



Instor updates California utility data center with custom containment, monitoring

Background:

When a large California power company originally built its data center in the 1970s, the facility was designed to house mainframes and tape libraries. In 2010 the company conducted a massive overhaul of its data center including upgraded CRAC units, water chillers, and power distribution systems. As part of the overhaul, Instor provided customized cabinets and helped the utility design and install the data center's first cold aisle containment pod.

Goals:

The company expected the upgrade to improve cooling and power efficiency, and it wanted to use the revamped data center as a testing ground to discover best practices to implement in a new data center it planned to build in 2012. The cold aisle containment pod was a key part of the experiment, and the utility needed a way to monitor and record the data center's environment to compare efficiency before and after the project.

Solution:

Instor measured the data center's baseline PUE by installing and using a wireless environmental sensor array by SynapSense. The sensor array recorded and monitored the data center's temperatures, humidity, and air pressure in real time and in multiple locations.

To control airflow, Instor custom designed more than 50 cabinets utilizing blanking systems and brush panels. The power company initially implemented cold aisle containment on one pod as an experiment before moving forward with the entire data center. The first trial pod consisted of two retractable curtain devices.

First, it utilized soft containment with clear SealTech Seiden Crystal, class A1 fire-rated curtains on both sides of the aisles and a roof from the ceiling to the tops of each cabinet. Cooler Bytes created a soft-ceiling, retractable hot aisle/cold aisle containment solution.

The containment pod was so effective that over the next couple years, the utility commissioned multiple pods in its three different data center locations in California. As of early 2014, Instor also is slated to provide three additional pods and 50 additional cabinets for the utility.