Microsoft

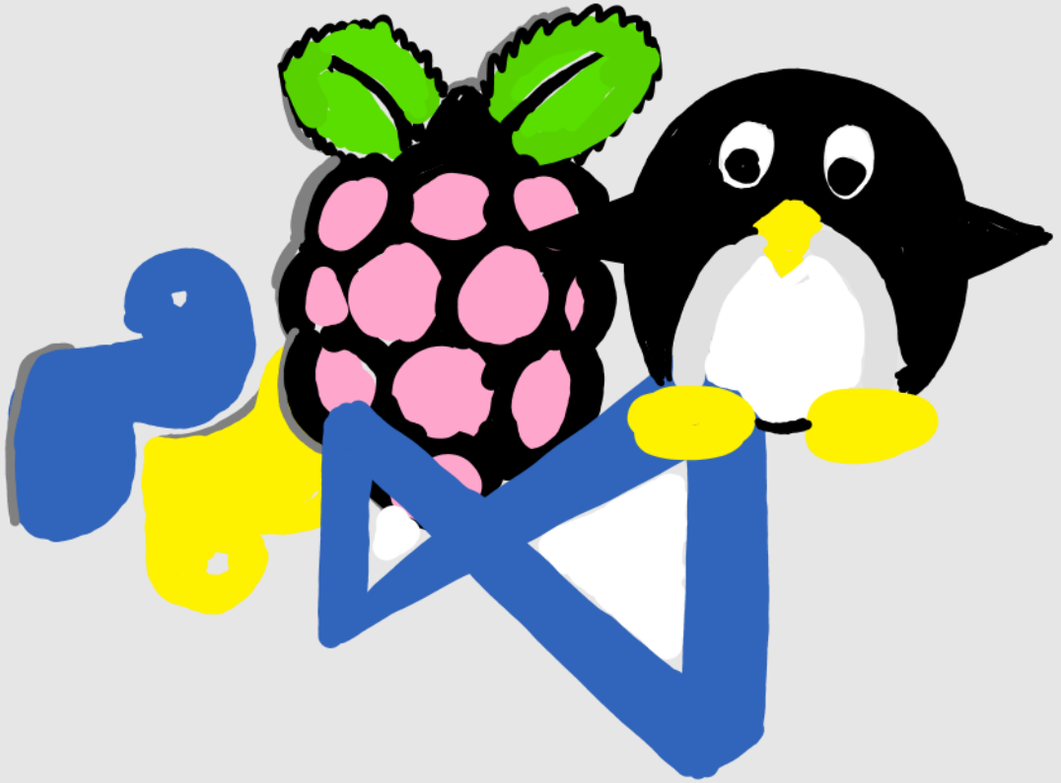
#techsummitCH

Linux meets Azure IoT Hub

Stefan Johner
Cloud Platform Manager @ Swiss Post
Cloud & Datacenter MVP
@JohnerStefan

Disclaimer

- I am not a Developer
- No deep dive IoT session
- Azure IoT Hub basics
- Simple but easy to understand IoT Use Case



