

# Scaling a Multi-Tenant k8s Cluster in a Telco



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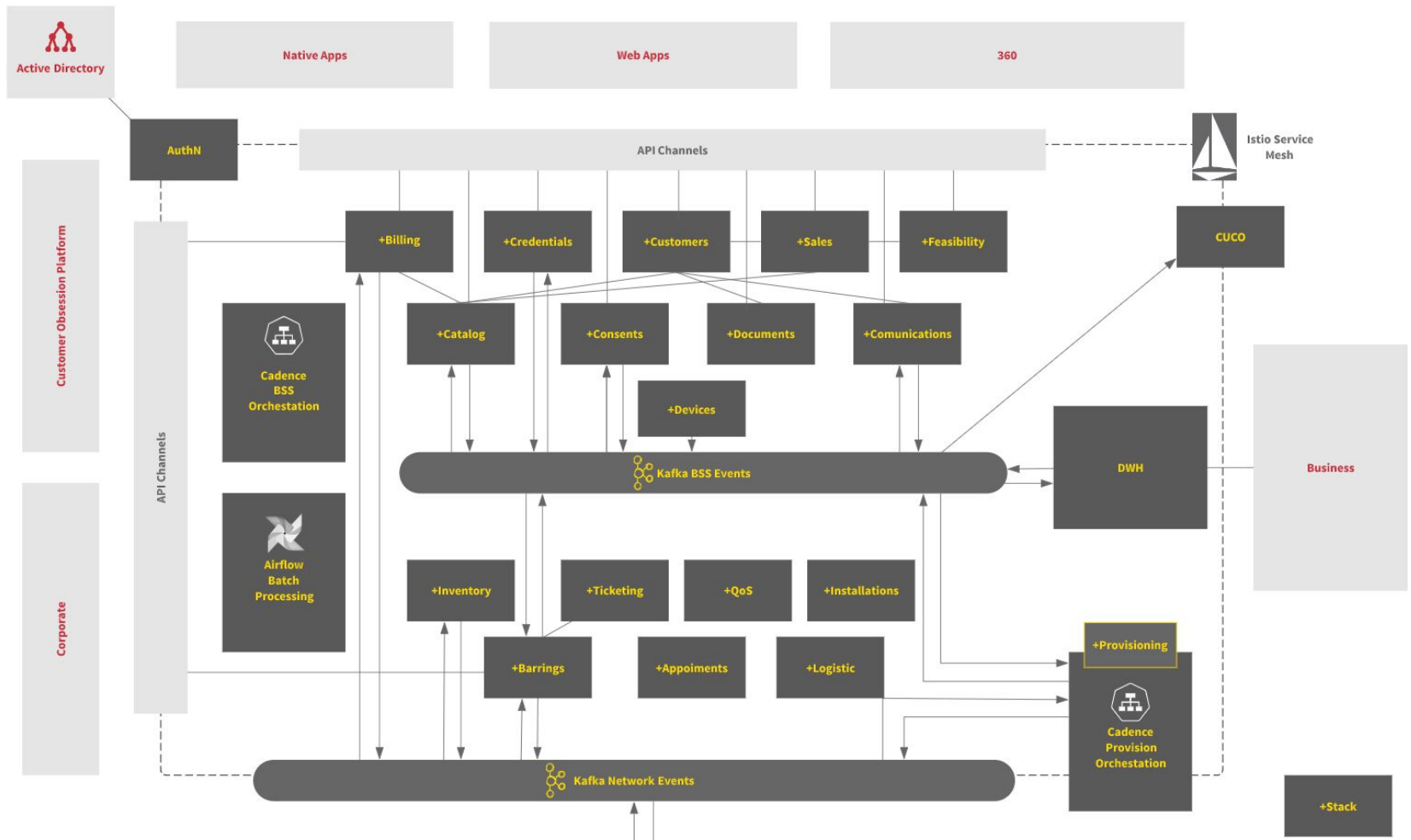
October 28, 2020

# About MasMovil group

- 4th telecom company in Spain
- Provides voice and broadband services to +12M customers
- Several brands in the group (7 main brands but there are more than 800)
- Software engineering area with more than 150 engineers

GRUPOMASMOVIL

**yoigo** **pepephone** **llamaya\*** **LEBARA** **Lycamobile**



**Reduce operational complexity**



**Scalability**

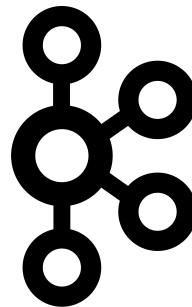
**Availability**

**Security**

**Reliability**



**Observability**

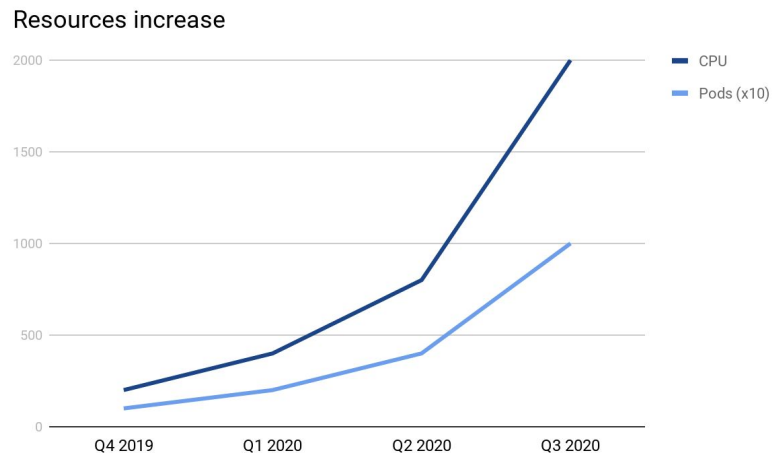


**Messaging**

**Analytics**

# Multi-tenancy caveats

- Single underlying infrastructure
- Reduce operational complexity
  - Infrastructure is operated by a team of 3 engineers
- Reduce costs
- Security issues
- Scalability issues



Namespaces  
**+400**

Pods  
**+10k**

Services  
**+3k**

Nodes  
**+300**

CPU  
**+2k**

Mem  
**+5TB**

kube-proxy replacement

NetworkPolicy logging

Multi-cluster



DNS Aware  
NetworkPolicy



cilium



Increased Istio security

External Services TLS  
visibility

Performance



Kafka policies by labels