

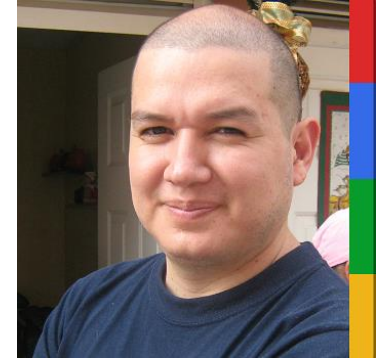
Soluciones inteligentes integrando SharePoint con IoT

Speaker: Oscar Polanco | @opolancoh



Oscar Polanco | @opolancoh

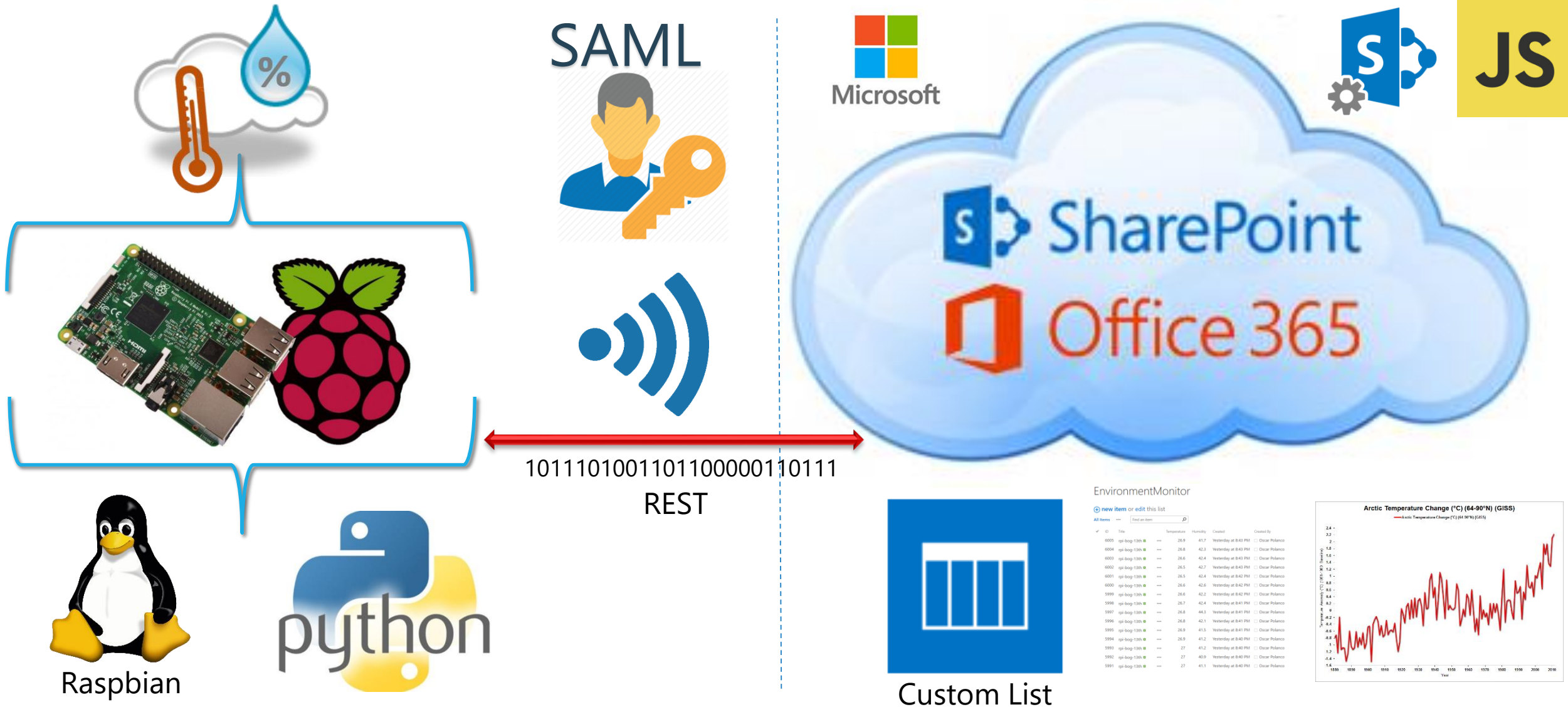
- Electronic Engineer
- Professional Cloud Solution Architect
- Microsoft Certified Solutions Developer



Professional Cloud Solution Architect, Software Engineering Specialist and Microsoft Certified Solutions Developer. 11+ years software development, design architecture and/or implementation experience for Microsoft-enabled platforms and technologies. Mainly in Microsoft Azure, ASP.NET Core, ASP.NET MVC, ASP.NET Web Forms, ASP.NET Web API, Entity Framework, OData, WPF, UWP, SQL Server, Oracle, Office 365 with SharePoint (On-Premises & Online). Additionally, I also have worked with other technologies such as NodeJS, Express and Python for IoT solutions.

Passionate in architecting, configuring, and deploying enterprise implementations for the SharePoint product line and the Microsoft technology stack, including next generation product stack. Efficiency in managing a successful digital transformation as they adopt the tools of a digital business.

