Bringing Observability and Device Management to IoT Devices

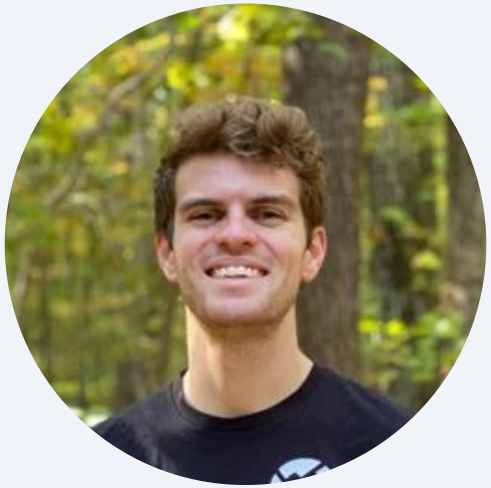
Presented By:

Daniel Mangum - Lead Cloud Engineer, Golioth

Noah Pendleton - Firmware Solutions Engineer, Memfault

Kyle Dando - Ecosystem Manager, NXP Semiconductors

Today's Speakers



Dan Mangum
Lead Cloud Engineer,
Golioth

Noah Pendleton
Firmware Solutions Engineer,
Memfault

Kyle Dando
MCUXpresso Ecosystem,
NXP

golioth

Memfault

NXP

Agenda

- Problem we are solving
- NXP’s Contribution
- Golioth’s Contribution
- Memfault’s Contribution
- Demo
- Q&A

The Connected Cow

Connecting the Edge of Internet of Things

Now at NXP

POLL #1

What is your experience with NXP MCUs?

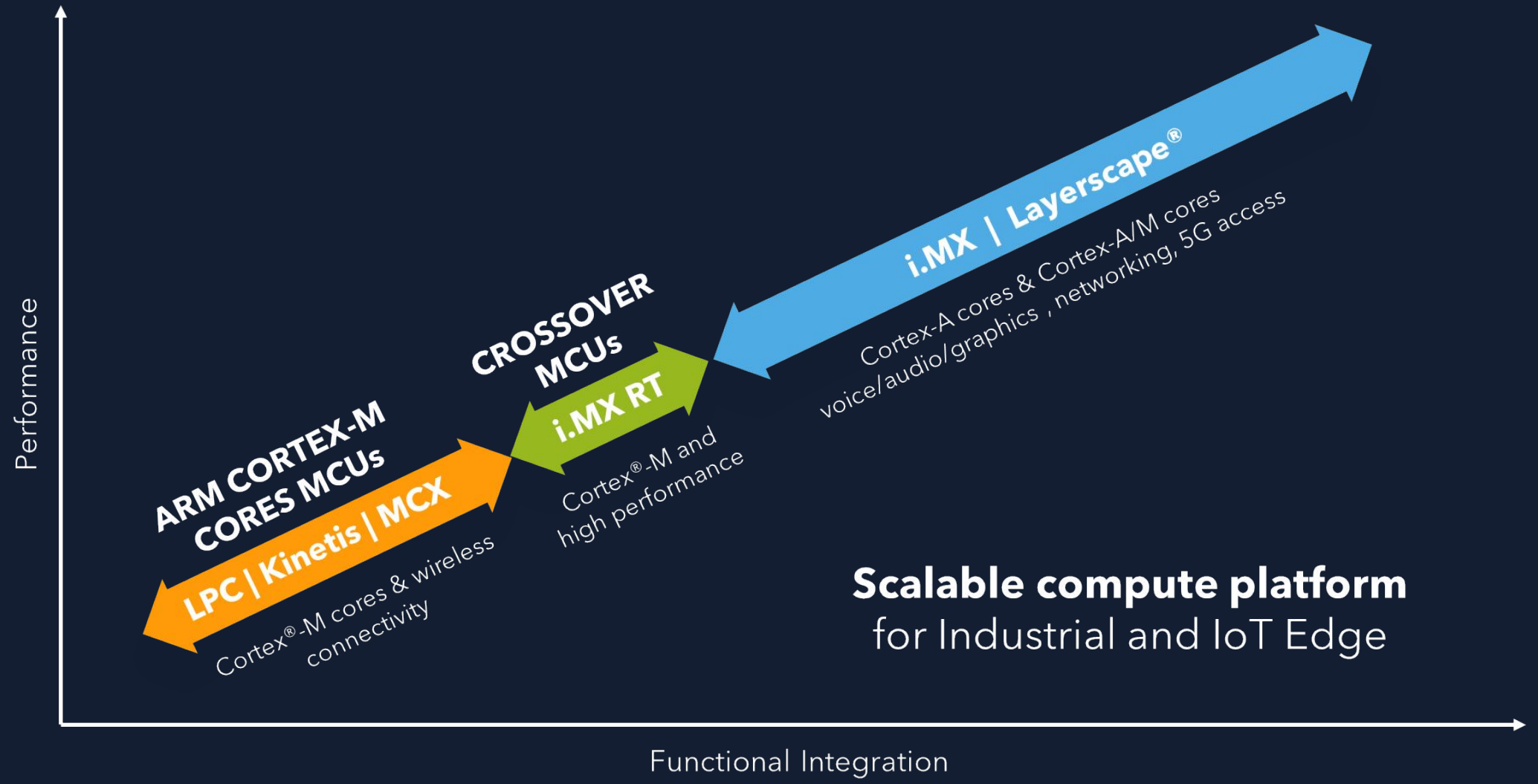
a. I am building my first product with NXP MCUs

