



IoT in Action

#IoTinActionMS



构建智能边缘

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微软 全球物联网解决方案技术部门

IoT in Action



发展历程

IoT in Action

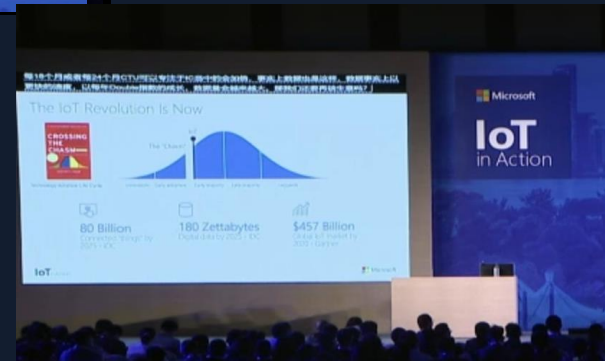


第 1 年 2017 年



发展历程

IoT in Action



第 2 年 2018 年



发展历程

IoT in Action



第 3 年 2019 年

IoT Signals

SUMMARY OF RESEARCH LEARNINGS
2019

市场采用物联网 (IoT) 的原因



IoT Signals

SUMMARY OF RESEARCH LEARNINGS
2019

不同行业的运用最佳范例



RETAIL/ WHOLESALE

Supply chain optimization	64%
Inventory optimization	59%
Surveillance and security	48%
Loss prevention	44%
Energy optimization	40%



TRANSPORTATION

Fleet management	56%
Security, surveillance, and safety	51%
Manufacturing operations efficiency	40%
Vehicle telematics and infotainment	38%
Predictive maintenance	33%



GOVERNMENT

Public Safety	48%
Infrastructure and facilities management	40%
Regulations and compliance management	38%
Fleet and asset management	37%
Incident response	29%



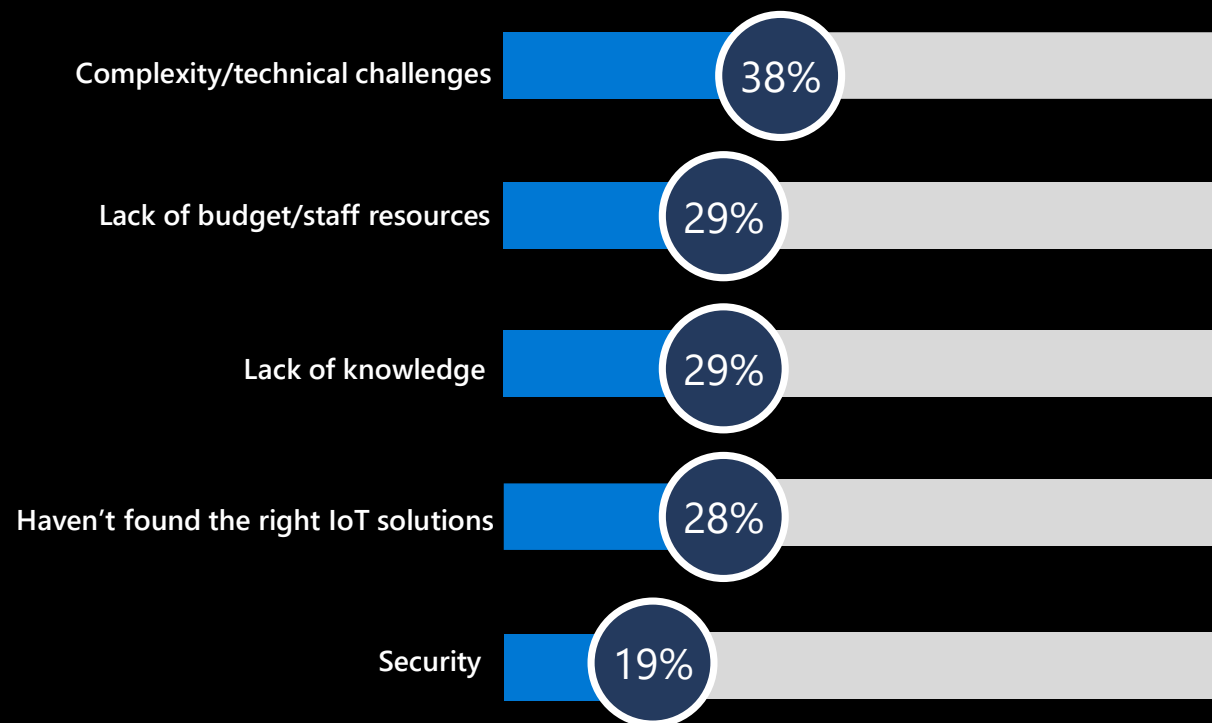
HEALTHCARE

Tracking patient, staff, and inventory	66%
Remote device monitoring and service	57%
Remote health monitoring and assistance	55%
Safety, security, and compliance	53%
Facilities management	42%