Our Goal



Smart solutions integrating Office 365 and IoT

01 | IoT: Introduction

02 | IoT: Examples, case studies

03 | IoT: Azure IoT Suite

04 | IoT: Solutions Architecture

05 | O365-IoT integration overview

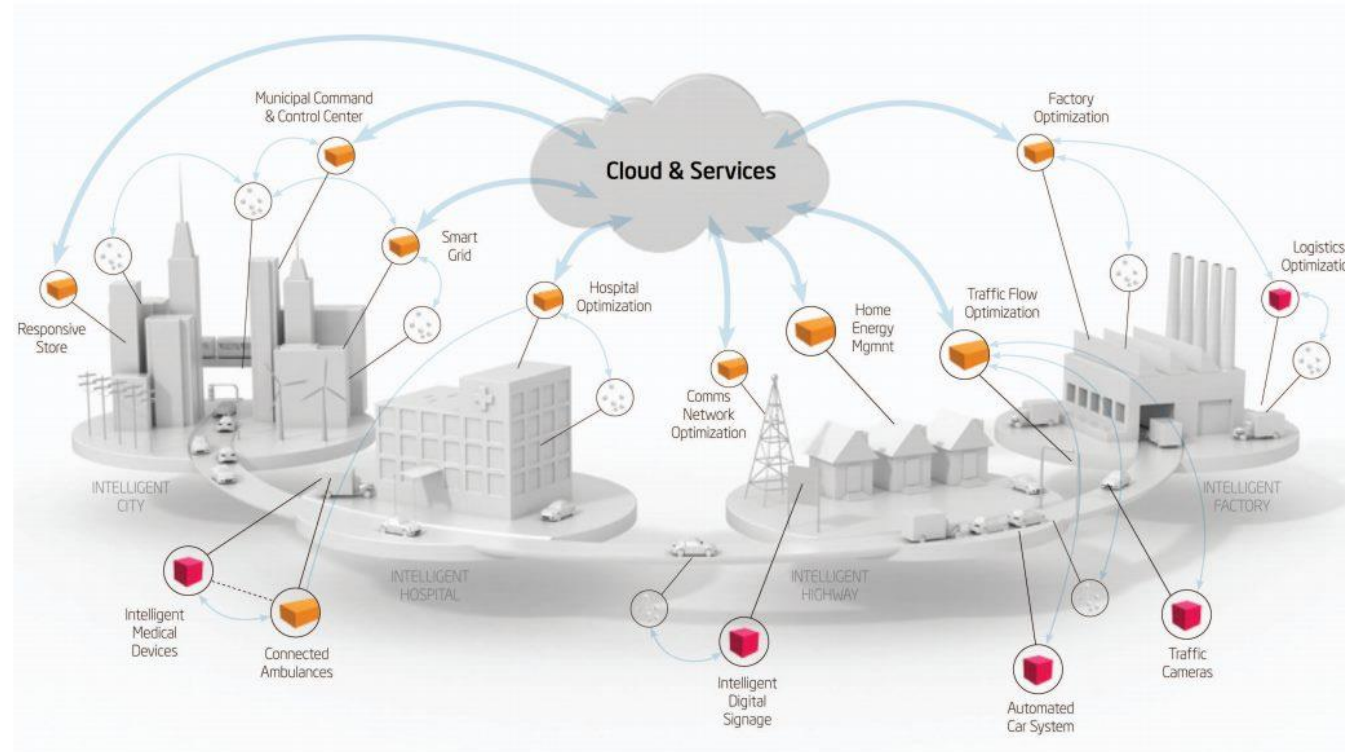
06 | Demo

01 | IoT: Introduction



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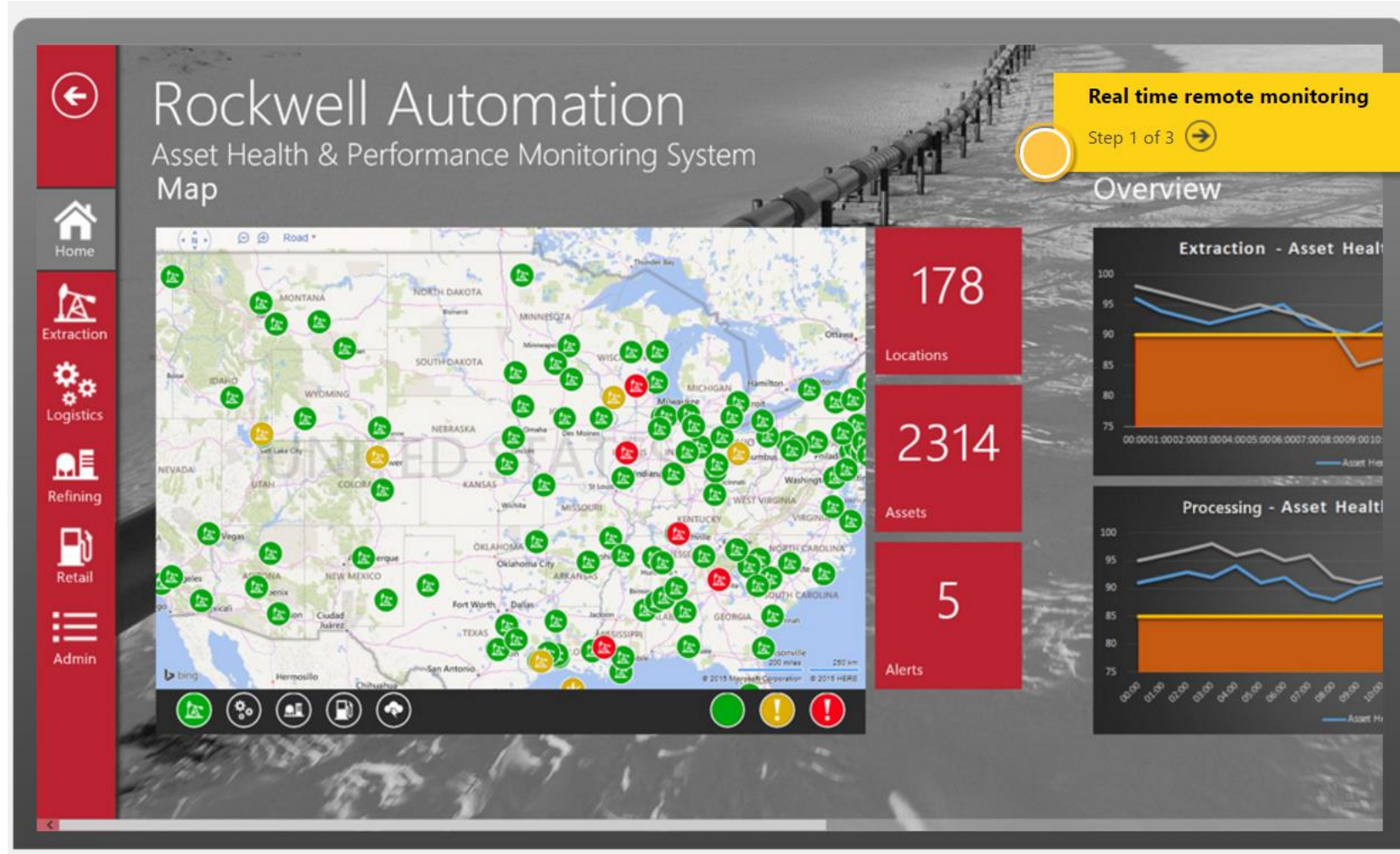
Internet Of Things



The internet of things is the network of physical objects or "things" embedded with electronics, software, sensors and connectivity to enable it to achieve greater value by exchanging data with internet and/or other connected devices.