Get to know Azure IoT Hub

How does it feel working with Azure IoT in a Linux only environment

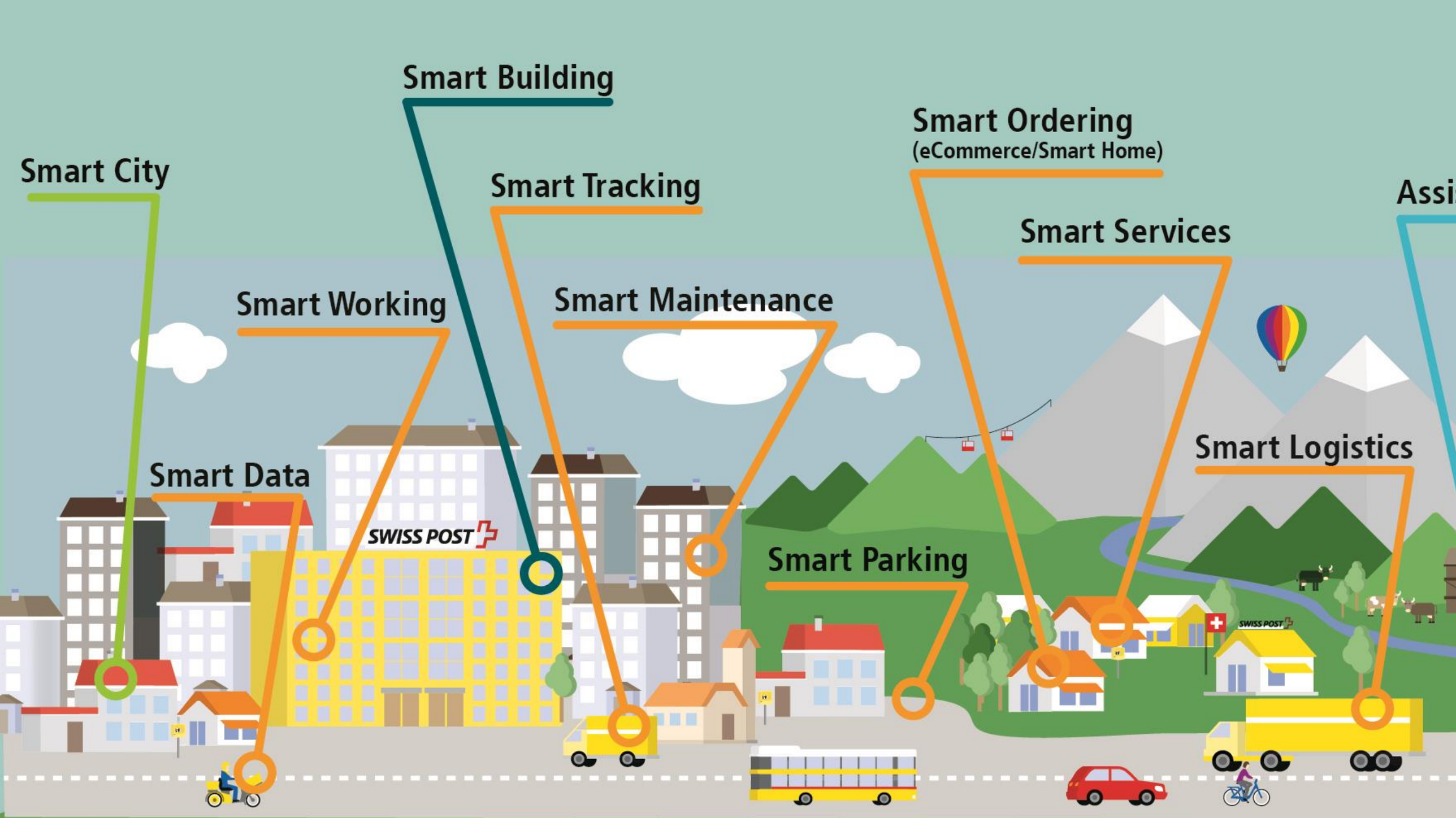
Internet of Things

Microsoft

"IoT is becoming a new normal. If you are not taking advantage of that new normal like you are with web, or mobile, or cloud, then you could find yourself at a competitive disadvantage."

Sam George
Director, Azure IoT at Microsoft

#IoTinActionMS


Smart Building
Smart City
Smart Tracking
Smart Ordering
(eCommerce/Smart Home)
Smart Services
Smart Working
Smart Maintenance
Smart Logistics
Smart Data
Smart Parking
SWISS POST
SWISS POST

