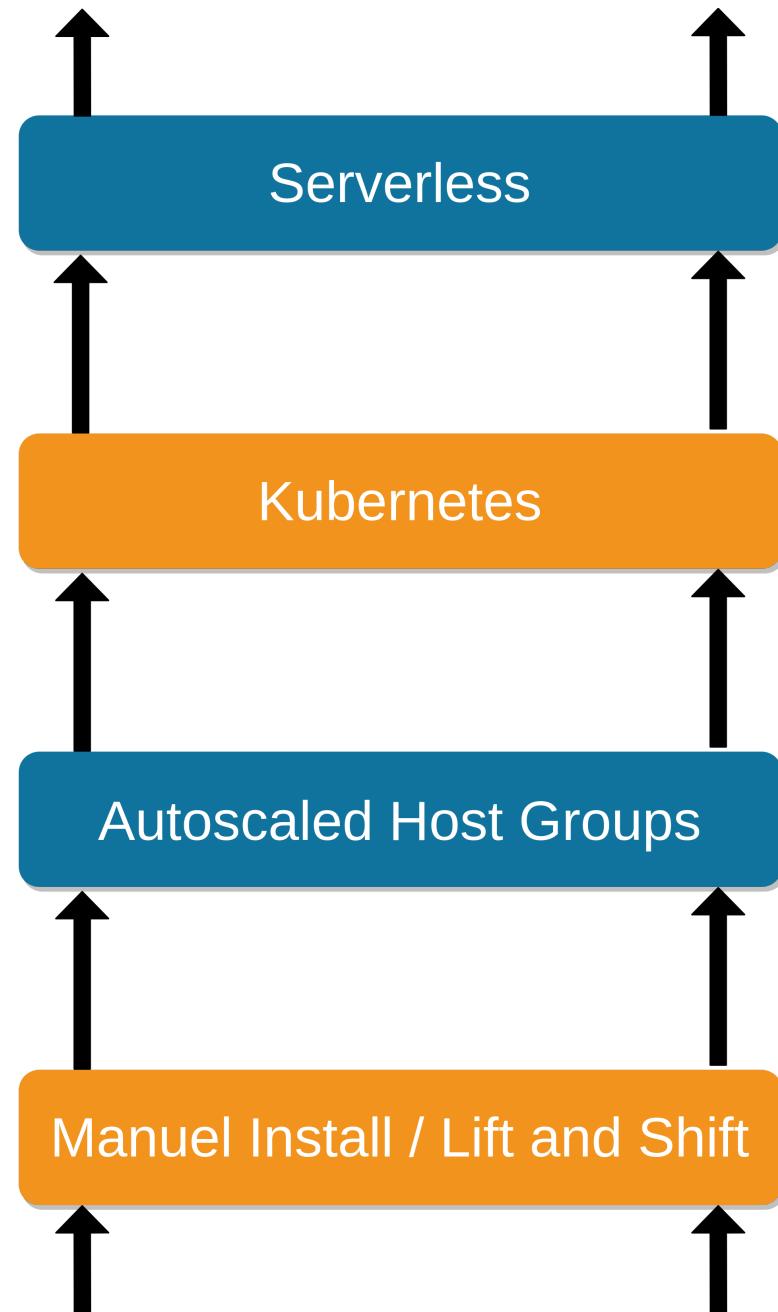


Climbing up the scaling ladder

Scaling in the cloud

- 3 Scaling scenarios
- demos at github.com/bastiandg/scaling-in-the-cloud
- cloud is not about cost, it is about scaling





Lift and shift

- Migrate legacy VMs/Software with (almost) no modification
- Doesn't scale very well (bigger VMs, faster disks)
- Your mess for less
- Conclusion: don't do it