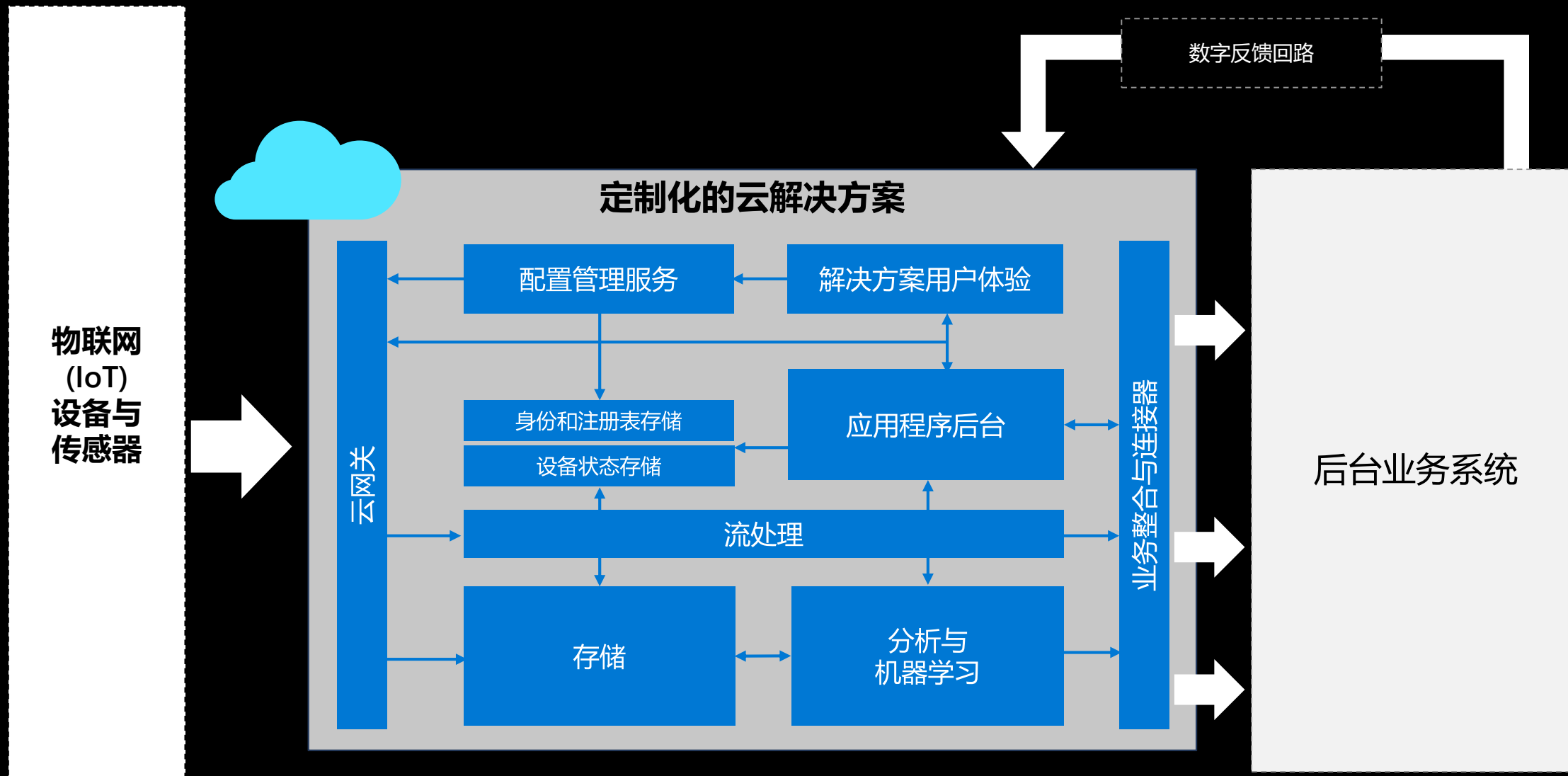
IoT Signals

SUMMARY OF RESEARCH LEARNINGS
2019

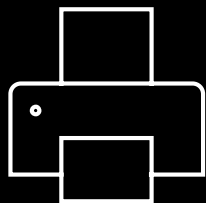
物联网发展的挑战



物联网解决方案架构 - DIY



过去，我们曾面临类似挑战...



周边设备



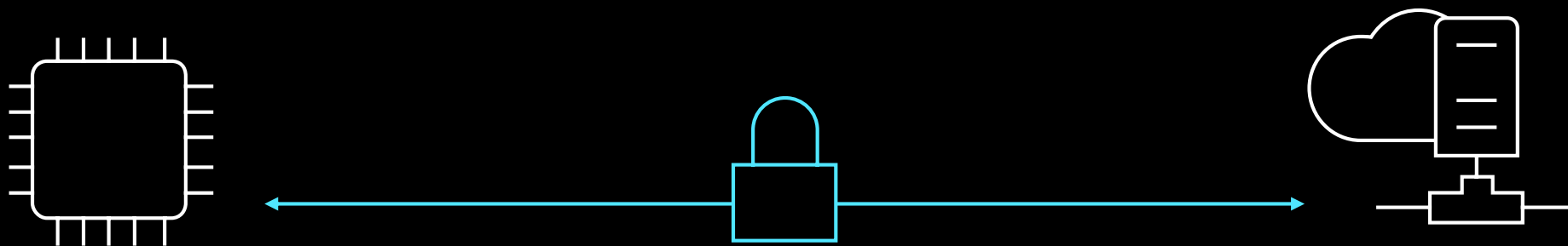
Window 操作系统

Windows Plug & Play 解决了这一问题



设备发布其能力模型并且符合这些模型
Windows 采用能力模型来了解如何与之交互

当今的物联网 (IoT)