Service on Demand

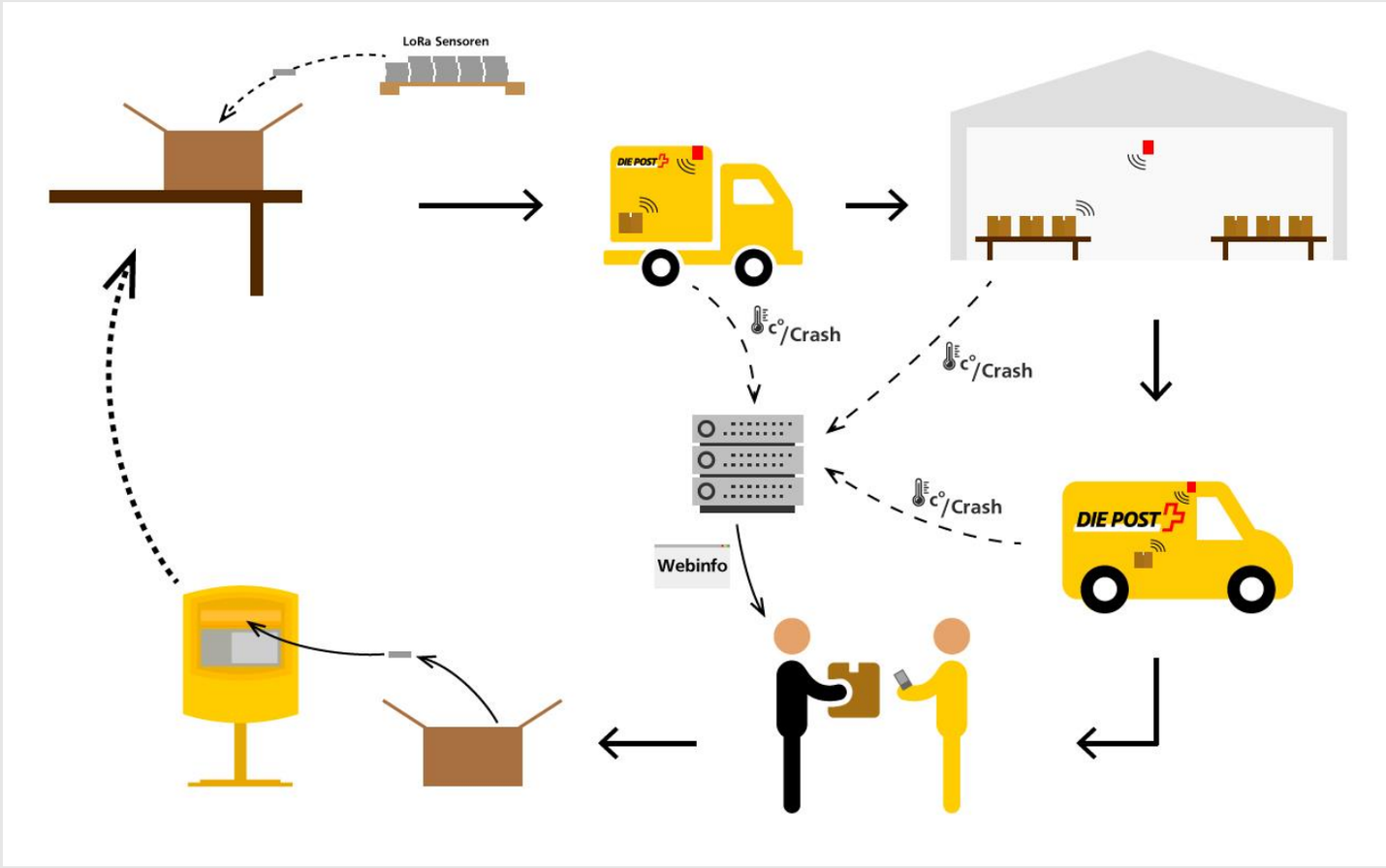
- Smart Button
- More than 300 devices deployed
- Uses Swisscom Lora WAN infrastructure
- Multiple types of devices
  - E-Paper Buttons
  - Buttonboards
  - Door opening counter

Post Home Button

- Smart Button
- Pilot project
- Uses Swisscom Lora WAN infrastructure
- Order by push of a button
- Uses OID technology to extend use case to other services

