Project Hermosa — System Design

Region 1
- Mobile Apps
- API Clients
- Web Browser
- Edge / LB / CDN
- Web App Service
- API Gateway
- Service Mesh: Service 1, Service 2, Service 3
- Shared Cache
- Message Queue
- RDBMS
- Key Value Store
- Doc Store
- SRE OPS / CI/CD OPS
- Admin API Integrations Dashboards
- Auth
- Certs
- Logging
- Metrics
- Workload Deployment Orchestration on Premise or Cloud

Region 2

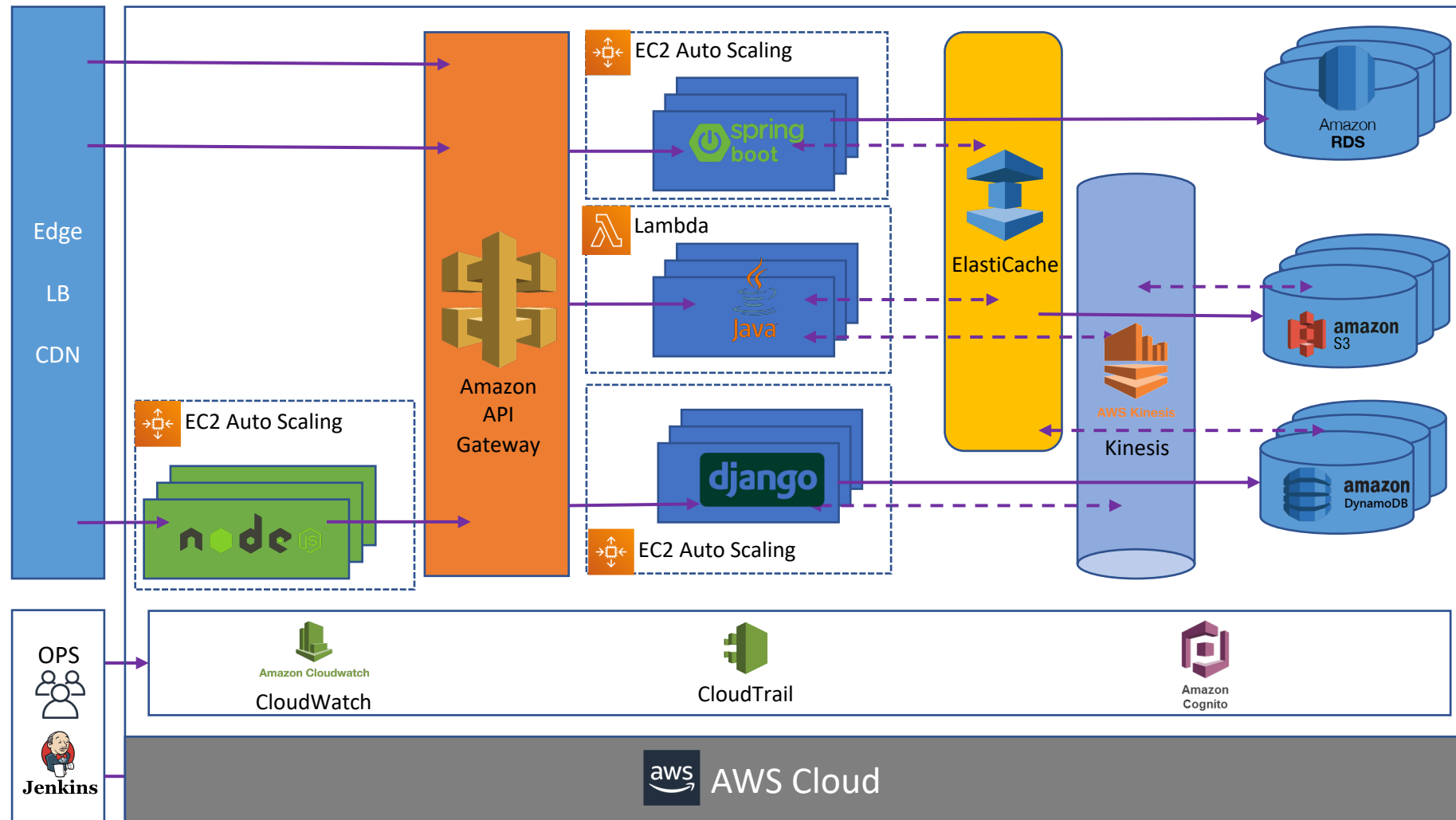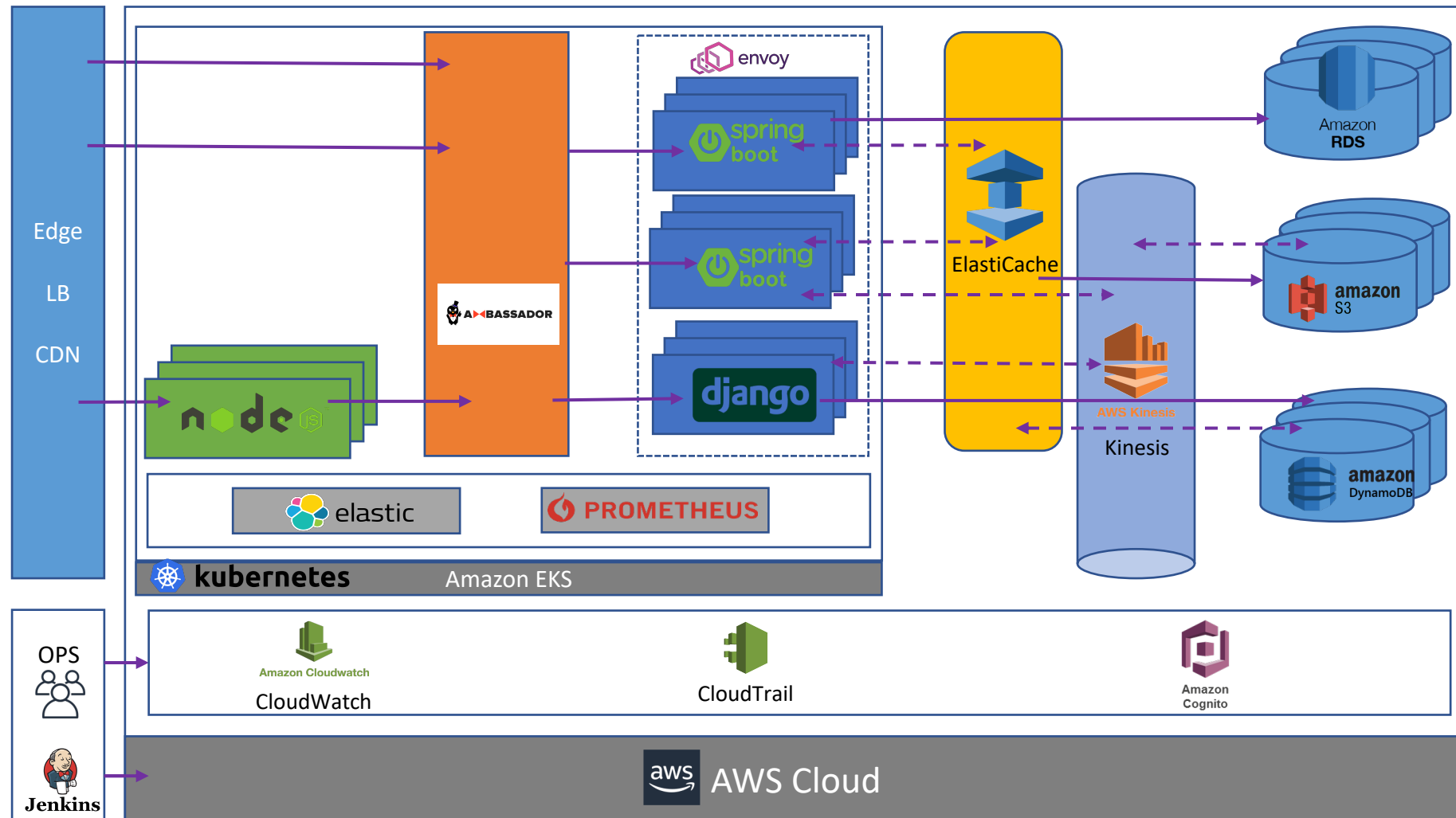**Region 3**
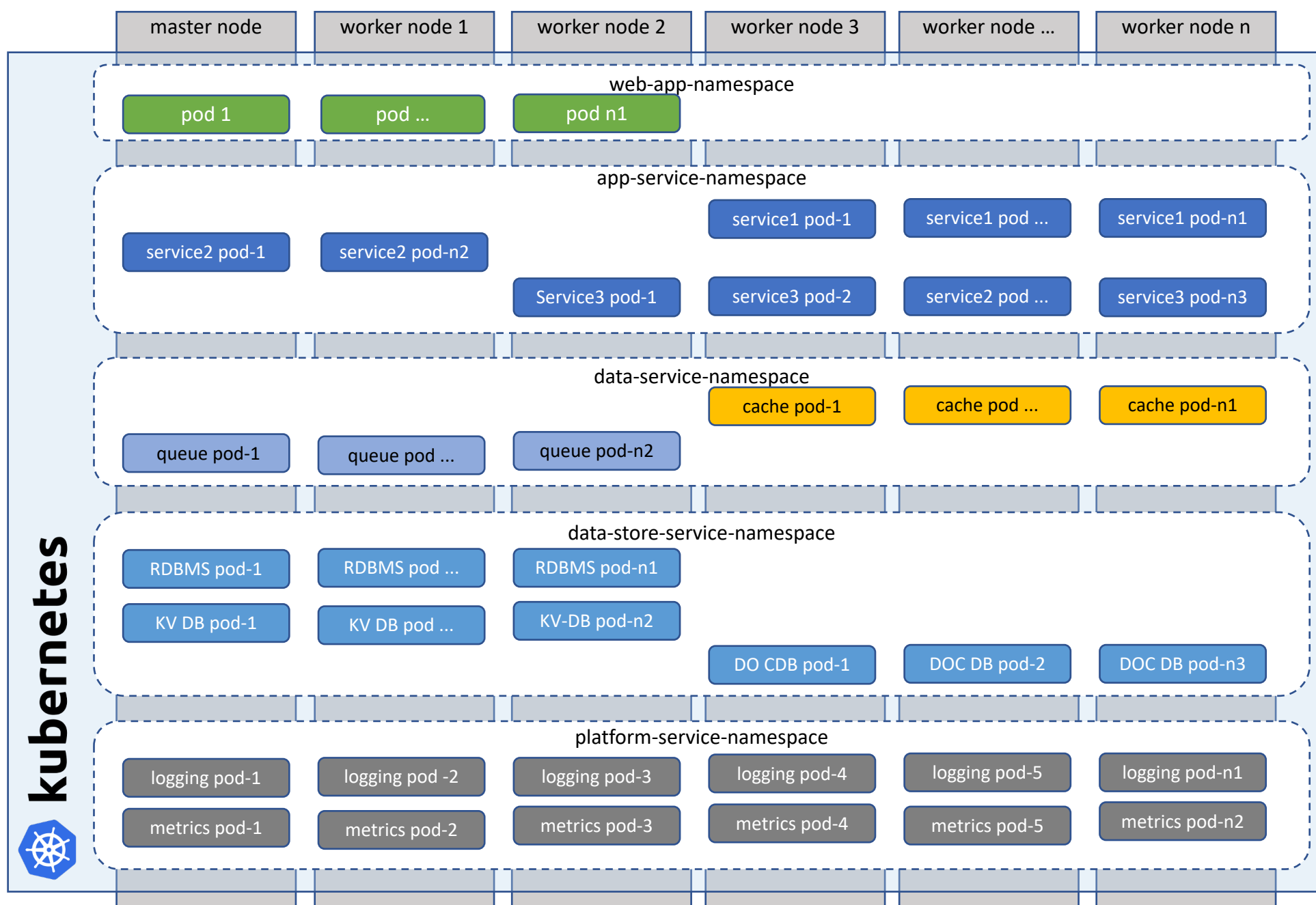
Cross region data replication

