



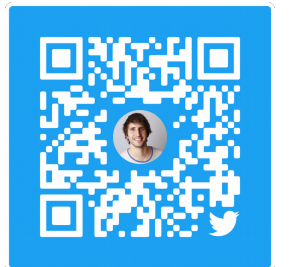
# Linux meets Azure IoT Hub


Get to know Azure IoT Hub from a Linux perspective

Stefan Johner | Die Schweizerische Post

 @johnerstefan

 <https://blog.jhnr.ch>



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**DATA ONE**

**Alegri**



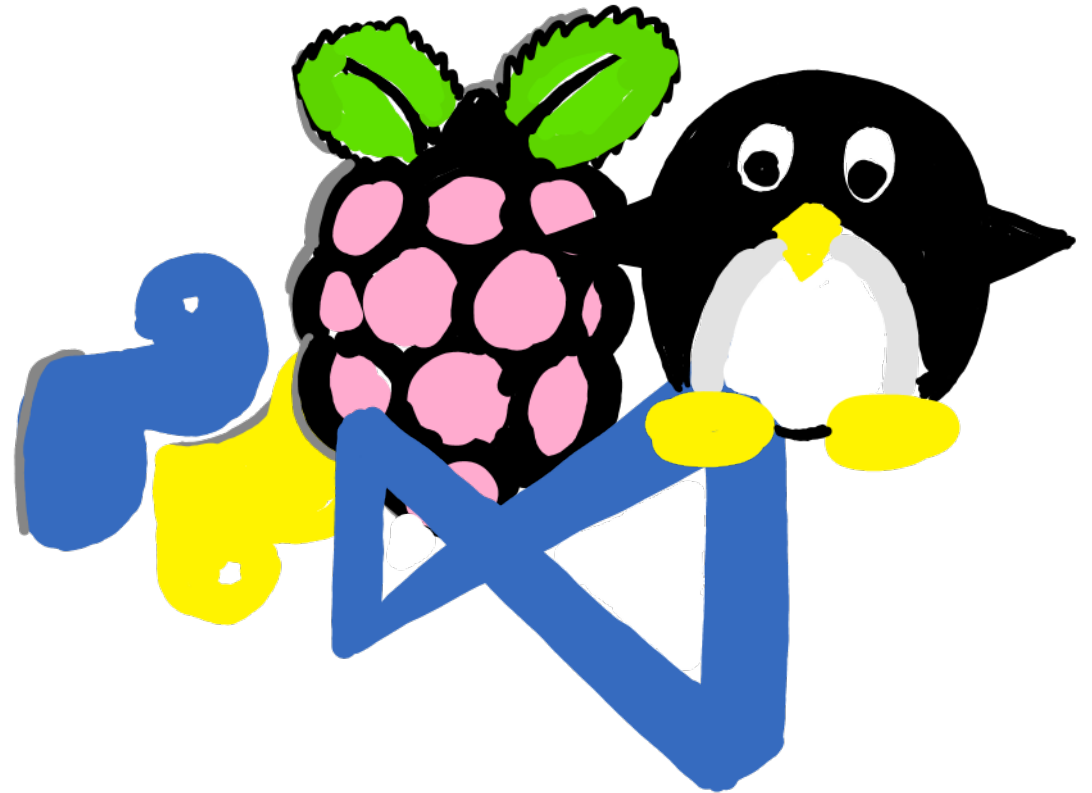
**Nigel Frank**  
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# Disclaimer

- I am not a Developer
- No deep dive IoT session
- Azure IoT Hub basics
- Simple IoT Demo Use Case



