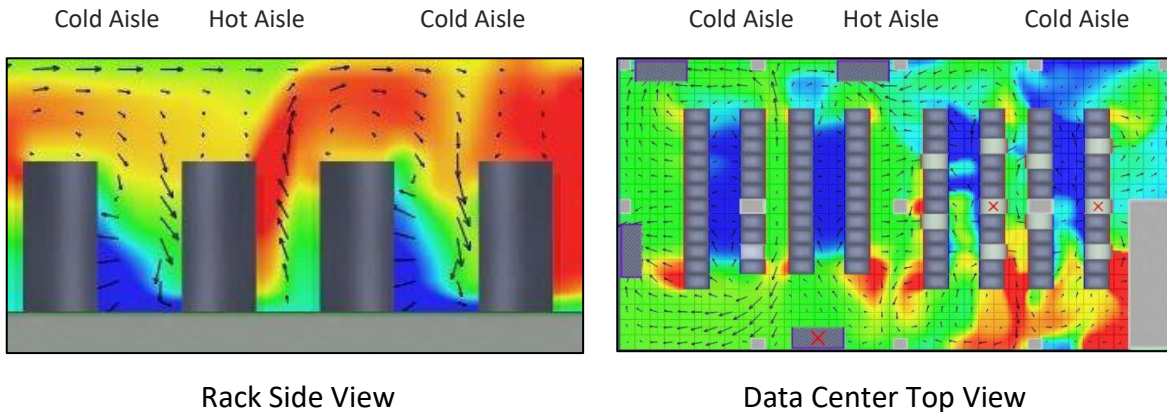


CFD ANALYSIS

Traditional Data Center vs. Data Center With Cold Aisle Containmentment

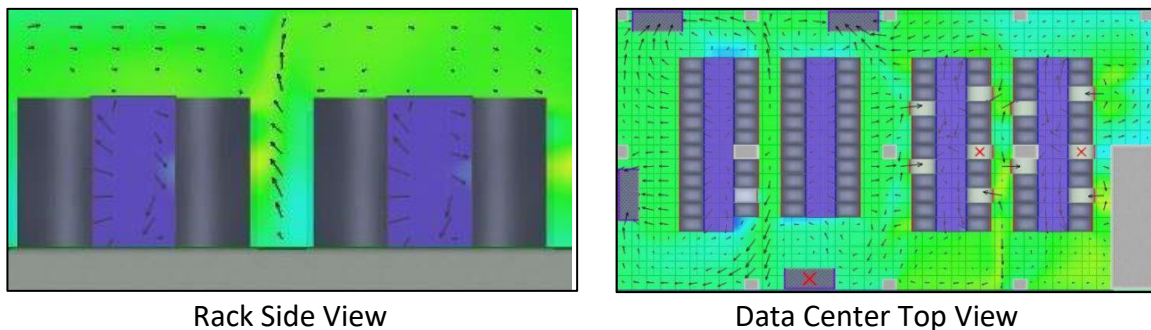
Traditional Data Center Without Cold Aisle Containmentment



Problem

Temperatures in a traditional data center shows several hot spots, cold and hot air mixing, variation in rack inlet temperatures, high inlet temperatures for equipment mounted on the top of racks and an increases in higher exhaust temperatures. This results in a waste of cold air, lower return temperatures for CRAC (Computer Room Air-Conditioning), higher inlet temperature for equipment thus leading to higher exhaust hot air, increase in equipment power consumption due to higher fan speed and inefficient performance by CRACs.

Data Center With Cold Aisle Containmentment



Solution

Temperatures in a data center with cold aisle containment shows a significant decrease in hot exhaust air from equipment while receiving the lower temperatures in cold aisle. No hot and cold air mixing due to which the cold aisle maintains the required set point and lower energy usage