

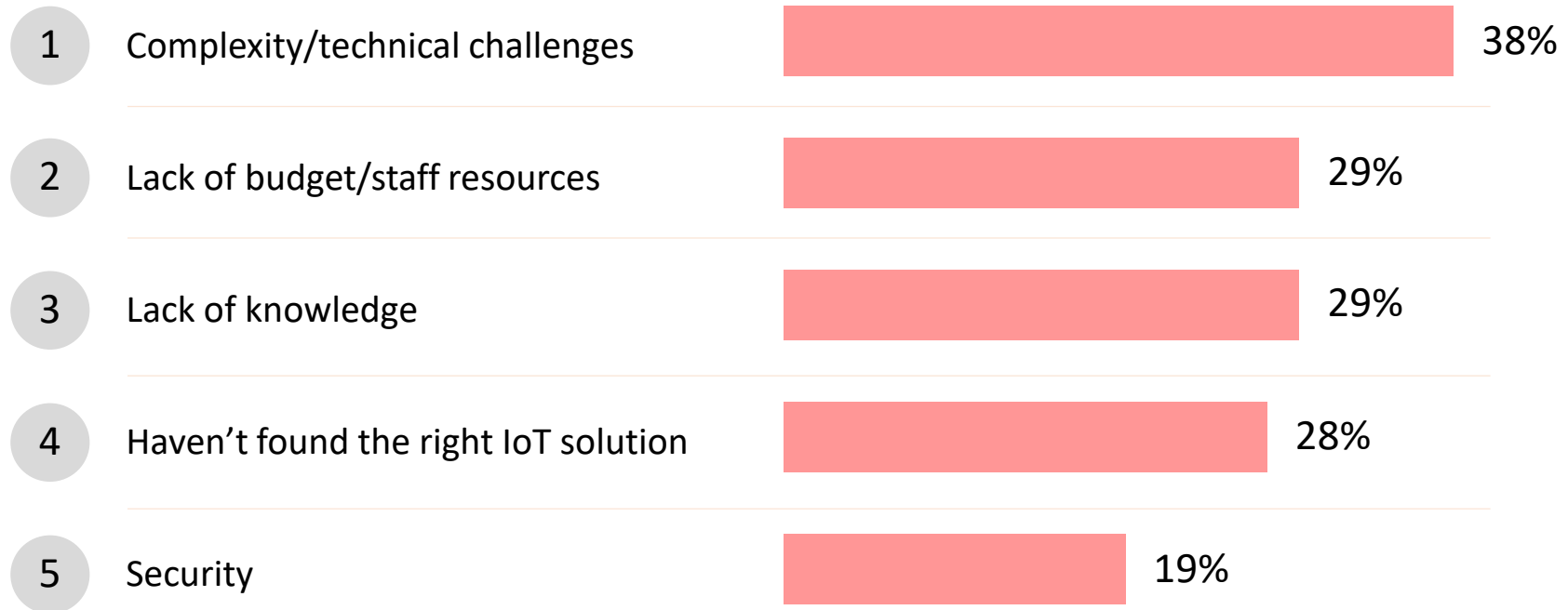
IoT Plug & Play in IoT Central

The screenshot displays the Azure IoT Central dashboard. At the top, a dark blue banner features the Azure IoT Central logo and the word "Hello." Below this, three white cards provide quick links: "Quick start demo" (Learn how to use Azure IoT Central in minutes), "Tutorials" (Step-by-step articles teach you how to create apps and devices), and "Documentation" (Comprehensive help articles and links to more support).

