

Webinar

How to Set up, Run and Scale a Secure MQTT Broker on Kubernetes



HIVEMQ



inovex





WELCOME



▶ **Magi Erber**

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What you gonna learn today

- ▶ How to deploy HiveMQ in any K8s cluster
- ▶ How to operate a reliable & scalable HiveMQ Deployment
- ▶ How to take advantage of utilities
- ▶ HiveMQ Kubernetes Operator



TECHNICAL IoT CHALLENGES

Scalability

- ▶ Massive scalability required for millions of devices

Instant Data Delivery

- ▶ Critical systems need reliable and instant data transfer

Unreliable Networks

- ▶ Excellent customer experience for IoT apps and devices



HiveMQ - Enterprise MQTT Broker



- ▶ Connectivity and Messaging Platform
- ▶ Based on standard IoT protocol (MQTT)
- ▶ 100% compatible to all MQTT versions (v3.1, v3.1.1, v5)
- ▶ Scales to more than 10 million always-on devices
- ▶ Allow multi-cloud and Enterprise software integration



HiveMQ is Unique



Massive IoT Scale Deployments

- ▶ Enables companies to seamlessly connect 10+ million devices

Elastic Clustering & Auto Heal

- ▶ Allow to scale cluster nodes up and down depending on IoT device traffic
- ▶ Automatically reconnect split cluster nodes due to network interruptions

Integration with third party systems

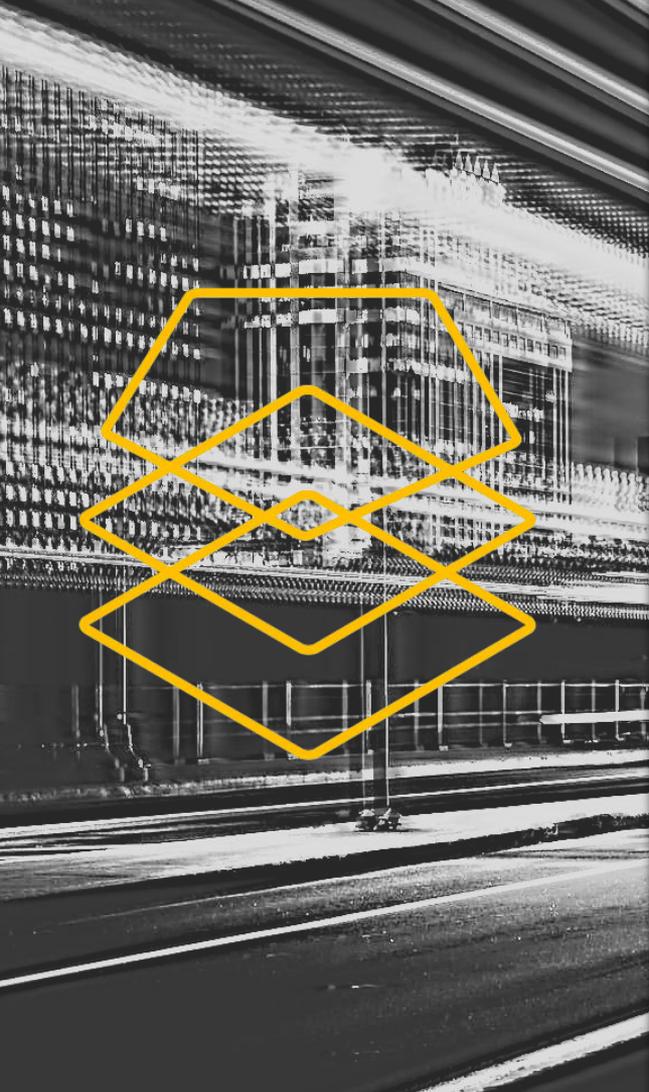
- ▶ Extension framework allows to integrate with nearly any external system

Traceability & Observability & Reliability

- ▶ Possibility to audit single client message flows
- ▶ DevOps metrics and dashboard across devices and cluster



What are the **challenges** we see operating a **reliable, scalable and secure** MQTT broker deployment?