b. I have released a product before with NXP MCUs

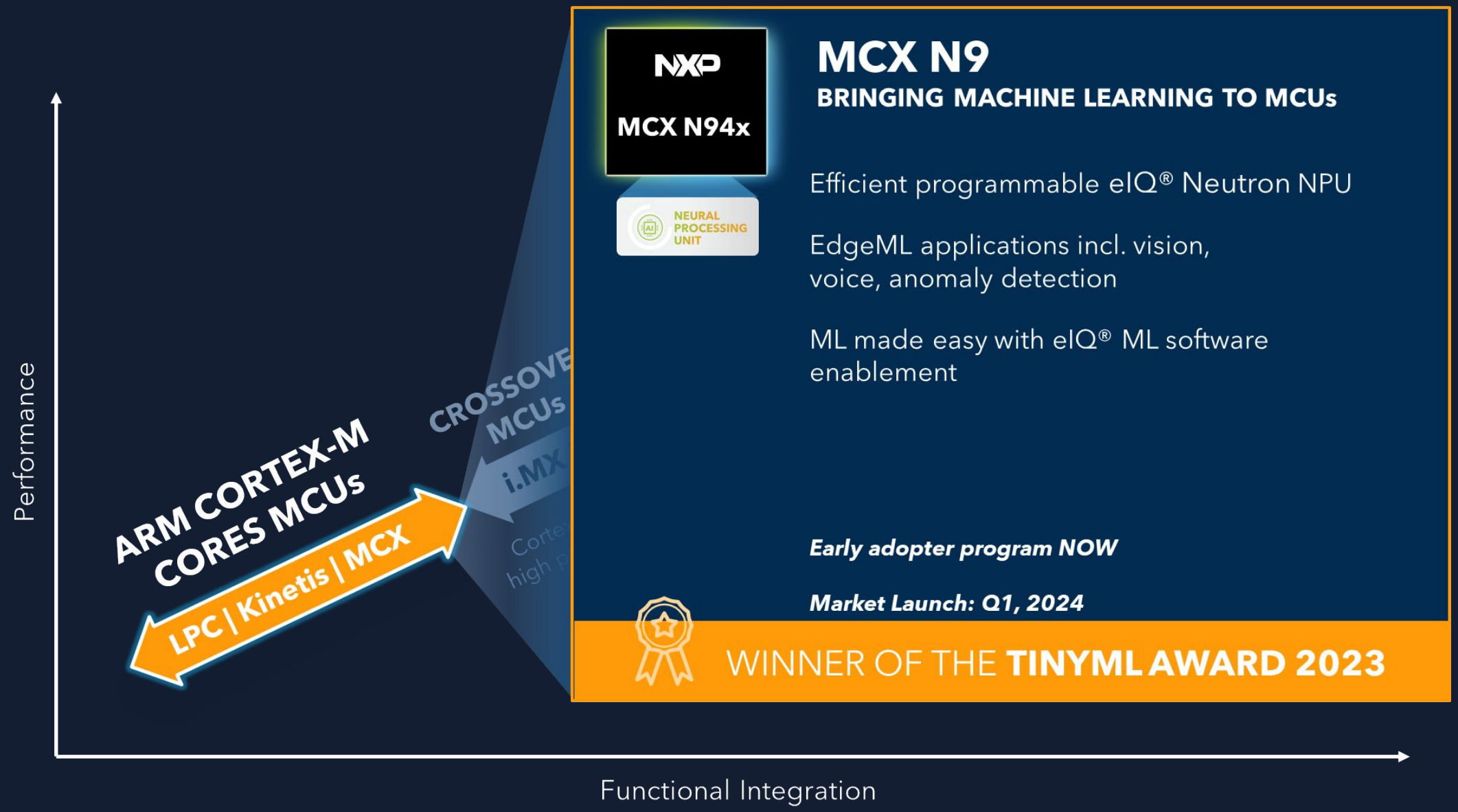
c. I have built devices with other vendor MCUs but not NXP

d. Other / I am just here to learn!

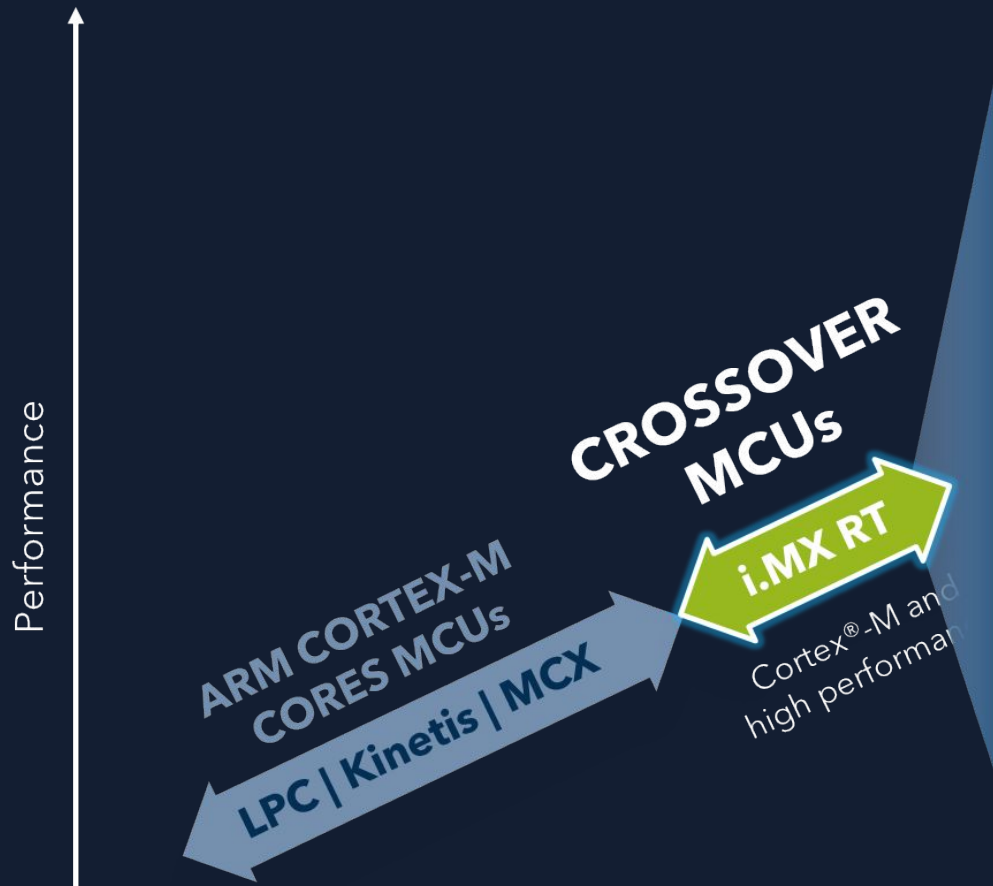
The Best Devices for the Job



The Best Devices for the Job



THE BEST DEVICES FOR THE JOB



NXP i.MX RT1180

i.MX RT1180
HIGH-PERFORMANCE DUAL-CORE MCU FOR INDUSTRY 4.0

800MHz Cortex-M7 for real-time control + power-efficient Cortex-M33 for network management

Integrated Gbps Ethernet switch with support for time-sensitive network (TSN) and industrial protocols