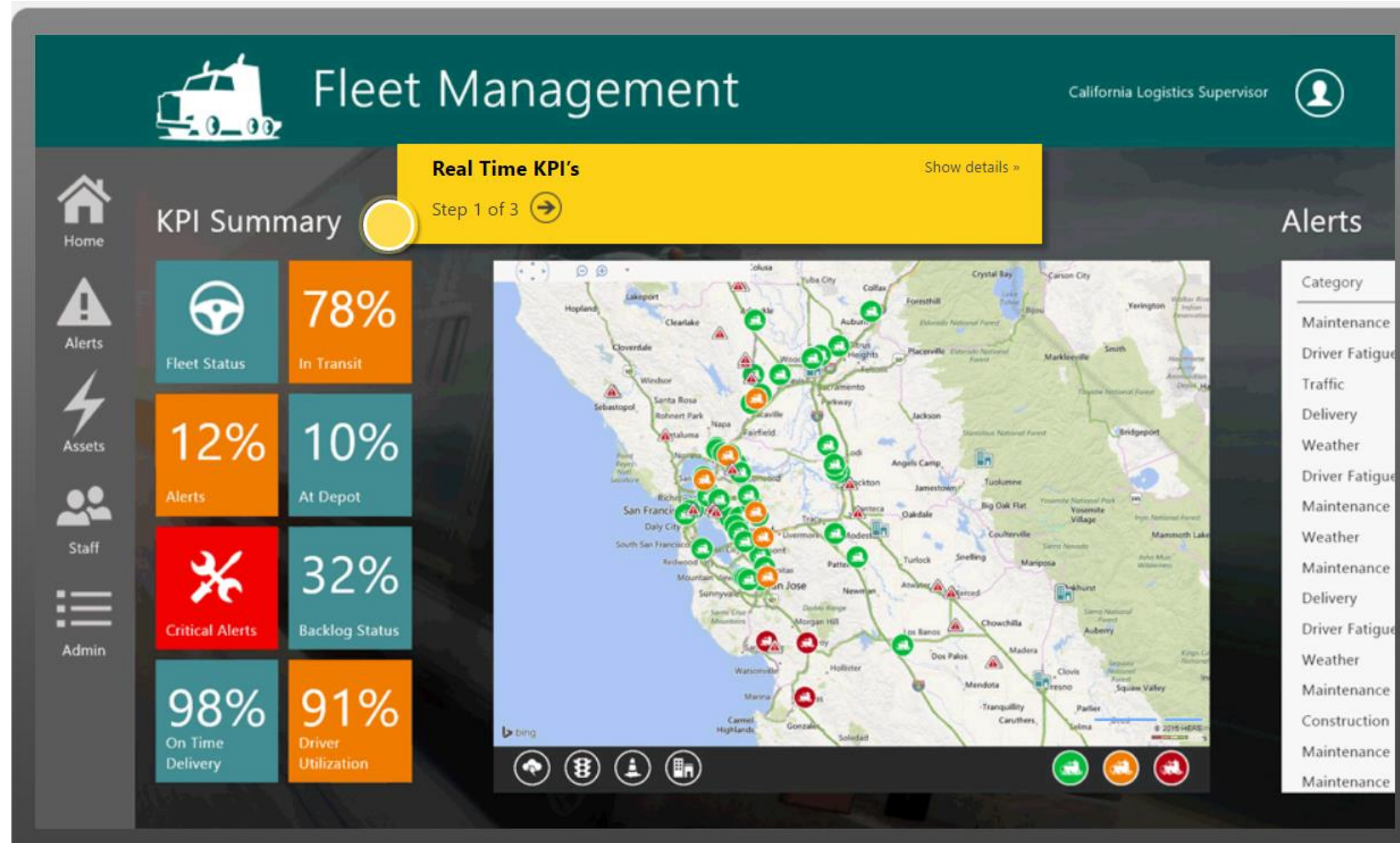


Example 1: Predictive maintenance



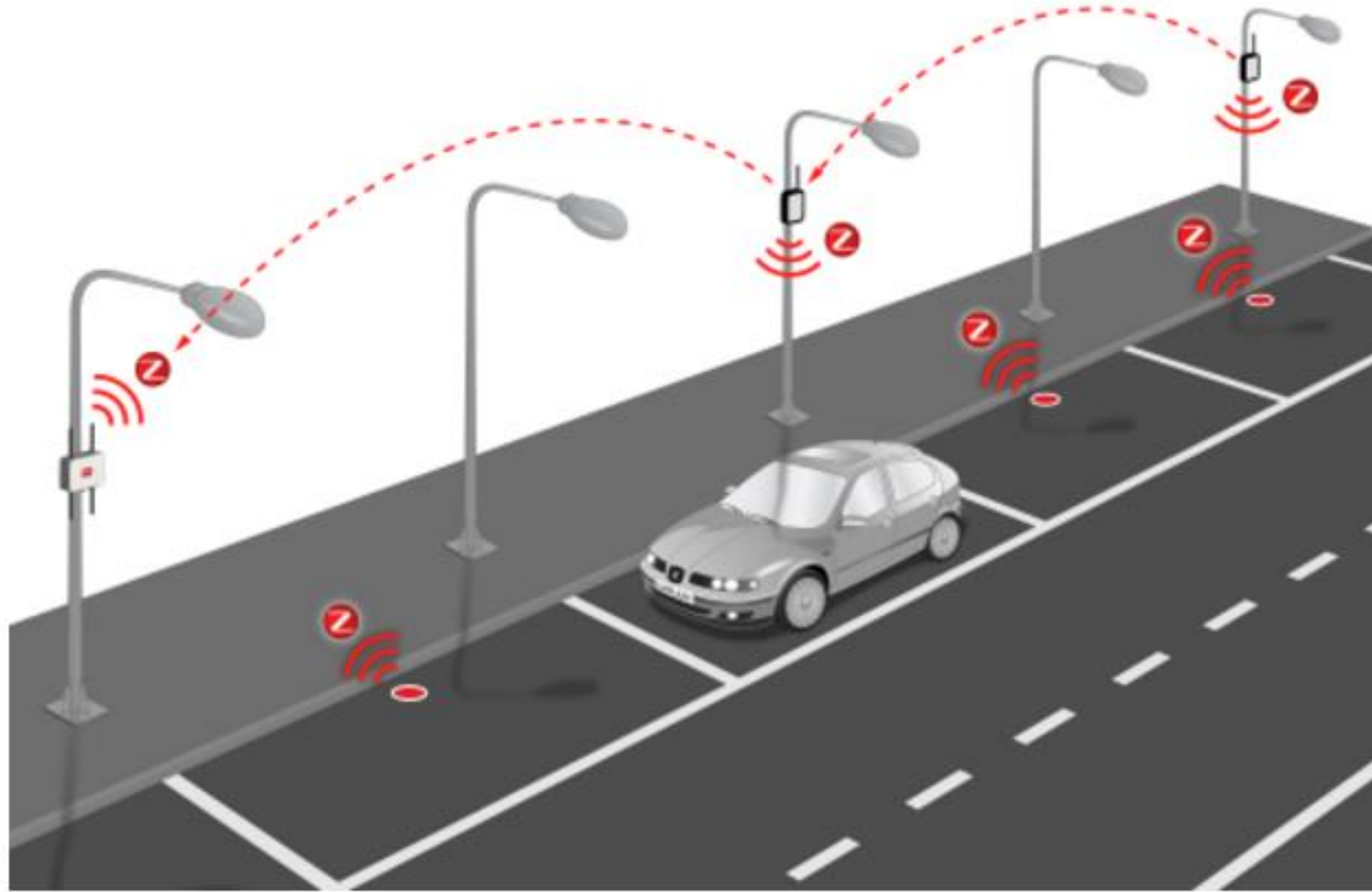
<http://www.microsoftazureiotsuite.com/demos/predictivemaintenance>