设备上的软件可以与云端的物联网 (IoT) 解决方案紧密协作

Azure IoT Plug & Play + Azure IoT Central

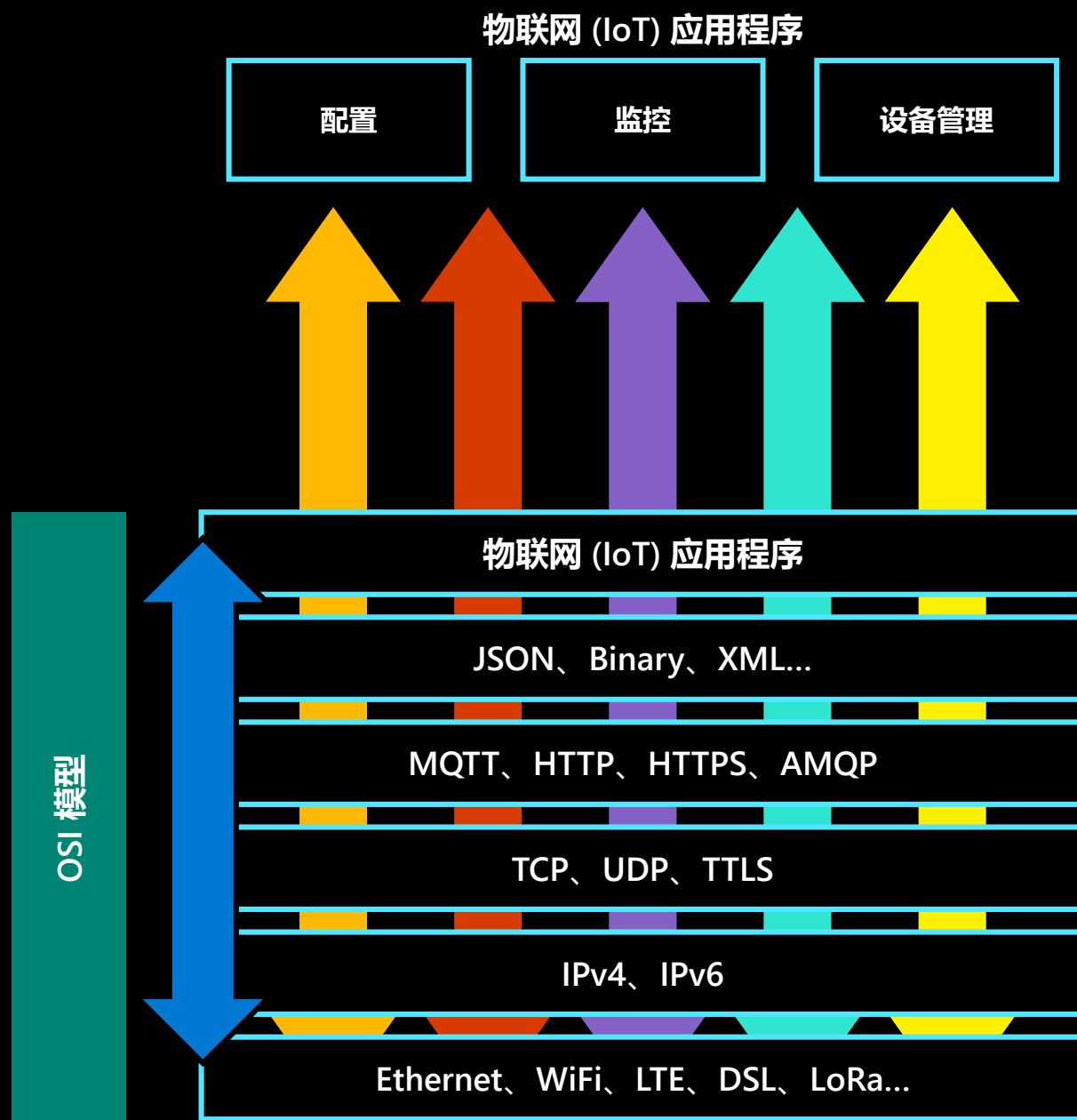
Tim Zhan 詹文平

大中华区 物联网方案架构师

微软 全球物联网解决方案技术部门

连接硬件 非常“困难”