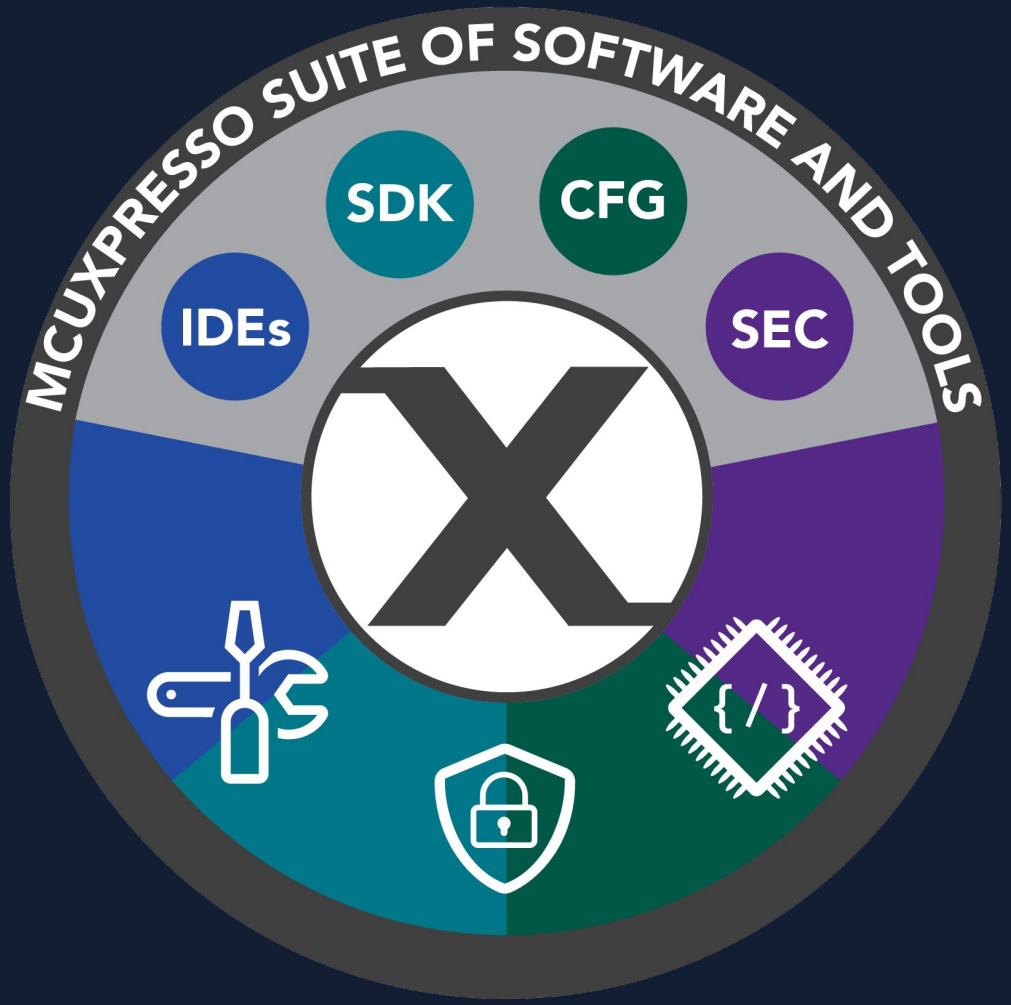
Advanced security with integrated EdgeLock® Secure Enclave

Functional safety software libraries

Early adopter program NOW

Market Launch: Q1, 2024

The Best Tools for the Job



- Software
  - MCUXpresso SDK
  - Application Middleware
  - Application Code Examples
- Tools
  - IDEs
    - MCUXpresso IDE
    - MCUXpresso for Visual Studio Code
    - IAR Embedded Workbench
    - Keil MDK
  - Config Tools
  - Secure Programming Tools
- Delivery
  - Open-CMSIS-Packs
  - GitHub

A Bit About Golioth

POLL #2

What services do you use today to send data to the internet from your devices?