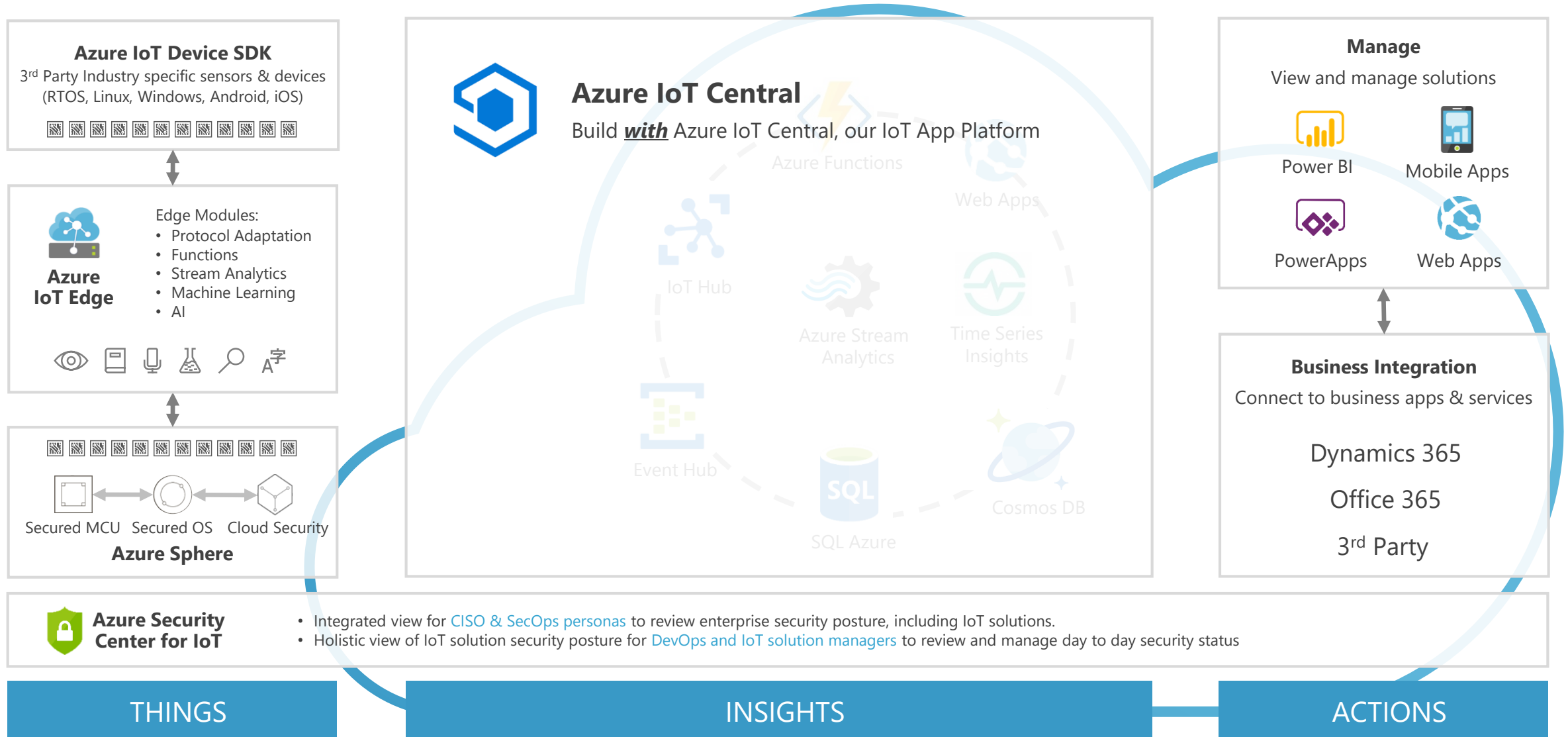
The main content area shows a preview of the "MXChip IoT DevKit" app. The app interface includes a sidebar with navigation options like Dashboard, Devices, Device groups, Rules, Analytics, Jobs, Device templates, Data export, and Administration. The main panel displays the "Overview" view for the "MXChip IoT DevKit" app, which is published 5 minutes ago. The app's configuration page shows various settings, including a "View name" dropdown set to "Overview", a "Static" section with an "Image" and "Label", and a "Properties" section with checkboxes for "Current", "Device model", "Fan Speed", "ID", and "Manufacturer".

On the right side of the app preview, there are four data cards: "Pressure" (40.07), "Humidity" (49.67), "Temperature" (43.36), and "Countdown". Below these cards is a line graph titled "Pressure, Temperature, Humidity" showing the historical data for these sensors over time. The graph has three lines: a blue line for Pressure (sensor), a green line for Temperature (sensor), and a red line for Humidity (sensor). The x-axis represents time from 12:00 to 12:15, and the y-axis represents the sensor values.