Example 2: Remote monitoring



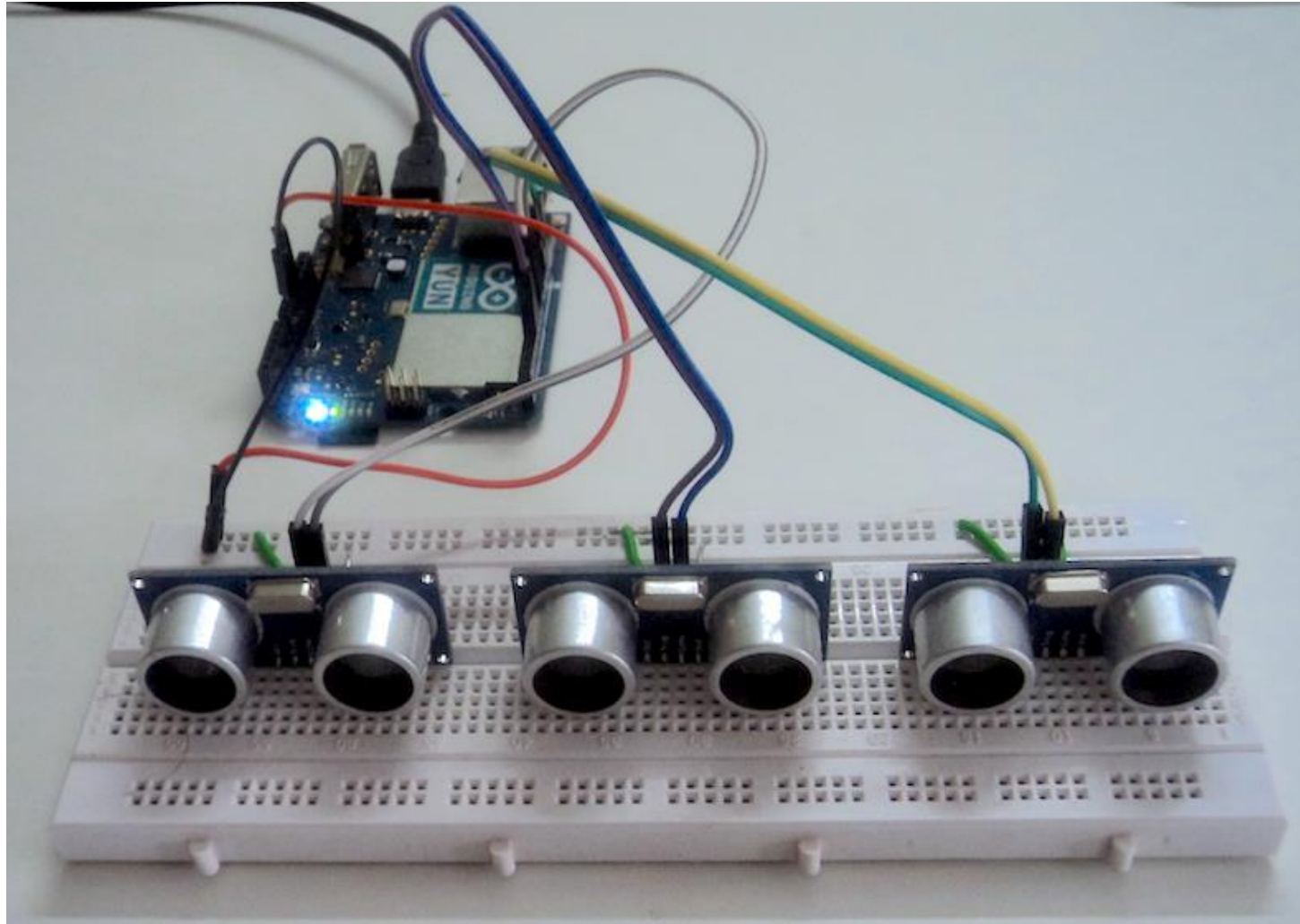
<http://www.microsoftazureiotsuite.com/demos/remotemonitoring>