Autoscaled Host Groups

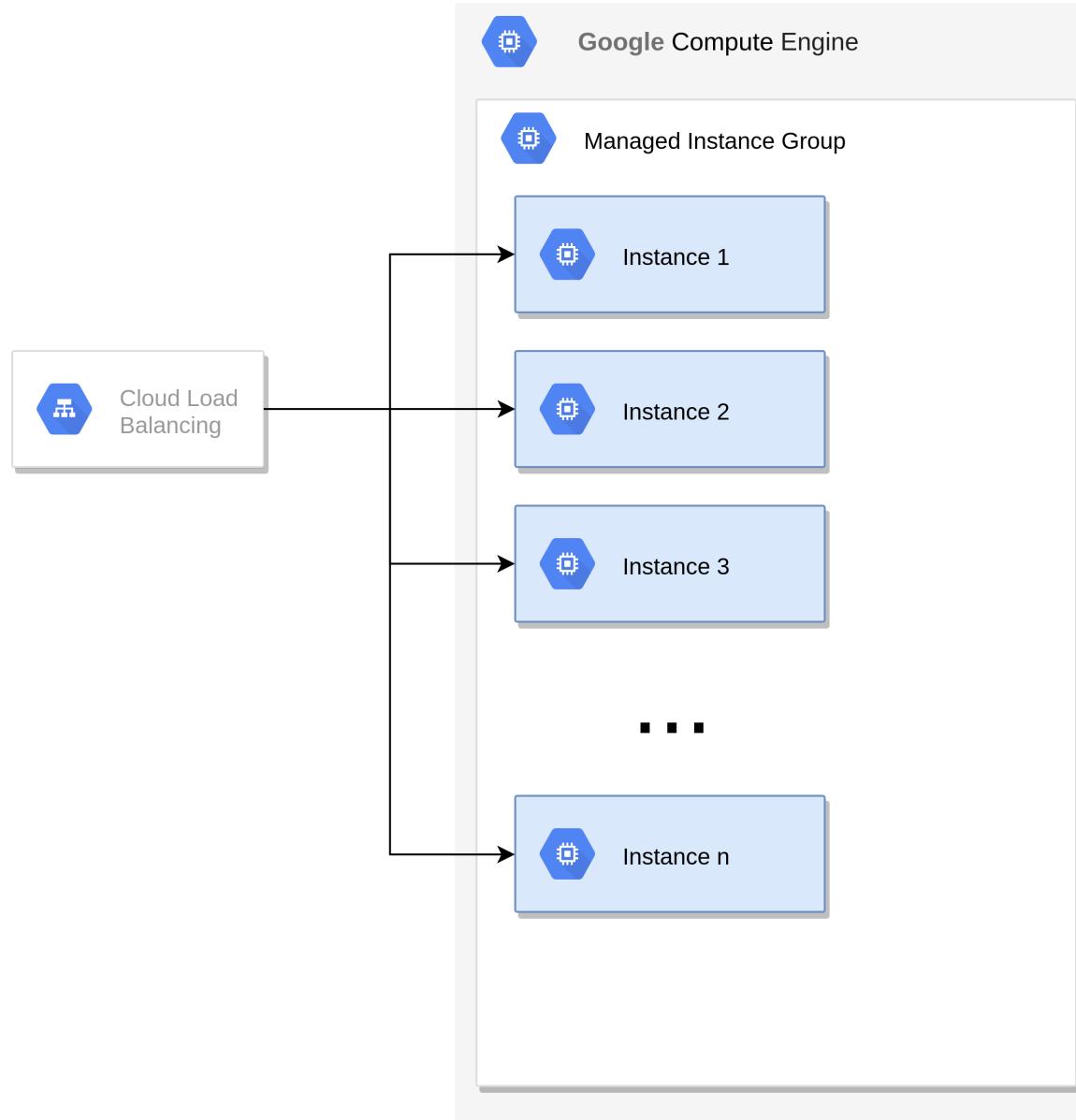
- Lift and Shift +
- Paradigm shift: VMs are containers
- Make infrastructure immutable
- Persist data outside VM