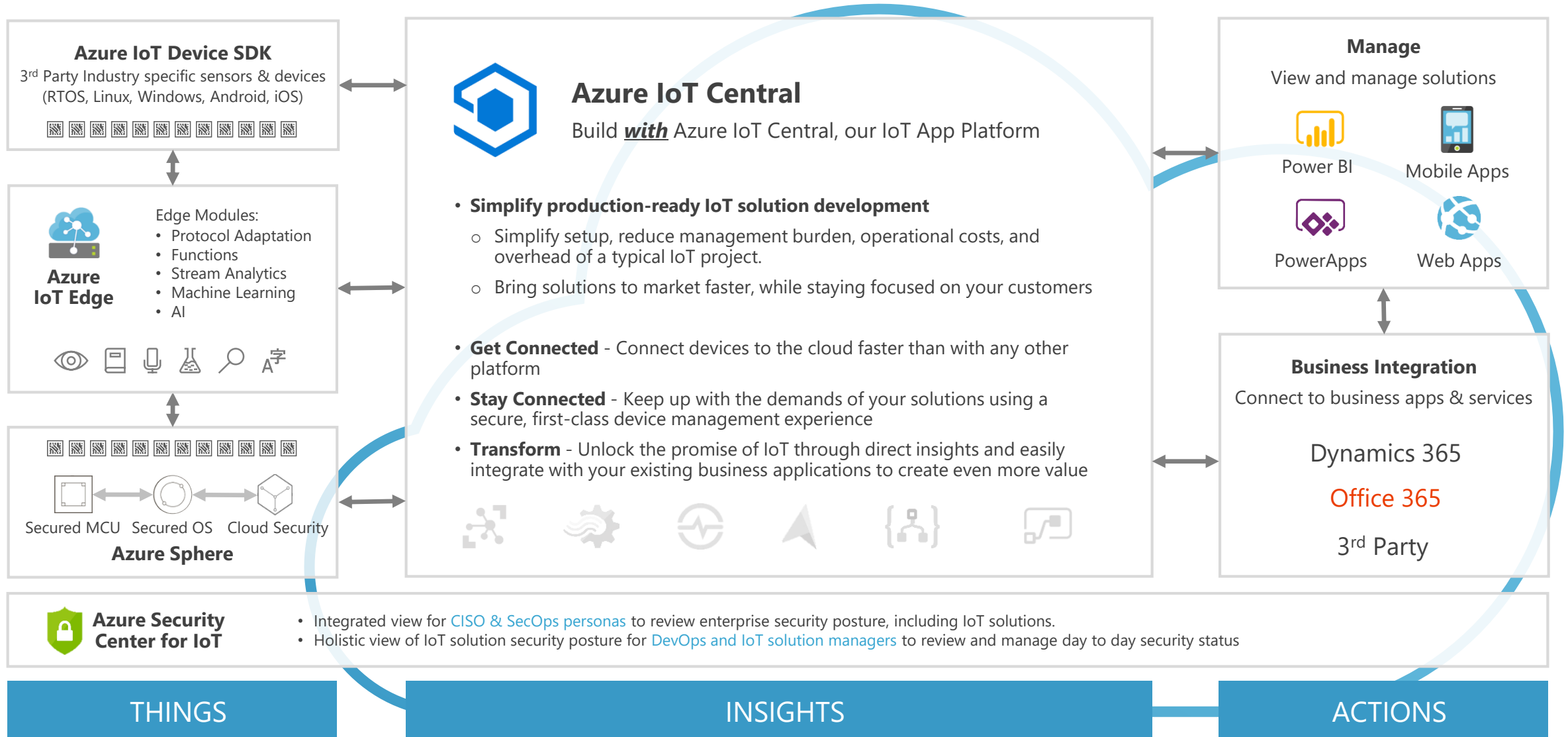
The top 5 IoT challenges



Simplifying IoT



Azure IoT Central



IoT Central

NEW Preview Capabilities



App templates
for Industry Verticals



White labeling
your SaaS – your brand



Azure IoT Edge
support



Multitenancy
Support



API
Support



IoT Plug and
Play Support



New 2-tiered pricing model
announced, based on
message volume

App templates are **tools** to help
partners & solution builders
kickstart IoT solution development

Use or sell to customers directly
or through **AppSource**

Your brand, your SaaS

App templates consist of:

- Sample operator dashboards
- Sample device templates
- Simulated devices
- Pre-configured rules and jobs
- Rich documentation including tutorials
- Brand templates using white labeling features

IoT Central

NEW Preview Capabilities



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message volume



Retail

- Digital distribution center
- In-store analytics
- Checkout, Condition monitoring
- Connected logistics
- Smart inventory management



Healthcare

- Continuous patient monitoring



Energy

- Smart meter analytics
- Solar power monitoring



Government

- Water quality monitoring
- Water consumption monitoring
- Connected waste management

IoT Central

NEW Capabilities



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support



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Support



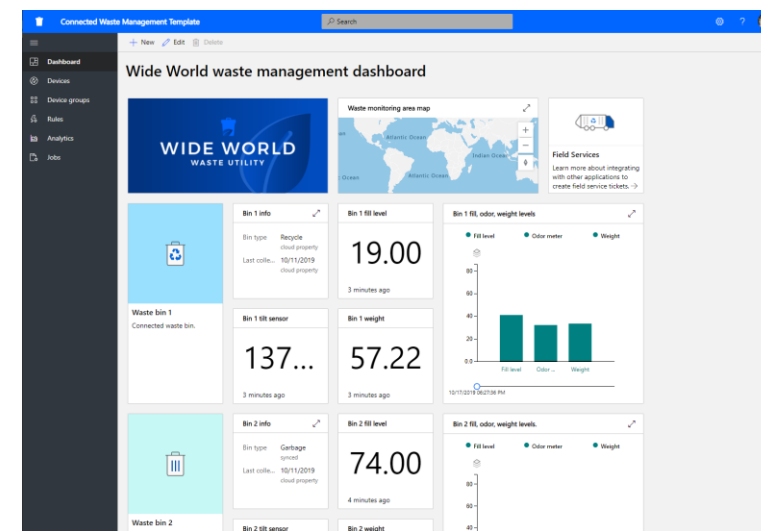
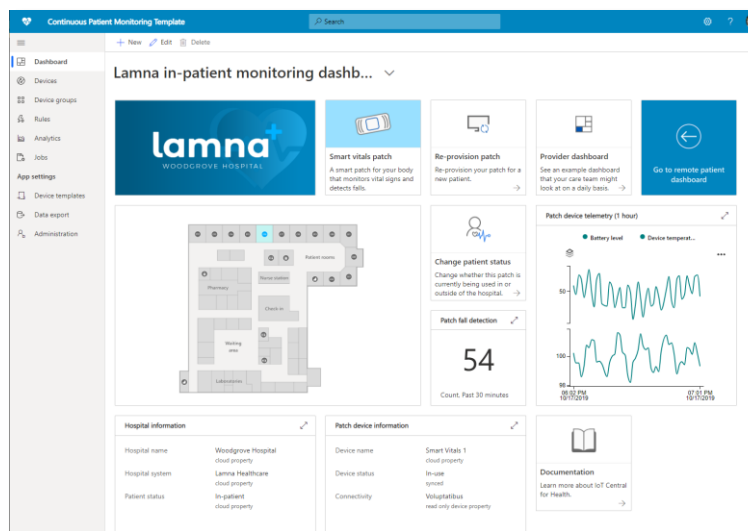
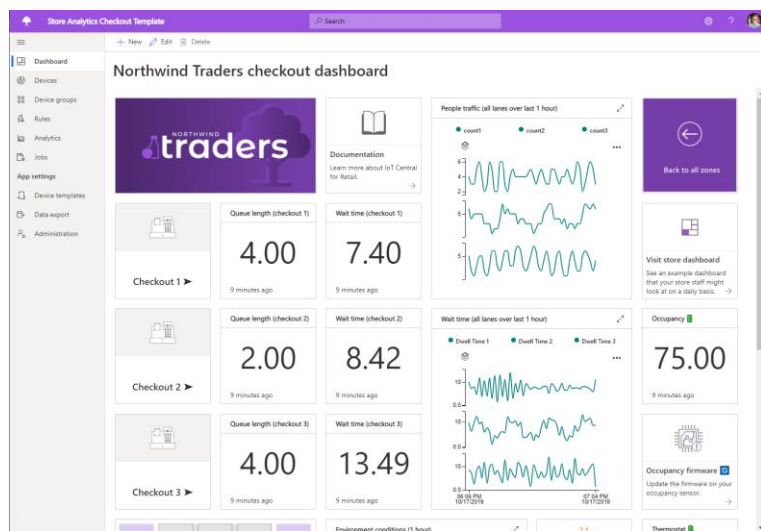
API
Support