Example 3: Smart Parking



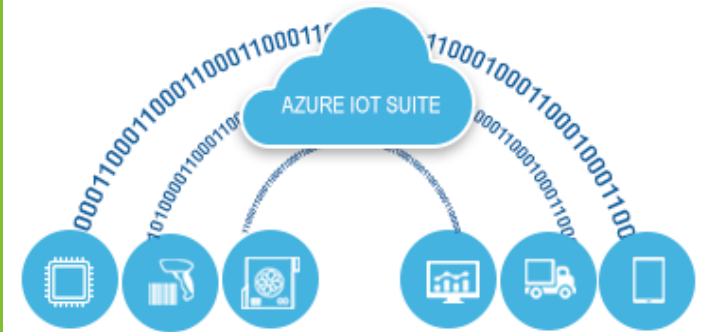
http://www.libelium.com/smart_parking

Example 4: IoT Enabled Smart Parking Meter



<https://developer.ibm.com/bluemix/2016/01/06/iot-enabled-smart-parking-meter/>

03 | IoT: Azure IoT Suite



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Azure IoT Suite

Azure IoT Suite

Capture and analyze untapped data to improve business results

- ✓ Get started quickly with preconfigured solutions
- ✓ Tailor preconfigured solutions to meet your needs
- ✓ Enhance the security of your IoT solutions
- ✓ Support a broad set of operating systems and protocols
- ✓ Easily connect millions of devices
- ✓ Analyze and visualize large quantities of operational data
- ✓ Integrate with your existing systems and applications
- ✓ Scale from proof of concept to broad deployment

Get started with Azure IoT Suite >

Azure IoT Suite services



IoT Hub

Connect, monitor, and control millions of IoT assets



Machine Learning

Powerful cloud based predictive analytics tool



Stream Analytics

Real-time data stream processing from millions of IoT devices



Notification Hubs

A scalable, push notification engine for quickly sending messages

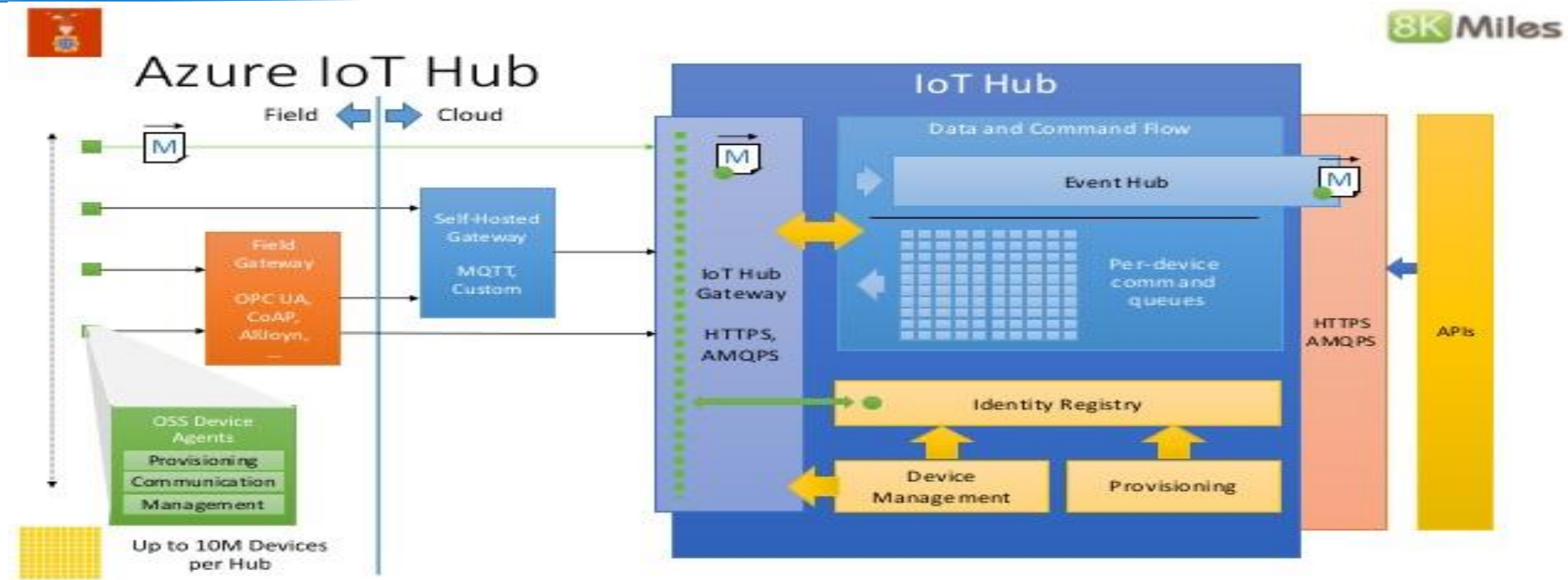


PowerBI

Transform data into rich visuals

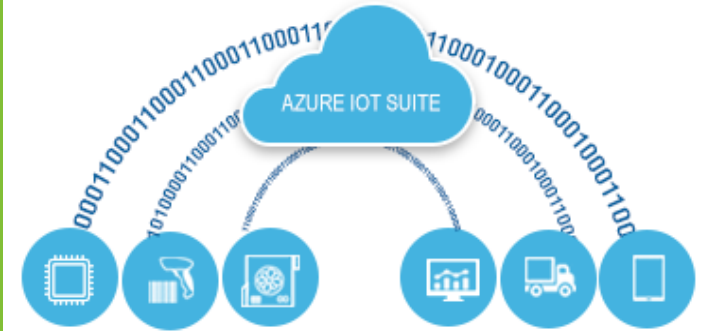
<https://azure.microsoft.com/en-us/suites/iot-suite>