准备
配置
设备管理
部署
监控

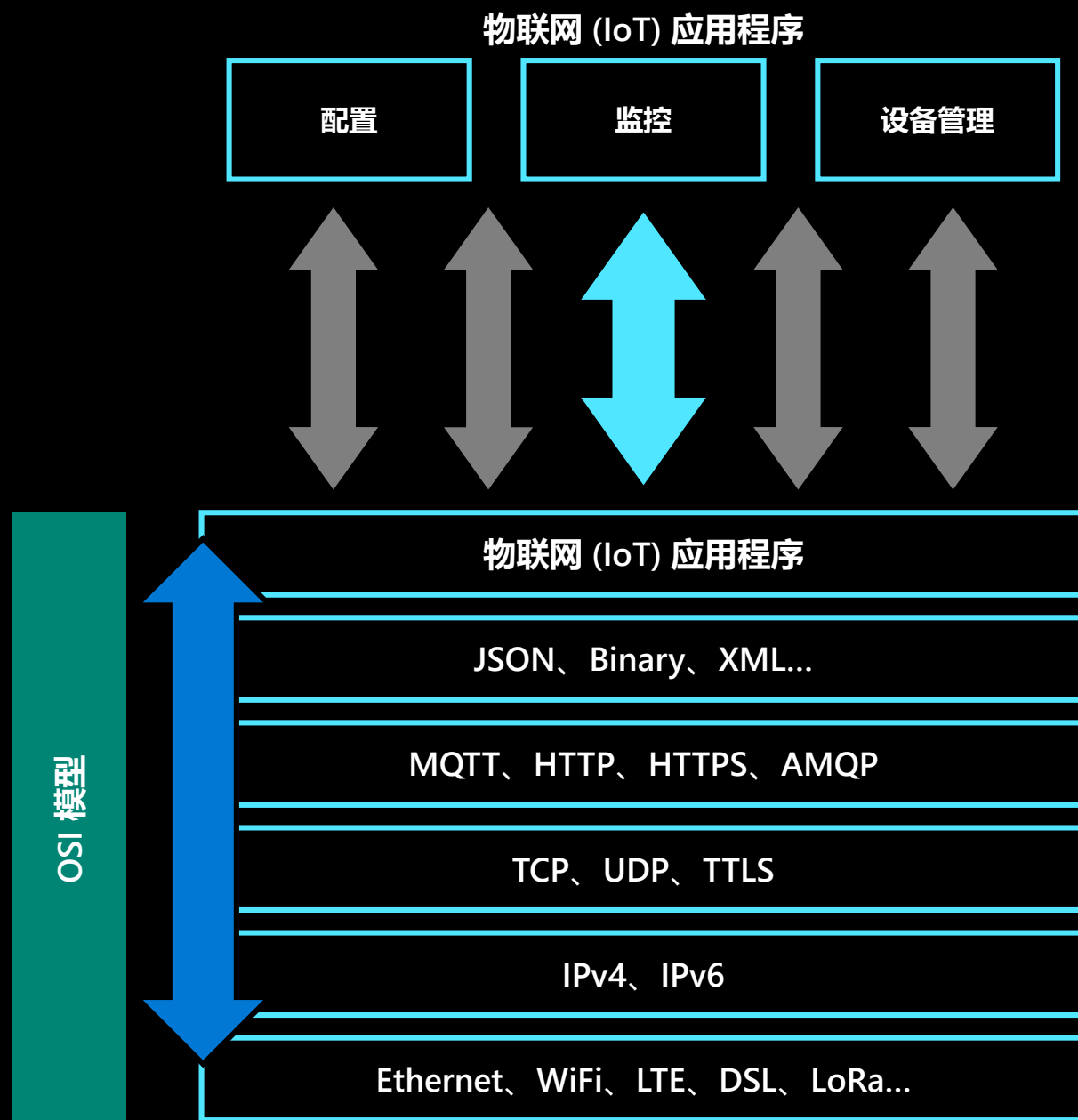


物联网 (IoT) 即插即用 定义了通用语言

可向云描述模型和
功能的平台功能

基于数字孪生
定义语言

基于开放标准 (JSON-LD、RDF) 的
开源



优势

解决方案开发人员

可大大减少在设备上构建软件的工作量

客户和合作伙伴

大型设备生态系统可以采用 Azure 物联网 (IoT) 解决方案，无需进行开发

设备制造商

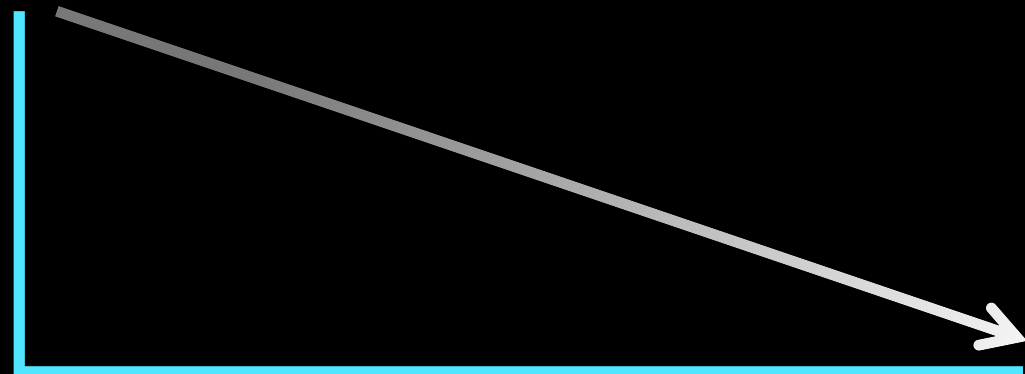
可认证您的设备可具备物联网 (IoT) 即插即用并且可以采用数千种 Azure 物联网 (IoT) 解决方案