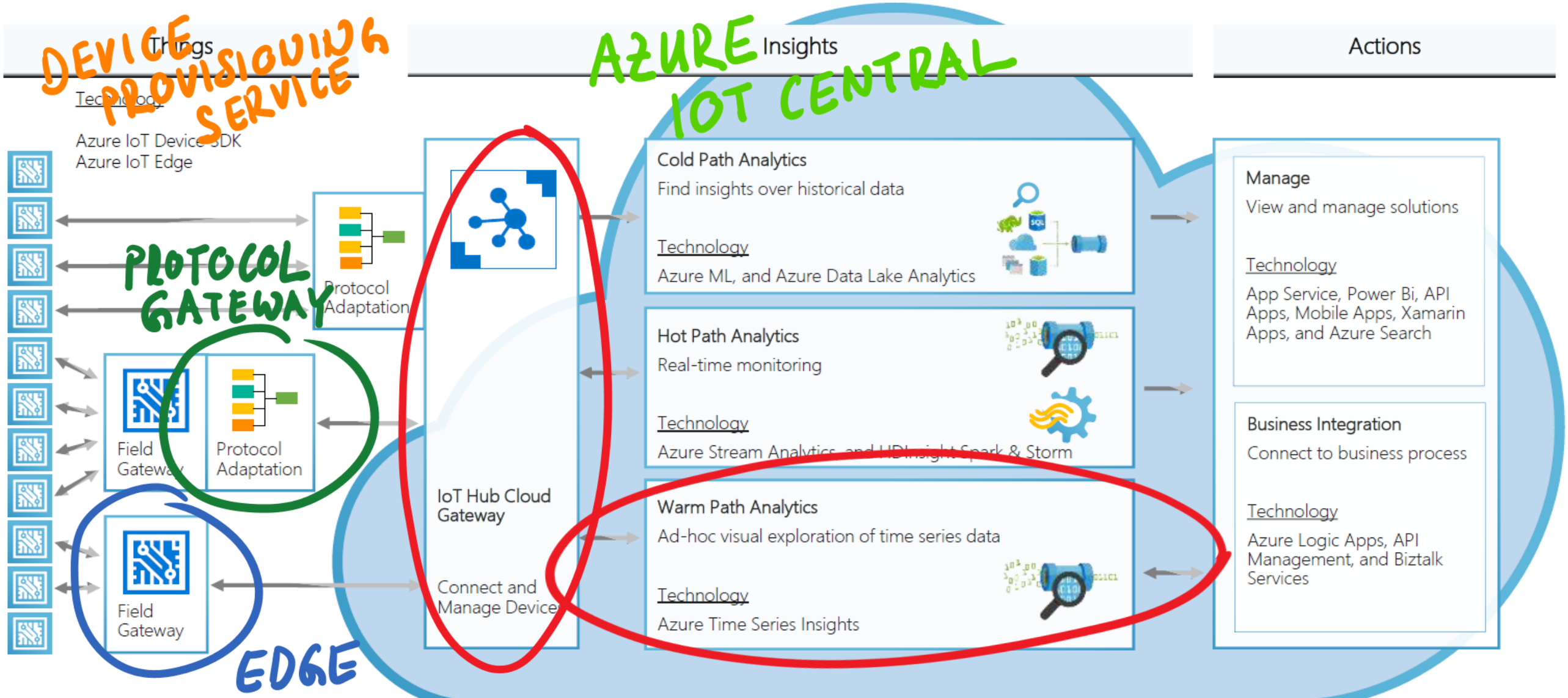
Track & Trace

- Data logger
- Track shipments
- Alarming
- Monitor Temperature



Azure IoT Hub

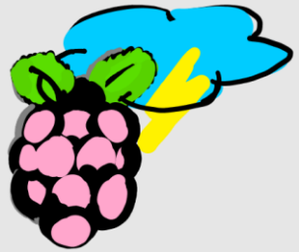
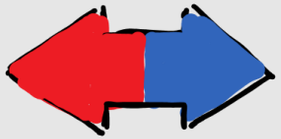
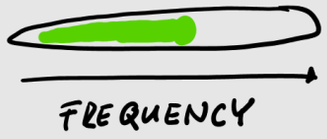
Azure IoT Device & Cloud Patterns



