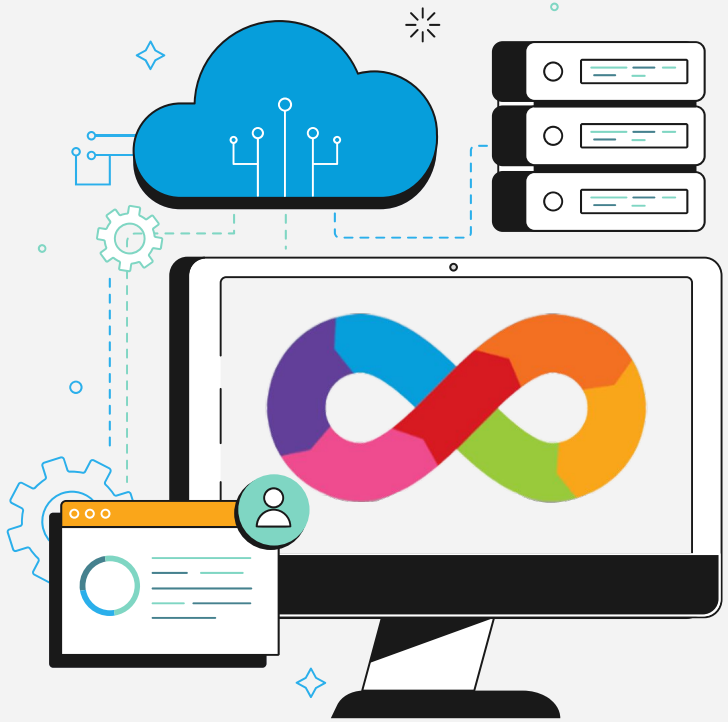
Introduction to DevOps

@ IBA - SMCS

Week 03

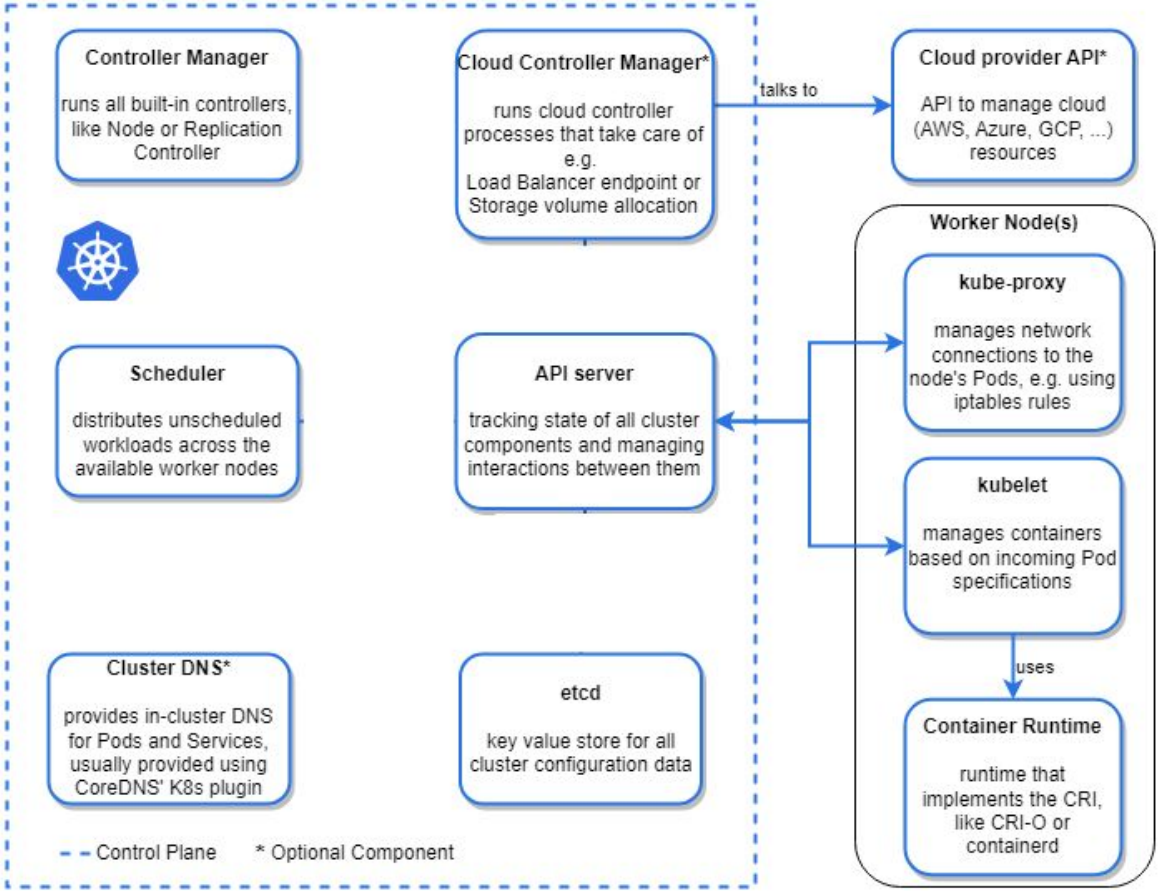


Obaid ur Rehman
Software Architect / Engineering Manager @ Folio3

