

IoT Prototype Challenge – Data Center Monitoring application

Story:

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As the number of enterprises & customers embarking on the cloud journey is increasing at an unprecedented rate, it is critical that we ensure good health of the heart of these cloud operations – the “**Data Centers**”. Uninterrupted business operations & business continuity are key requirements for any organization, for which Data Center operations play an extremely important role.

Any Data Center’s success depends on the smooth operations of its various ingredients - temperature blown through the racks to cool the servers, reliable power supply, secure access, smoke detectors, battery leakages are some of the aspects that need to be monitored flawlessly. An IoT solution that monitors and controls these critical components and parameters would be extremely beneficial for the management of Data Centers and thus ensure seamless business operations.

In addition, real time tracking of suppliers’ trucks (example fuel tanks) would be helpful as well. Acting on a fault at real time (example, alerting the technician about a battery leakage) could also be integrated with this IoT solution. With this prototype, I would like to present a “*Feasible and Viable*” IoT solution that might turn out to be immensely “*Desirable*” for Data Centers services teams.

Point Of View:

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As a Data Center Operations Manager

I need a way to monitor and control the key parameters of the Data Center, by proactively alerting the operations team of any potential malfunctioning

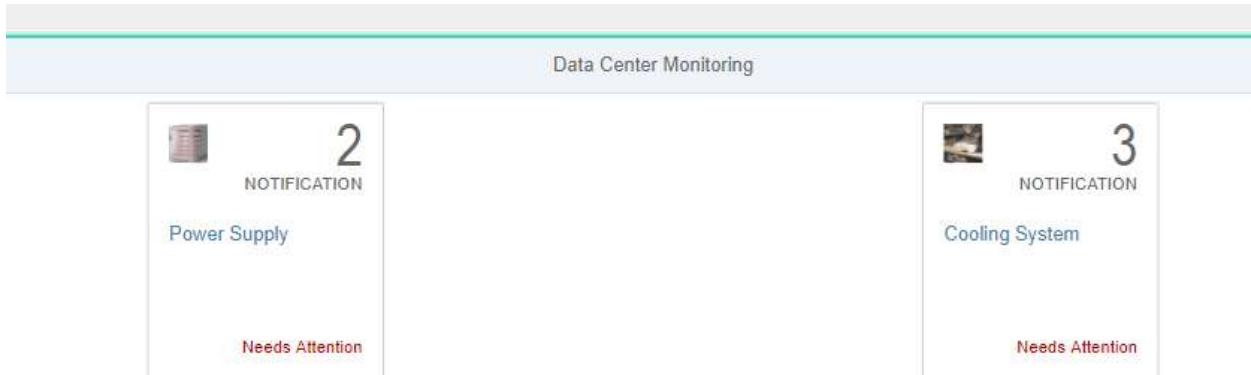
so that the customers experience uninterrupted services without affecting their business continuity.

User Experience Journey:

<p>ACTIONS</p>	<ul style="list-style-type: none"> ➤ Enter the control room of the Data Center in Seattle 	<ul style="list-style-type: none"> ➤ Check the operations of the cooling unit & the power supply 	<ul style="list-style-type: none"> ➤ How is my Data Center performing wrt the Gas emissions 	<ul style="list-style-type: none"> ➤ Connect with the smoke detector vendors, login to different system 	<ul style="list-style-type: none"> ➤ Meeting with head of IT operations, exit the Data center
<p>MINDSET</p>	<ul style="list-style-type: none"> ➤ “Hope all components are performing well” ➤ “Wish could have monitored with a mobile device solution” ➤ “Wish also knew how is the status for the Sydney & Germany centers” 	<ul style="list-style-type: none"> ➤ “In case of battery leakages, how much time would it take to identify the faulty battery & fix the issue” ➤ “Do my suppliers have enough battery inventory across all locations - nervous” ➤ “I am missing real time info for battery health” 	<ul style="list-style-type: none"> ➤ “Wish I had real time data for the Co2 emissions for all my Data Centers” ➤ “I am missing any analytics about the Historic data, wish you could a system that also does a Prediction for me” 	<ul style="list-style-type: none"> ➤ Wish my SRM solution was integrated ➤ Wish could track the location of the vendors’ trucks 	<ul style="list-style-type: none"> ➤ Getting late for the next meeting scheduled in a different building ➤ Wish could have monitored health of my DC remotely
<p>FEELING</p>	<p>😊</p>				
<p>TOUCH POINTS</p>	<ul style="list-style-type: none"> ➤ Secure access, RFID reader 	<ul style="list-style-type: none"> ➤ Data Center controlling operator ➤ Power Supply and Coolant Data 	<ul style="list-style-type: none"> ➤ Carbon emission data ➤ Operator proficient with usage of the emissions software 	<ul style="list-style-type: none"> ➤ SRM system ➤ Call vendors to track updates 	<ul style="list-style-type: none"> ➤ Check calendar ➤ Secure exit from the Data Center

Mockup Screens:

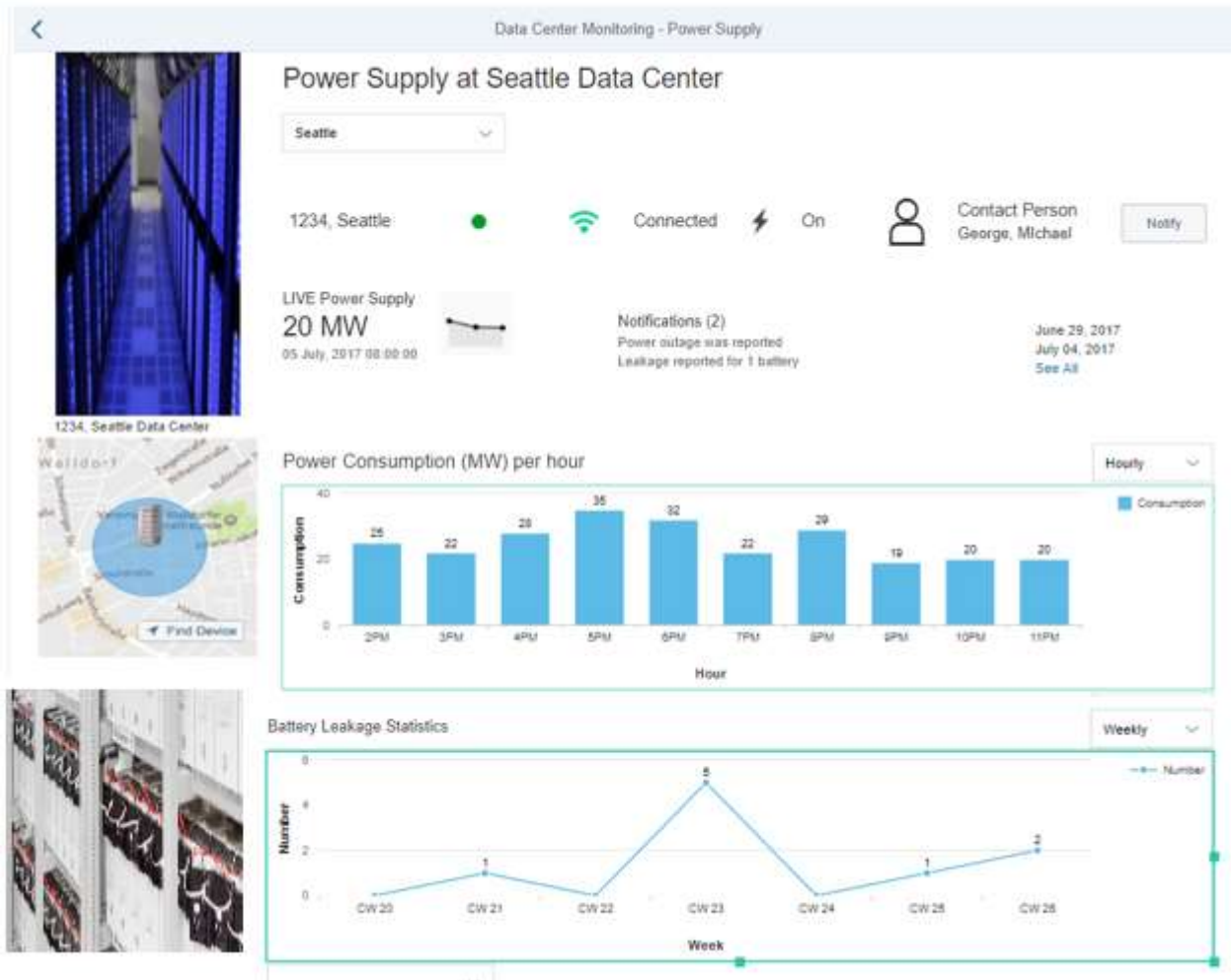
- Launch Page: The below snapshot is the launch page for the ‘Data Center Monitoring’ IoT application. For this example, the focus is on 2 aspects - the Cooling system and the Power supply at the Data Centers across locations.



- Power Supply:

The below snapshot displays the “Power Consumption” statistics for a Data Center – a dropdown has been added based on which the operator could select the respective Data Center Location (map updated accordingly).

Also, this screen would display information about the Power Outages (if any) and the “Battery information” at the UPS in case of a power outage. As an example, an alert is displayed about a leakage for a battery - the application can “notify” the technicians to take immediate action.



- Cooling Facility:

Another view that is critical for the Data Center operator is about the Cooling systems performance at the Data Center. Some important statistics to monitor here are the temperature, availability of the ice-cold water (to absorb heat from AC systems) and the availability of the cooling units.



Cooling Units at Seattle Data Center



Seattle

1234, Seattle



Connected



On



Contact Person
George, Michael

Notify

LIVE Device Control
Temperature:
4 degrees

Notifications (2)
Power outage was reported
Leakage reported for 1 battery

June 29, 2017
July 04, 2017
[See All](#)