Ingredients Autoscaled Host Groups

- Managed instance group
 - VM Autoscaler
- Packer
 - VM Image
- Terraform
 - VM Template
 - Managed instance group
 - Loadbalancer

Managed instance group in GCP



Demo Autoscaled Host Groups





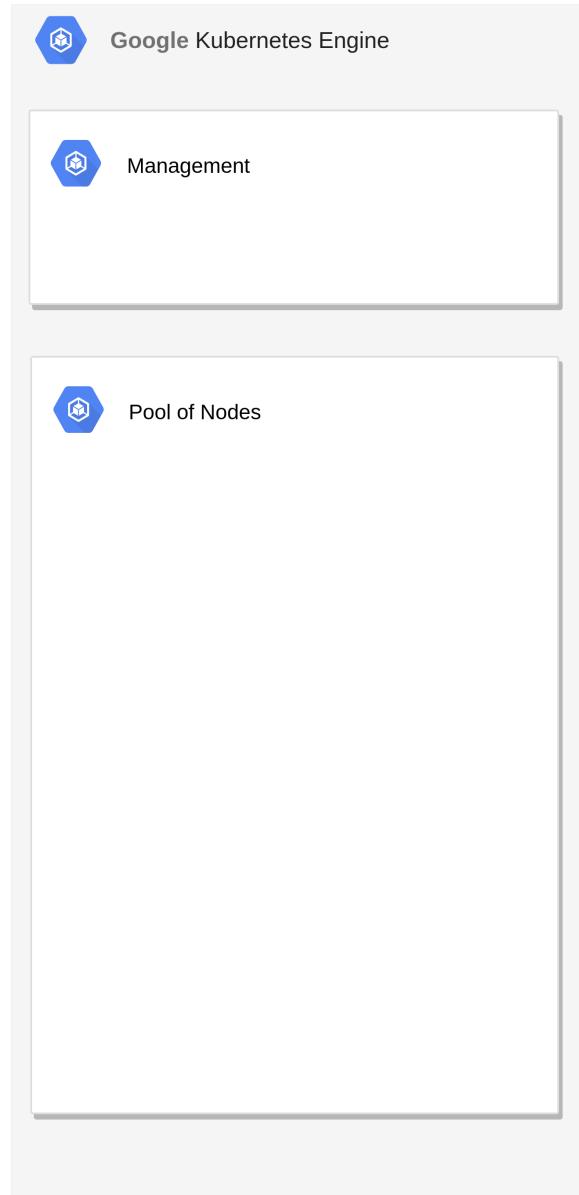
kubernetes

- Paradigm shift: There are no VMs
- Pool of resources
- services containerized

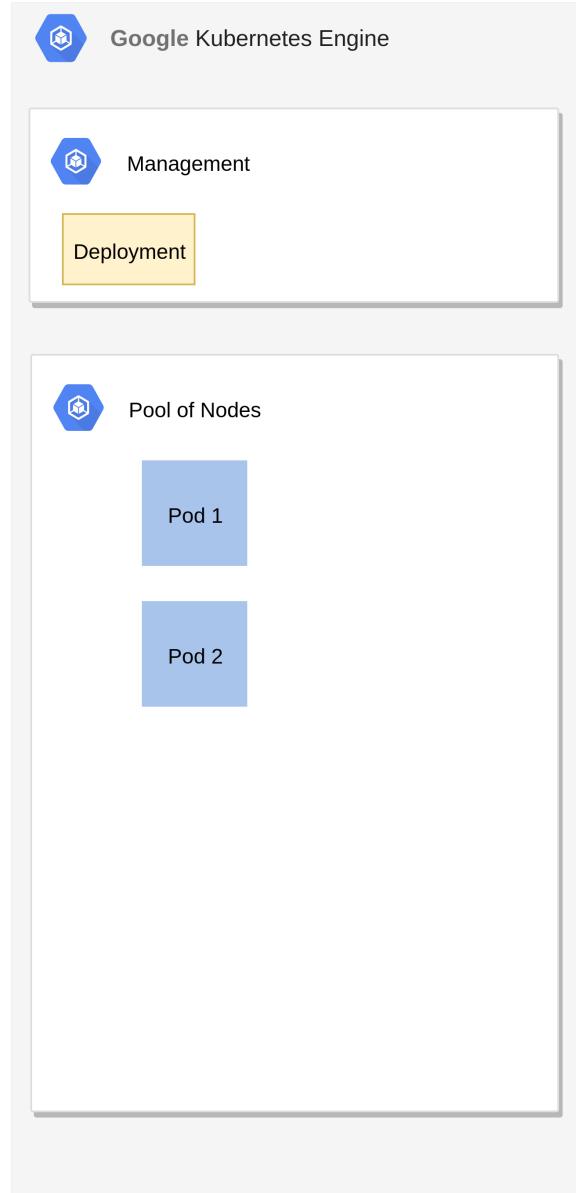
Ingredients kubernetes

- Terraform
 - Kubernetes Cluster
 - Node Autoscaler
- Docker
 - Container image
- Kubernetes
 - Deployment
 - Horizontal Pod Autoscaler
 - Service

