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# Smart Building Application Optimization Using Azure IoT

## About Company:

This renowned organization has proved to be a Pioneer in the Real Estate but also has developed a proficient skill in enduring Real Estate with the latest Technology that is in Tech Market. A strong, customer-focused approach and the constant quest for top-class quality have enabled this organization to attain leadership. The company believes that progress must be achieved with harmony with environment.

### Country:

India

### Industry:

Real Estate

### Organization Size:

Large (1000+ Employees)

### Solution:

IoT

### Products & Services:

- Azure Virtual Machine
- Azure IoT Hub
- Azure Virtual Network
- Azure Application Gateway
- Azure SQL Managed Instance

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## Project Summary

The client has their Smart Building Application developed with the help of Internet of Things (IoT) Technology for various smart solutions. The application manages and helps operate the sensors that are attached to their building from the parking lot to the top floor of the building. This smart application is in connectivity with Azure IoT Hub that manages the data in transit and data at rest and stores every data captured in Azure Storage Account.

The smart application integrates all sub-systems of buildings which are required for building operations such as Energy System, HVAC System, Lighting Systems, Safety & Security Systems, UPS, etc. along with other devices and sensors required for providing Building Insight along with User experiences.

This building will have multiple smart system such as Smart Parking, Smart Cafeteria, Indoor Navigation, Smart Meeting, Smart Office, Digital Signage, Air Quality Management, Visitor Management System, Smart Toilets, GPS based Fleet Management & Energy Management system. This system will enhance UX Experience, Improve in Productivity and Opex cost (Energy Consumption by HVAC, Lighting, UPS, etc.) optimization.

The overall solution is Azure based and hence all the services are implemented keeping in mind the capabilities of Microsoft Azure and the customer support that Microsoft provides. Also, with the help of geo-replication to another region, the failure of any services can easily be recovered, and Disaster Management criteria is also met.

## Challenge

The organization, possessing their workloads in Azure IoT cloud, encountered different challenges while in the development phase of the project. Following are the most critical challenges that were faced:

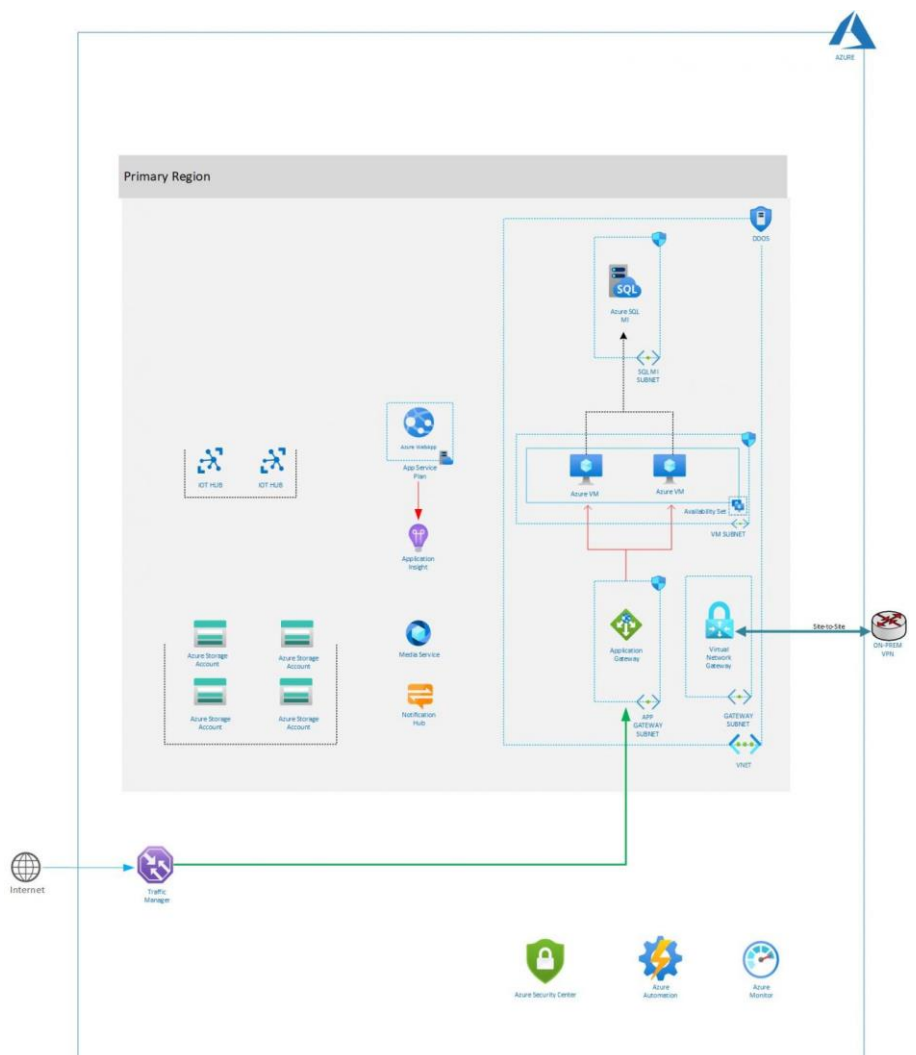
- There was no real-time visibility of data for the client & the end-customer to track & monitor measurement & control data.
- Security was another main concern for the data transitions from one smart device to another.
- Electricity load management was a major point of concern since the building was equipped heavily with high quality sensors and devices that keep utilizing the electric energy.

## Solution

IFI's certified consultants analyzed the smart building application and its integration with Azure and after calculating all the possibilities came to the following solutions:

- The IoT platform supports a robust data management system architecture to handle enormous volume of data coming-in from connected end-devices.
- Using an IoT Hub provided better security in comparison to an on-premises version and enabled reliable secure bidirectional communication among different smart devices.

The data that is collected on the daily basis through IoT Hub was analyzed for different devices and energy consumption was calculated.



## About IFI Techsolutions

IFI Tech is a born in cloud **Microsoft Gold Partner** and a **Cloud Solutions Provider (CSP)** setup by ex-Microsoft employees to help global customers ranging from Enterprises to SMBs and Start-ups with their digital transformation journey.

- 6 Years in Business
- 310+ Projects Delivered
- 230+ Clients Transformed
- 50+ Professionals
- 2900+ Servers Migrated
- 35,000+ Consulting Hours

Here are a few ways in which we can help you:

- ✓ Free Cloud Strategy & Roadmap
- ✓ Free Azure POCs
- ✓ Free Migration Services – any Datacenter to Microsoft Azure
- ✓ 3 Months of Free 24x7 Expert MSP Services
- ✓ Free Azure Infrastructure Review & Optimization
- ✓ Free assessment of identifying workloads to move to Azure

## Next Steps

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For more information about Azure IoT, go to:  
<https://ifi.tech/Solutions/>

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