WEBINAR

Connecting a Smart Factory to the Cloud with MQTT & Sparkplug

No Software Installation Required!

HOSTED BY

IN COLLABORATION WITH

HiveMQ

canary

OPTO 22

Our Speakers

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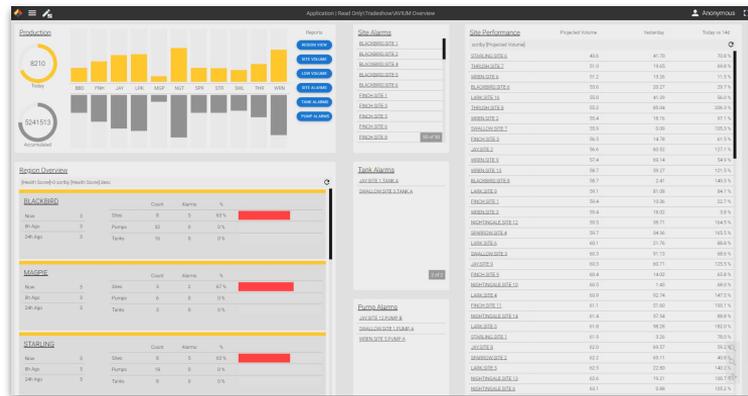
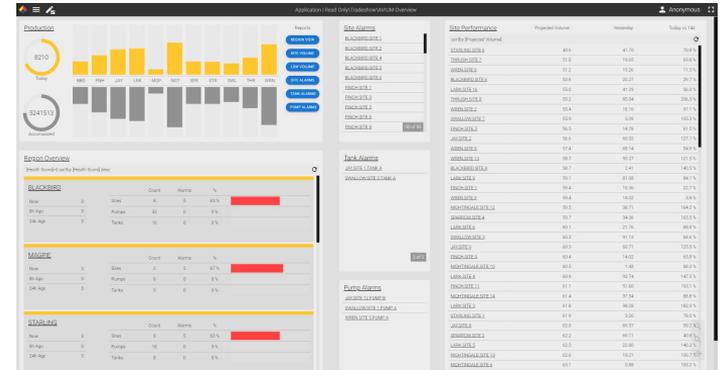in *linkedin.com/in/bhougland/*

Jeff Knepper
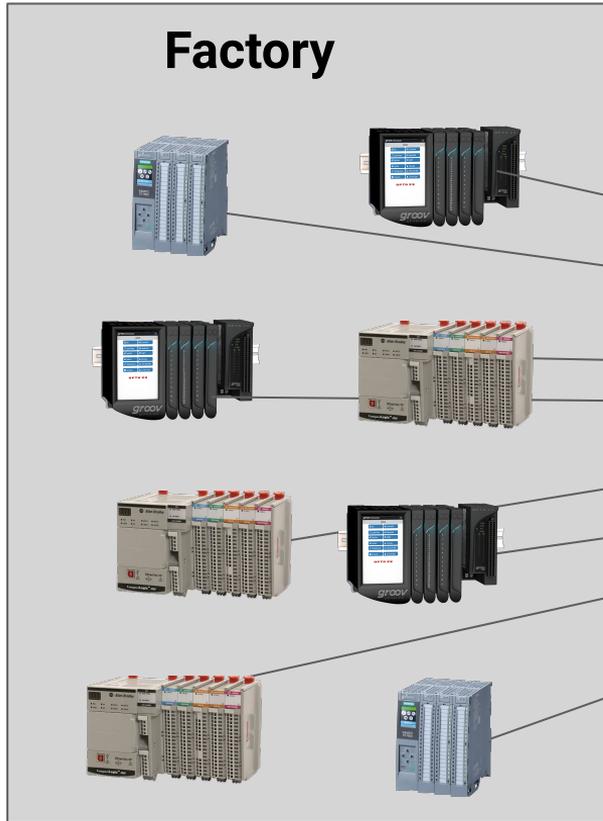**Canary Labs Executive Director of Business Development**
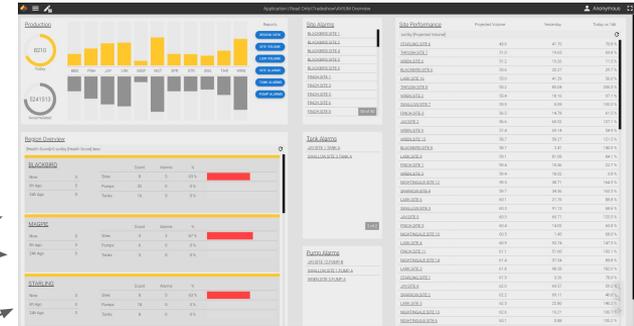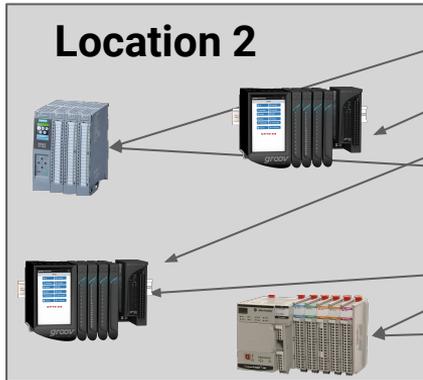
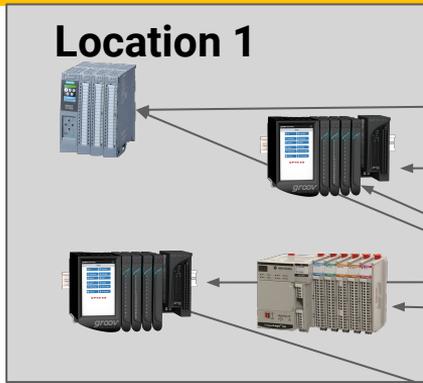in *linkedin.com/in/jeff-knepper-0a0b81a/*

