



## WHAT IS IOT CENTRAL?

- ENTERPRISE SOFTWARE AS A SERVICE (SAAS) OFFERING FOR IOT SOLUTIONS
- SCALABLE AND SECURE WITH PREDICTABLE COSTS
- IMPLEMENTATION REQUIRES LITTLE TO NO CLOUD EXPERIENCE
- INDUSTRY FOCUSED WITH ROOM FOR CUSTOMIZATION
- EXTENSIBLE WITH CONTINUOUS DATA EXPORT, WEBHOOKS, WORKFLOWS (MICROSOFT FLOW AND AZURE LOGIC APPS), AZURE FUNCTIONS, AND MANAGEMENT APIS
- FULLY CUSTOMIZED SOLUTION UP AND RUNNING IN LESS THAN A DAY
- SUPPORT FOR REGULAR IOT DEVICES, AS WELL AS IOT EDGE DEVICES

## **I NEED TO DEPLOY AN IOT SOLUTION. WHAT ARE MY OPTIONS?**

- **AZURE IOT CENTRAL**
- **AZURE IOT SOLUTION ACCELERATORS**
- **BUILDING FROM SCRATCH**

## PROS

- SOFTWARE AS A SERVICE WITH FULLY AUTOMATED DEPLOYMENT
- LITTLE TO NO CLOUD SPECIFIC EXPERTISE REQUIRED
- GET UP AND RUNNING IN MINUTES, FULLY CUSTOMIZED IN A COUPLE OF HOURS
- SOLUTION BASED ON DECADES OF LESSONS LEARNED IN THE IOT SPACE AND ADHERENCE TO THE IOT SOLUTION REFERENCE ARCHITECTURE
- PRE-CONFIGURED APPLICATION TEMPLATES FOR MULTIPLE INDUSTRIES INCLUDING RETAIL, HEALTHCARE, ENERGY, AND GOVERNMENT
- DEVICE TEMPLATES AVAILABLE FOR MANY EXISTING AZURE CERTIFIED IOT DEVICES
- RICH CUSTOMIZABLE WEB UI – DASHBOARDS, CLOUD TO DEVICE COMMANDING, DEVICE MANAGEMENT
- EXTENSIBLE WITH **MANAGEMENT APIS**, CONTINUOUS DATA EXPORT, AND ACTIONS (WEBHOOKS, MS FLOW, LOGIC APPS, AND AZURE FUNCTIONS)
- PREDICTABLE PRICING

## CONS

- HIDES UNDERLYING IMPLEMENTATION, NO LOW-LEVEL CUSTOMIZATION AS UNDERLYING RESOURCES ARE HIDDEN (EX. IOT HUB MESSAGE ROUTING)
- WEB UI DOES NOT SUPPORT PLUGGABLE CUSTOM-BUILT SOFTWARE MODULES
- NO APIS EXPOSING DATA FUNCTIONS, **APIS ARE ONLY AVAILABLE FOR MANAGEMENT OF DEVICES, DEVICE TEMPLATES, DATA EXPORTS, AND ROLES**

# IOT SOLUTION ACCELERATOR PROS & CONS



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## PROS

- PLATFORM AS A SERVICE (PAAS)
- FULLY AUTOMATED DEPLOYMENT, UP AND RUNNING IN LESS THAN AN HOUR
- DEFINE CUSTOM DATA TELEMETRY, RULES, AND ALERTS DIRECTLY IN THE WEB UI.
- DASHBOARDS, CHARTS, DEVICE MANAGEMENT, AND COMMANDING
- UNDERLYING AZURE RESOURCES ARE ACCESSIBLE AND CUSTOMIZABLE
- OPEN SOURCE AND HOSTED ON GITHUB, ALLOWS FOR CUSTOM DEVELOPMENT AND MODIFICATION
- BASED ON THE AZURE IOT REFERENCE ARCHITECTURE

## CONS

- LIMITED SCENARIOS AVAILABLE. TODAY THERE IS REMOTE MONITORING, CONNECTED FACTORY (OPC UA), PREDICTIVE MAINTENANCE, AND DEVICE SIMULATION
- UPON DEPLOYMENT, YOU ARE RESPONSIBLE FOR KEEPING THE UNDERLYING SOURCE CODE UP TO DATE.
- CLOUD MANAGEMENT AND SOFTWARE DEVELOPMENT EXPERTISE IS REQUIRED AND CAN VARY BETWEEN SCENARIOS (EX. REMOTE MONITORING ACCEL UI IS USING REACT, WHEREAS CONNECTED FACTORY USING STRAIGHT UP RAZOR VIEWS)
- SOME ACCELERATORS HAVEN'T BEEN UPDATED RECENTLY (EX. PREDICTIVE MAINTENANCE HASN'T HAD AN UPDATE IN OVER A YEAR)

# BUILD FROM SCRATCH PROS & CONS



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## PROS

- FULL CONTROL OVER SOLUTION RESOURCES
- COMPLETELY CUSTOMIZABLE, FINE TUNE RESOURCES TO OBTAIN A COST IN THE DESIRED RANGE
- DEPLOY ONLY THE RESOURCES SPECIFICALLY REQUIRED

## CONS

- DEEP KNOWLEDGE OF CLOUD INFRASTRUCTURE MANAGEMENT AND DEVELOPMENT IS REQUIRED
- YOUR ORGANIZATION IS RESPONSIBLE FOR ENSURING SECURITY, SCALE, AND USABILITY OF THE SYSTEM
- LONGER DEPLOYMENT/DEVELOPMENT TIMES

# HIGH LEVEL COMPARISON

	<u>IOT CENTRAL</u>	<u>IOT SOLUTION ACCELERATOR</u>	<u>BUILD FROM SCRATCH</u>
TIME TO MARKET	FAST	FAST	SLOW
ACCESS TO RESOURCES	NO	YES	YES
FLEXIBILITY	MEDIUM (DEFINE MODEL AND UI)	HIGH (OPEN SOURCE)	HIGH
CLOUD ADMIN SKILLS	LOW (SAAS HANDLES THIS)	MED-HIGH (AUTO DEPLOYMENT)	HIGH
SOFTWARE DEV SKILLS	LOW (SAAS HANDLES THIS)	MED-HIGH (CUSTOMIZATION AND TROUBLESHOOTING)	HIGH (FULL APPLICATION ARCHITECTURE, DEVELOPMENT, AND SUPPORT)

## DEMO AZURE IOT CENTRAL

- CREATION OF AN AZURE IOT CENTRAL SOLUTION
- OVERVIEW OF EXISTING APPLICATION TEMPLATES
- OVERVIEW OF EXISTING DEVICE TEMPLATES
- DEFINING A TELEMETRY MODEL (DATA PROPERTIES, AND ACTIONS)
- DEVICE SIMULATION
- CONNECTING A REAL DEVICE
- CUSTOMIZING THE SOLUTION UI, ALERTS AND ACTIONS (TRIGGER EMAIL IN FLOW)
- SHOW CONTINUOUS DATA EXPORT (USE WITH ML)