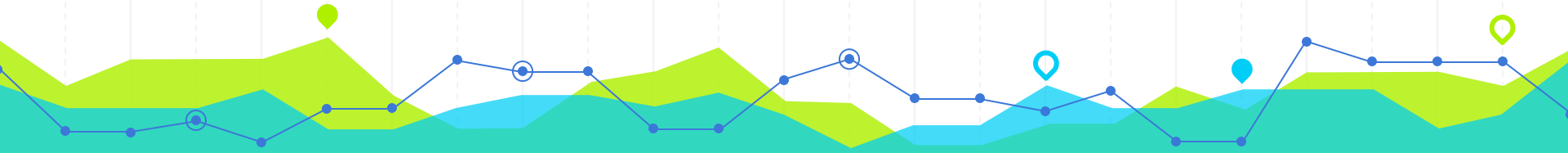


KUBERNETES

Manage a cluster of Linux containers

HELLO!

I am Luciano Antonio Borguetti Faustino

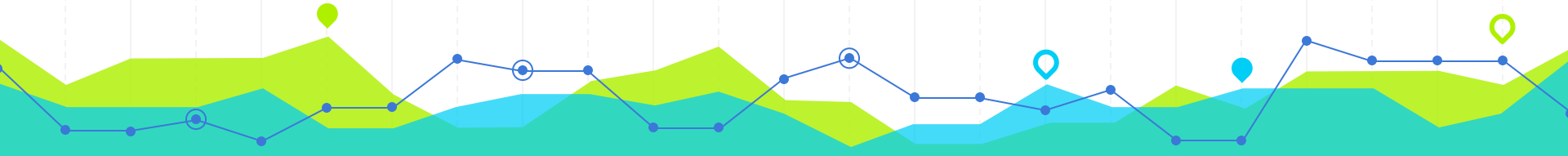
Black Ops @ Neoway Business Solutions

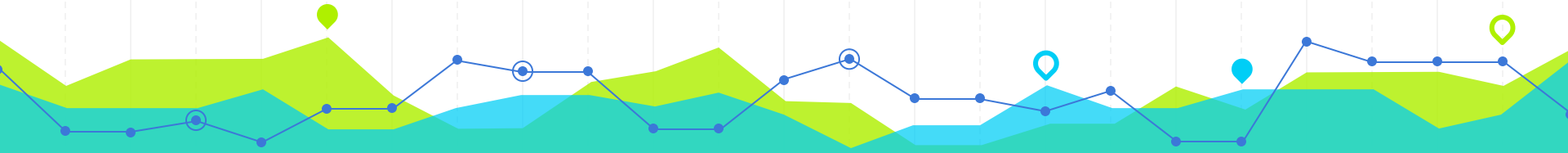
You can find me at

lucianoborguetti@gmail.com or https://github.com/lborguetti


Why
should
I care?

THE PROBLEM

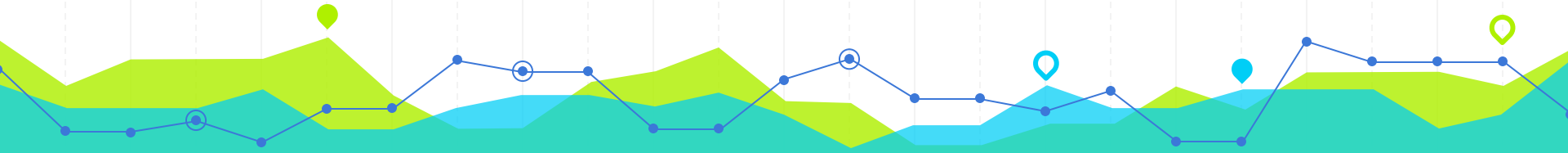




Microservices architecture

1

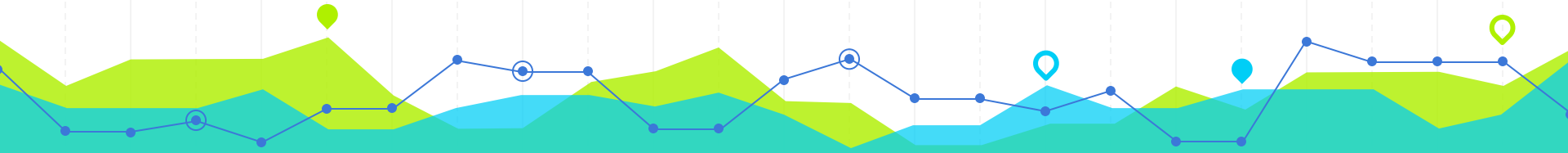
Multi-tenant application, containers, service discovery ...