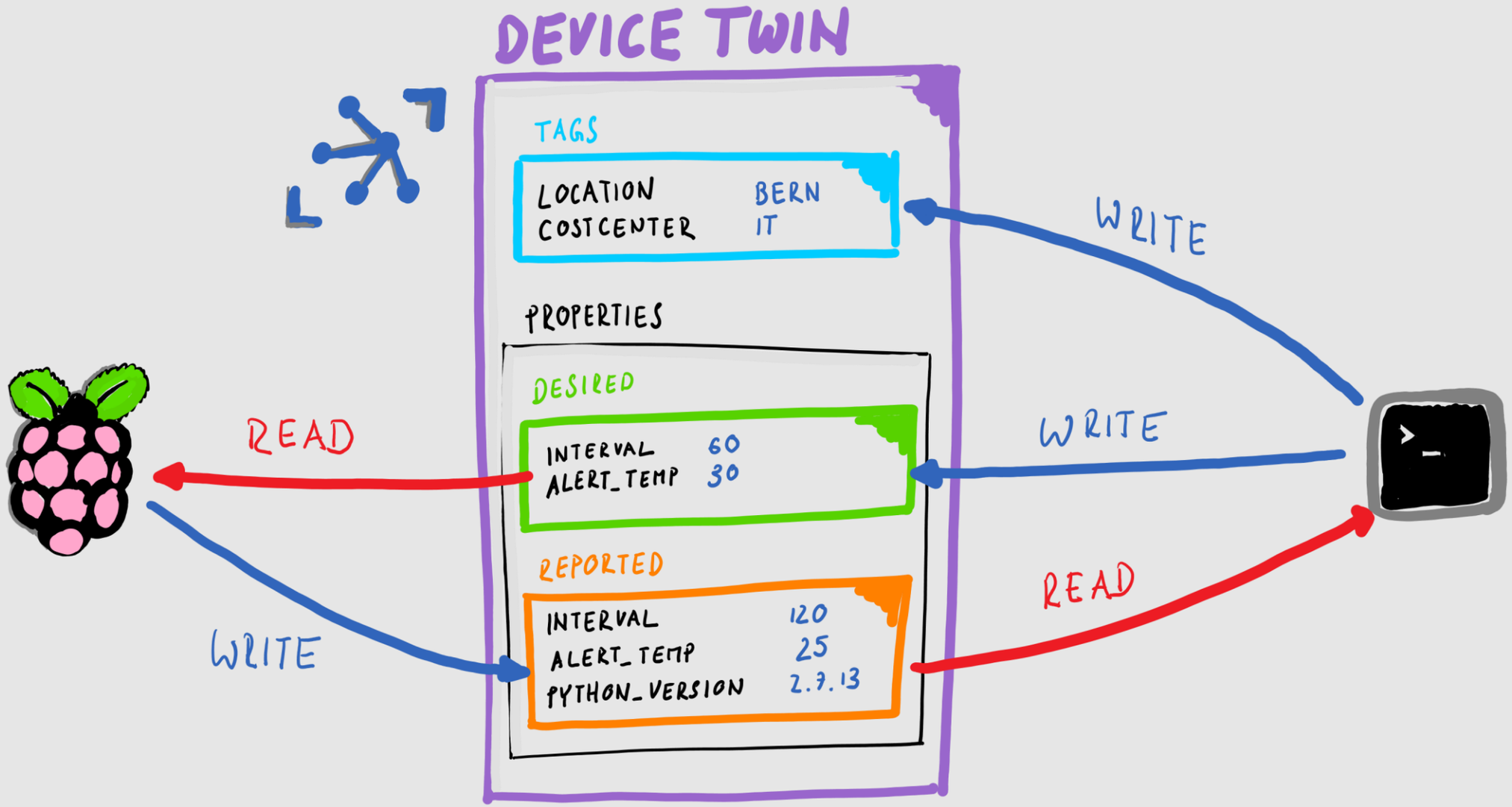
IoT Hub

- Generally available since February 4, 2016
- Stable and fast service
- Backend/Management for sensors and devices
- “Bridge” to other Azure Services
  - Custom Endpoints
  - Declarative Message Routing
- Protocol Support for MQTT, AMQT and HTTPS
- Libraries for most popular languages and platforms
- Cloud-to-Device communication