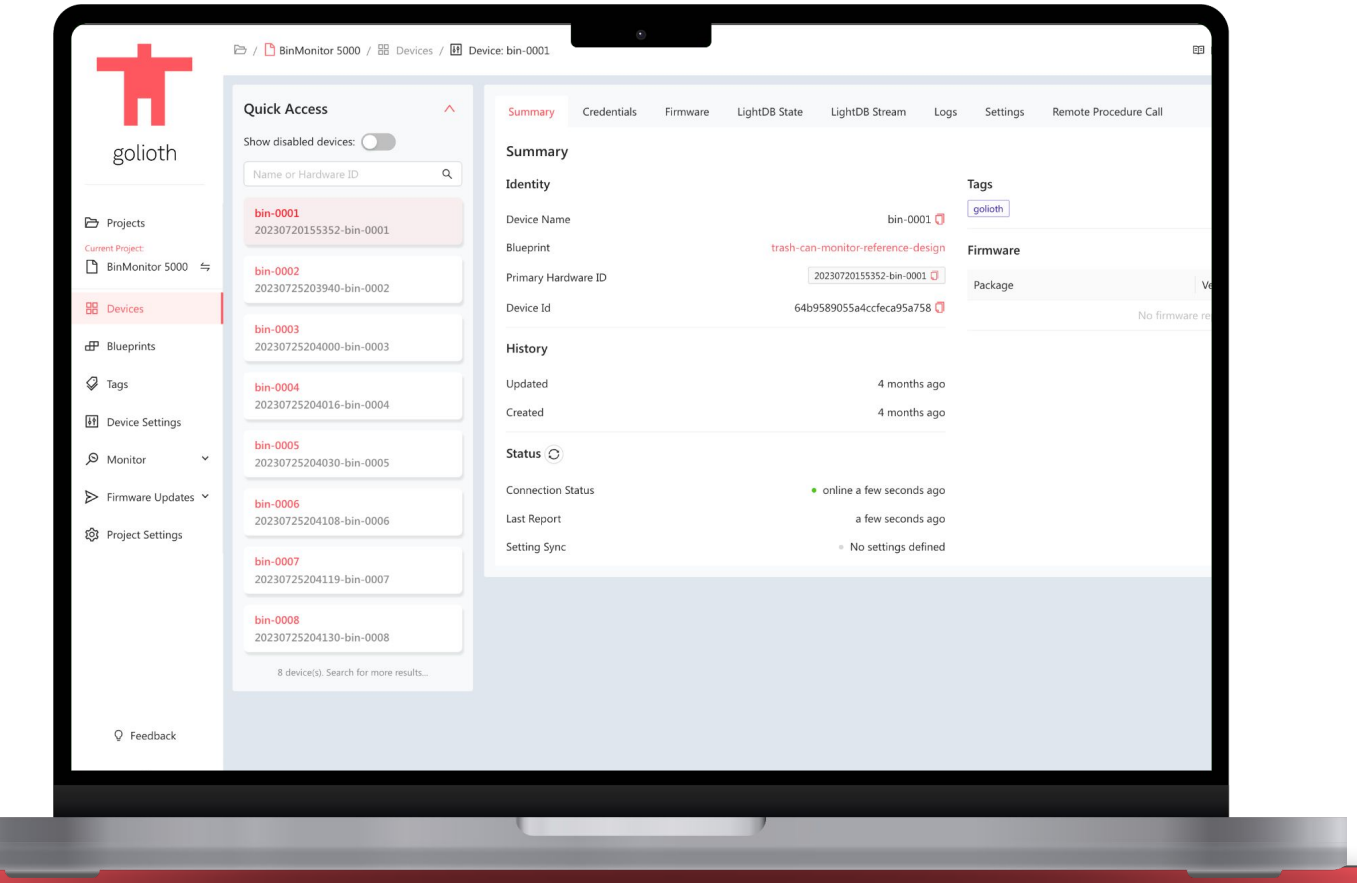
a. Golioth

b. AWS IoT

c. Azure IoT Hub

d. Self-Hosted

What we do



Flexible IoT development platform leader

Build IoT faster with one development platform for prototyping, testing, and scaling IoT fleets.

Engineers love us: Top performing IoT management platform and IoT development tool on G2.

Put IoT at the center of CI/CD

Build IoT easily with a single API, device toolkit, open source designs, and a thriving IoT community.

Stress-free IoT for everyone

We're built for your entire team, covering hardware, firmware, cloud, and data developers.

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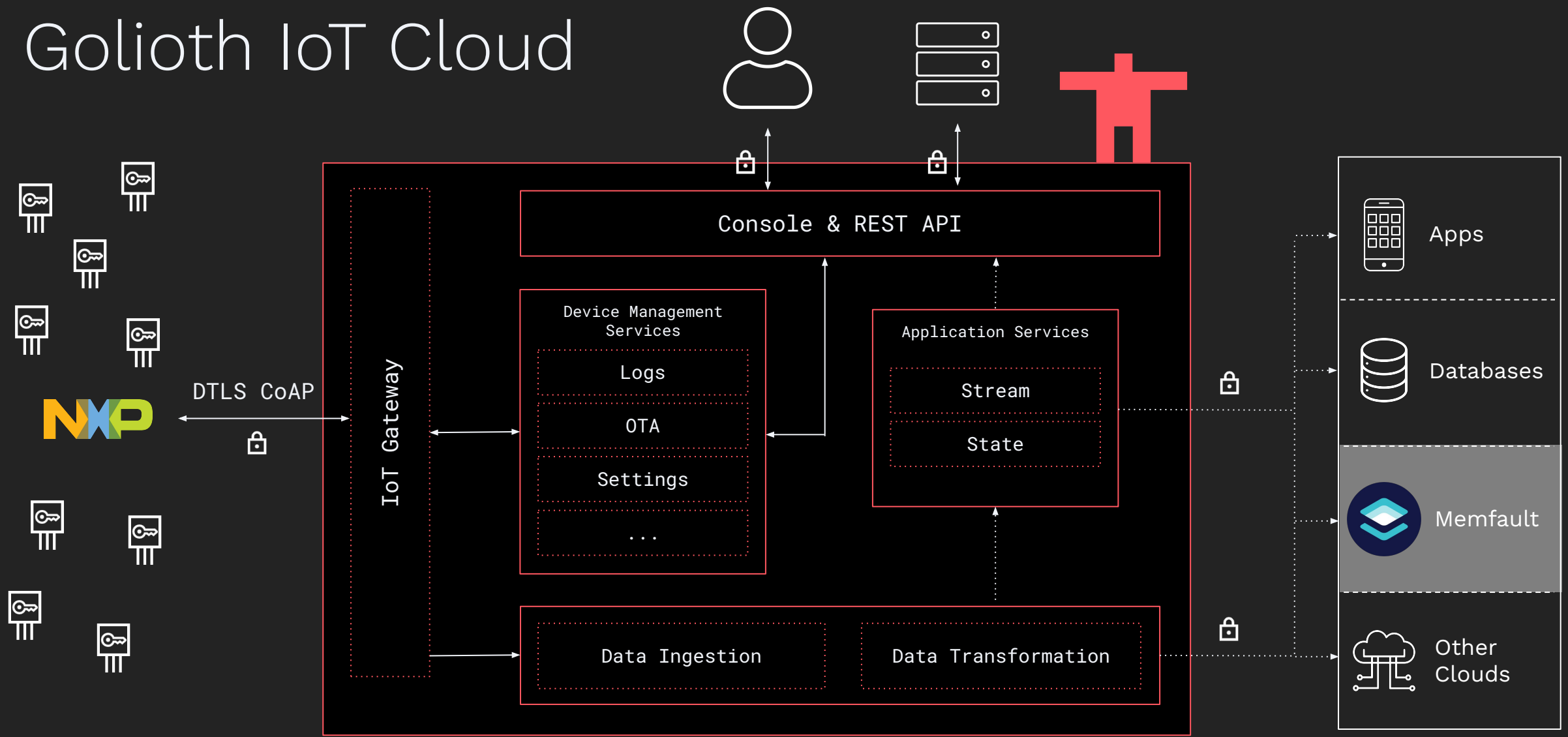
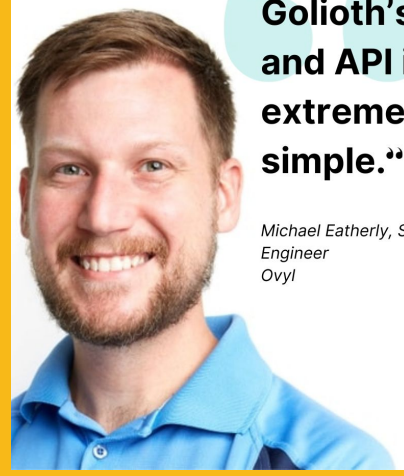
Golioth IoT Cloud



Your Devices
Your Firmware
(+ Golioth SDK)

Golioth Device Management,
Application, and Data Services

Your Tech Stack

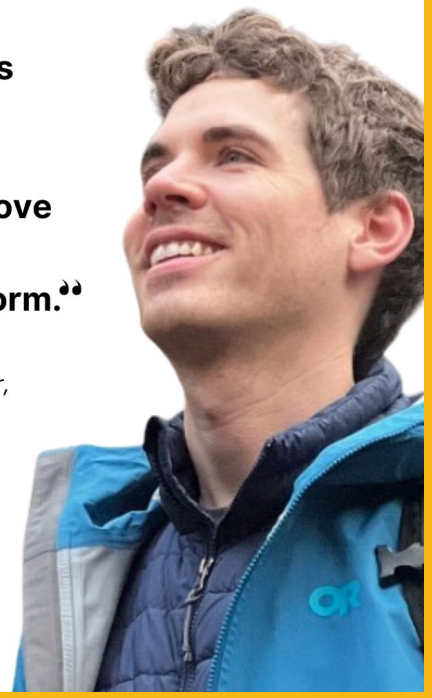


Golioth's SDK and API is extremely simple."

