roman

- Product manager by day
- Open-source contributor by night: [containerlab](#), [scrapligo](#), [gnmic](#), [commando](#), [kne](#), ...
- Get in touch: [@ntdvps](#)

Network labs

A basic need of a neteng

- Test config changes before they down prod
- Prototype solutions
- Learn new protocols, designs, frameworks



Declarative domination

Can we use it for labs infrastructure?

IT Infrastructure/Workloads



kubernetes

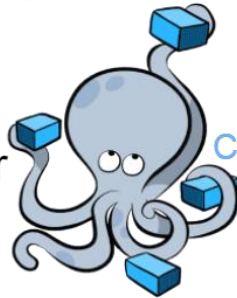


HashiCorp
Vagrant



Pulumi

Docker



Compose



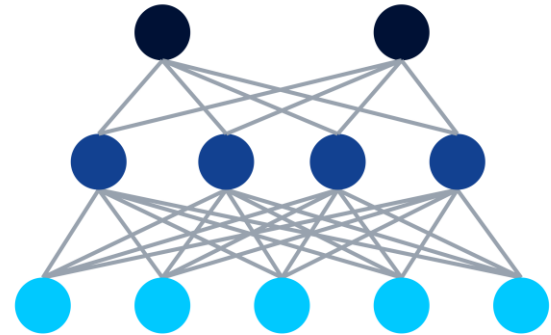
HashiCorp

Terraform



ANSIBLE

Network labs



Containerlab

Bringing declarativeness to [networking] labs

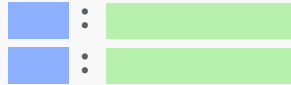
IT



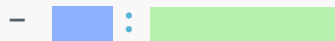
Network Labs

```
name: mylab
```

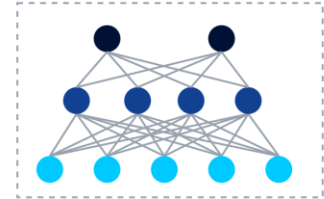
```
topology:  
  nodes:
```



```
links:
```



CONTAINERlab



Topology definition file

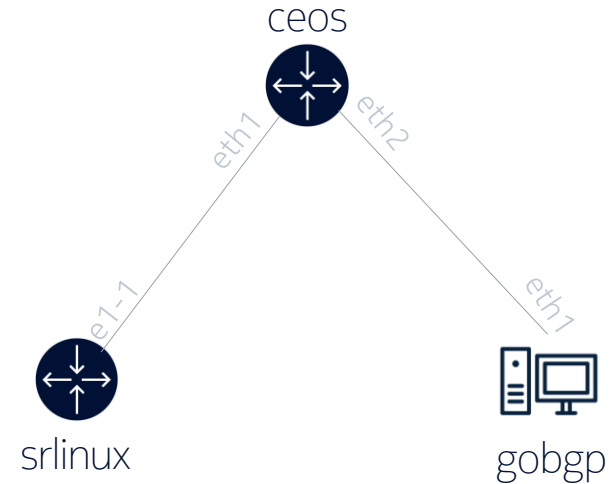
topology definition

```
name: rr frnog.clab.yml

topology:
  nodes:
    srlinux:
      kind: srl
      image: ghcr.io/nokia/srlinux
    ceos:
      kind: ceos
      image: ceos:4.25.0F
    gobgp:
      kind: linux
      image: ghcr.io/hellt/network-multitool

  links:
    - endpoints: ["srlinux:e1-1", "ceos:eth1"]
    - endpoints: ["ceos:eth2", "gobgp:eth1"]
```

logical view



Containerlab

Deploy

```
$ containerlab deploy -t frnog.clab.yml
```

#	Name	Container ID	Image	Kind	State	IPv4 Address	IPv6 Address
1	ceos	b58c42293c82	ceos:4.25.0F	ceos	running	172.20.20.2	2001:172:20:20::2
2	gobgp	0419fba1976c	ghcr.io/hellt/network-multitool	linux	running	172.20.20.3	2001:172:20:20::3
3	srlinux	244aa33b261c	ghcr.io/nokia/srlinux	srl	running	172.20.20.4	2001:172:20:20::4

srlinux

```
ssh admin@srlinux
```

```
Welcome to the srlinux CLI.  
Type 'help' (and press <ENTER>)  
if you need any help using this.  
--{ running }--[ ]--  
A:srl#
```