Communications guidance

Option			
Scenario			
Data Flow			
Targets			
Frequency			

Concept of Device Twins

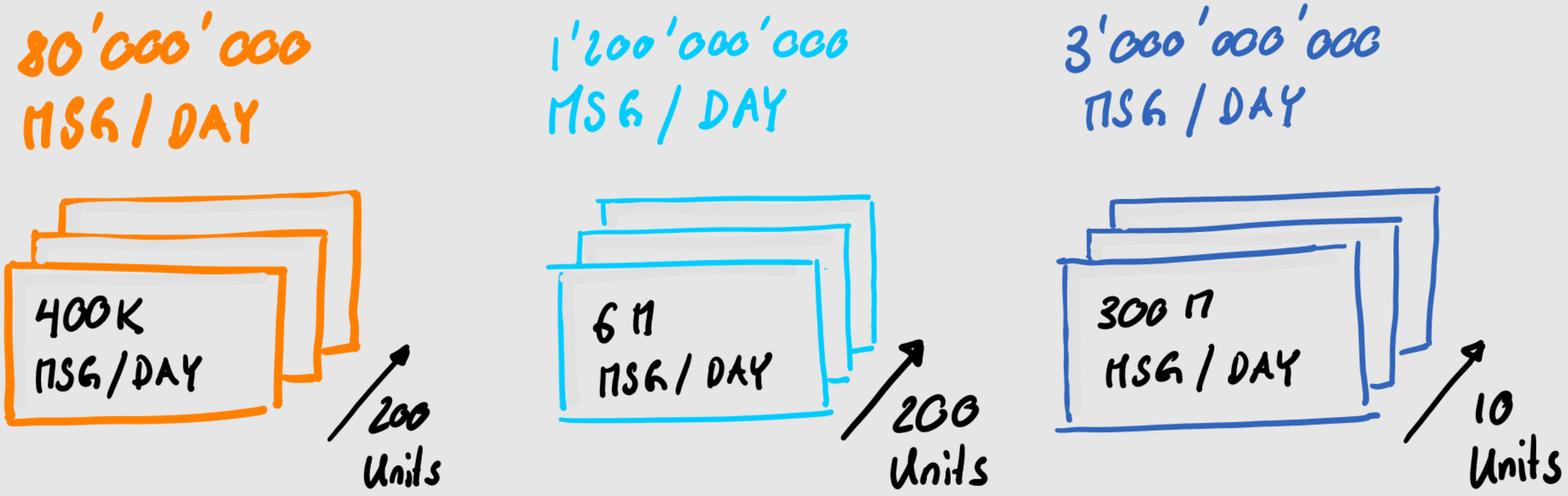


Long Term Support

- Every six months, a new version of LTS is released
- A version is actively maintained for six months to receive security fixes and critical bug fixes
- After a one-year total lifetime, the branch will be removed

Pricing and Scale

- Offered in four editions: Free, S1, S2 and S3
- Total of 8,000 messages a day are free