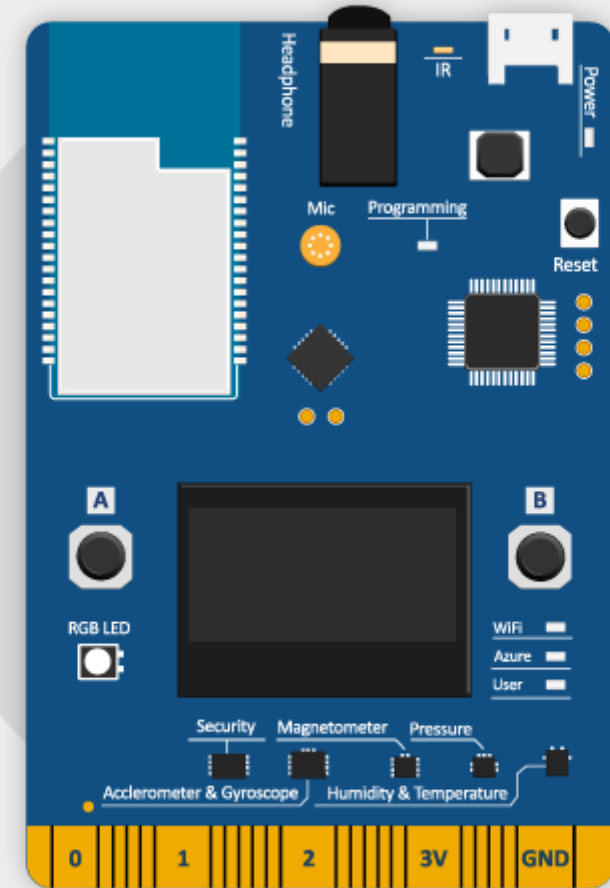
Get to know Azure IoT Hub

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

# Win a MXChip IoT Dev Kit

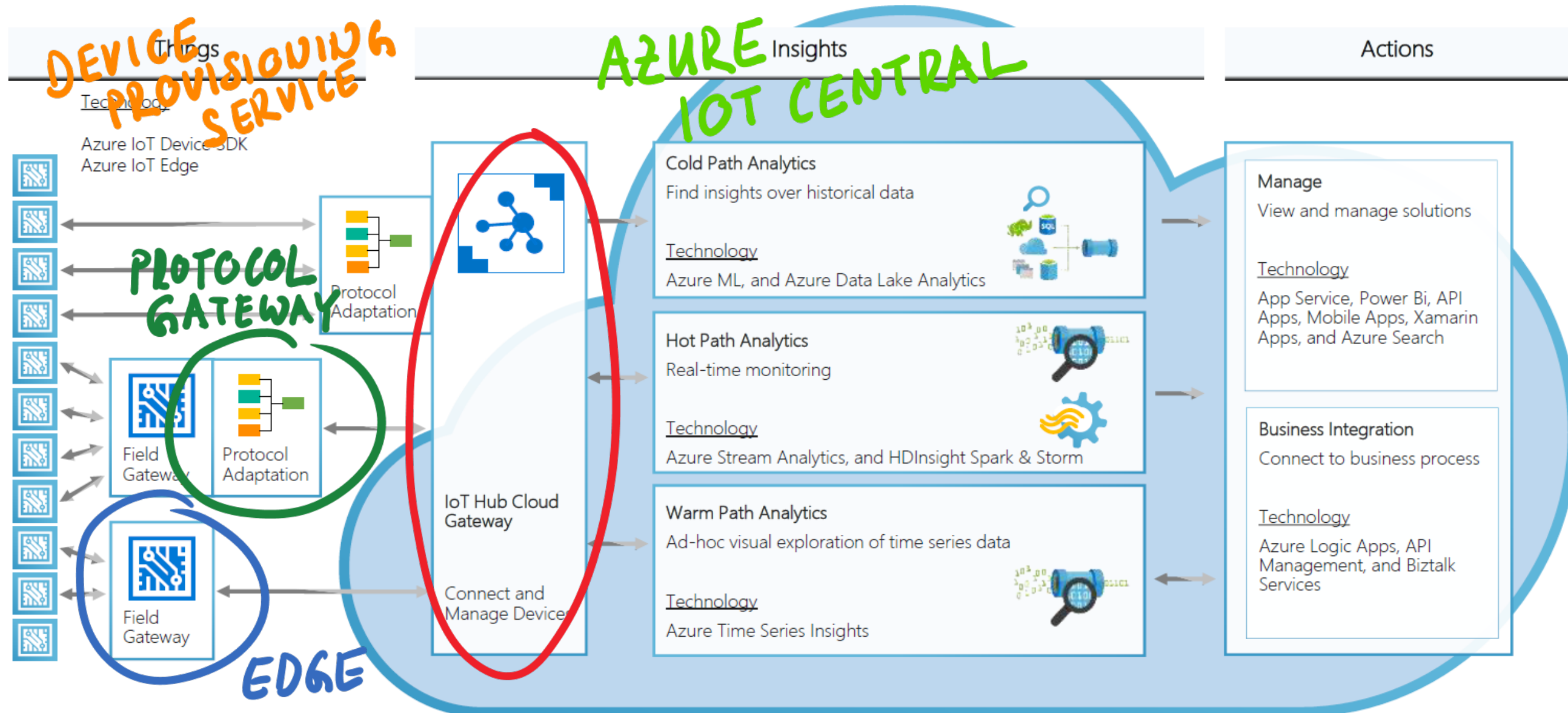
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# Azure IoT Hub