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Play Support



New 2-tiered pricing model
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IoT Central

NEW Preview Capabilities



App templates
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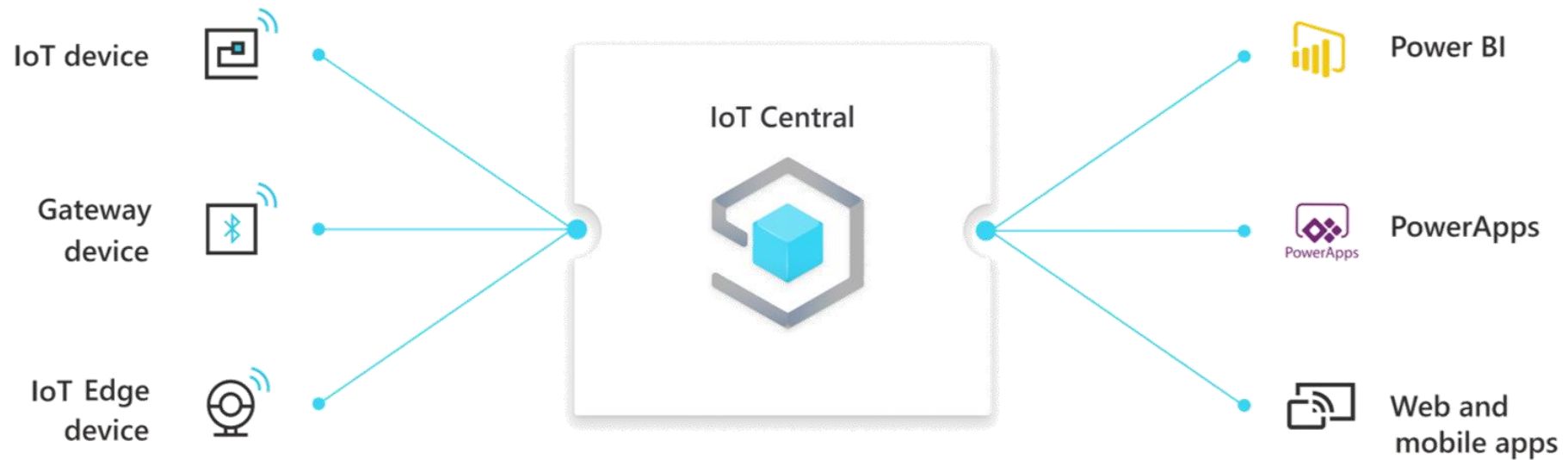
API
Support



IoT Plug and
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IoT Central

NEW Preview Capabilities



App templates
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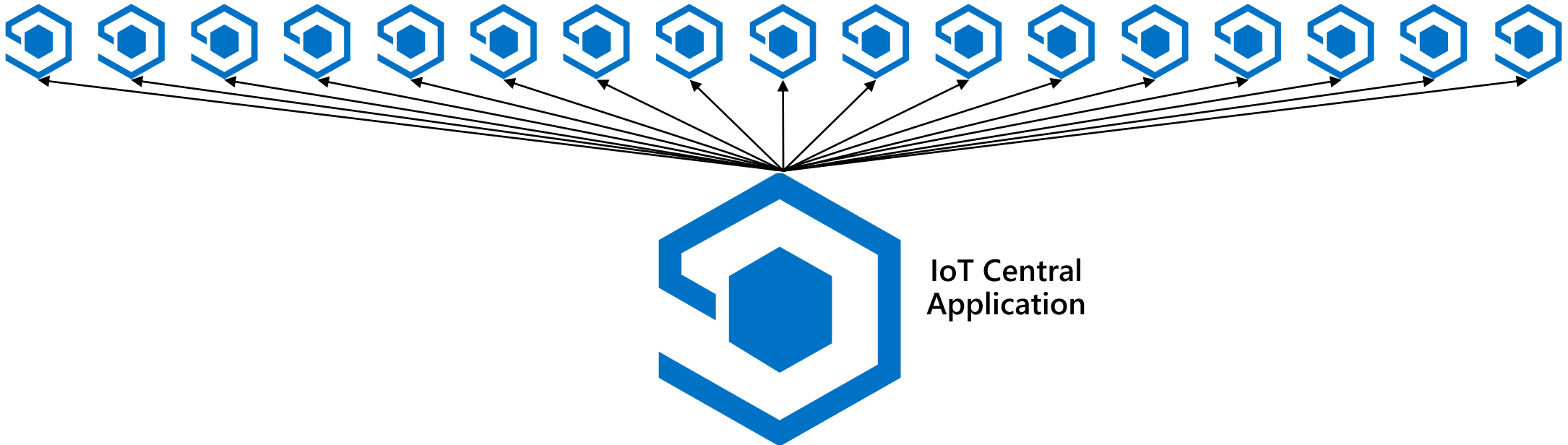