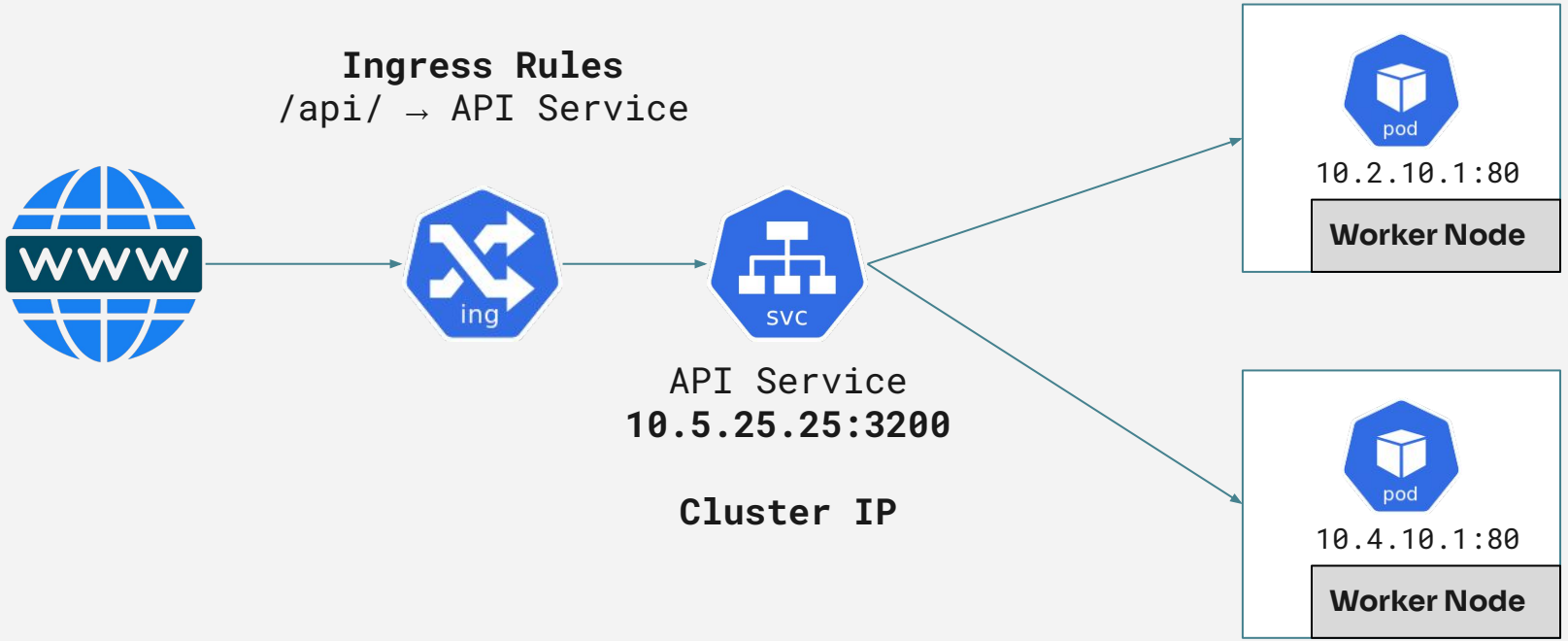
Agenda for this week

1. Recap
2. Kubernetes: Services
3. Alternatives to K8s:
    a. Amazon Web services ECS - Overview
4. K8s in the Cloud:
    a. Google Kubernetes Engine - Hands on Demo