Azure IoT Hub



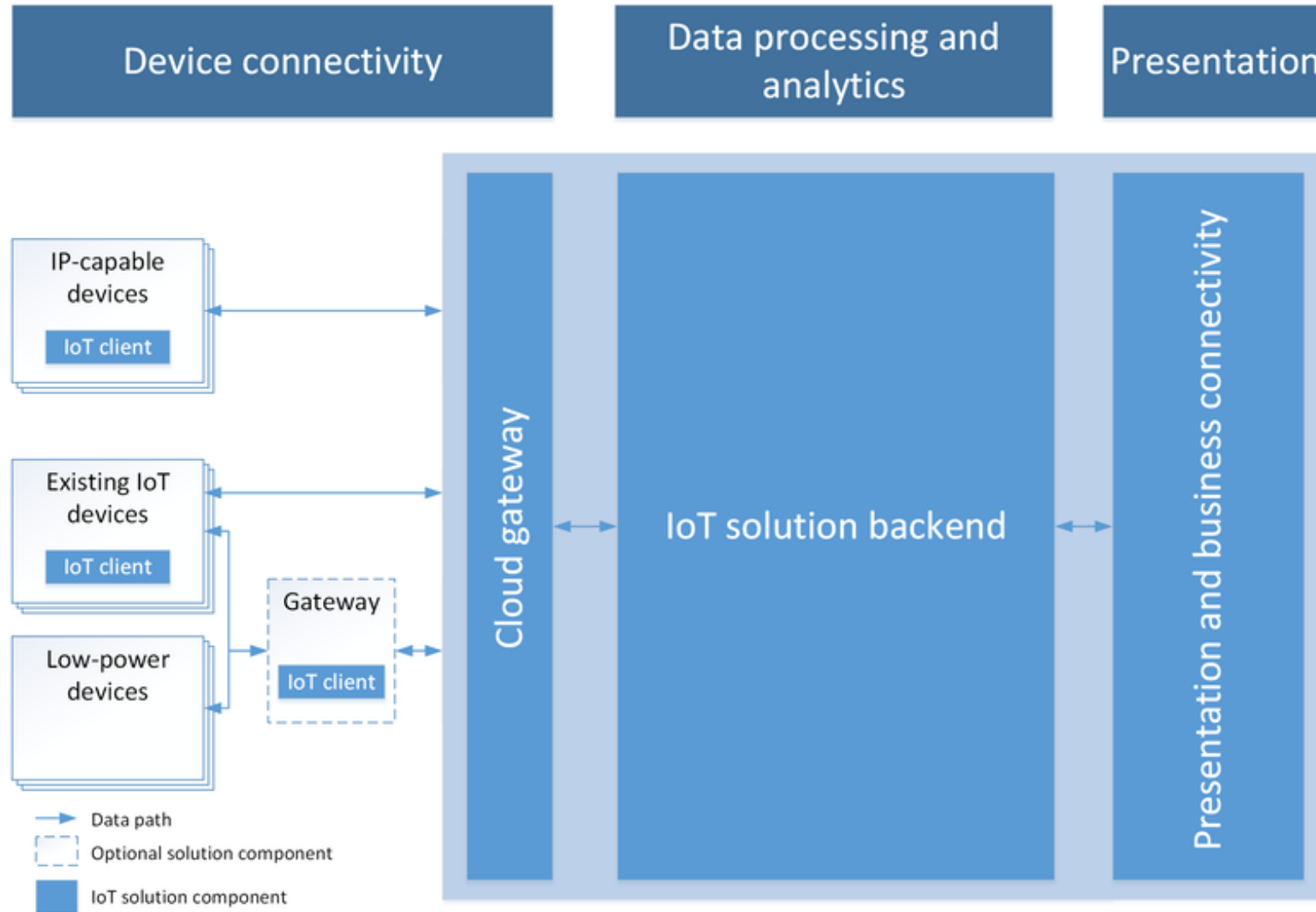
EDITION TYPE	PRICE (PER MONTH)	TOTAL NUMBER OF MESSAGES/DAY
Free	Free	8,000
S1	\$50	400,000
S2	\$500	6,000,000
S3	\$5,000	300,000,000

04 | IoT: Solutions Architecture



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IoT Solution Architecture



The diagram illustrates the architecture of a web application. It features three main components: the Internet, the Web Application, and the Database. The Internet is represented by a blue vertical bar on the left, with a large red double-headed arrow indicating bidirectional communication between it and the Web Application. The Web Application is a green rounded rectangle in the center, which also has a red double-headed arrow connecting it to the Database. The Database is shown as an orange cylinder at the bottom. To the left of the Internet bar is a cloud icon filled with various technology-related icons. To the right of the Web Application is a list of its core functions: Business Logic, Authentication, and Authorization. Below the Database is a dashboard icon displaying various data visualizations like bar charts, line graphs, and maps.

Internet

Web Application

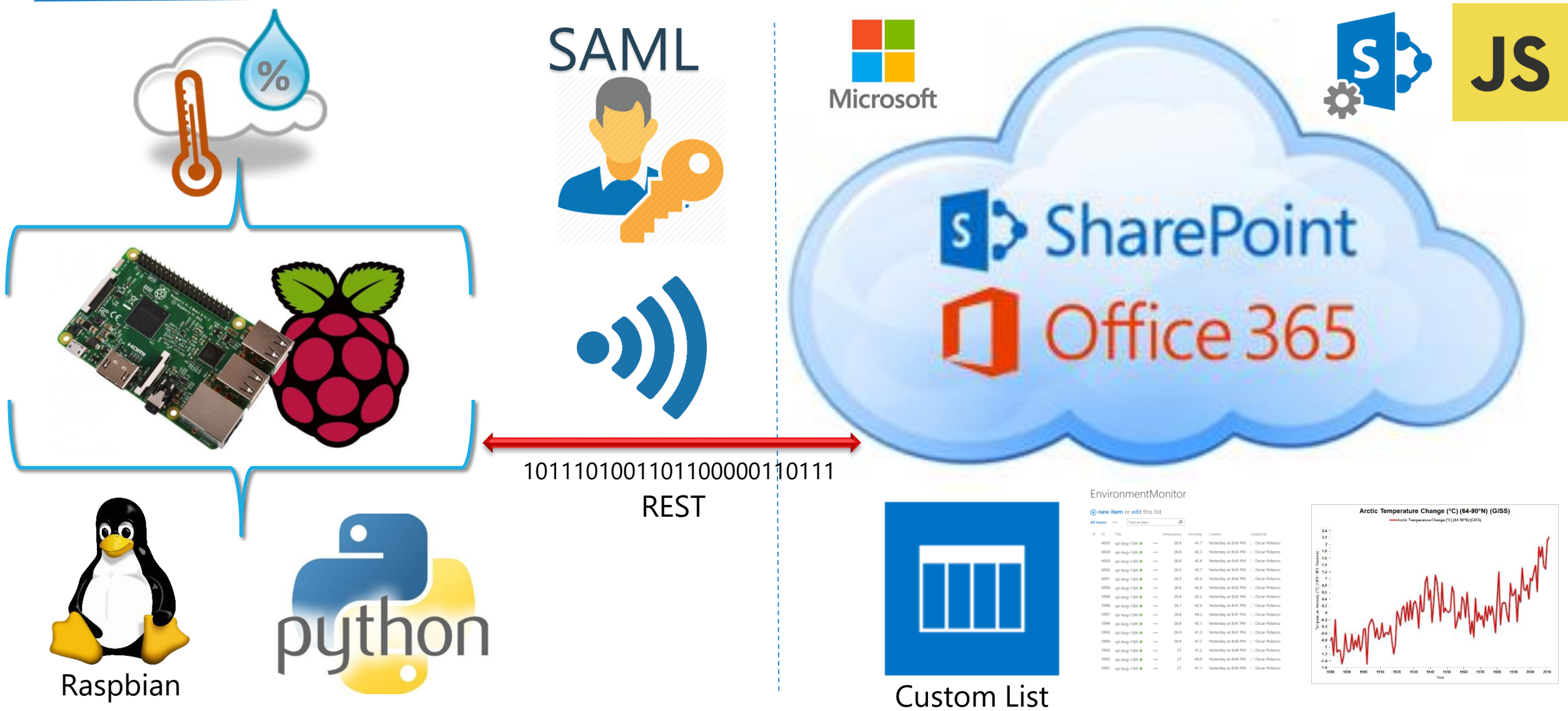
- Business Logic
- Authentication
- Authorization