IoT Plug and
Play Support



New 2-tiered pricing model
announced, based on
message volume

Tenants: application instances with isolated devices, data, users & roles



IoT Central

NEW Preview Capabilities



App templates
for Industry Verticals



White labeling
your SaaS – your brand



Azure IoT Edge
support



Multitenancy
Support



API
Support



IoT Plug and
Play Support



New 2-tiered pricing model
announced, based on
message volume



Power BI



PowerApps



Web and Mobile

App Management
APIs

Device Modelling
APIs

Device Onboarding
APIs

Device Management
APIs

Data & Insights
APIs



IoT Central
Application

IoT Central

NEW Pricing in January



App templates
for Industry Verticals



White labeling
your SaaS – your brand



Azure IoT Edge
support



Multitenancy
Support



API
Support



IoT Plug and
Play Support



New 2-tiered pricing model
announced, based on
message volume

2
devices



free

5,000
messages
/month
/device



40c

30,000
messages
/month
/device



70c

IoT Central

NEW Preview Capabilities



App templates
for Industry Verticals



White labeling
your SaaS – your brand



Azure IoT Edge
support



Multitenancy
Support



API
Support

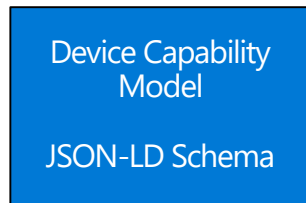


IoT Plug and
Play Support

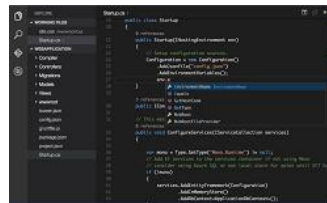


New 2-tiered pricing model
announced, based on
message volume

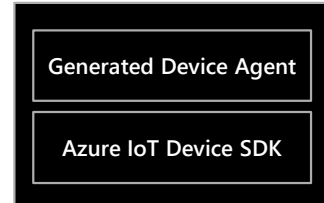
Device
Capability Model



VS
Code



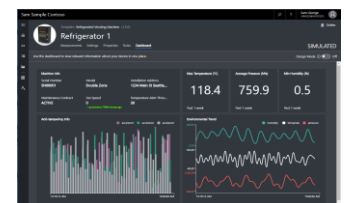
IoT Plug and Play
Device Software



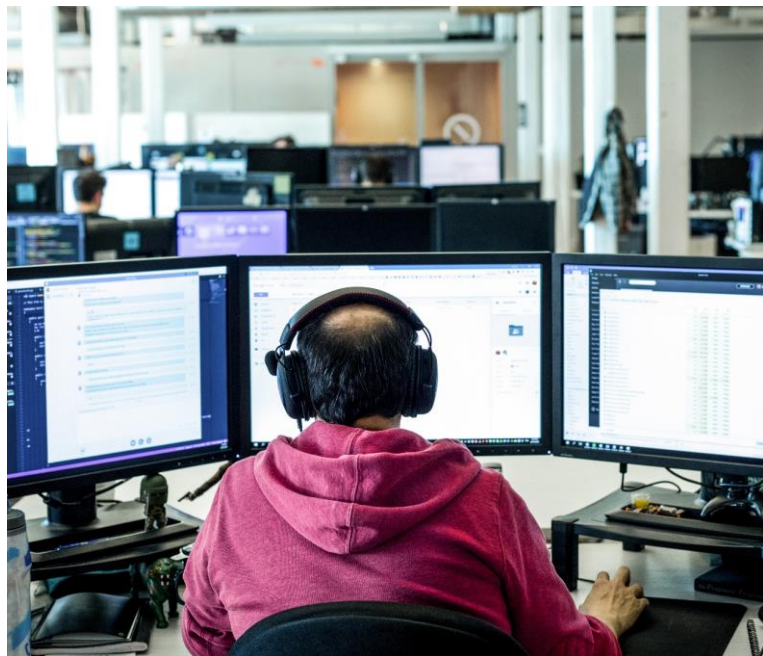
Azure IoT Device Catalog
IoT Plug & Play Certified



Azure IoT Central
& Partner Solutions



IoT device challenges for solution developers today:



In-depth knowledge of embedded development is required to connect to the cloud, send telemetry, and apply configuration changes



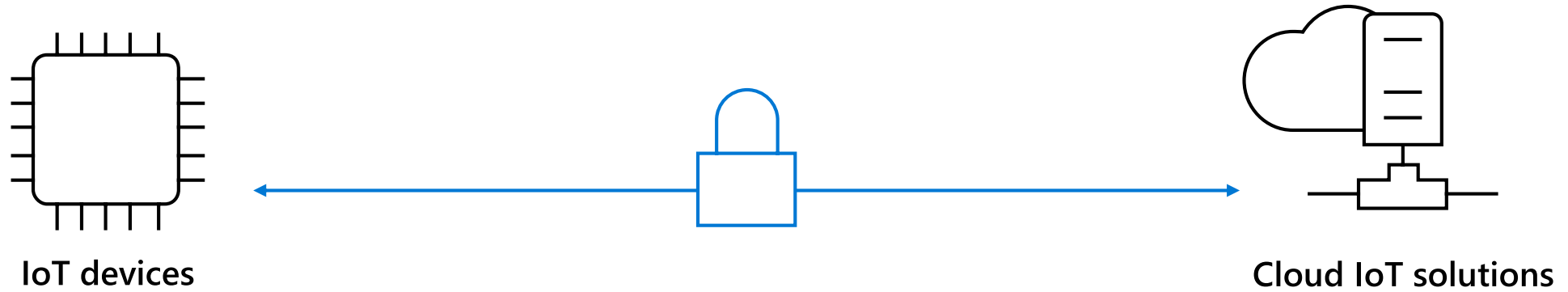
Extremely difficult for solution developers to transform low-level device messages into meaningful data, events, and workflows



Hardware sourcing, integration, and ramping to production can take months or even years for most of our customers.