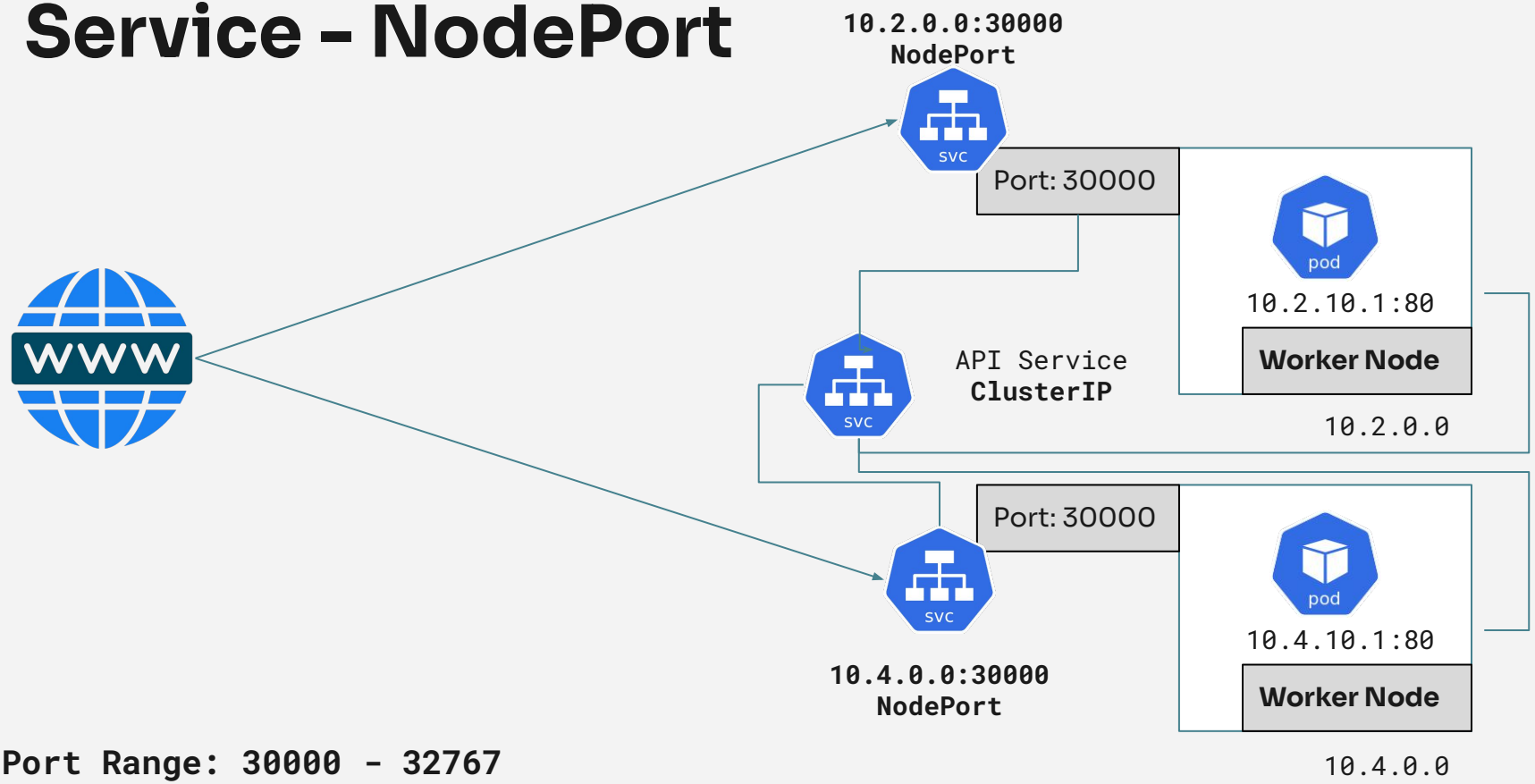
Kubernetes Architecture



Service – Cluster IP (Internal)