# Azure IoT Device & Cloud Patterns



# What's the deal with OSS?

- Azure does not care if you are running Windows or Linux
- IoT Devices are running Linux → Azure Sphere OS
- Open Source components
  - SDKs
  - IoT Edge
  - IoT Explorer
  - IoT Protocol Gateway

## Azure IoT SDKs:

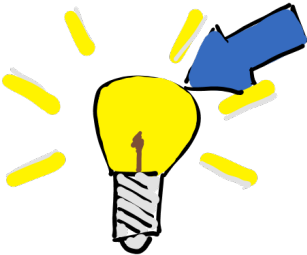

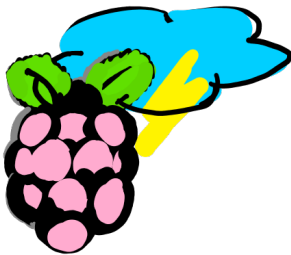



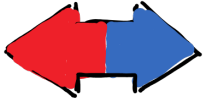








- C
- Python
- NodeJS
- Java
- .Net

# IoT Hub

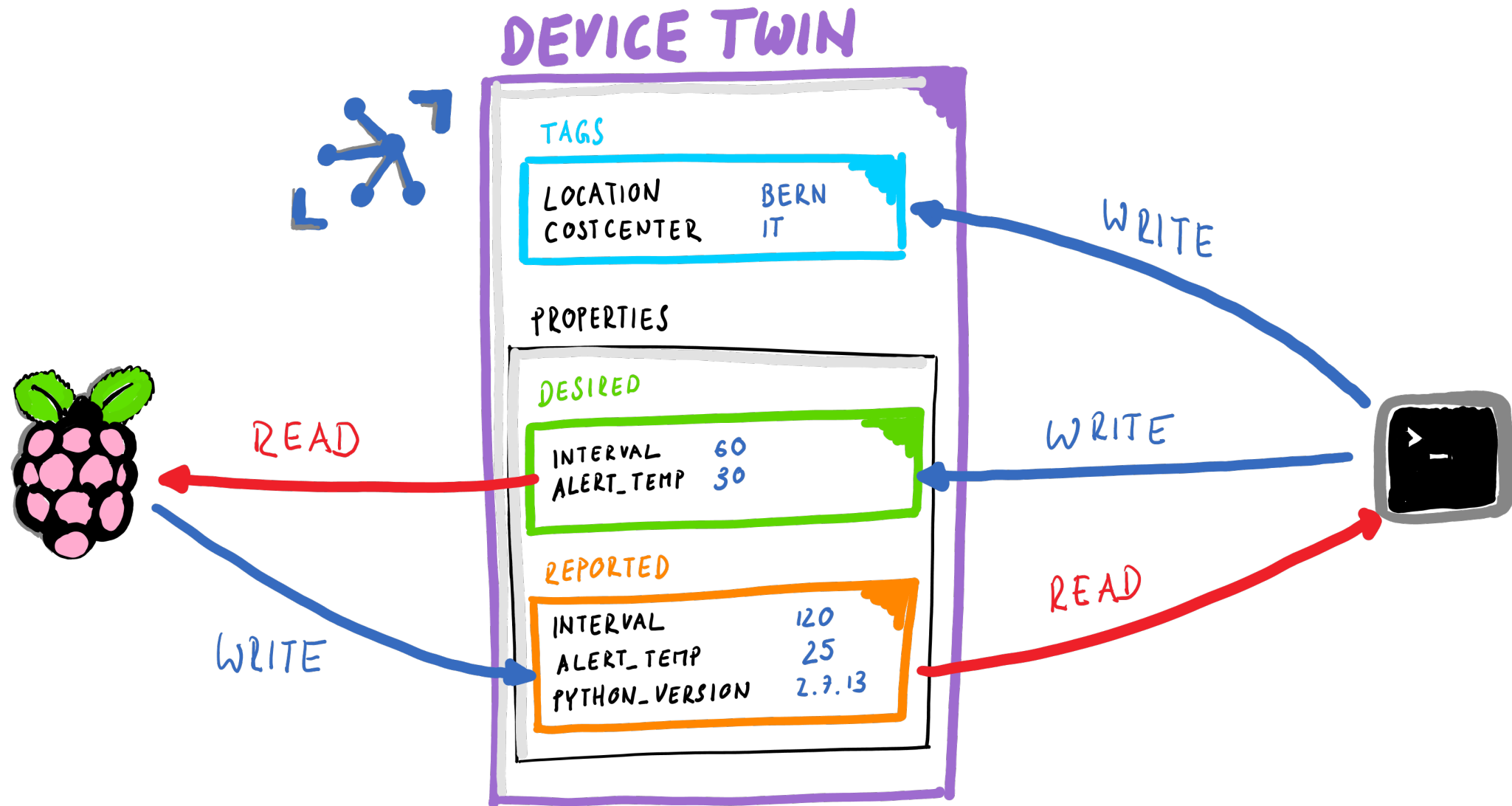
- “Bridge” to other Azure Services
  - Custom Endpoints
  - Declarative Message Routing
- Backend/Management for sensors and devices
- Protocol Support for MQTT, AMQT and HTTPS
- Libraries for most popular languages and platforms
- Cloud-to-Device communication



# C2D Communications guidance

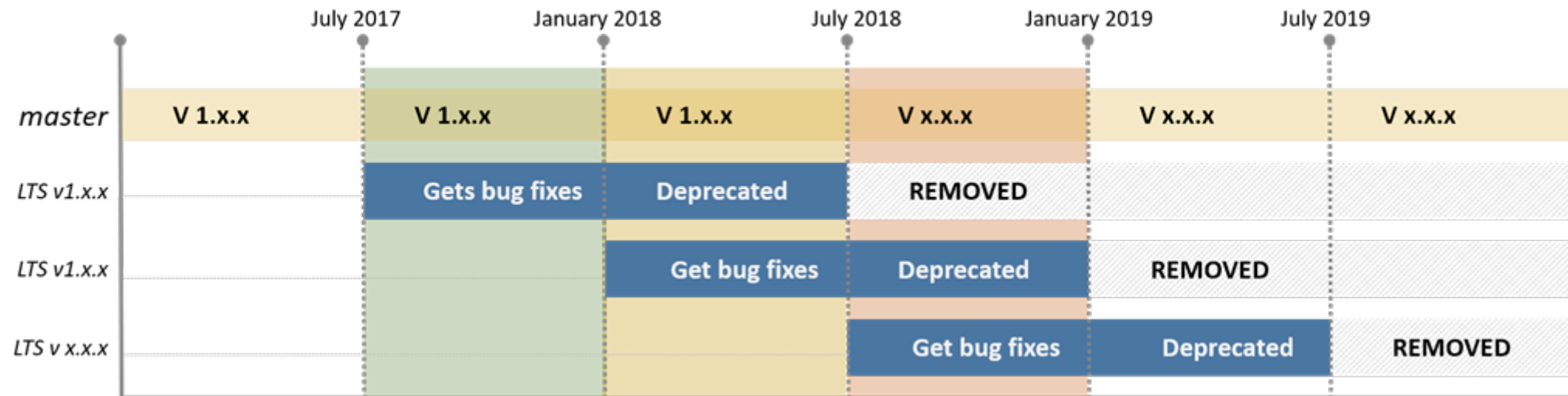
Option			
Scenario			
Data Flow			
Targets			
Frequency			