Michael Eatherly, Senior Software Engineer
Ovyl

Golioth helped us unblock our big technical risk, allowing us to move into production using their platform."

Keenan Johnson, Founder,
Ribbit Network



We've gained an entire employee's worth of productivity with Golioth. It's like we've had another engineer join the team."

Eli Thomas, Head of Technology
Method Recycling

Moore About Memfault

Memfault

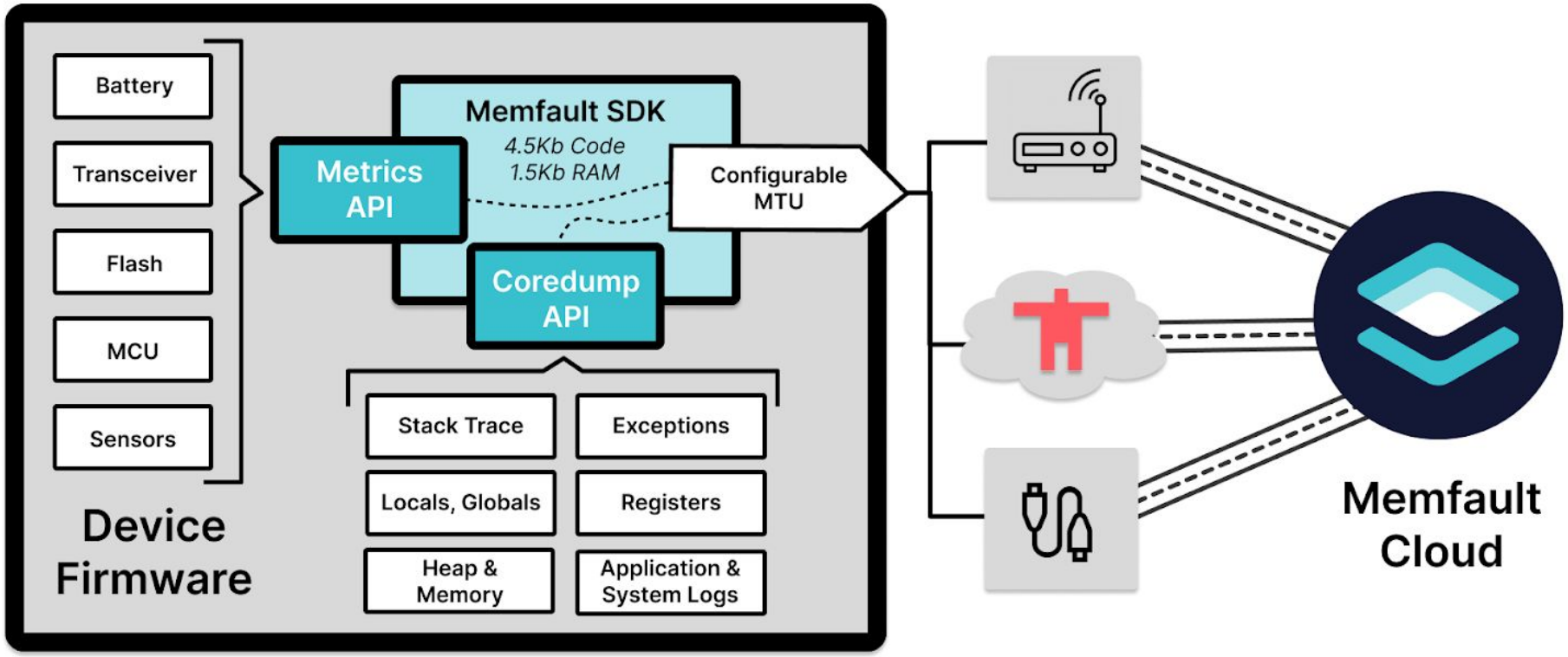
POLL #3

Which properties are most important to your device? (check all that apply)

a. Battery & Power
b. Connectivity
c. Performance
d. Stability and Crashes
e. Other