要查看公开预览版，请访问
<http://aka.ms/IoTPlugandPlay>



使物联网 (IoT) 实现无缝运行

工作量



基础设施即服务

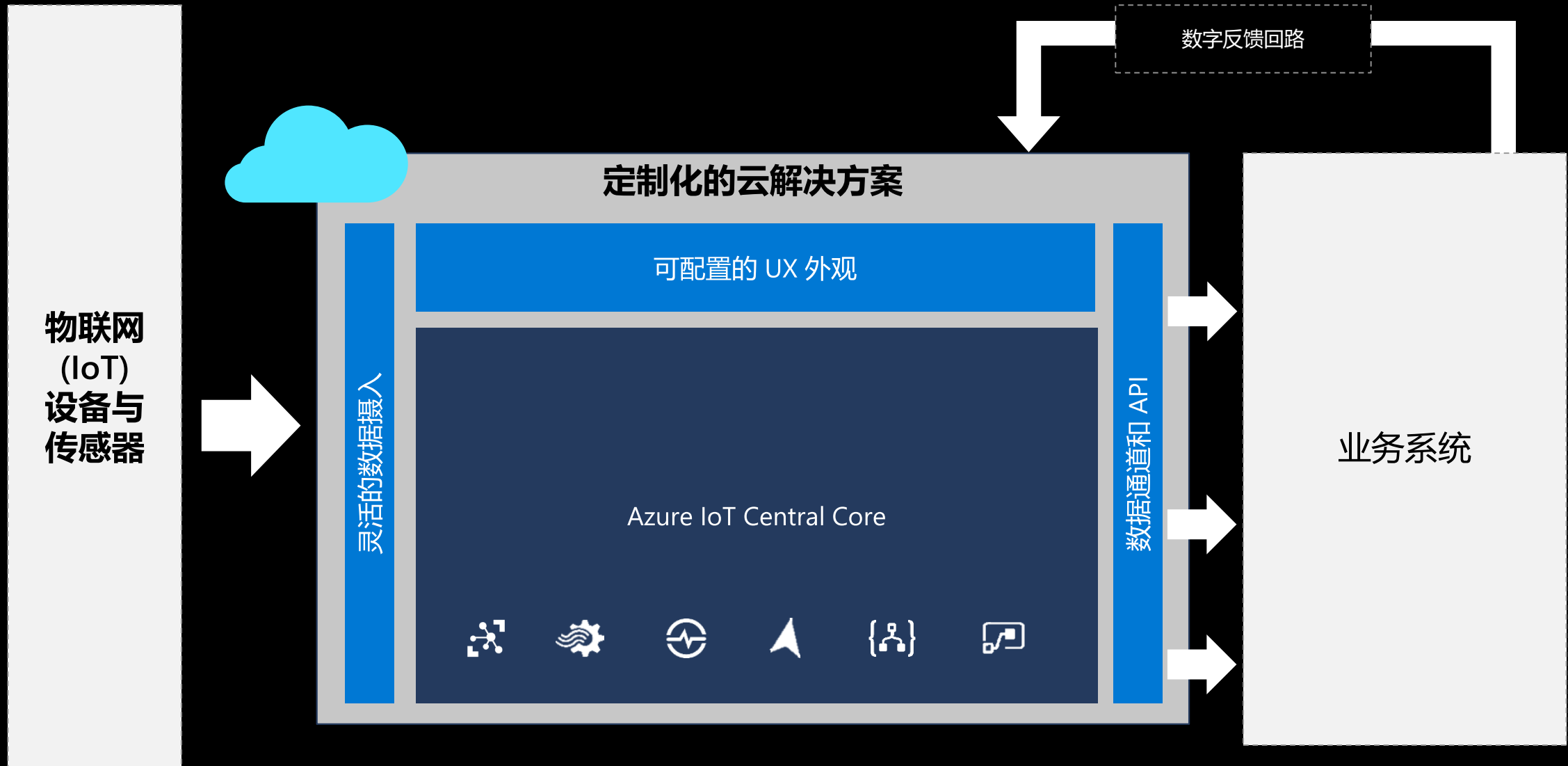
平台即服务

软件即服务



构建和实施物联网 (IoT) 解决方案的
总体工作量正在迅速减少

解决方案架构 - IoT Central



Azure IoT Central

是物联网 (IoT) 应用平台，非常安全，可覆盖全球，具有高可用性，可进行灾难恢复



设备连接与
管理



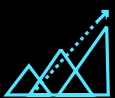
遥测摄入和
命令与控制



监控规则和
触发动作



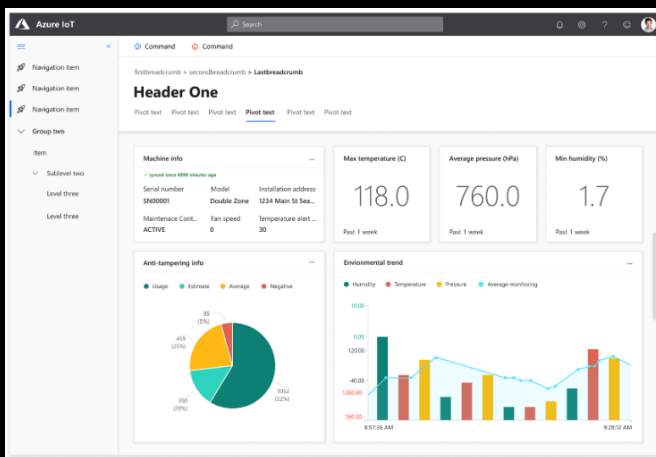
用户角色和
权限



仪表板、可视化
和洞察



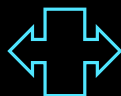
完全由 Microsoft
托管和管理



地图、位置遥测和
地理围栏



设备网桥
从其他云中摄取数据



连续数据导出
将数据带入下游业务应用



白牌
您的软件即服务 - 您的品牌



物联网 (IoT) 即插即用
公开预览版



IoT Edge 支持
包括模块管理



多租户和基于角色的
权限访问控制



可扩展性
API



解决方案构建者应用模板

IoT Central 应用模板



适用于重点垂直行业的
应用模板

行业
应用
模板



零售

数字配送中心
店铺分析
结帐、状态监控
互联物流
智能库存管理



卫生保健

可持续对病人进行监测



能源

智能电表分析
太阳能监控



政府

水质监测
用水量监测
互联垃圾管理

Azure IoT Central DEMO



什么是 保密运算？