Making it easy to connect a Smart Factory

Connecting more difficult with brownfields

Factory

More complexity with different location and applications

Location 1

Location 2

Siloed OT Systems - No Interoperability
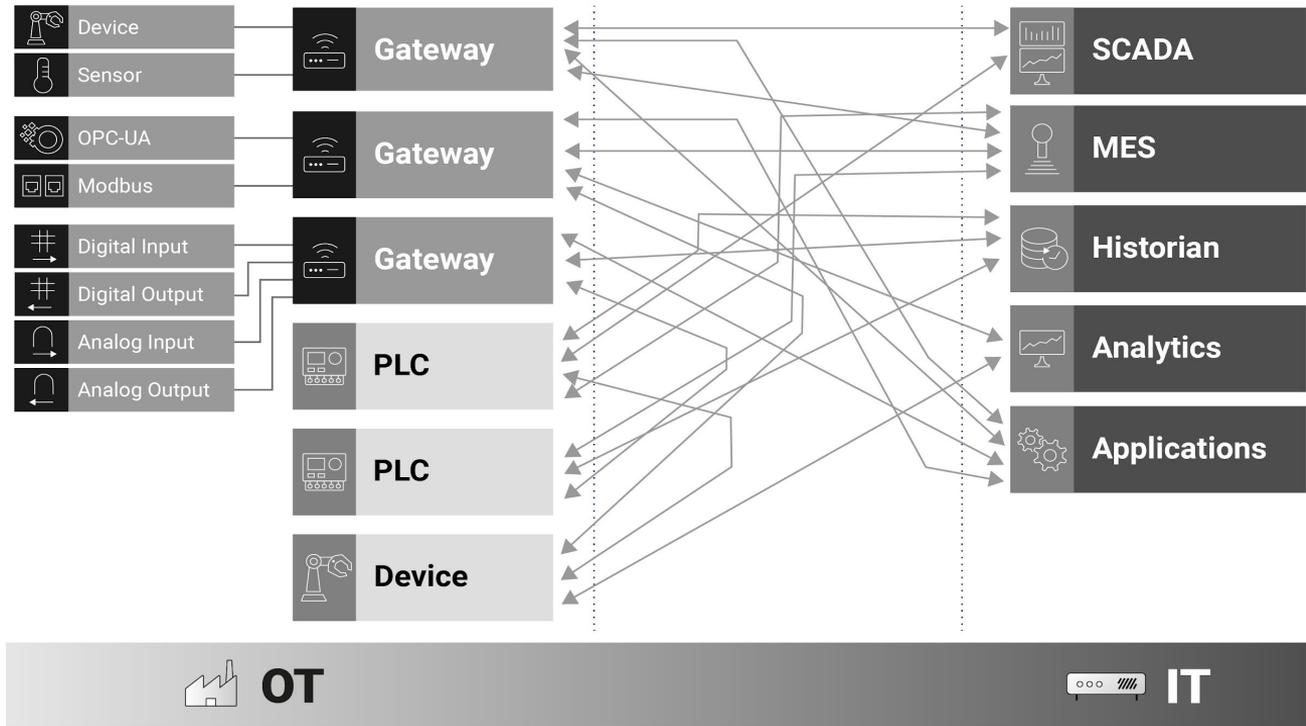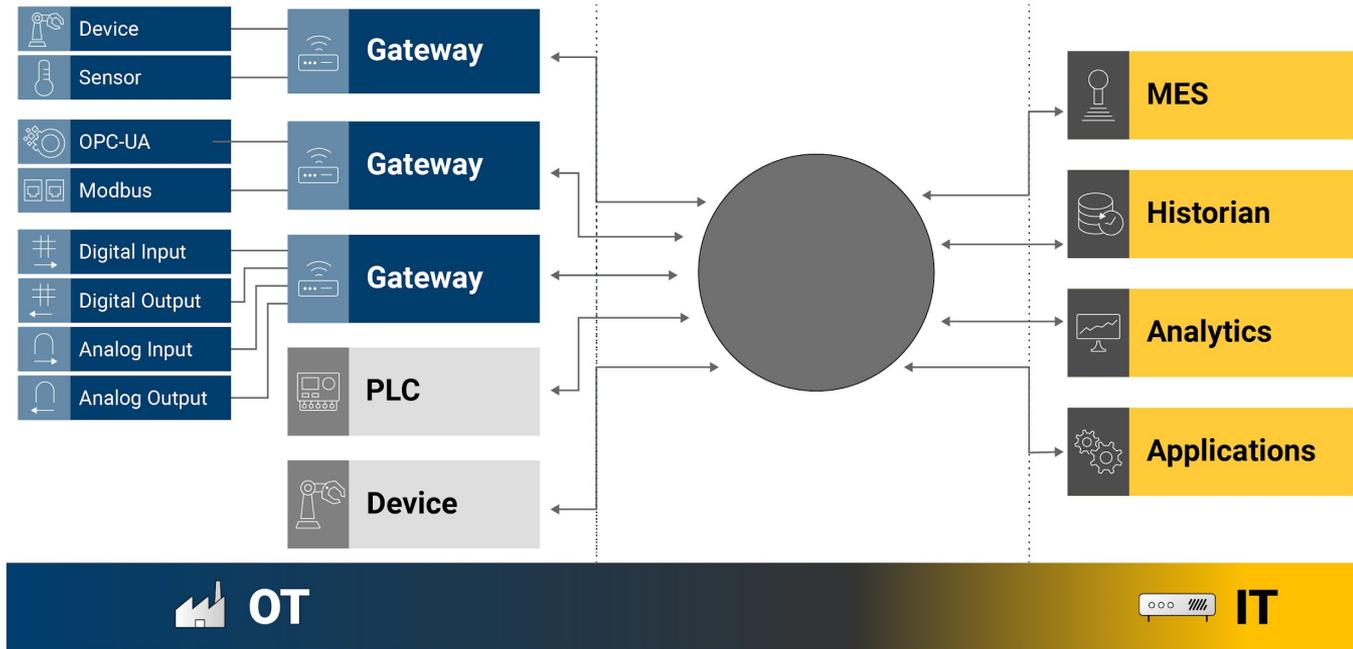
Challenges of OT Systems Today