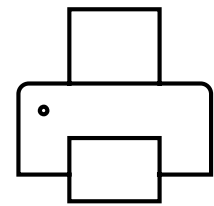
Azure IoT must simplify how IoT devices integrate with solutions built on the Azure platform

IoT today

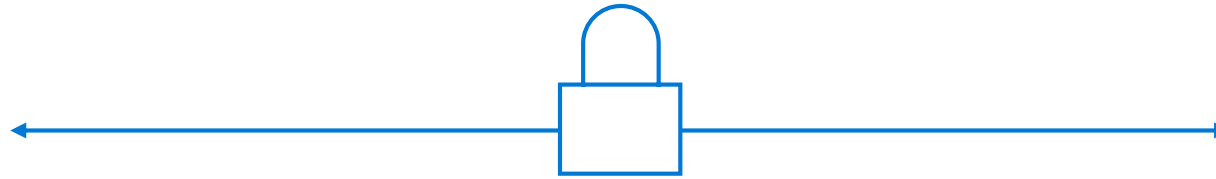


Tight coupling between software on device and IoT solution in the cloud

We had a similar challenge in the past...

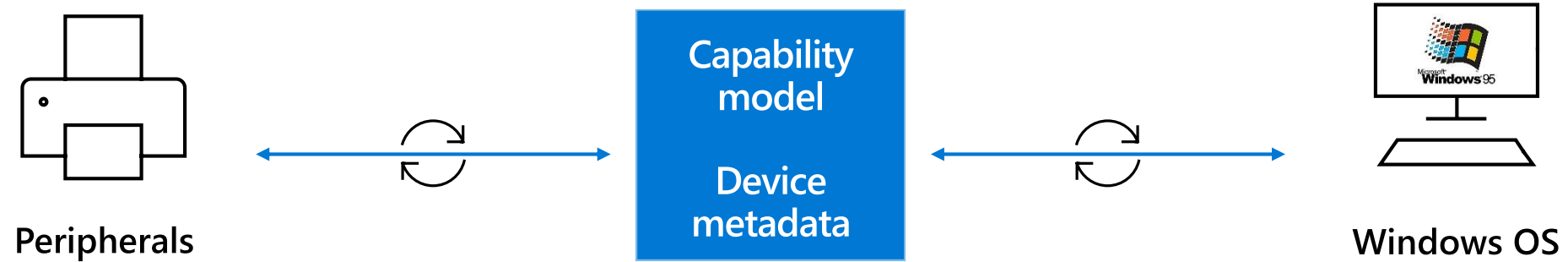


Peripherals



Windows OS

That was solved with Windows Plug and Play



Devices published their capability models and adhered to them
Windows used the capability model to know how to interact with them

Connecting hardware is very “hard”