Keep all services running

Zero downtime ...

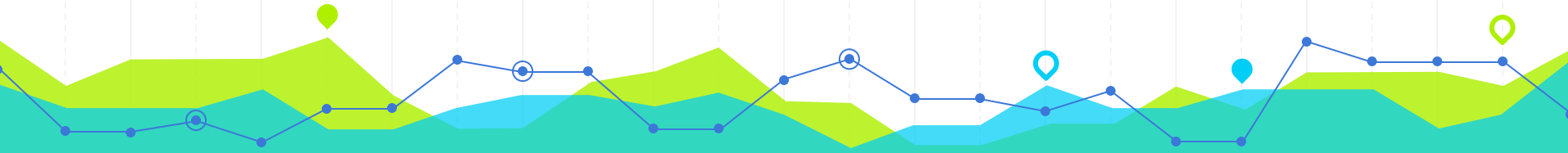
2



Auto scaling

Singly ...

3



Multi Cloud

4

AWS, Google Cloud, Azure, Softlayer,
Collocations, etc ...

KUBERNETES

KUBERNETES

Automating deployment

Scaling

Operations of application containers across clusters

Started by Google in 2014

Google's Borg system

Lean, portable, extensible, self-healing

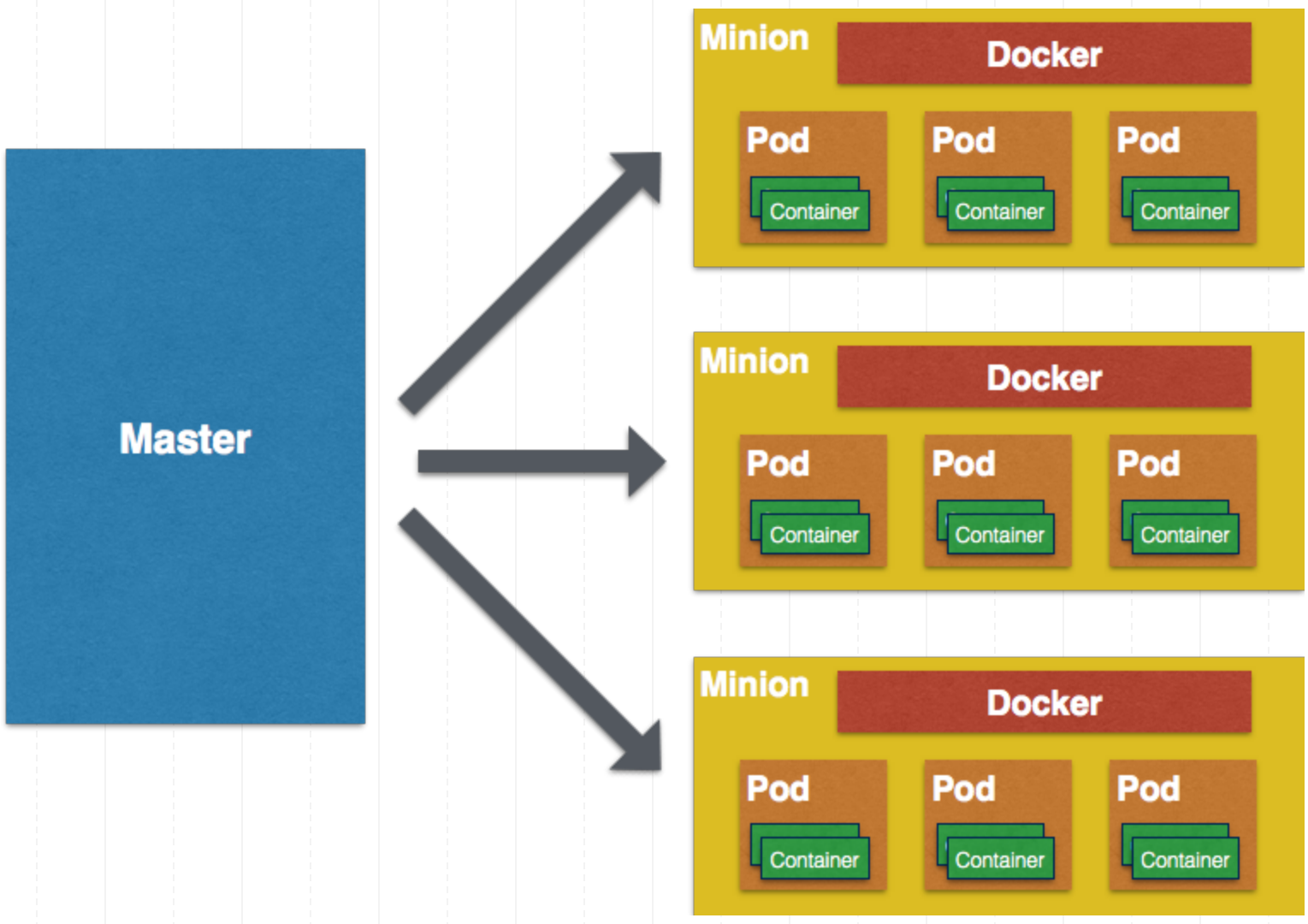
Scale your applications on the fly