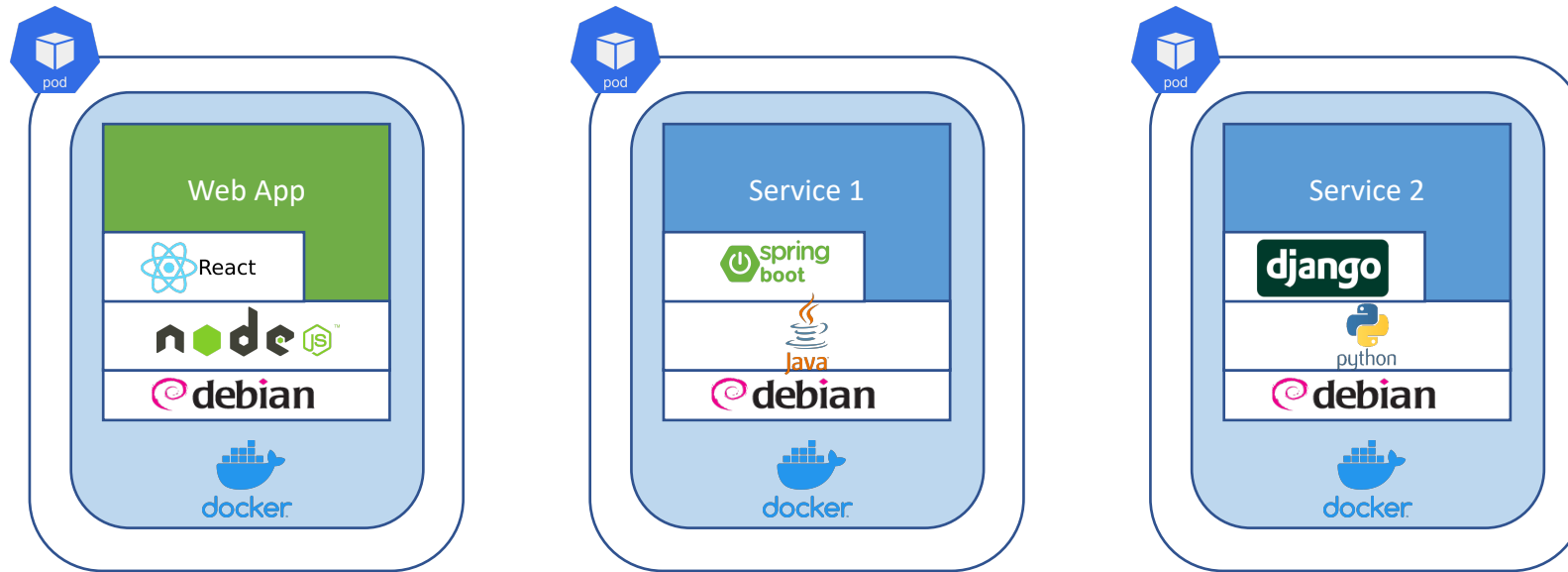Example deployment stack on Kubernetes which can be on premise or on cloud

Example cloud native deployment stack specific to a cloud vendor like AWS

Deployment example using cloud hosted Kubernetes and cloud native services

master node	worker node 1	worker node 2	worker node 3	worker node ...	worker node n

web-app-namespace

pod 1	pod ...	pod n1			

app-service-namespace

			service1 pod-1	service1 pod ...	service1 pod-n1
service2 pod-1	service2 pod-n2				
		Service3 pod-1	service3 pod-2	service2 pod ...	service3 pod-n3

data-service-namespace

			cache pod-1	cache pod ...	cache pod-n1
queue pod-1	queue pod ...	queue pod-n2			

data-store-service-namespace

RDBMS pod-1	RDBMS pod ...	RDBMS pod-n1			
KV DB pod-1	KV DB pod ...	KV-DB pod-n2			
			DO CDB pod-1	DOC DB pod-2	DOC DB pod-n3

platform-service-namespace

logging pod-1	logging pod -2	logging pod-3	logging pod-4	logging pod-5	logging pod-n1
metrics pod-1	metrics pod-2	metrics pod-3	metrics pod-4	metrics pod-5	metrics pod-n2

kubernetes

Kubernetes deployment of services with namespace separation

Service technology stack examples at the Docker container and Kubernetes pod level