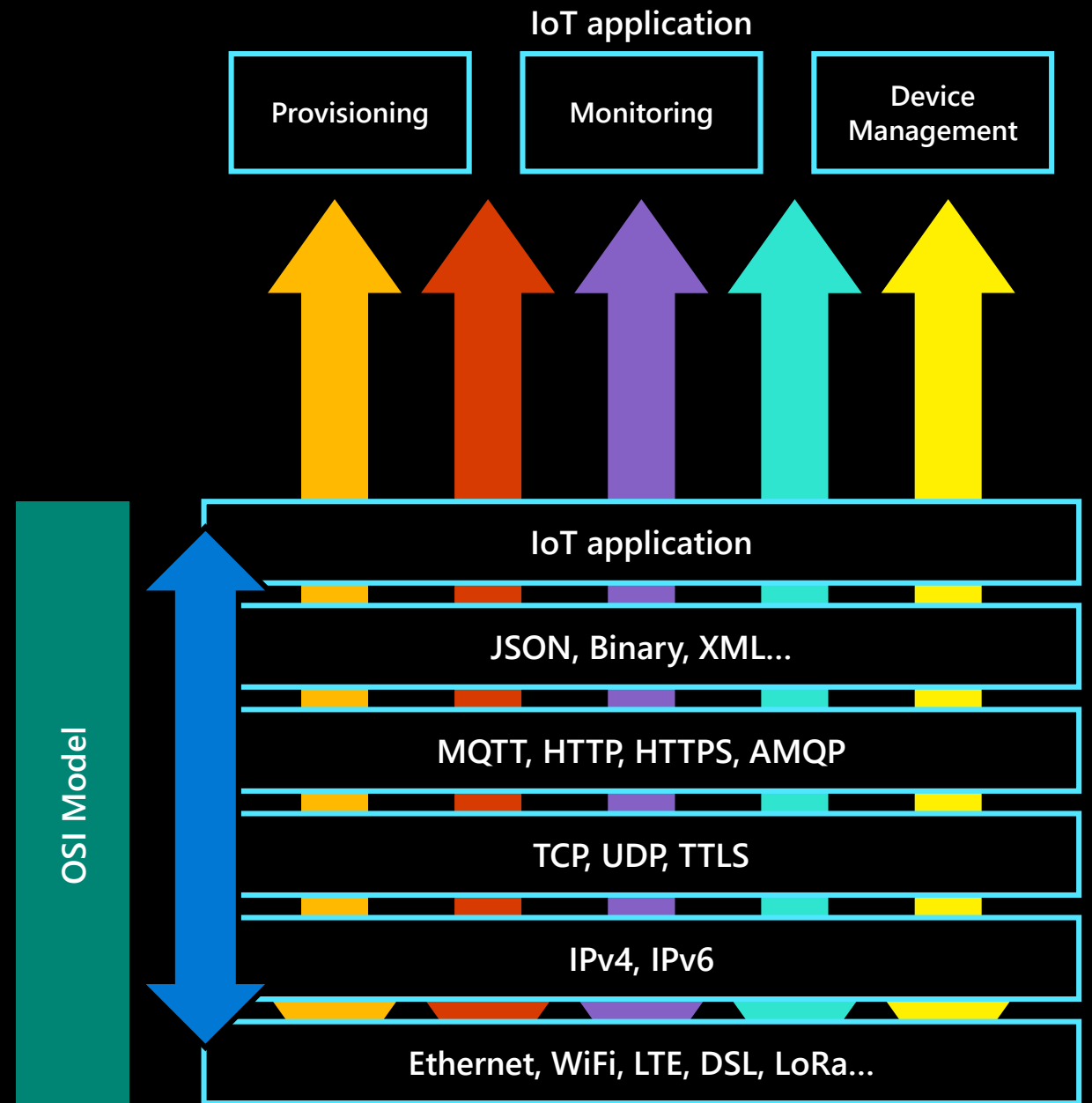
Provisioning

Configuration

Device management

Deployment

Monitoring

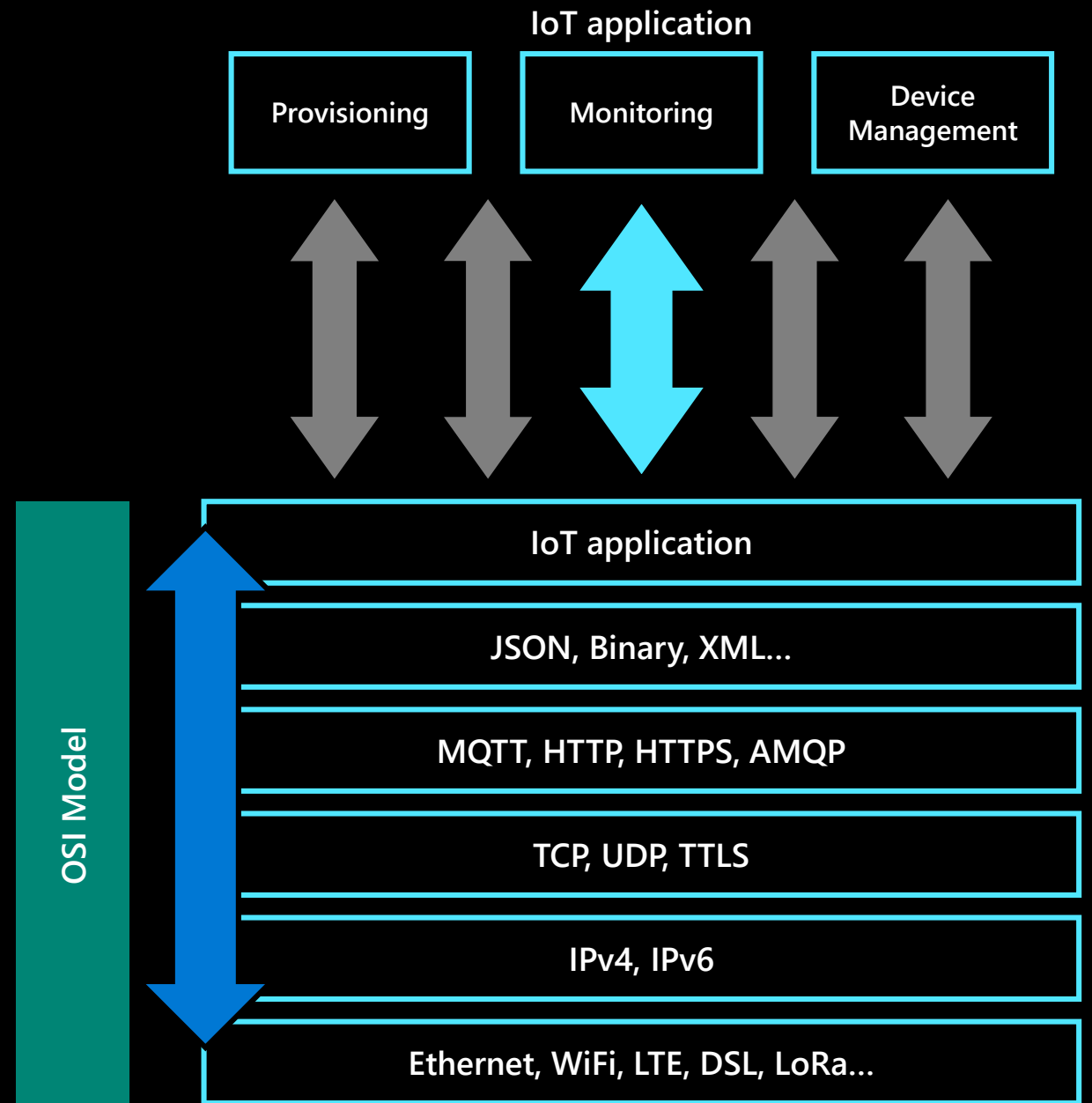


IoT Plug and Play defines common language

A platform feature to describe models and capabilities to Cloud

Based on Digital Twin definition language

Open source based on open standards (JSON-LD, RDF)



Benefits

Solution developers

Dramatically reduces the effort needed to build software on devices

Customers and partners

Large ecosystem of devices that just work with Azure IoT solutions, without any development required

Device builders

Certify your device for IoT Plug and Play and it can be used with thousands of Azure IoT solutions