# Concept of Device Twins



# Long Term Support

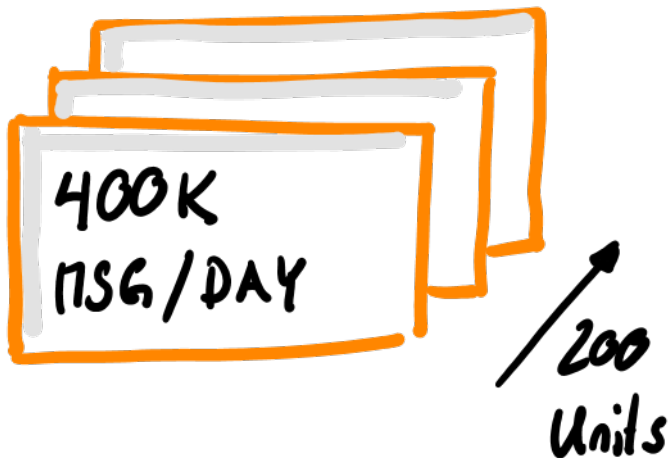
- Every six months, a new version of LTS is released
- A version is actively maintained for six months to receive security fixes and critical bug fixes
- After a one-year total lifetime, the branch will be removed



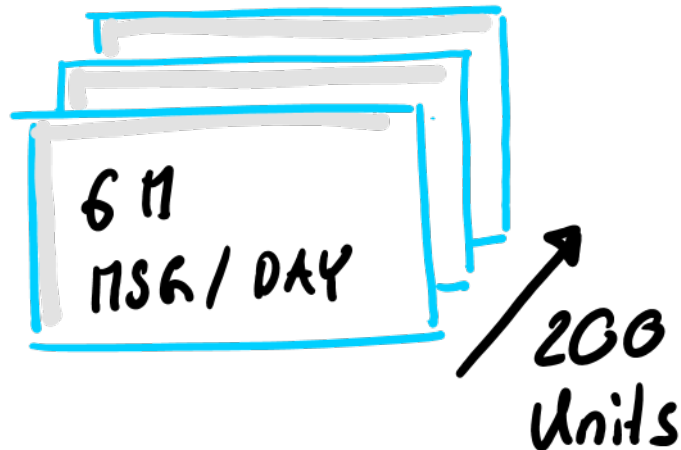