Memfault for Embedded Observability

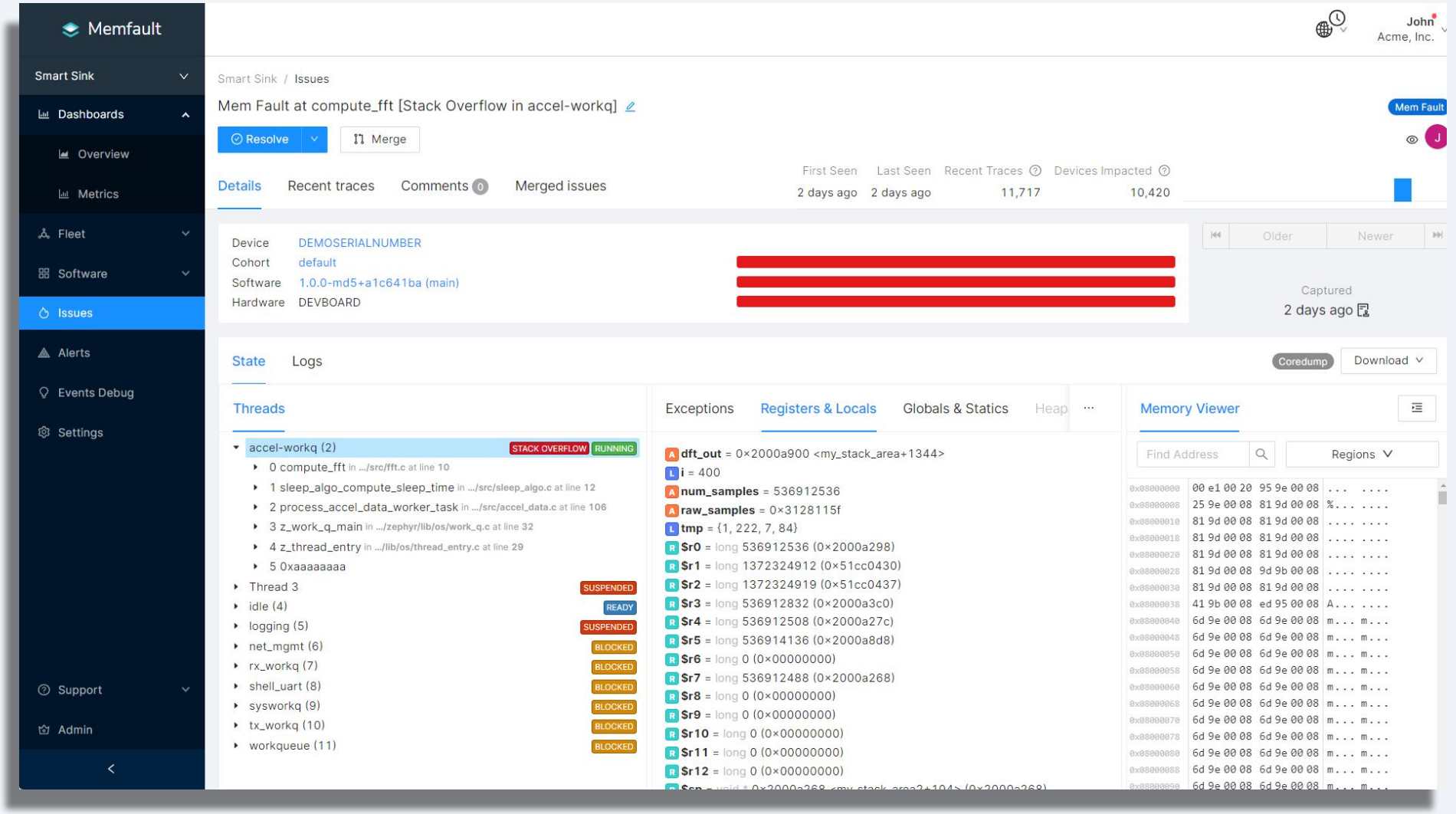
Proactively Monitor Devices



Memfault

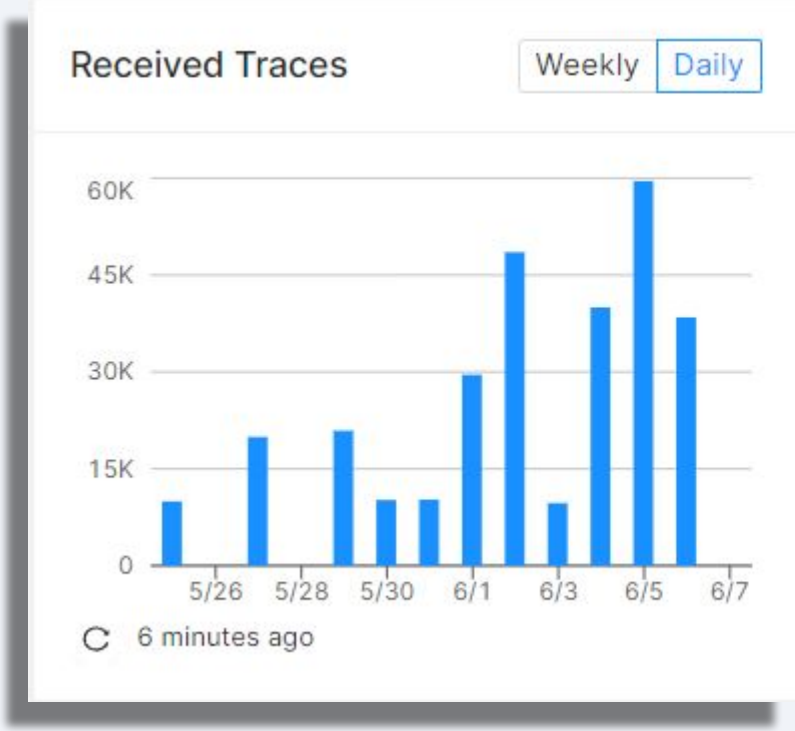
golioth

Debug crashes 100% remotely

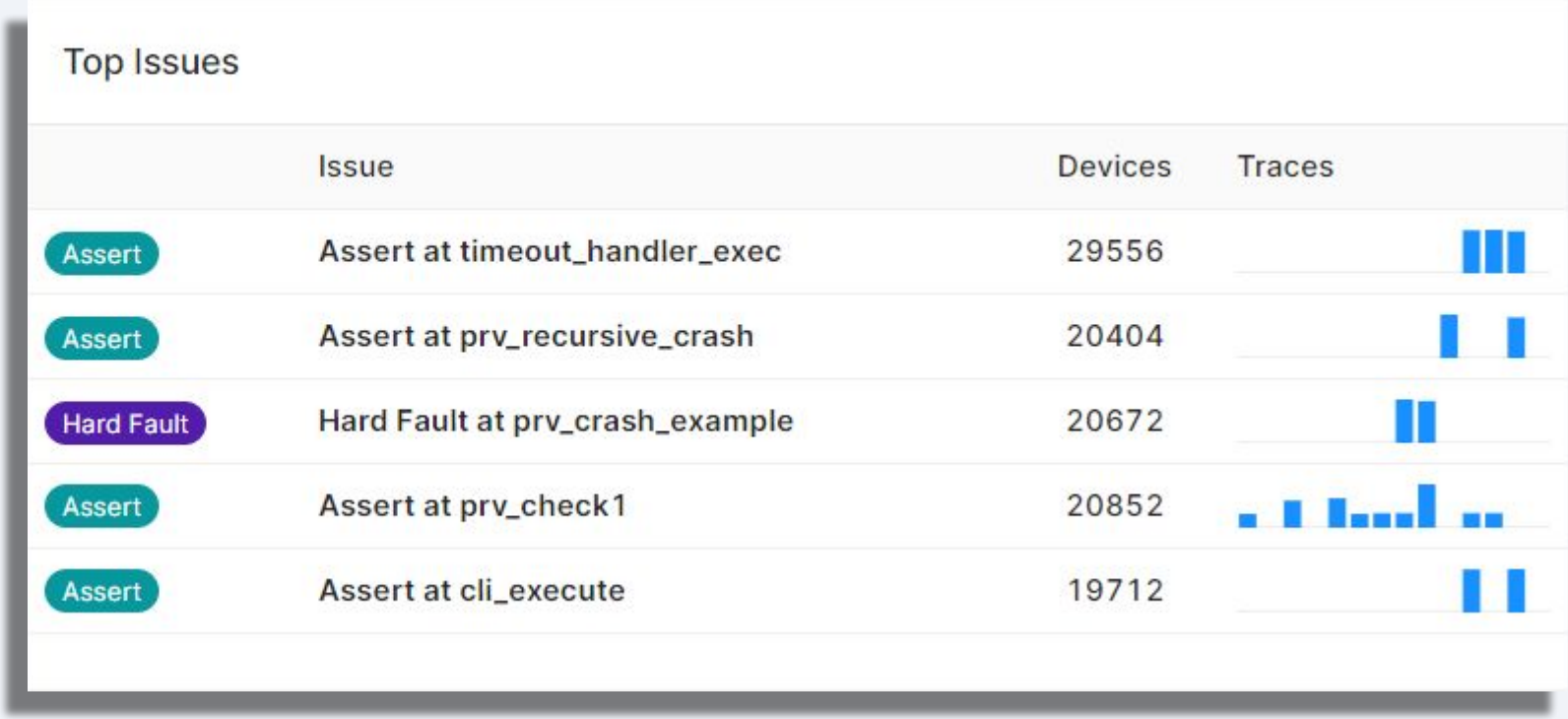


Fleet-scale Trace Analysis

Detect problems

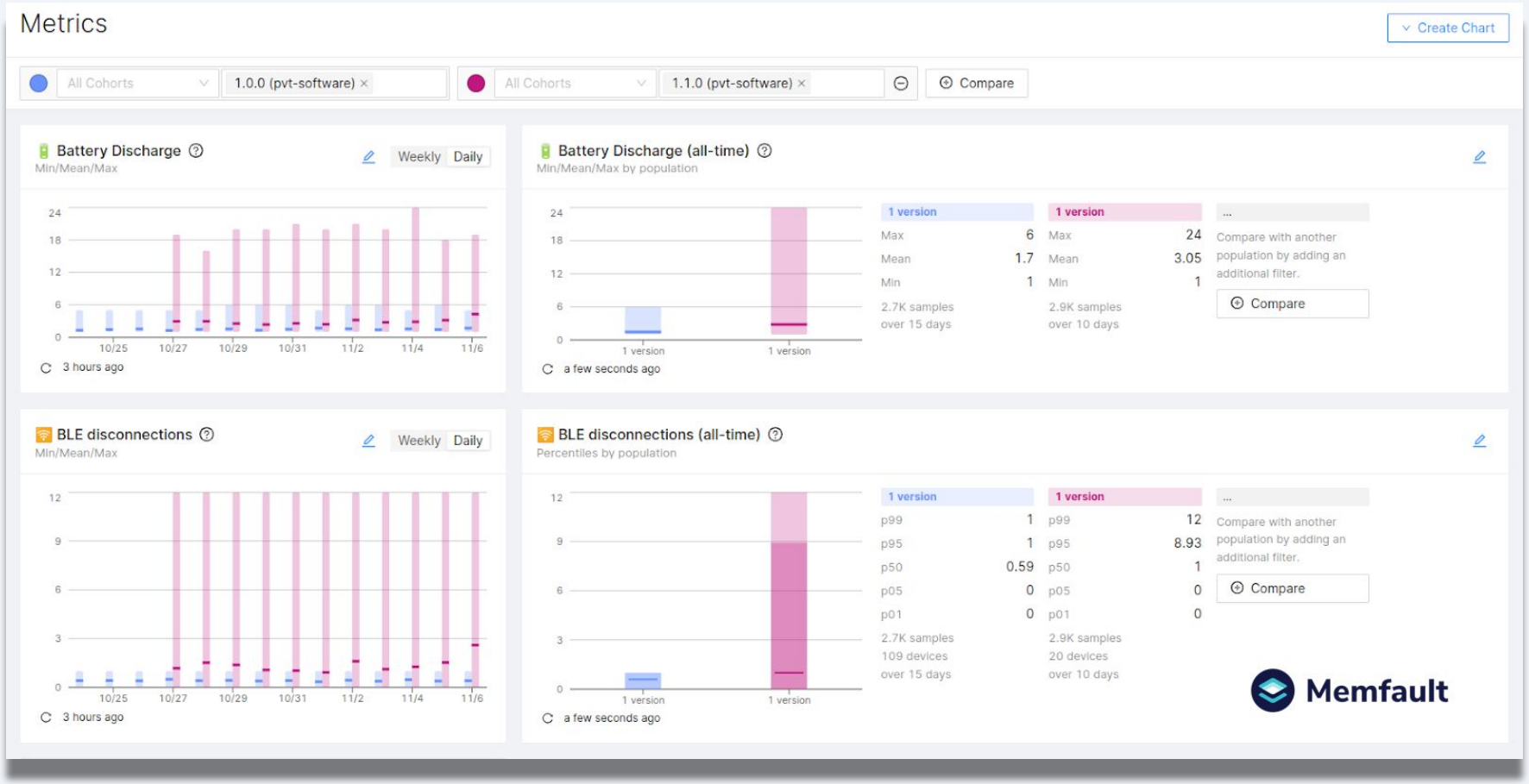


Automatically label and gain insights



Memfault finds the issues you care about