- Difficult to change workflows and processes

- Difficult to analyze data across the entire system

- Difficult to setup a new system/facilities

Decoupled Architecture

OT

Device
Sensor
→ Gateway

OPC-UA
Modbus
→ Gateway

Digital Input
Digital Output
Analog Input
Analog Output
→ Gateway

PLC

Device

IT

MES
Historian
Analytics
Applications

MQTT Offers

- Decoupled devices and applications
- Publish/Subscribe protocol
- Scalable and extensible
- Robust and reliable

Introducing Sparkplug

Sparkplug Adds to MQTT:

- **Topic namespace**

- **Data Model and Structure**

- **Extensible process variable payload**

- **Defines MQTT state management**
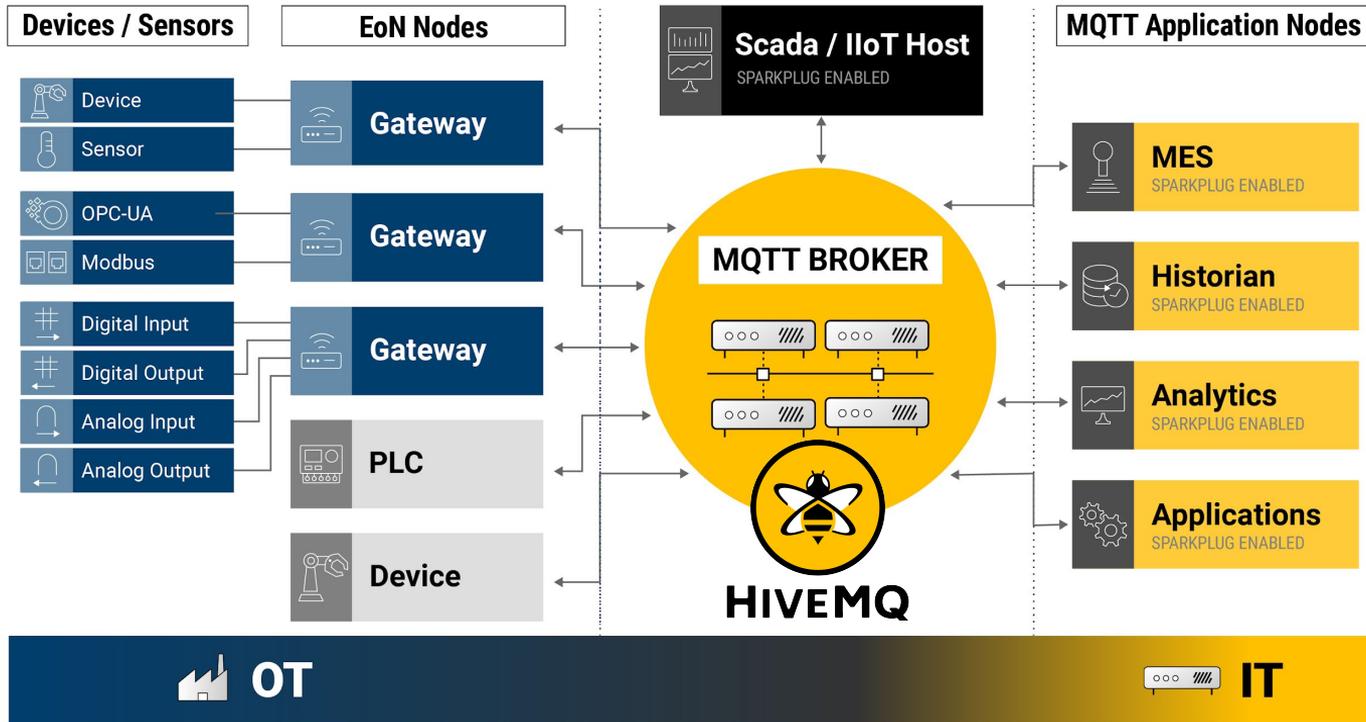
Sparkplug Key Concepts

Key Concepts:

- Continuous session awareness

- Report by exception

- Interoperability by consistent data format

- Auto discovery

- Unified namespace

MQTT Sparkplug Architecture

Live Demo
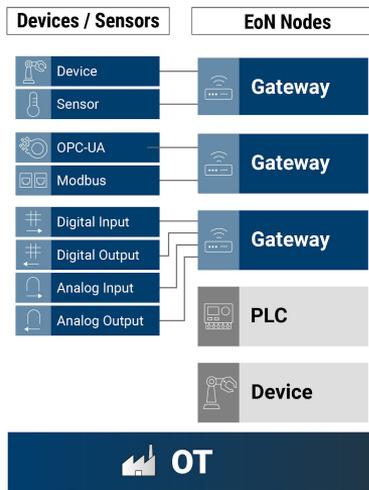
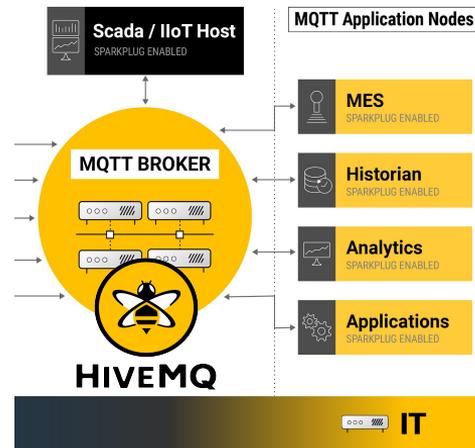Watch it here: https://youtu.be/RHJfC43Zeds