Optimize use of your hardware by using only the resources you need

Rolling updates

Data management

Health checking


Master
Minion
Docker
Pod
Container
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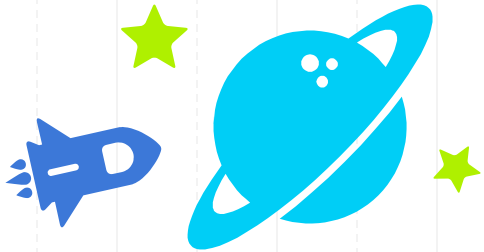
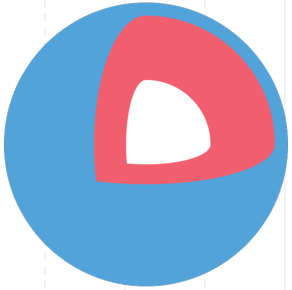
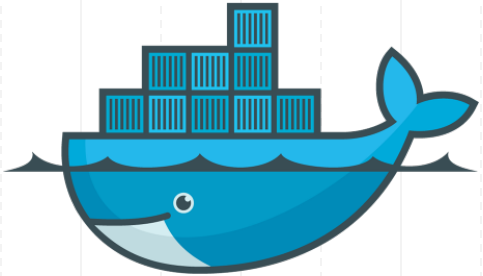


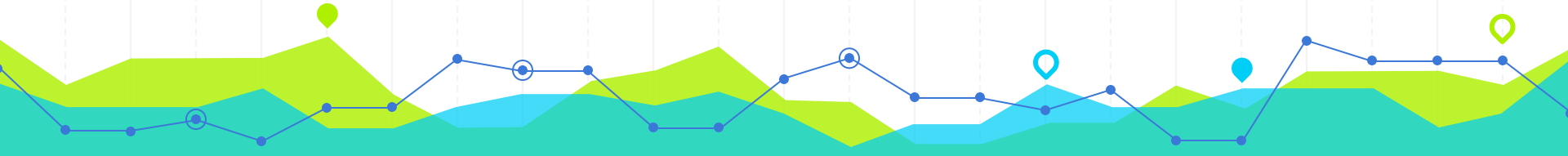
OUR DEPLOY


CoreOS




kubernetes

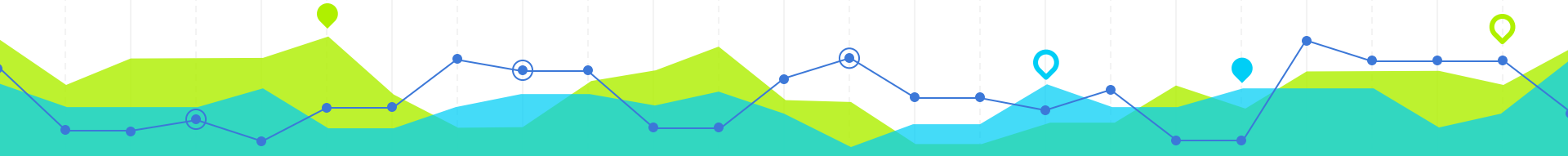

Prometheus
An open-source service monitoring system and time series database.