▶ Scalability

- ▶ IoT Solutions need to scale to accommodate growth (100s - 1,000,000s of devices)
- ▶ Scale up and scale down to accommodate spikes
- ▶ Scale your deployments dynamically



Business critical Operations

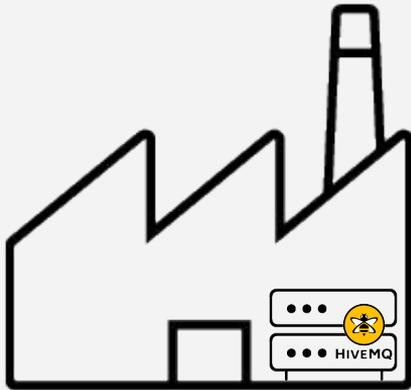
- ▶ 24/7 operation of all IoT applications
- ▶ Continuous monitoring
- ▶ Fast reaction in failure cases to establish a continuous user experience



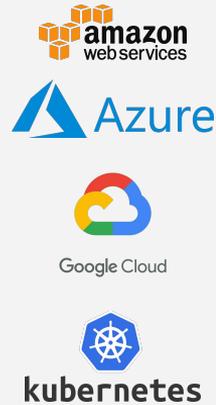
24/7



Deployment Agnostic



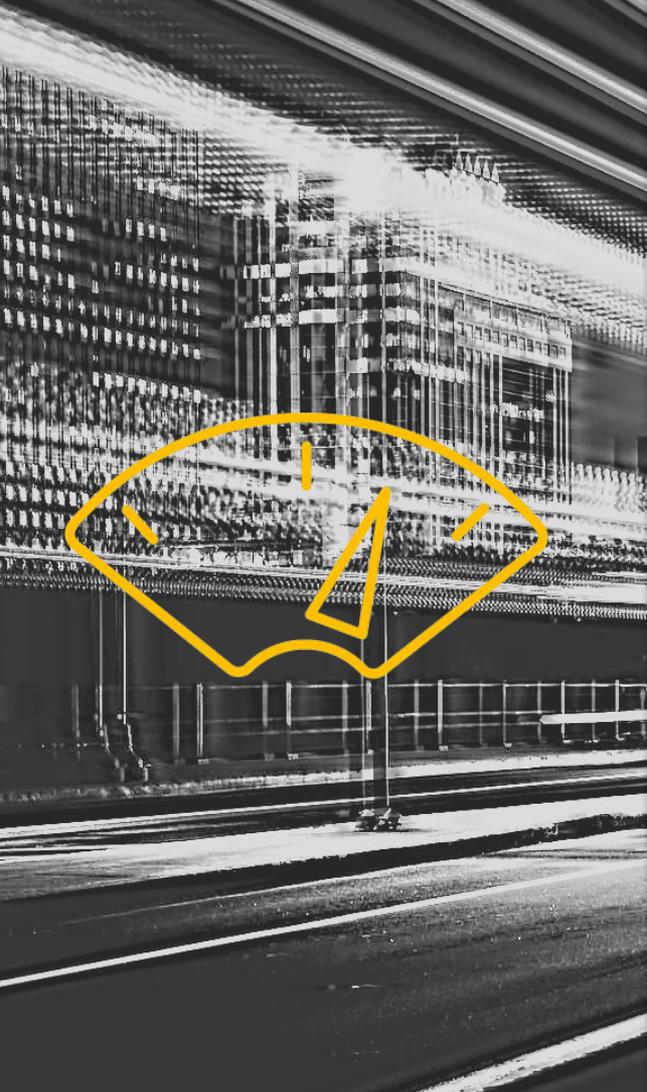
On-premise



Self-hosted



Managed Service



▶▶ Time to Market

- ▶ Continuous Deployment
- ▶ No handoffs between different teams
- ▶ DevOps culture: You built it, you run it
- ▶ Fast and continuous application updates