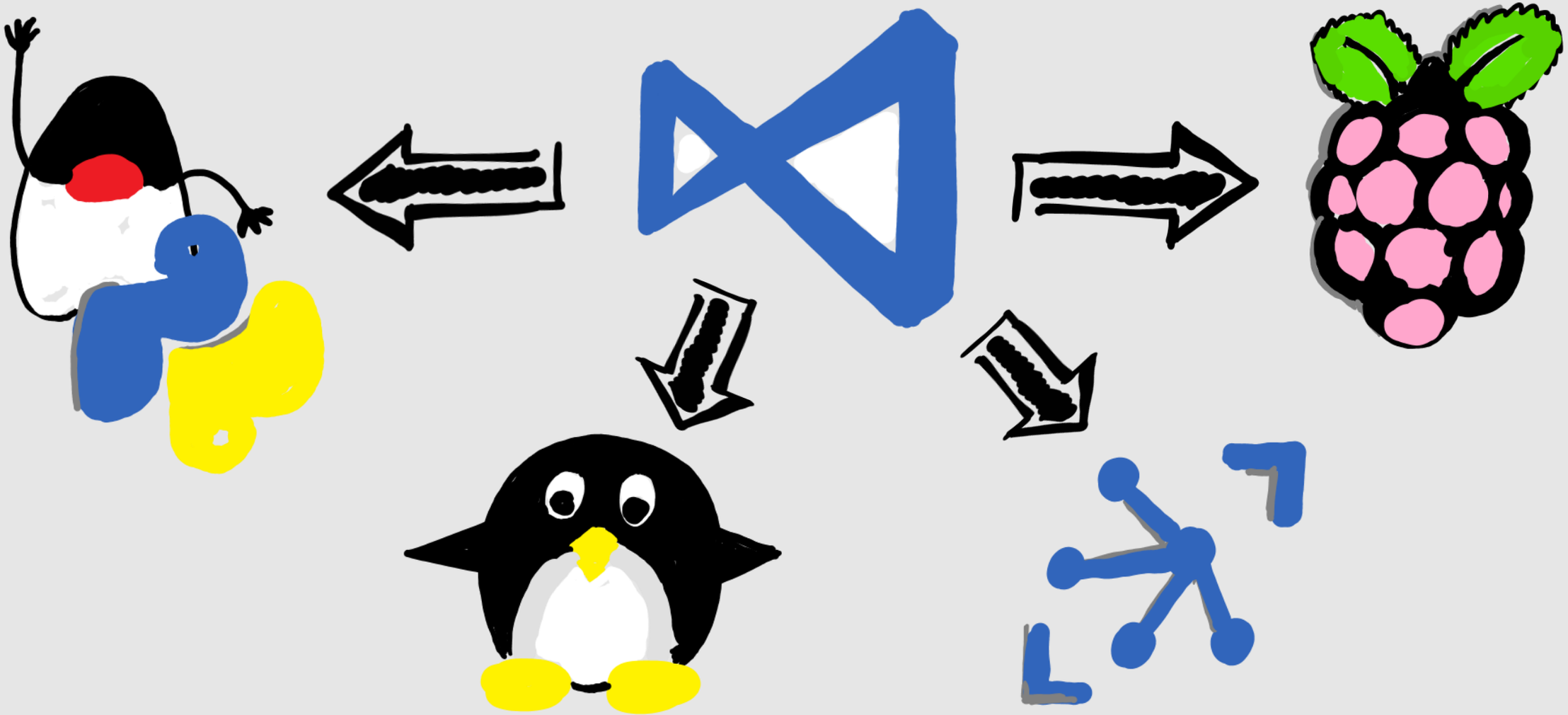
What's the deal with linux?

- Azure does not care if you are running Windows or Linux
- Open Source compontents
  - SDKs
  - IoT Edge
  - IoT Explorer
  - IoT Protocol Gateway
- Azure CLI
- ARM Deployments

Azure IoT SDKs:

- C
- Python
- NodeJS
- Java
- .Net

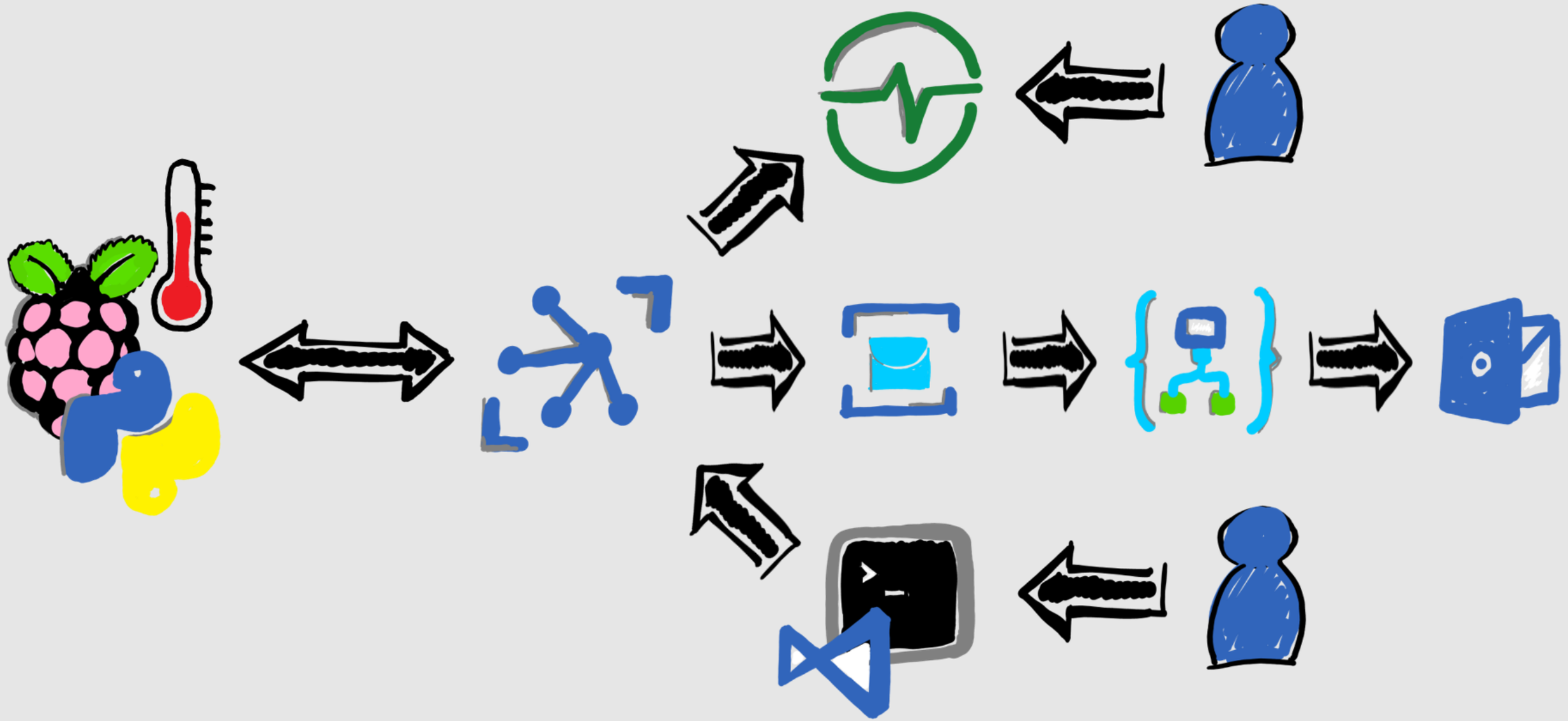
Visual Studio Code is your friend



Demo: Raspberry Pi Sensor

Raspberry Pi with Sense HAT connected to Azure IoT Hub and Time Series Insights

Demo Overview



Summary

Takeaways

- Azure IoT Hub  Linux
- Visual Studio Code is your friend
- SDKs and many other components are Open Source
- Direct Methods and Device Twins help you manage your things at scale
- Bridge to other Azure services like Time Series Insights
- Check out samples and get started with free tier

References

- My Raspberry Pi Sensor Sample on Github
- Azure IoT Referenz Architecture
- Azure IoT Hub Documentation
- Comparison of Azure IoT Hub vs. Event Hub
- Azure IoT SDKs on Github
- Azure IoT Edge on Github
- Raspberry Pi Online Simulator
- Azure IoT Samples

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