LESSONS LEARNED SUPPORTING +200,000 IoT DEVICES

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#ossummit
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Who is balena?
Who is balena?
Who is balena?
Platform built to develop, deploy and manage fleets of connected devices at scale.
What do we mean by “Fleet Management”? 
Now, how do you manage 500 or 50,000 or 500,000 of these?
and relax...
Lessons Learned
The pets versus cattle analogy
Hardware
Hardware

- What are your constraints?
  (environment? power? vibration? size? price?)
Hardware

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- Physical access to the hardware?
Hardware

● What are your constraints? (environment? power? vibration? size? price?)

● Physical access to the hardware?

● Chip Shortage creates more multi-device types fleets.
Memory
Memory

● Try to avoid SD Cards, when possible.
Memory

● Try to avoid SD Cards, when possible.

● Instead use expensive SD Cards (e.g. SanDisk ExtremePro) or devices with eMMC.
Connectivity
Connectivity

• How is the device connected? Do you have enough bandwidth?
Connectivity

- How is the device connected? Do you have enough bandwidth?
- Do you have a backup connectivity?
Connectivity

● How is the device connected? Do you have enough bandwidth?
● Do you have a backup connectivity?
● Do you have more devices connected to the same network?
Software
Software

- Do you have remote access to your devices?
Software

- Do you have remote access to your devices?
- Can you run Diagnostics remotely?
Software

- Do you have remote access to your devices?
- Can you run Diagnostics remotely?
- Can you deploy remote updates? (applications, OS and others)
Software

● Do you have remote access to your devices?
● Can you run Diagnostics remotely?
● Can you deploy remote updates? (applications, OS and others)
● Do you have test environments? CI / CD?
Software

- Do you have remote access to your devices?
- Can you run Diagnostics remotely?
- Can you deploy remote updates? (applications, OS and others)
- Do you have test environments? CI / CD?
- Can you pre-schedule updates?
Let’s wrap-up
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- Don’t reinvent the wheel.
- Work with great partners and production grade hardware.
- Get a B-plan embracing open source.
Questions?
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