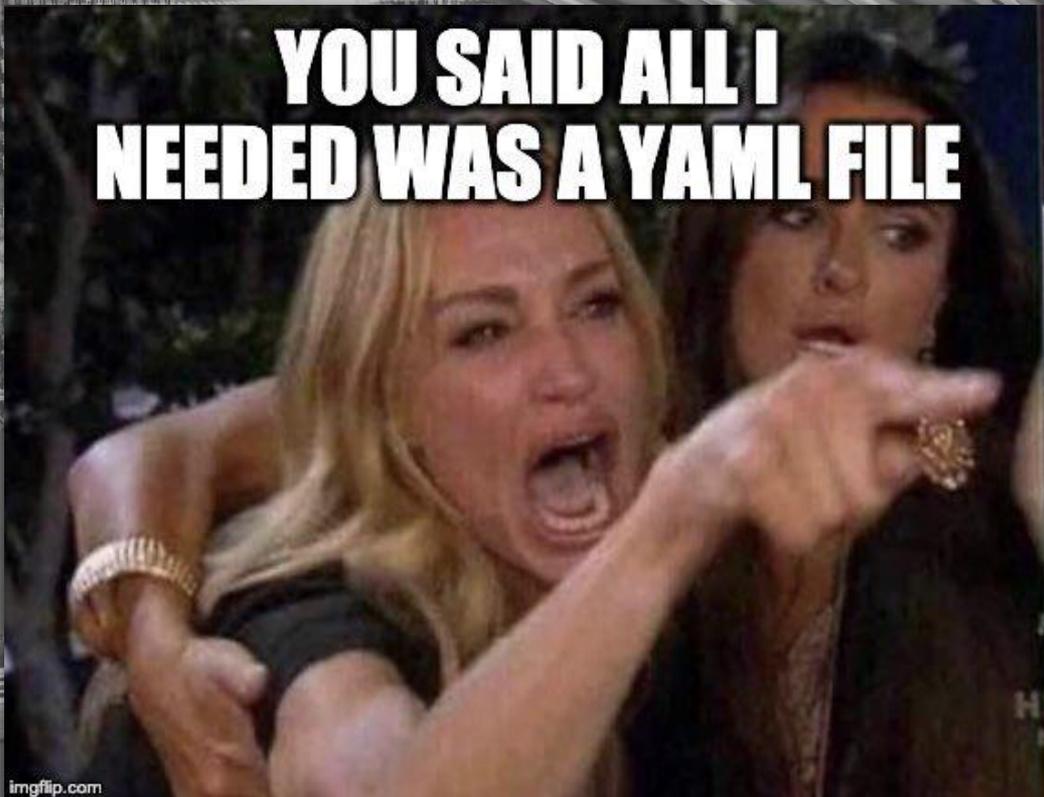
KUBERNETES COMES TO THE RESCUE



kubernetes

- ▶ Open-source **container-orchestration system** for automating deployment, scaling & management of containerized apps
- ▶ Allows you to run distributed systems resiliently
- ▶ Mighty features like automated rollouts and rollbacks, self healing and load balancing
- ▶ Uses declarative description of desired state

**YOU SAID ALL I
NEEDED WAS A YAML FILE**



imgflip.com



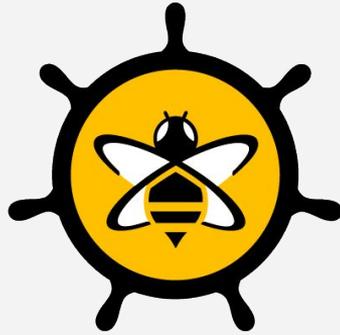
https://banzaicloud.com/blog/what_have_the_kubernetes_ever_done_for_us/



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kubernetes



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K8s OPERATOR

THANK YOU

For attending the webinar



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