In public preview

<http://aka.ms/IoTPlugandPlay>



IoT Plug and Play

Azure IoT
Device Simulation

Partner Solutions &
Azure IoT Central

VS Code

Device
Capability
Model

JSON-LD
Schema

Azure IoT Device Catalog
IoT Plug & Play Certified

IoT Plug and Play
Device Software

Generated Device Agent

Azure IoT Device SDK

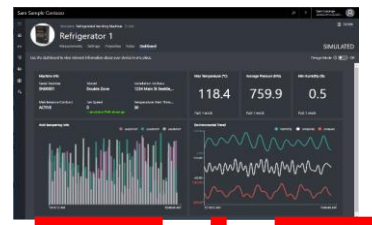
Devices that just
work out of the
box with no code
required

Easy to model
device
capabilities, easy
to generate
device software
skeleton

Easy to certify
plug and play
devices

Easy for
customers and
partners to find
plug and play
devices that just
work

Easy to develop
device software
and ensure it just
works with IoT
solutions



```
const { spawn } = require('child_process');
const { exec } = require('child_process');

// Start the device simulation
const device = spawn('python', ['simulator.py', 'device.json']);

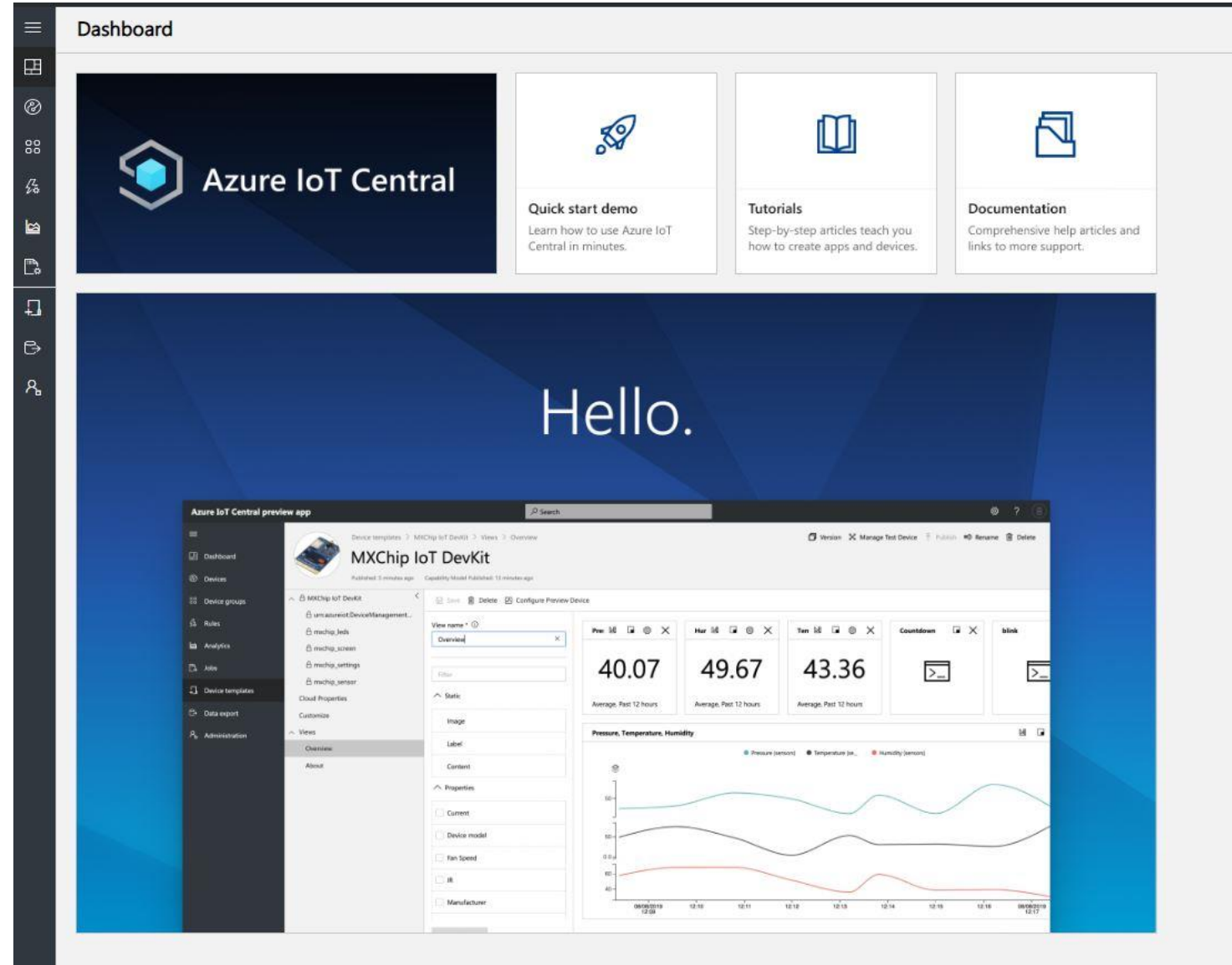
// Listen for data from the device
device.stdout.on('data', (data) => {
  console.log(`Received data: ${data}`);
});

// Listen for errors from the device
device.stderr.on('data', (data) => {
  console.log(`Error: ${data}`);
});

// Close the device when the simulation is done
device.on('close', (code) => {
  console.log(`Device closed with code: ${code}`);
});
```

IoT Plug & Play in IoT Central

Demo



Resources

- <https://aka.ms/iotcentral-pnp-video>
- <https://aka.ms/iotcentral-pnp-tutorials>