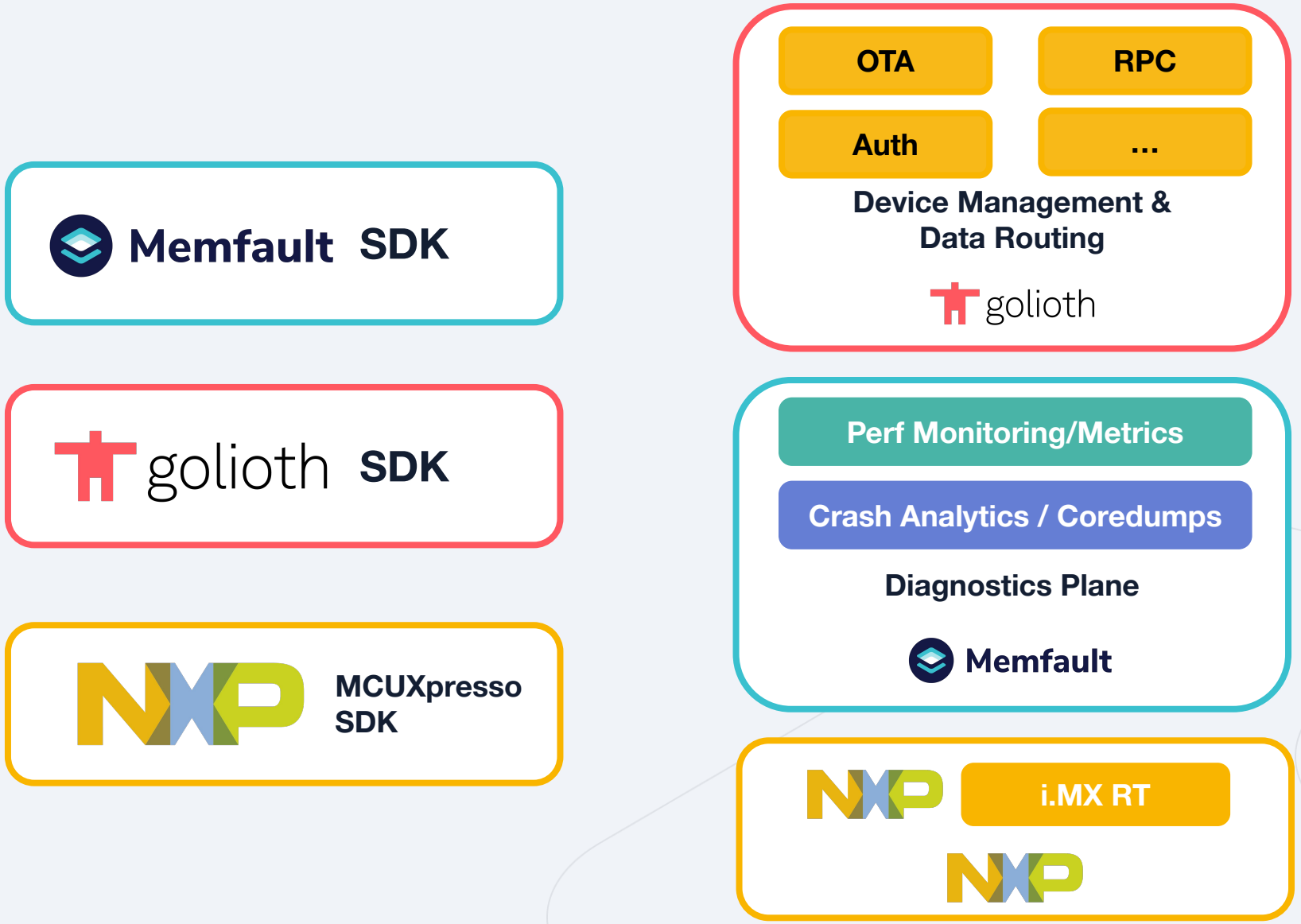
Fine tuned Performance Metrics



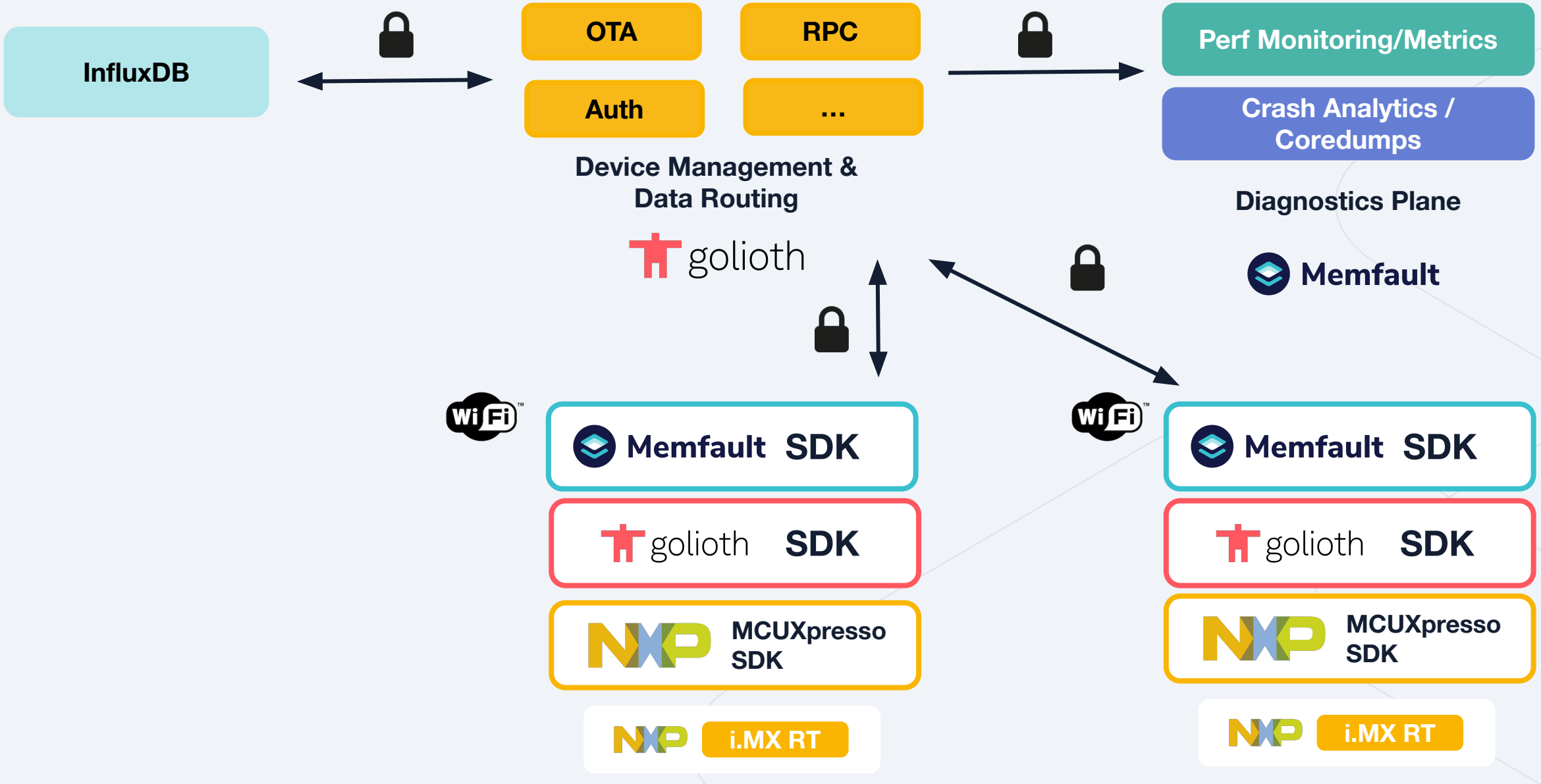
Tracking critical metrics over time from your devices allow you to gather valuable insights.

Demonstration

Get to Know the Companies



Overview of the Job



How to get started

Resources

- **Join the Waitlist Today!**
  - https://hslp.golioth.io/memfault-golioth

- Learn more at www.memfault.com , www.golioth.io and www.nxp.com
  - Memfault SDK source code and documentation
  - Integration guide for the NXP i.MX RT1060
  - Sign up for free Golioth training

- Licensing
  - NXP users get free self-service Memfault for up to 100 devices: https://memfault.com/register/nxp
  - Ask Memfault or your NXP sales representative for commercial support

Questions?

Thank You