

Protect the Bottom Line by Ensuring IT Uptime

Many businesses use a hybrid IT approach of data center colocation and on-premises server rooms.

Financial services companies are no different. For the expensive servers and other high-end computing equipment onsite, a financial services organization is typically on its own to keep data closets and server rooms up and running.

Whether in a data center or company server room, it's critical to maintain high uptime for IT systems, applications, and data with vigilant monitoring. That's because high temperature and humidity can cause server malfunctions or failures that lead to downtime. Plus, plumbing and server cooling system leaks resulting in flooding and IT equipment damage can cause downtime too.

See how sensors help financial services IT managers remotely monitor temperature, humidity, plumbing, heating, ventilation, and air conditioning (HVAC) systems 24/7 using innovative solutions connected to the Internet of Things (IoT).

Spoiler alert: The ROI is significant by avoiding downtime using a temperature, humidity, and water detection solution to keep IT systems running strong. The financial services company did it with data from a variety of fast-install IoT sensors and meters. The solution is easily managed using an online dashboard on a smartphone or computer. Plus, alerts via email, text, or call.

Challenges

Like most businesses, a large financial services firm relies heavily on its computer systems and servers for employees to work and serve customers. The company's data closets and server rooms are full of expensive computers, server stacks, and networking equipment that operate well within an optimal temperature range and must be protected from humidity and water. Overheated or flooded servers can cost thousands of dollars and cause significant downtime for the financial services company.

The firm's CTO reached out to us due to an issue monitoring their data closets. They had a cooling system malfunction over a recent weekend when the office was empty, which damaged and shut down servers in one of their data closets.

The plumbing leak caused delays in operations during the weekend and the start of the following week, frustrating everyone from the c-suite and shareholders to employees and customers. The downtime resulted in a loss of business and reputation.

It was because of this event that the CTO and his IT managers wanted to:

- Put more preventive measures in place to better protect IT infrastructure and prolong the life of the equipment at all company offices.
- Ensure the company's IT facilities have redundant systems for temperature, humidity, and water protection and optimize cooling and HVAC systems performance.





Solution

Sensors provide a reliable remote monitoring solution for server rooms or data closets that includes Wireless Temperature, Humidity, HVAC, Open-Closed, and Water Detection Sensors. Our solution for the financial services company is perfect for installation inside and outside data closets and server rooms.

Specifically, the company's IT personnel self-installed:

- A backup system of Temperature and Humidity Sensors in and around all of its server rooms
- Wireless Water Rope, Detect Plus, and Puck Sensors placed in strategic locations throughout company buildings and its server rooms
- Duct Temperature and Differential Air Pressure Sensors and AC Current Meters to monitor HVAC and environmental control system performance
- Open-Closed Sensors on server room and data closet doors to alert staff if they were ajar
- The Sensor Management and Remote Monitoring Software on IT staff smartphones, tablets, and computers
- A Wireless Gateway in each server room to protect and communicate data sent to and from sensors and meters

Sensors send data wirelessly to the Wireless Gateway, then the gateway aggregates the data and sends it to the software. Using the software, IT managers uploaded a graphic or map showing the sensor network layout and the monitored rooms and areas.

This allowed the managers to drag and drop sensor tags onto the design or map with live data. Then, they can see the performance of the monitored production line from an aerial view. Managers set up notifications to alert them if readings or assessments fell outside set ranges or limits and signified any potential issues, allowing them to respond immediately.



Results

Before implementing the Wireless Sensors, this company experienced operational delays in manually monitoring and mitigating server room and data closet conditions. Employees and customers experienced the adverse effects of the delays in their productivity and customer experience.

Soon after installing the Wireless Solution, temperature sensors detected an incident where the HVAC system was not providing adequate cooling to one of their data closets. True to our strategic fix-before-failure approach, Wireless Sensors detected the issue early, allowing HVAC technicians to provide maintenance to the system before any damage or downtime occurred.

Using the comprehensive monitoring solution, this company can:

- Prevent costly damage to their servers and IT equipment due to excessive temperatures, humidity, or water leaks.
- Ensure their HVAC and cooling systems function properly 24/7.
- Maintain a reliable IT infrastructure suitable for evolving business operations.
- Be alerted if doors are not closed properly, preventing temperature fluctuations.
- Automatically track and document climate conditions with remote monitoring.

Overall, the Remote Monitoring Solution helps company server room managers ensure high uptime by lowering the risk of outages and mitigating environmental risks, protecting the company's bottom line.

ROI: Soon after installing the Wireless Solution, IT managers optimized their remote monitoring. Most importantly, they could save thousands of dollars by avoiding temperature, humidity, and water damage to their IT infrastructure.

Wireless Sensors and Meters Help Boost Uptime for Better Financial Services



1

Standard and Digital Temperature Sensors

The American Society of Heating, Refrigerating, and Air-Conditioning Engineers (ASHRAE) suggests server rooms stay between 18°C (64.4°F) to 27°C (80.6°F). Standard and Digital Temperature Sensors measure a range from -40°C to +125°C (-40°F to +257°F).

2

Humidity Sensors

The scientific-grade Humidity Sensor remotely monitors relative humidity (RH) with a +/- 3% accuracy (between 10–90% RH), temperature, and dew point. Available in Wireless and Power over Ethernet (PoE) options to instantly alert you via text, email, or call.

3

Open / Closed Sensors

You can instantly know if a server room door has been left open. Keep all your IT equipment and restricted areas safe. Open-Closed Sensors feature a switch and trigger magnet to detect open-close status. It's ideal for lids, windows, and gates too.

4

Duct Temperature Sensors

Keep a sealed environment and easily monitor HVAC performance and ductwork temperatures with the Duct Temperature Sensor. It uses a probe to measure a range of -40°C to +150°C (-40°F to +302°F) and features a negative temperature coefficient (NTC) thermistor.

5

Water Detection Sensors

The Wireless Water Detection Puck, Water Detect Plus, and Water Rope Sensor can help prevent damage from plumbing and server stack cooling system leaks. Our Water Detection Sensors can also help you keep employees and customers safe from slips and falls.

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