Database

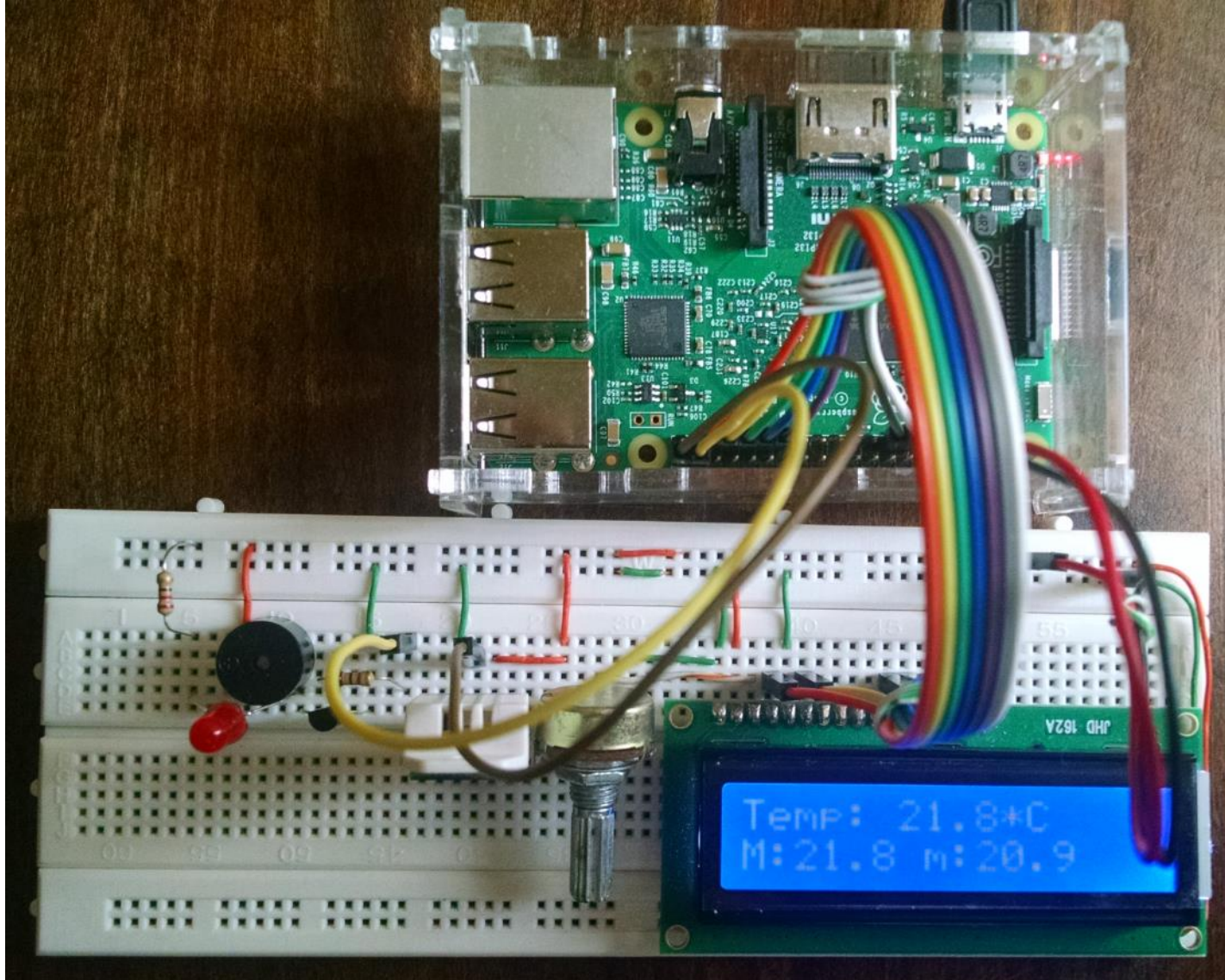
05 | O365-IoT integration overview

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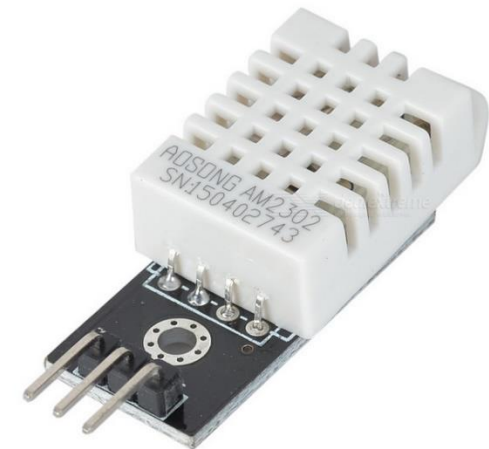
Office 365 (SharePoint Online) – IoT Integration