HiveMQ

Factory to Cloud
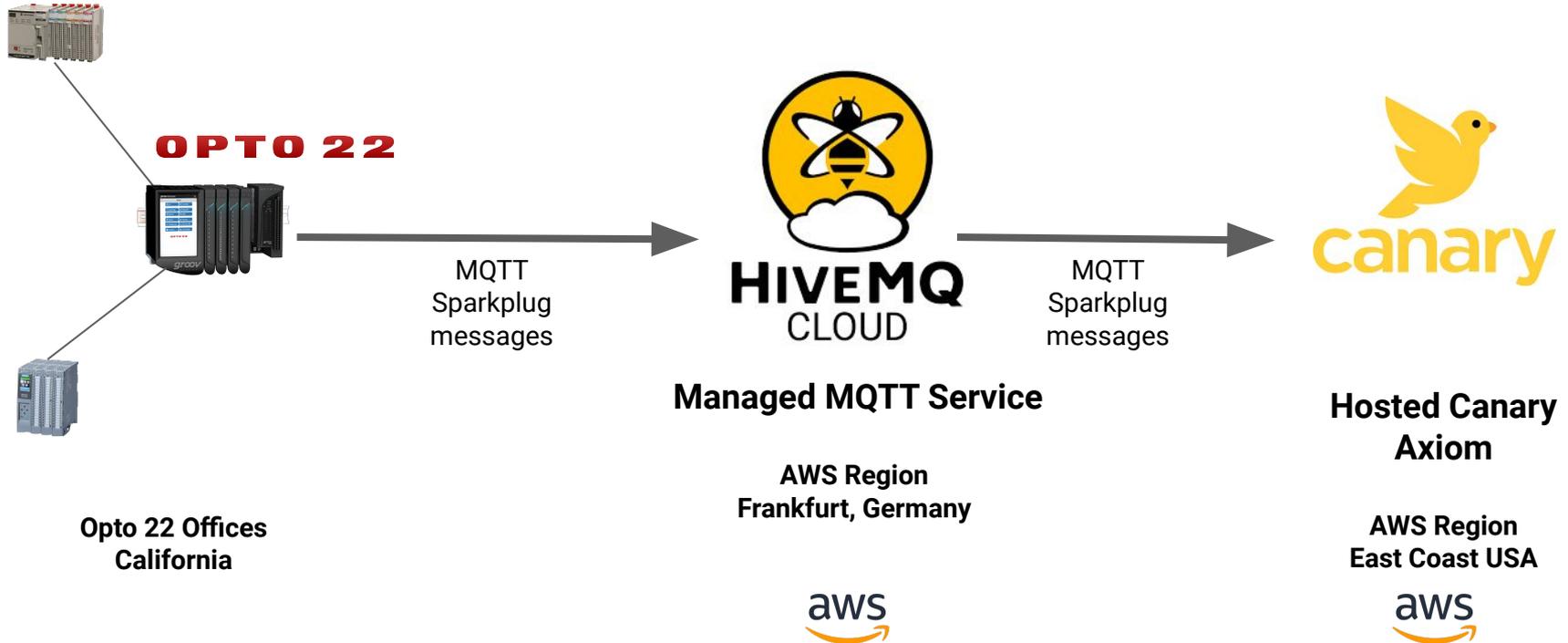

- **Secure communication**
- **Bidirectional**
- **Devices not exposed to the Internet**

Demo - In 30 minutes

No Software To Install

MQTT Sparkplug messages

MQTT Sparkplug messages

Managed MQTT Service

AWS Region Frankfurt, Germany

Hosted Canary Axiom

AWS Region East Coast USA

Opto 22 Offices California

Summary

- Cloud managed services simplify getting started
  - No Software Installation Required

- Sparkplug standard makes it possible to integrate out the box

- Sparkplug architecture is extensible
  - New hardware and software can be added with no changes

Sparkplug Landscape

Resources

Resources

[HiveMQ Cloud](#) - Free for up to 100 MQTT clients

[MQTT Essentials](#) - Resources for learning about MQTT
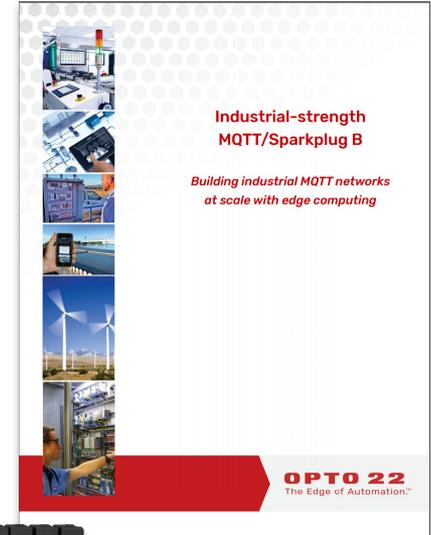
[HiveMQ Sparkplug Resources](#)

Resources

Industrial Strength MQTT/Sparkplug B White Paper

Getting an Edge in Automation Webinar

groov **EPIC Specifications & Features**

groov **RIO Resources**

Resources

Axiom Demo

Pricing Calculator

info@canarylabs.com

THANK YOU

HiveMQ