可存储、传输
和处理计算工作负载，
而不会影响数据和
知识产权的保密及隐私权

为什么物联网 (IoT) 中需要采用保密运算？

智能边缘计算不仅需要保护存储和传输中的代码和数据，
还需要保护使用中的代码和数据

代码和 数据保密



专有的代码和算法

敏感数据（例如患者信息）和机器学习模型

先获得洞察， 再采取行动



从智能边缘处理中获取洞察，从而采取安全措施

值得信赖的 I/O，用于指挥和控制关键基础设施

重要的业务



采取计量，进行计费

事件跟踪，例如违反保修管理

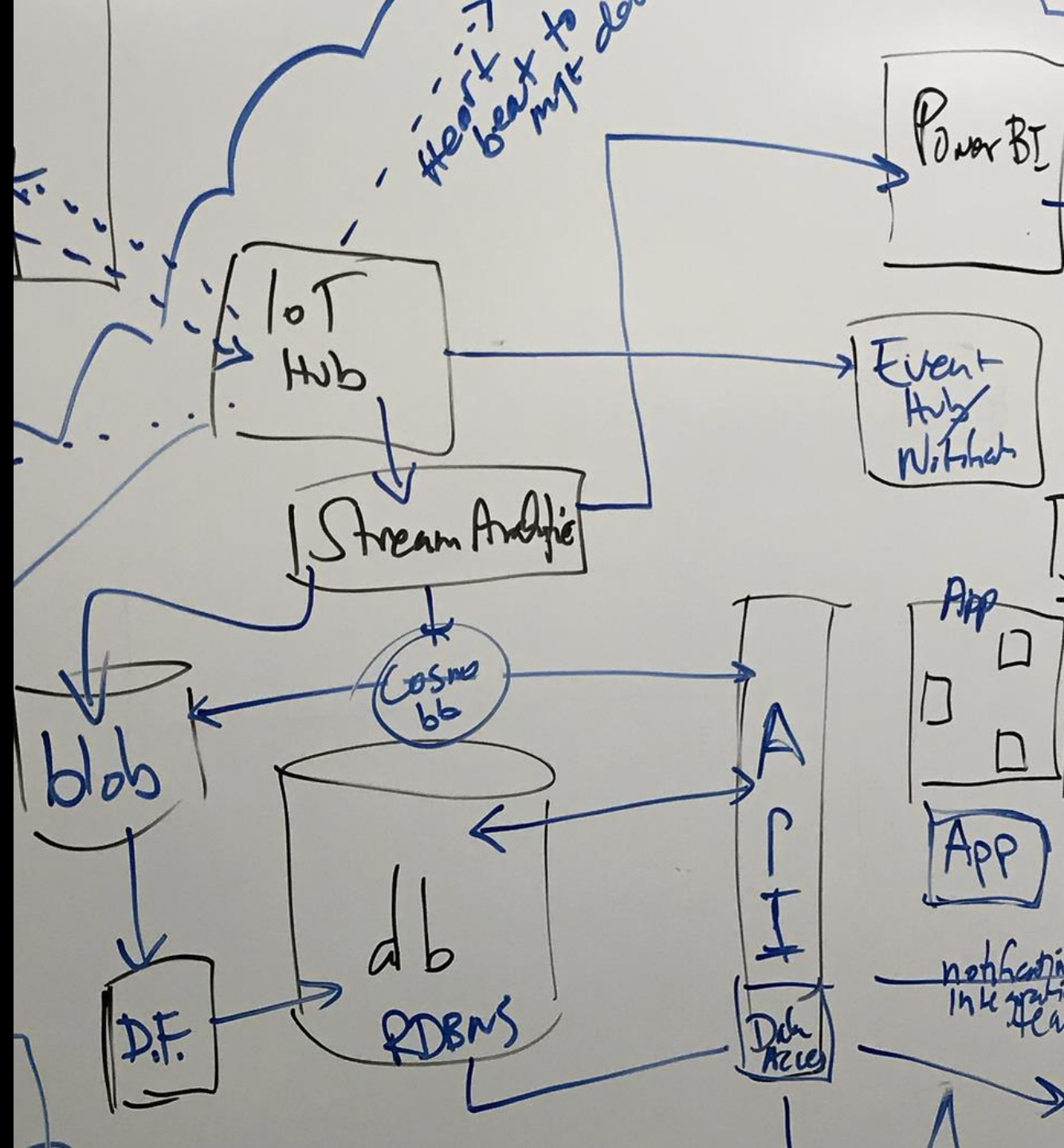


和合作伙伴完成 更多 IoT 方案及机会

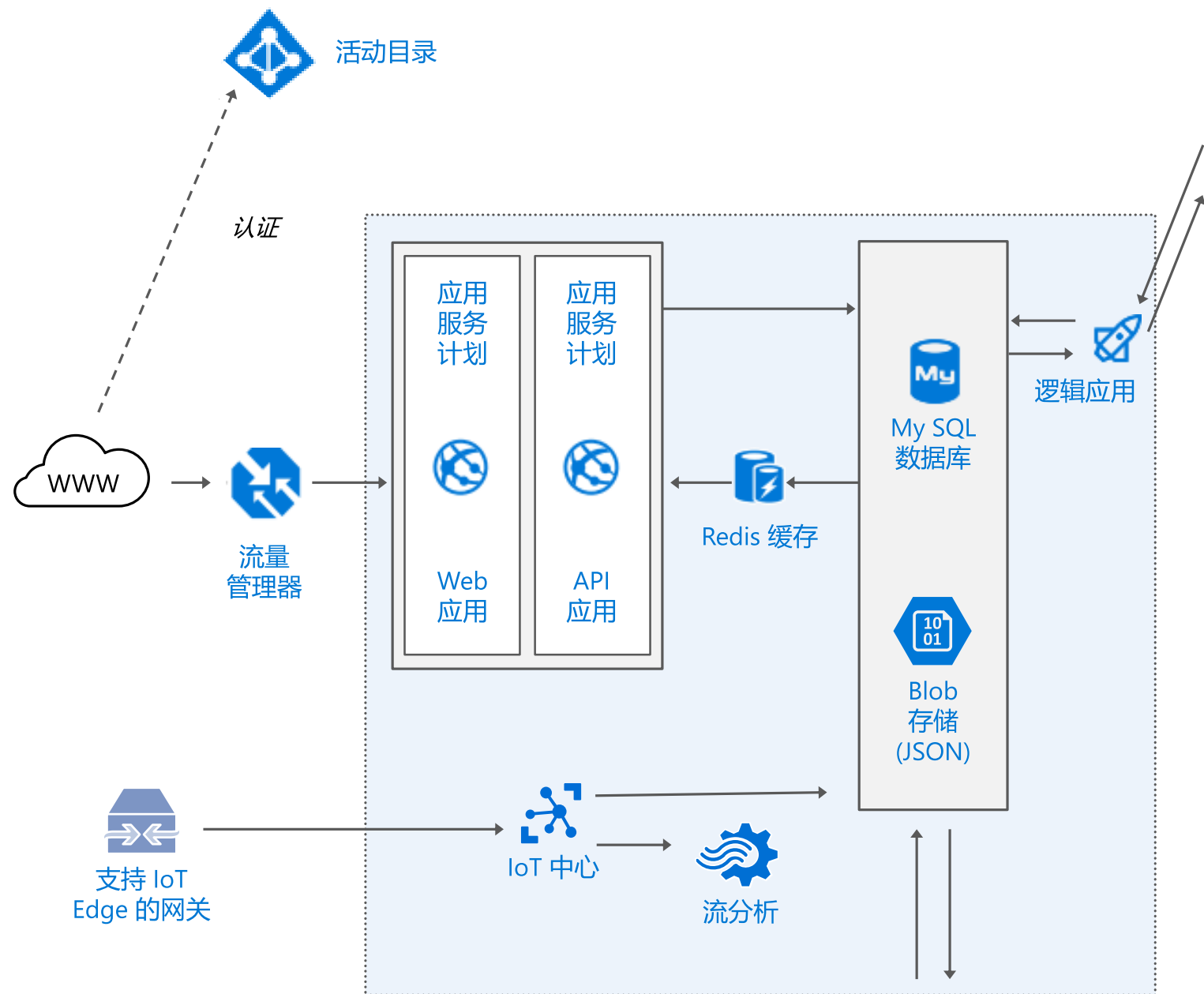


ADS

白板设计过程



ADS 输出





基于Azure IoT Plug and Play的资产管理 方案

罗伟

David Luo

副总裁

Vice President

IoT in Action

neoway 有方



面向授信XR体验的身 份验证和内容推送 —Azure Sphere Key Solution

曹峻玮

Kelvin Cao

副总兼联合创始人

VP & Co-founder

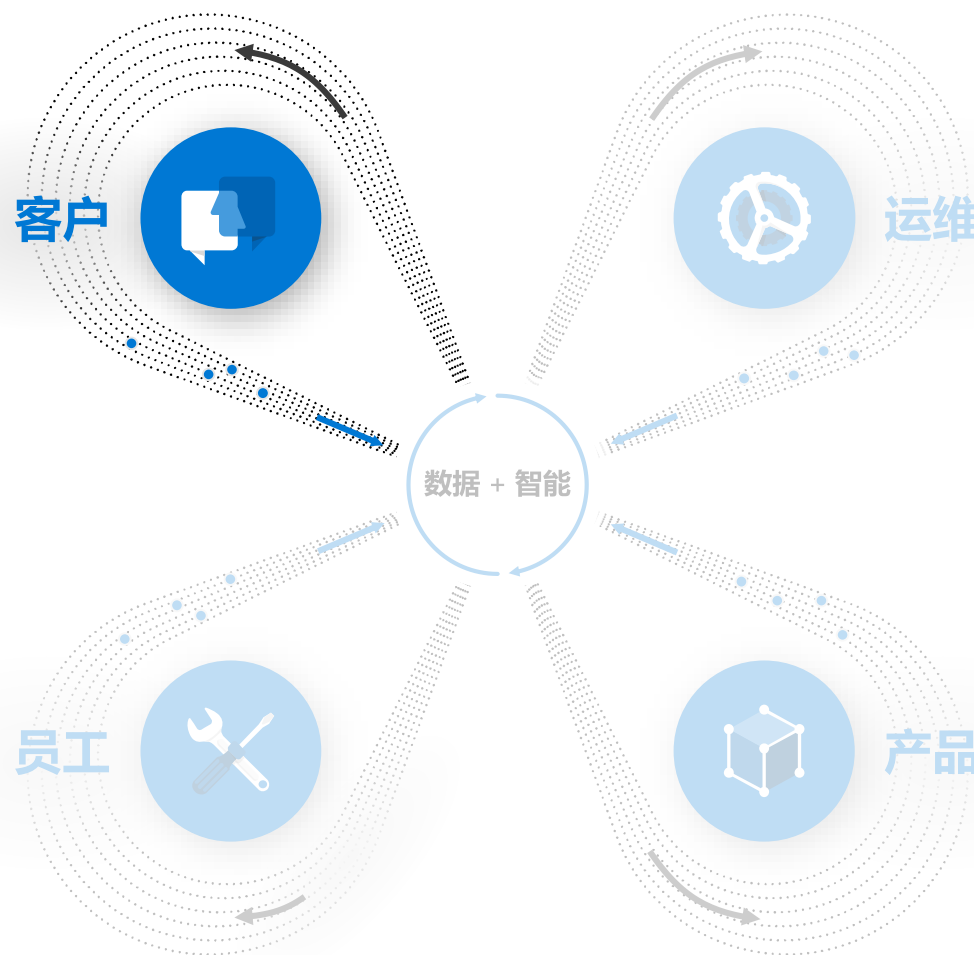
IoT in Action



我们与合作伙伴 一起进行迭代

这就是我们所说的，我们的
最大优势就是我们的生态系统

我们可以通过这种方式
帮助您创建更好的流程



所需的
技能



技能差距

所需的
技能




欢迎使用 Microsoft Learn

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预计
投入的
时间

