Monitoring Nodeless k8s with Prometheus

PromCon2019 EU, madhuri@elotl.co

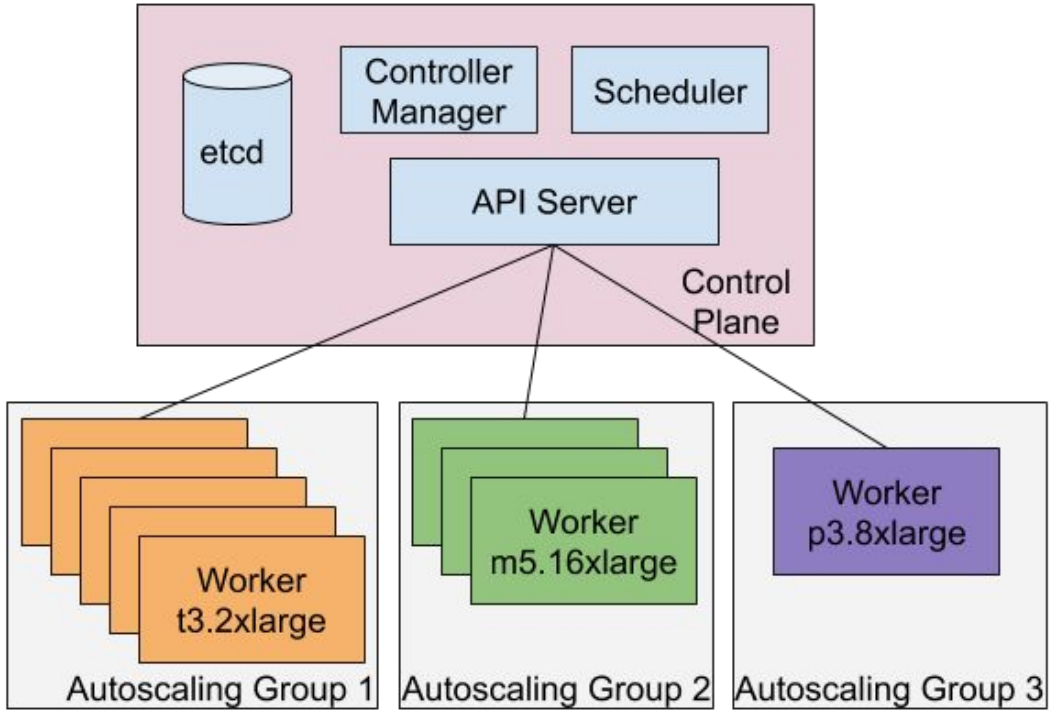
Agenda

- Bio
- Nodeless k8s
- Nodeless k8s + Prometheus
- Demo
- Takeaways
- Q & A

Do you use Kubernetes on public cloud?