ceos

```
ssh admin@ceos
```

```
Password:  
ceos>
```

gobgp

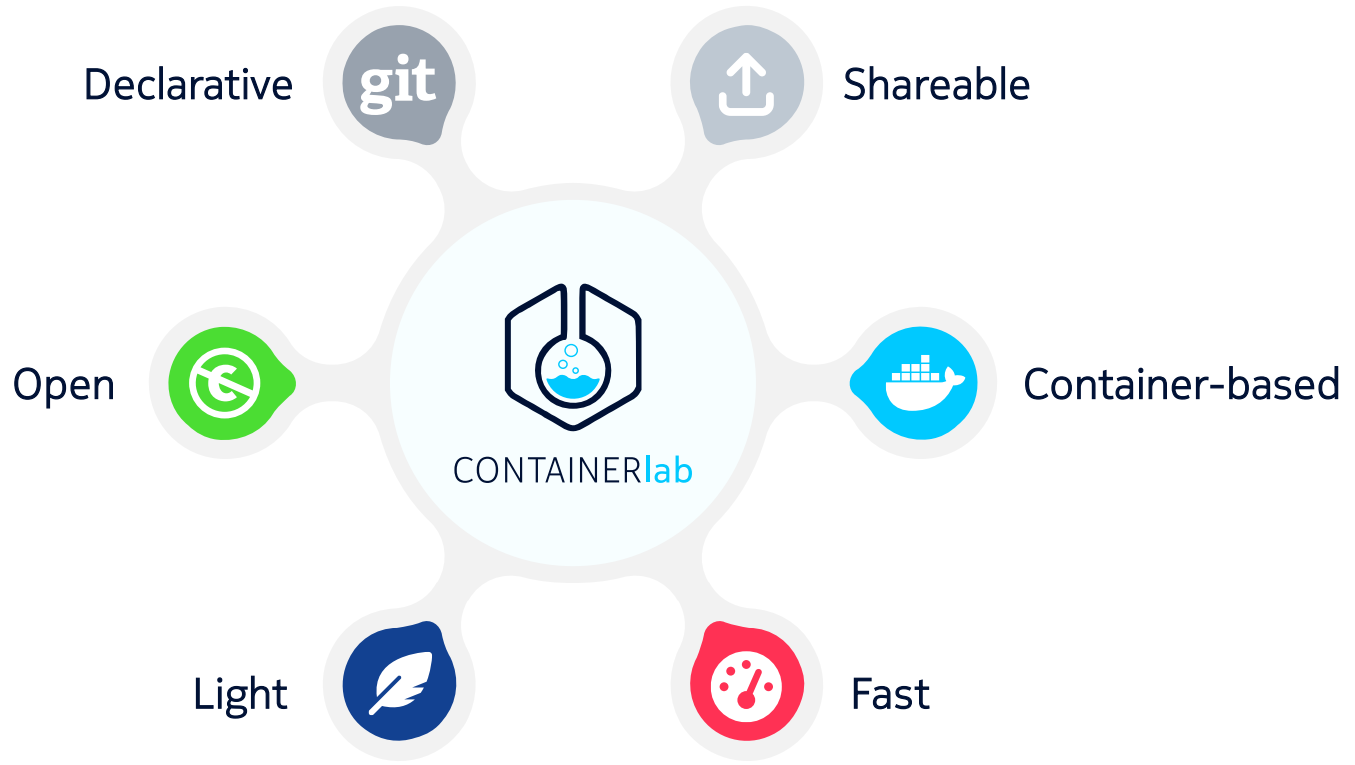
```
docker exec -it gobgp bash
```

```
gobgp>
```

Et alors?

Containerlab


Key benefits




Multivendor and open

Both container- and VM-based Network OSes


NOKIA

 srl
vr-sros

JUNIPER
NETWORKS

 crpd
vr-vmx
vr-vqfx

ARISTA

 ceos
vr-veos


CISCO

vr-xrv9k
vr-csr


SONIC

 sonic-vs
frr


NVIDIA

 CVX


paloalto
NETWORKS

vr-pan


DELL

vr-ftosv

ixia

Keysight_ixia-c

 Containerized NOS

Containerlab

Sounds interesting, where do I start?

- Explore containerlab.dev documentation portal
- Try to create a lab with the Network OS dearest to your heart
- Missing feature, a problem, a nice idea? Reach out to us via Github Issues/Discussions
- Join our [growing community on Discord](#)
- Give containerlab [repo](#) a ★