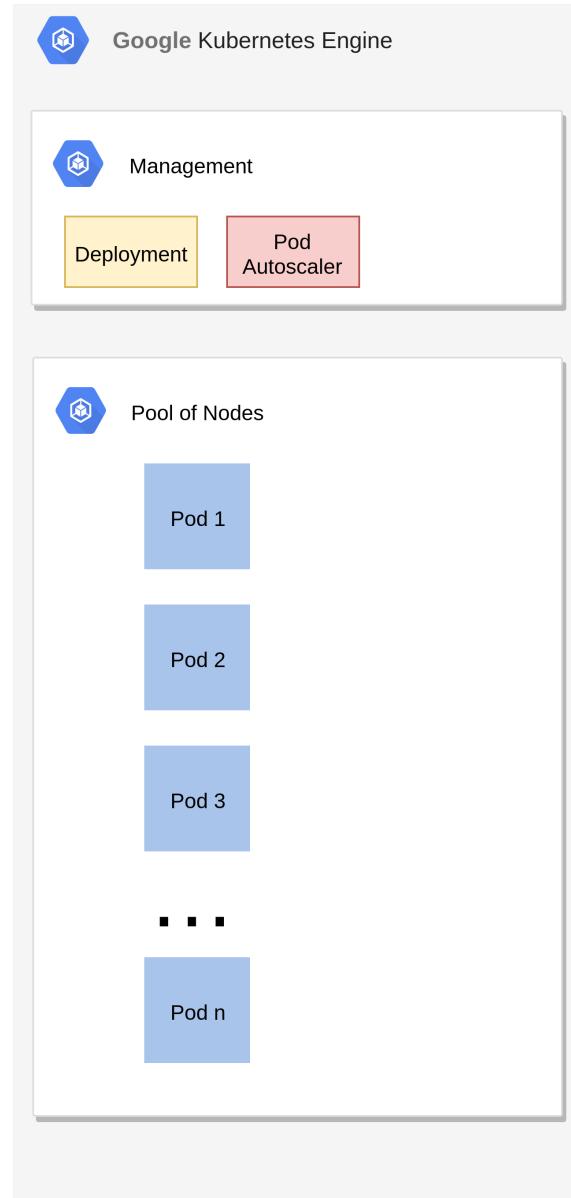
Kubernetes cluster



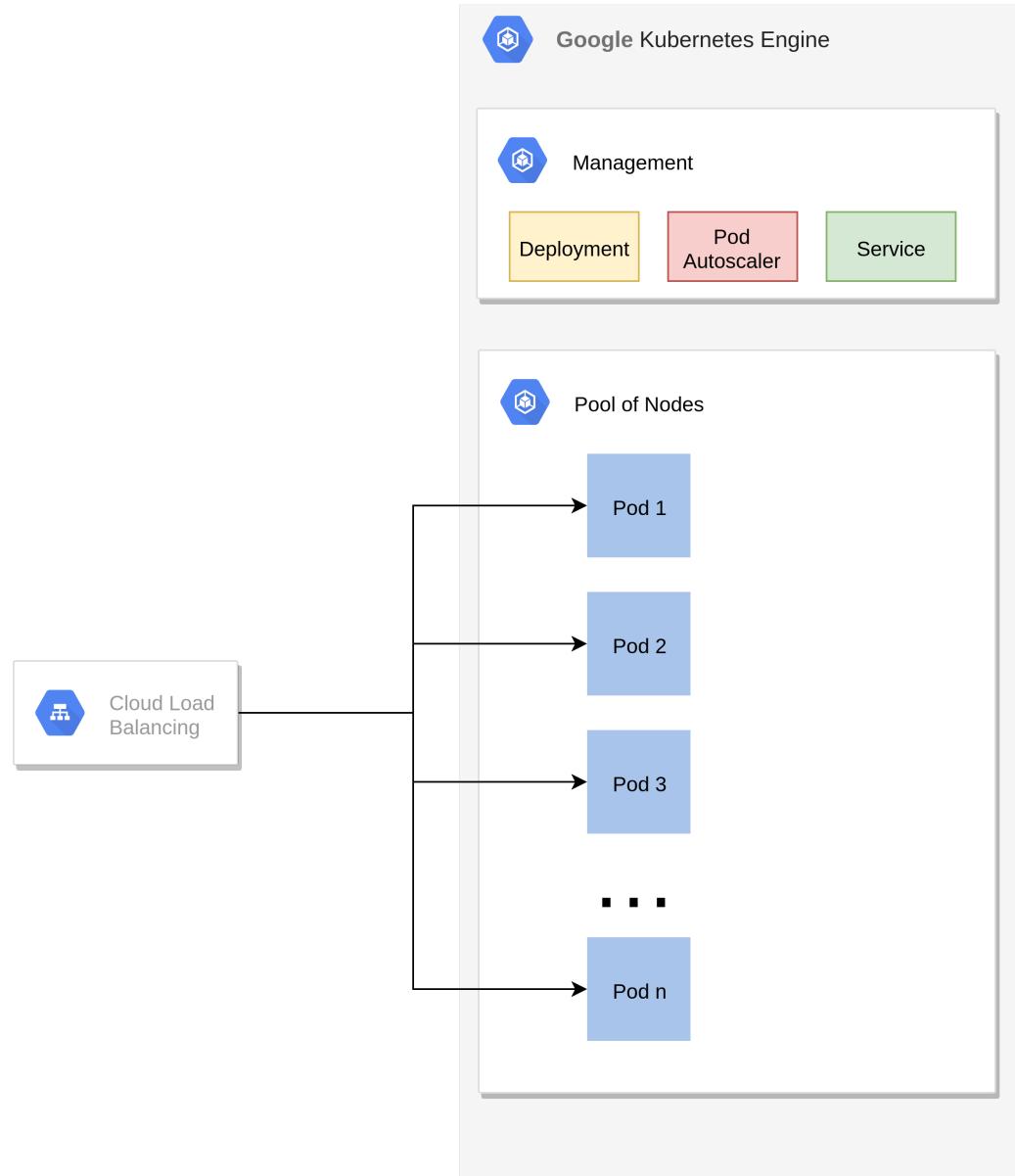
Kubernetes deployment



Kubernetes pod autoscaler



Kubernetes service



Demo kubernetes



serverless

- Paradigm shift: There is no infrastructure
- No infrastructure management
- Pay per use
- stateless

Ingredients serverless

- Docker
 - Container Image
- Cloud Run
 - Deployment

Demo serverless



Takeaways

- Don't do lift and shift
- separate storage from computing