K8s cluster capacity planning on public cloud is hard

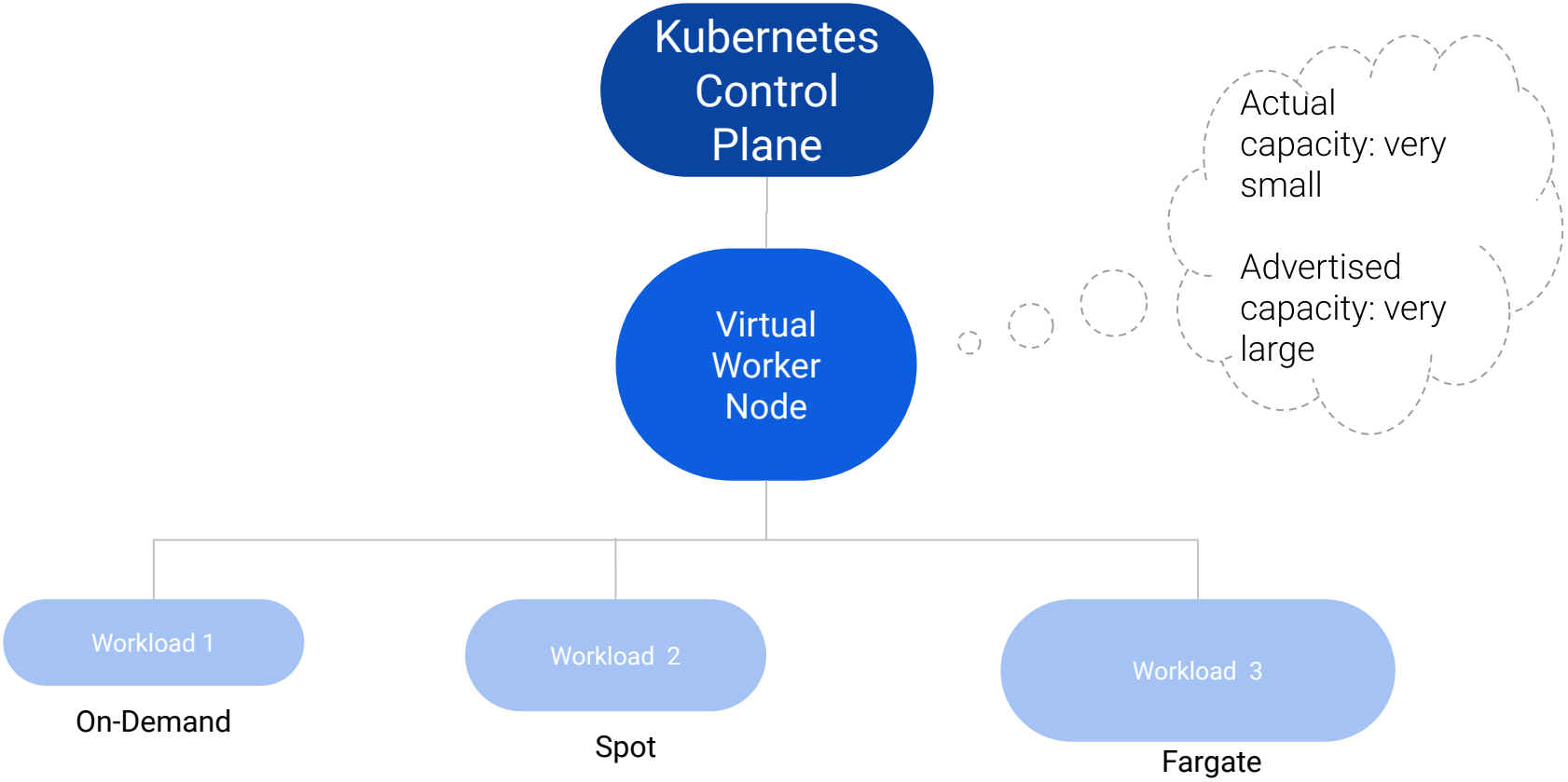
Kubernetes Cluster



Worker node capacity planning woes

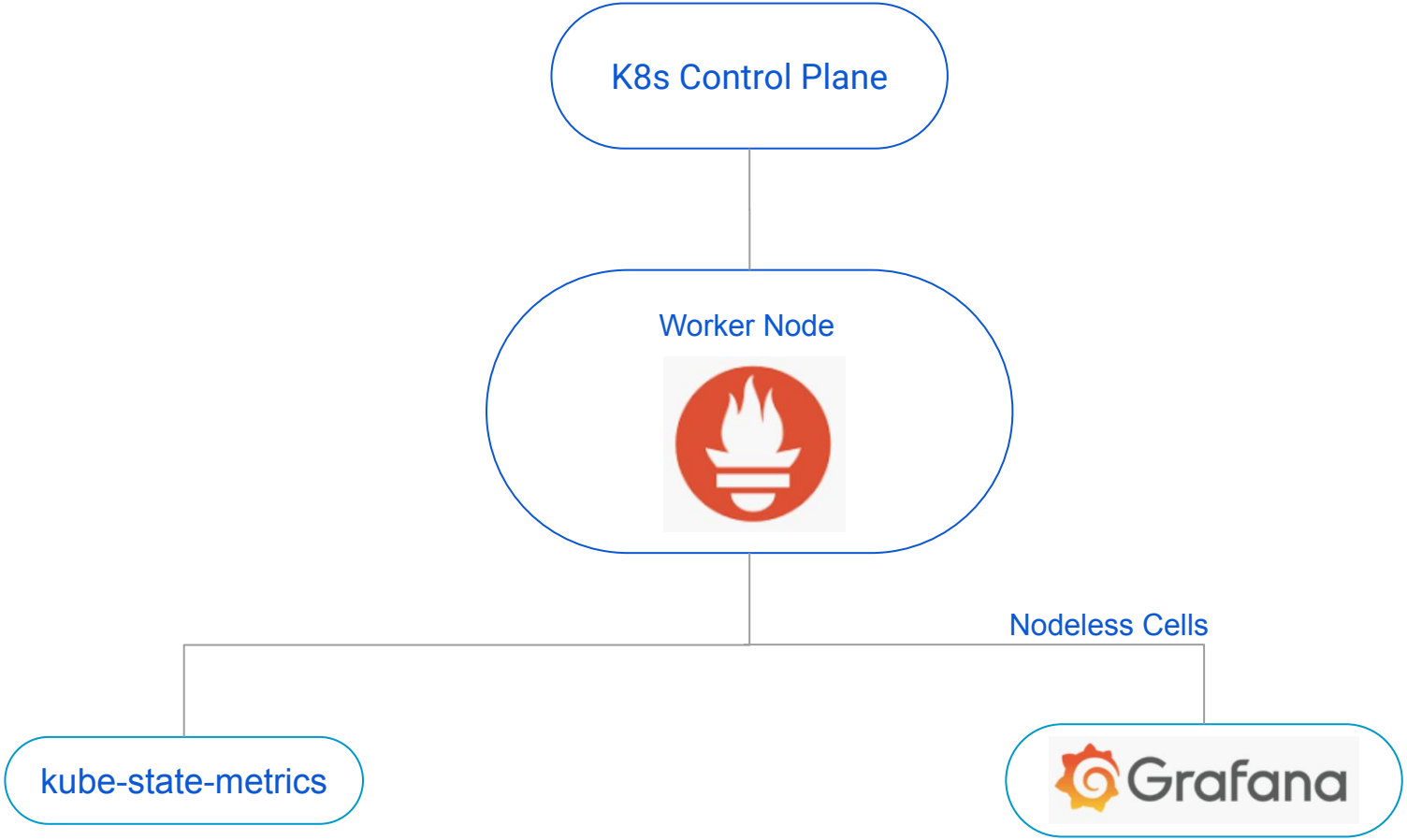
- Provision too nodes
  - Waste resources, money
- Provision too few nodes
  - Pods won’t run
- Rolling updates, pod autoscaling, jobs
  - Need capacity headroom