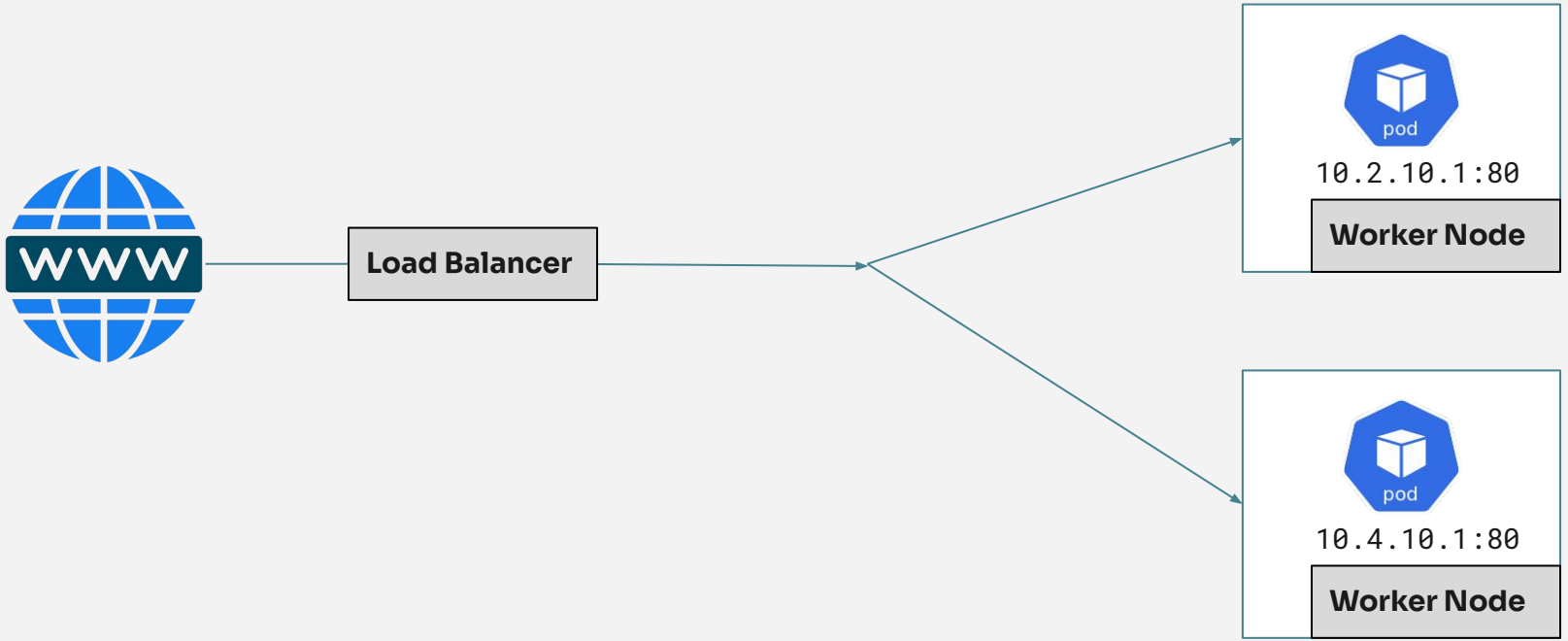


Service - NodePort



Port Range: 30000 - 32767

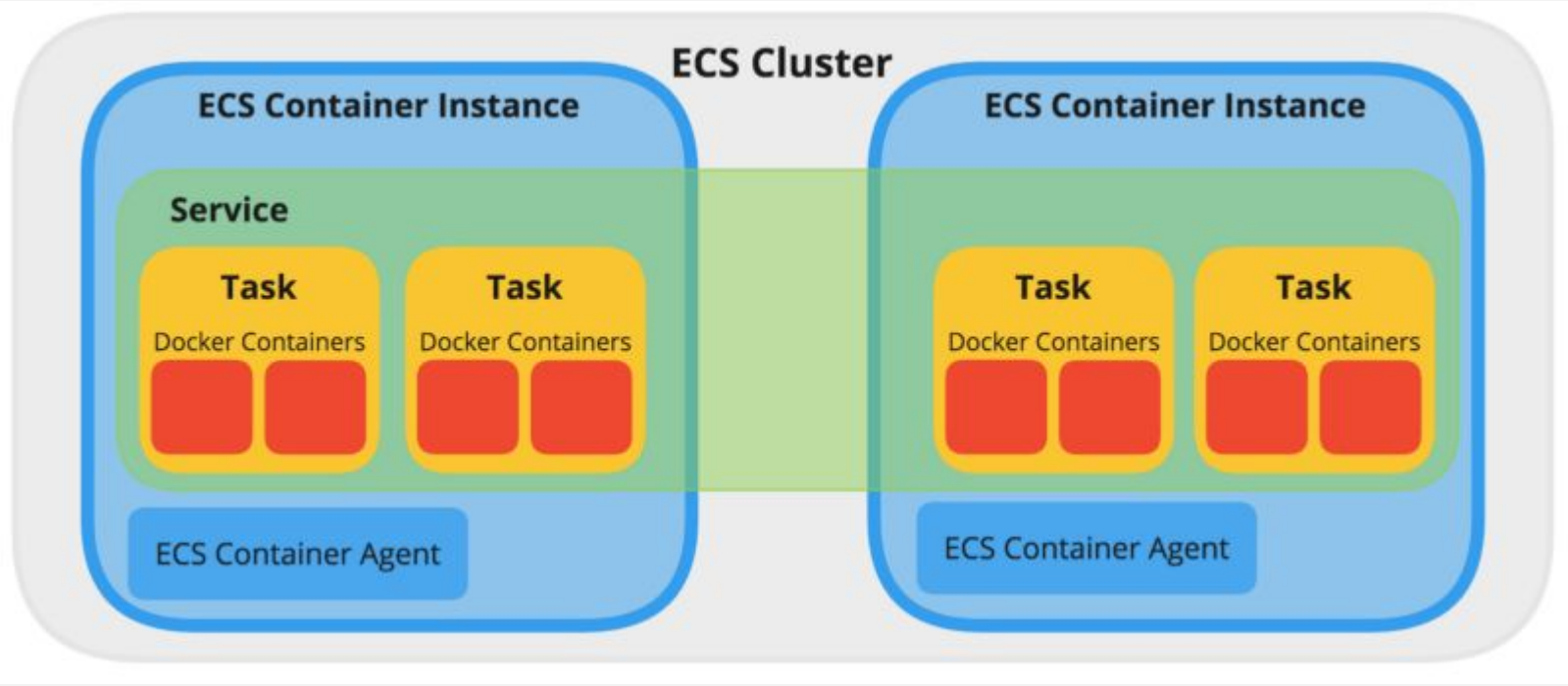
Service – Load Balancer



`Feature`	`ClusterIP`	`NodePort`	`LoadBalancer`
Exposition	Exposes the Service on an internal IP in the cluster.	Exposing services to external clients	Exposing services to external clients
Cluster	This type makes the Service only reachable from within the cluster	A NodePort service, each cluster node opens a port on the node itself (hence the name) and redirects traffic received on that port to the underlying service.	A LoadBalancer service accessible through a dedicated load balancer, provisioned from the cloud infrastructure Kubernetes is running on
Accessibility	It is **default** service and Internal clients send requests to a stable internal IP address.	The service is accessible at the internal cluster IP-port, and also through a dedicated port on all nodes.	Clients connect to the service through the load balancer's IP.
Yaml Config	`type: ClusterIP`	`type: NodePort`	`type: LoadBalancer`
Port Range	Any public ip form Cluster	30000 - 32767	Any public ip form Cluster
User Cases	For internal communication	Best for testing public or private access or providing access for a small amount of time.	widely used For External communication

Source

AWS Elastic Container Service – ECS



AWS ECS – Fargate

Containers in a cluster without a provisioned Node.

End of Week 3

Q&A