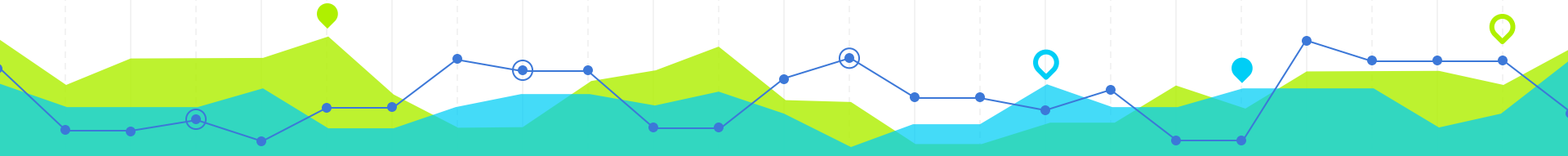
Core OS

Docker & RKT

Prometheus.io



INSTALL




KEEP
CALM
AND
AUTOMATE
ALL THE THINGS

https://github.com/NeowayLabs/cloud-machine

This is a Go Project that should be used to create a cloud environment. The app will create volumes and instance through AWS, although in the next future it'll be possible use other backends like Microsoft Azure, Google Cloud Platform, etc.

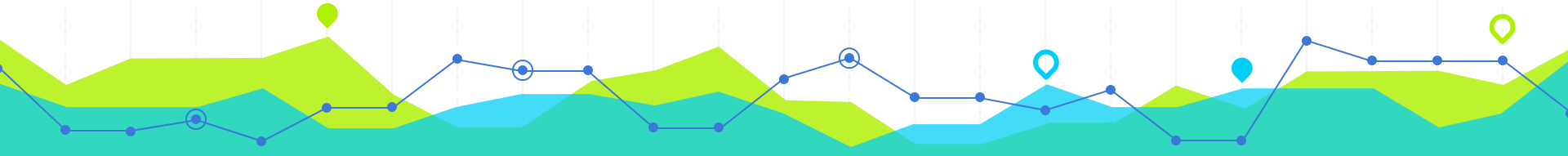
```
# cloud-machine/k8s-cluster.yml

default:
  imageid: ami-5d4d486d
  region: us-west-2
  keyname: aws-keyname
  securitygroups: [sg-00000000,sg-00000001]
  subnetid: subnet-abcd0000
  defaultavailablezone: us-west-2a

clusters:
  - machine: cloud-machine/master.yml
    nodes: 1
  - machine: cloud-machine/node.yml
    nodes: 5
```

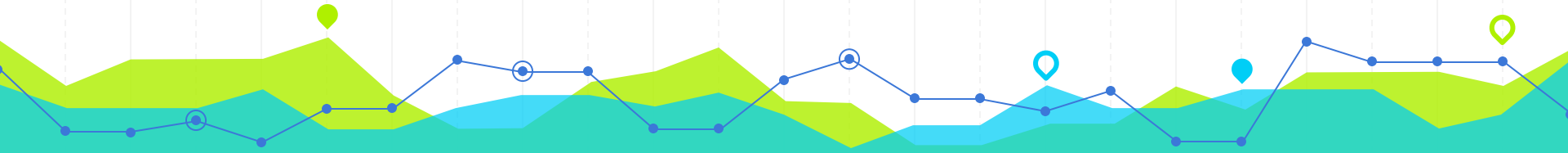
```
# cloud-machine/k8s-master.yml

instance:
  name: k8s-master
  type: r3.xlarge
  cloudconfig: cloud-config/master.yaml
  ebsoptimized: true
volumes:
  - name: master-data
    type: gp2
    size: 50
    device: /dev/xvdk
    mount: /data
    filesystem: ext4
```

```
# cloud-machine/k8s-node.yml

instance:
  name: k8s-node
  type: r3.xlarge
  cloudconfig: cloud-config/node.yaml
  ebsoptimized: true
volumes:
  - name: node-data
    type: io1
    size: 100
    iops: 1000
    device: /dev/xvdk
    mount: /data
    filesystem: ext4
```

“

$ ./cluster-up cloud-machine/k8s-cluster.yml





TRY IT

https://github.com/NeowayLabs

https://github.com/NeowayLabs/kubernetes-coreos-vagrant

THANKS!

Any questions?

You can find me at
lucianoborguetti@gmail.com
or
https://github.com/lborguetti