



LEADING LIFE SCIENCES COMPANY TESTS IOT WITH COGNIZANT AND MICROSOFT AZURE

International pharmaceutical and medical device company demonstrates value of Internet of Things at patient point of care with solution built by Cognizant on Microsoft Azure

The Challenge

The client, one of the world's largest life sciences companies, wanted to demonstrate a Connected Health proof of concept on Microsoft Azure that would collect real-time data from devices, alerts and data extraction services. Its goal was to illustrate the potential of the Internet of Things through a Microsoft Intelligent Systems Solution at a Microsoft Worldwide Partner Conference (WPC).

Required functions included monitoring patients and delivering real-time critical decision-making information to the point of care. A secondary objective was to build additional features on the Azure back-end as a service.

AT A GLANCE

A global pharmaceutical and medical device company turned to Cognizant to build a proof of concept for using the Internet of Things to monitor patients and deliver critical decision support data at the point of care. Cognizant developed a solution that encompassed a range of disparate devices, strong access control and powerful data processing to deliver patient health data when and where needed.

The Solution

Cognizant used the Microsoft Azure Intelligent Systems Service to implement an Internet of Things (IoT) scenario in which vital patient data was directly stored over the Internet from a variety of patient monitoring and diagnostic devices.

The heavily secured solution collected data in real-time from a variety of devices for analysis. When warranted, the system could push vital health alerts to caregiver devices, including the Microsoft Surface tablet. Caregivers also could access decision support data, with strong authentication methods ensuring appropriate access and the protection and privacy of personally identifiable health data.

The Approach

Drawing on its experience in healthcare and life sciences as well as the Microsoft Azure platform, Cognizant developed an integrated solution for the Connected Health IoT concept that extended from managing heterogeneous edge devices to the visualization of the data for caregivers using a gateway-based security architecture. A rule-based scalable push notification infrastructure could send personalized notification messages to millions of users and devices. The web application was deployed on the Microsoft

Project Highlights

- Robust Connected Health IoT proof of concept
- Solution connected disparate medical devices
- Push notifications to alert caregivers
- Strong security and privacy structures
- Scalability and reliability

Azure Web Sites service which is optimized for rapid development and testing and enables fast scaling.

Token-based authentication with an encryption and decryption mechanism and role-based authorization ensured restricted access to the personal health data. Cognizant deployed the Microsoft Push Notification Services (MPNS) as a Windows Azure Worker Role to send notifications to caregiver devices.

The solution included hosted data storage on SQL server database on Azure. It proved to be a secure way of accessing REST APIs and supported compliance with U.S. federal regulations for privacy and security for critical healthcare data.

ABOUT COGNIZANT

Cognizant (NASDAQ-100: CTSI) is one of the world's leading professional services companies, transforming clients' business, operating and technology models for the digital era. Our unique industry-based, consultative approach helps clients envision, build and run more innovative and efficient businesses. Headquartered in the U.S., Cognizant is ranked 205 on the Fortune 500 and is consistently listed among the most admired companies in the world. Learn how Cognizant helps clients lead with digital at www.cognizant.com or follow us @Cognizant.



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