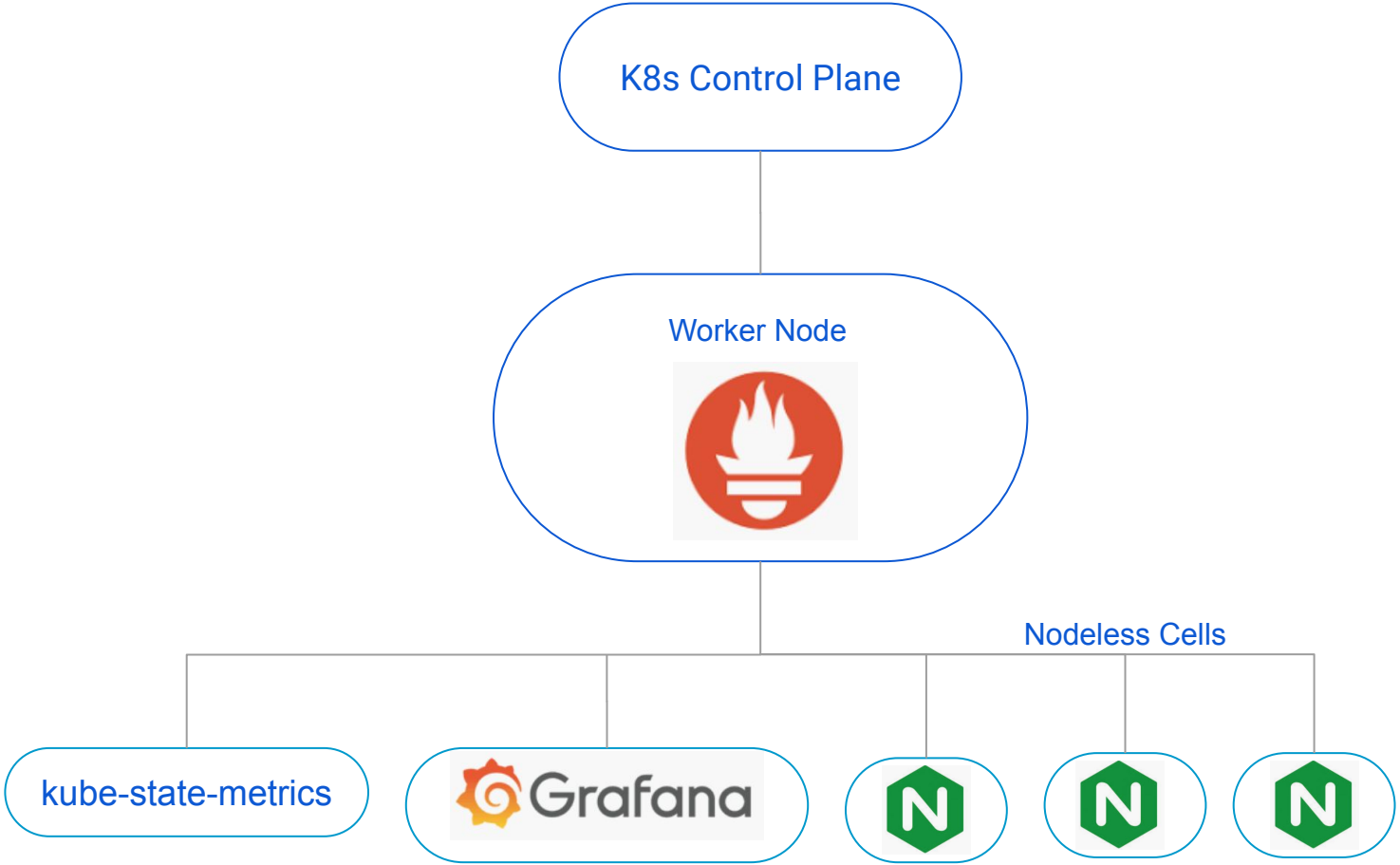
Nodeless Kubernetes



Can i monitor Nodeless k8s apps with Prometheus?

Demo!


K8s Control Plane
Worker Node
Nodeless Cells
kube-state-metrics
Grafana


K8s Control Plane
Worker Node
Nodeless Cells
kube-state-metrics
Grafana

Takeaways

- Kubernetes cluster capacity planning is hard
- Nodeless k8s is a simple, easy way to consume k8s on public cloud
- Prometheus + Grafana are a great fit for monitoring Nodeless k8s apps

Resources

- Try
  - https://github.com/elotl/kubeadm-aws
  - https://github.com/elotl/eks-milpa
  - https://github.com/elotl/nodeless-prometheus-tutorial
- Read
  - https://jpetazzo.github.io/2019/02/13/running-kubernetes-without-nodes-with-kiyot/
  - https://medium.com/elotl-blog

Acknowledgements

- PromCon2019 EU organizers
- Host - Google
- Elotl Engineering - Brendan Cox, Vilmos Nebehaj
- Audience - thank you!

Q&A

Monitoring Nodeless k8s with Prometheus

PromCon2019 EU, madhuri@elotl.co