Electronic device

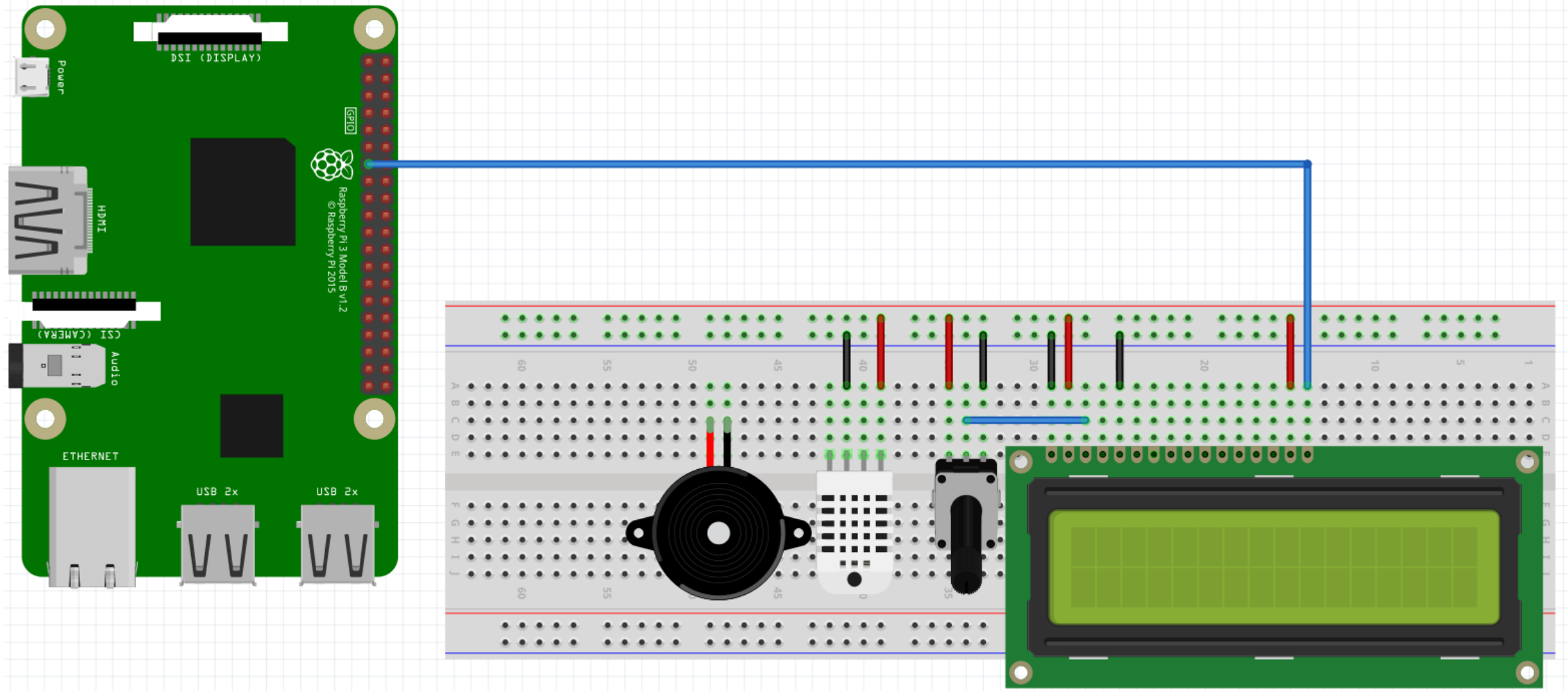


LCD 16x2



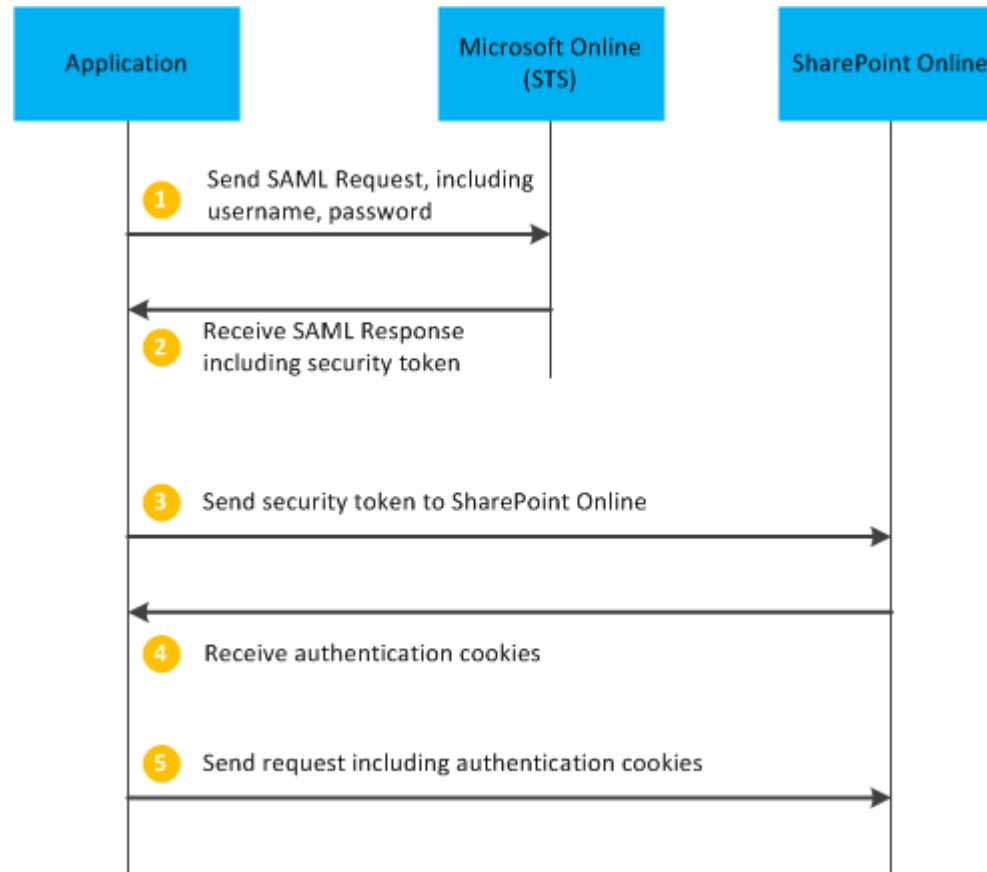
Temperature, Humidity Sensor

Electronic circuit diagram



User authentication - SAML

SharePoint Online Remote Authentication



<http://paulryan.com.au/2014/spo-remote-authentication-rest>

<https://github.com/vgrem/Office365-REST-Python-Client>



DEMO
TIME

Gracias

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