

CASE STUDY

# ▶ How a COMPUTER PERIPHERALS OEM MET THEIR FIELD SUPPORT CHALLENGE



With a decade of experience in Device Management, M2M and IoT Solutions and Services, read how Thinxstream® used Azure® IoT Hub to develop a custom device management solution.

# THE BUSINESS GOAL

## Monitor Every Device Issue Centrally

In competitive markets, device OEMs such as our customer are challenged to provide high-quality field support services for geographically-dispersed end-users.

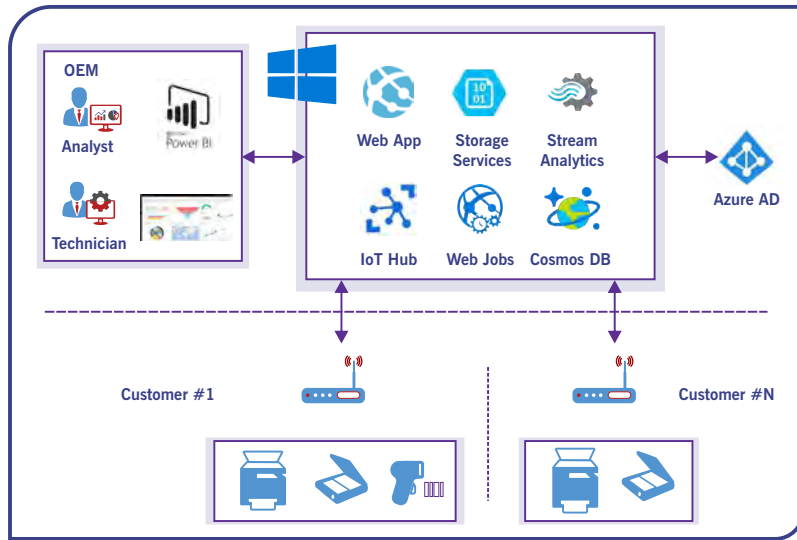
Budget goals demand that field support services be profitable for device OEMs, while maintaining a balance between quality of service and number of technicians. Repeat field visits impact cost, device availability and response time.

To achieve high customer satisfaction while yet managing costs, an IoT solution that can monitor and manage the health of a customer's device, enables remote field support services, remote updates, preventive maintenance, and in the case of a field support visit, a high first-time fix rate.

## TOP IOT CHALLENGES

- ▶ **MULTIPLICITY OF DEVICE MODELS**
- ▶ **STREAMS OF DEVICE DATA AND LOGS IN MULTIPLE FORMATS**
- ▶ **SECURE DATA STORAGE AND TRANSFER**
- ▶ **MINIMAL LOADING OF END-USER SYSTEMS**
- ▶ **SUPPORT FOR FIELD GATEWAY SERVERS**
- ▶ **SUPPORT FOR LIMITED INTERNET CONNECTIVITY SCENARIOS**
- ▶ **TESTING DEVICES WHILE IN CONTINUOUS USE**
- ▶ **DIAGNOSTICS INFORMATION AVAILABILITY IN QUICK TIME**

# THE IOT SOLUTION



- > **IoT Platform:** Azure® IoT Hub and device twins
- > **Cloud Services:** Azure Stream Analytics, Azure Service Bus, Azure App Service Web Apps and Web Jobs, Azure AD
- > **Cloud Data Services:** Azure Cosmos DB and Azure Storage services
- > **UI:** HTML, CSS, Bootstrap, Polymer, jQuery®, HighCharts®
- > **Programming:** C#, ASP.Net Core, ASP.Net Razor
- > **Client OS:** Windows® 7, 8.1, 10

## KEY HIGHLIGHTS

- ▶ REMOTE MONITORING AND MANAGEMENT
- ▶ REMOTE DIAGNOSIS AND ISSUE RESOLUTION
- ▶ ANALYTICAL QUERIES TO IDENTIFY POTENTIAL MALFUNCTIONS BEFORE THEY OCCUR
- ▶ INTEGRATION WITH EXISTING PRODUCT INTERFACES
- ▶ AUTHENTICATION AND AUTHORIZATION WITH AZURE ACTIVE DIRECTORY
- ▶ COMMON GATEWAY TO THE INTERNET
- ▶ MULTI-TENANTED SOLUTION

**“WE DELIVERED THE AZURE IOT HUB SOLUTION ON TIME AND WITHIN BUDGET, ENABLING OUR CUSTOMER TO RAPIDLY ADDRESS THEIR FIELD SUPPORT CHALLENGES.”**

**RANGA RAJ**  
**Director**

### **More Information:**

- > [Business Benefits of IoT Solutions](#)
- > [Thinstream IoT Advantage](#)
- > [IoT Solutions for Device Monitoring](#)
- > [IoT Solutions for Device Management](#)
- > [IoT Services for Azure IoT Hub](#)
- > [Technology Enablers for IoT Solutions](#)
- > [Scope of IoT Solutions and Services](#)

## **THE RESULTS**

The Computer Peripherals OEM leveraged our IoT services to develop a custom IoT solution for field support and experienced a significant improvement in the ability to remotely diagnose and troubleshoot device malfunctions.

The rich and user-friendly dashboard of our field support solution enabled effective monitoring of overall device status, usage and alerts.

Leveraging Azure IoT Hub Reference Architectures, IaC and DevOps practices resulted in fast turn around and a stable and repeatable development and deployment process.

Our IoT solution architecture has established the foundation of the field support solution for future implementations and innovation by the customer.

**Thinxtream Technologies** is a global software company with a portfolio of innovative software platforms, products, components, solutions, patents, competences and services for Internet of Things (IoT) across several industry verticals and applications, successfully enabling leading customers, including Fortune 500 companies, meet their application, product and business goals.

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