

# CFD

## + COMPUTATIONAL FLUID DYNAMICS

Prior to implementing any air flow solution, Computational Fluid Dynamics (CFD) software provides visual insight into the airflow and temperature of the entire data center, as well as into individual enclosures. Software integration with thermal, power, and asset management tools allow the assessment of current data center performance, identification of inefficiencies, testing of new concept design, and evaluation of “what if” scenarios. Through on-site surveys and/or customer supplied data, an accurate report is created to determine effective upgrades that result in increased power unit effectiveness (PUE) and equipment ROI.

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### 1 IDENTIFY INEFFICIENCIES

- Over cooling
- Recirculation
- Obstructions in air delivery

### 2 TEST NEW DESIGNS

- Containment
- Aisle layouts
- IT hardware deployment
- Floor tile migration/movement

### 3 EVALUATE “WHAT IF” SCENARIOS

- CRAC unit failures
- Increasing IT load capacity
- Increasing temperatures in the data center