Microsoft.com/learn



Azure fundamentals

8 hr 17 min remaining • Learning Path • 1 of 12 modules completed

Beginner Developer Solution Architect Administrator AI Engineer Business Analyst Business User

Data Engineer Data Scientist Azure Azure Portal Azure Resource Manager Storage Virtual Machines

Interested in the cloud, but aren't quite sure what it can do for you? This path is the place to start.

In this learning path, you will:


- Learn cloud concepts such as High Availability, Scalability, Elasticity, Agility, Fault Tolerance, and Disaster Recovery
- Understand the benefits of cloud computing in Azure and how it can save you time and money
- Compare and contrast basic strategies for transitioning to the Azure cloud
- Explore the breadth of services available in Azure including compute, network, storage and security

Once you complete this learning path, you will have the necessary knowledge to take the [AZ900 Microsoft Azure Fundamentals Exam](#).

Prerequisites
None

12300 XP

Modules in this learning path



Cloud Concepts - Principles of cloud computing

1 hr 2 min • Module • 10 Units


★★★★★ 4.8 (23350)

Explore the core concepts of cloud computing and how it can help your business.

Overview ▾

1100 XP

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课程总点数 =
12,300

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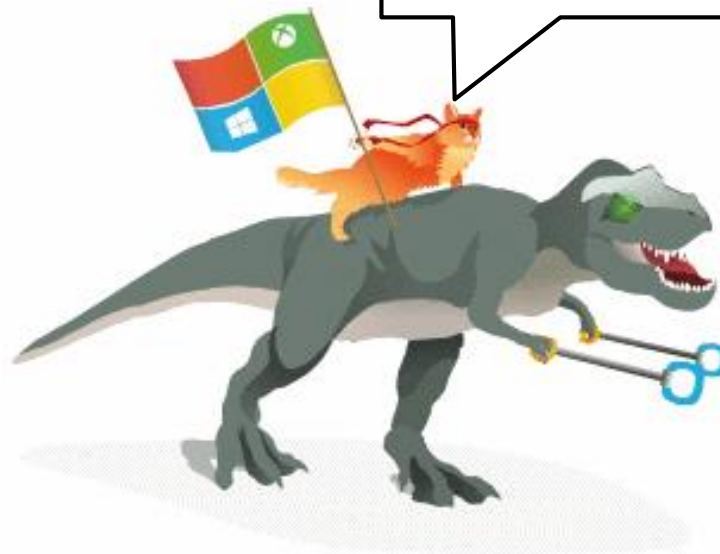
单独模块点数
= 1,100

✓ 1100 XP

借助 Microsoft Learn 提高您的 Azure 技能



我会集齐**所有**
认证徽章!





FINAL WORDS

- 帮助合作伙伴创建 IoT 解决方案
- 如何简化 IoT
 - From IaaS, PaaS, to SaaS
 - IoT Plug and Play, IoT Central
- 数字化转型
 - 目标是 透过流程简化达到效率
 - 先规划再部署
- 保密运算：端到端的安全保护运算

IoT in Action