# Pricing and Scale

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

80'000'000  
MSG / DAY



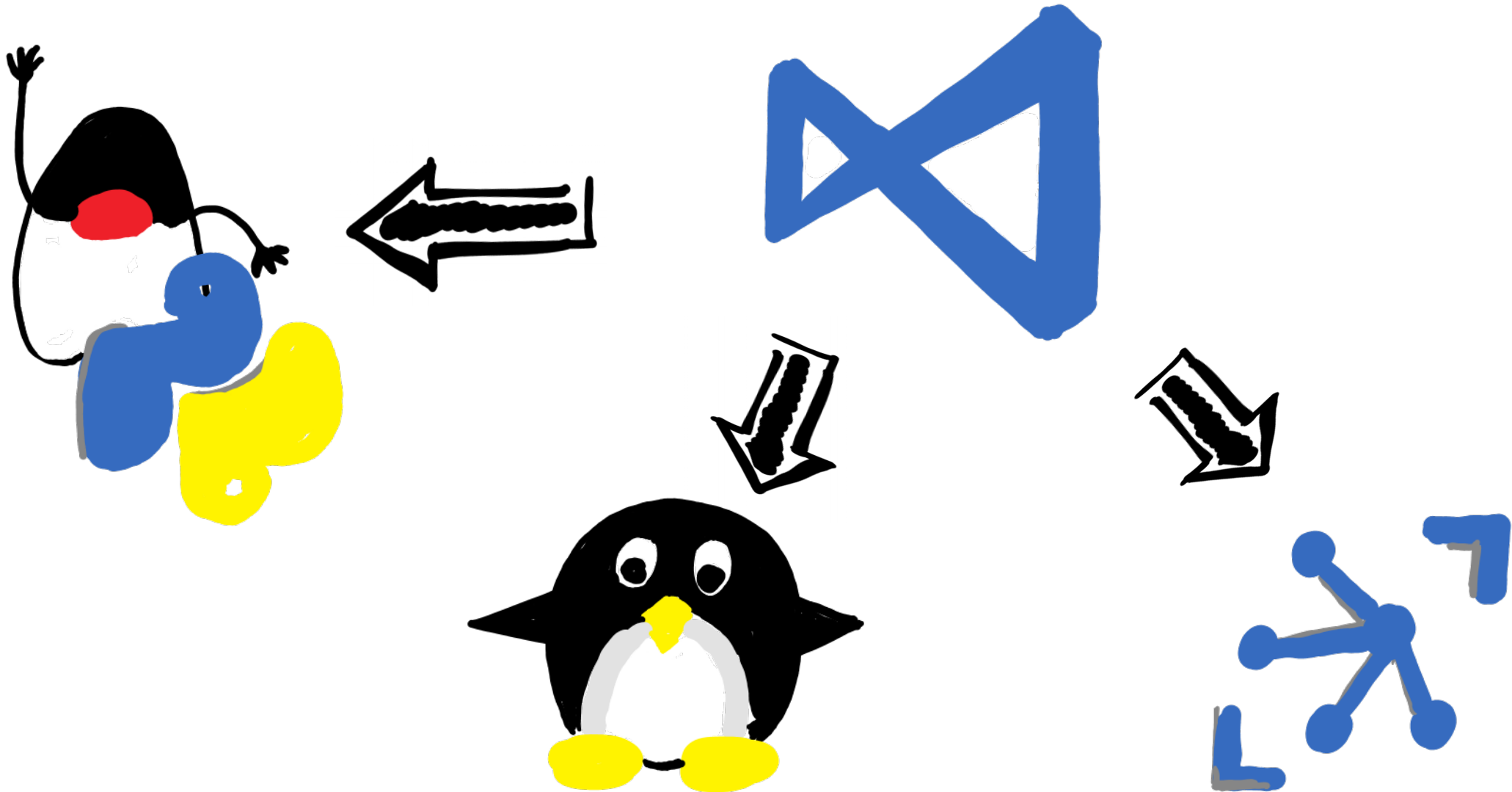
1'200'000'000  
MSG / DAY



3'000'000'000  
MSG / DAY



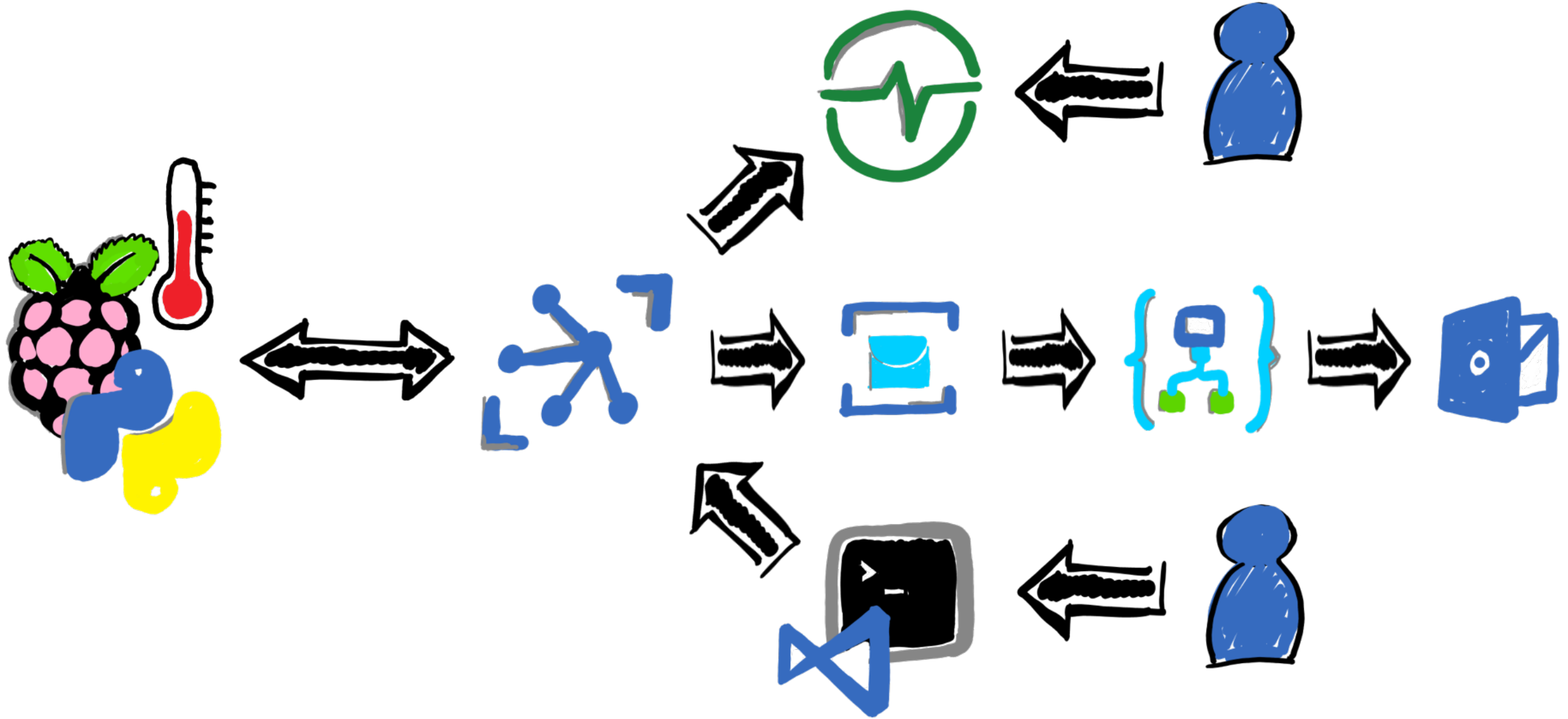
# Visual Studio Code is your friend



# Demo: RaspberryPi Sensor

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


# Demo Overview



# Summary



# Key-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 Reference Architecture](#)
- [Azure IoT Hub Documentation](#)
- [Comparison of Azure IoT Hub vs. Event Hub](#)
- [Azure IoT SDKs on Github](#)
- [Raspberry Pi Online Simulator](#)
- [Azure IoT Samples](#)



# Azure Saturday 2018

We appreciate your feedback!

<https://form.responster.com/yW6Q72>