COOLING CAPACITY ASSESSMENT

upsite technologies®

Learn How to Maximize Your Data Center Cooling Infrastructure

Is Your Data Center Wasting Cold Air?

Upsite's research found that the average data center boasts excess cooling capacity that's nearly 4X the IT load. This is due to misdiagnosing cooling problems as a lack of capacity, when the actual issue is poor airflow management (AFM). This misunderstanding leads to attempts at resolving cooling problems by simply adding more cold air, which only wastes more money. This strategy is like trying to increase cooling in your home by adding another air conditioner, but leaving your windows open. There is clearly a more effective solution to resolve this issue.
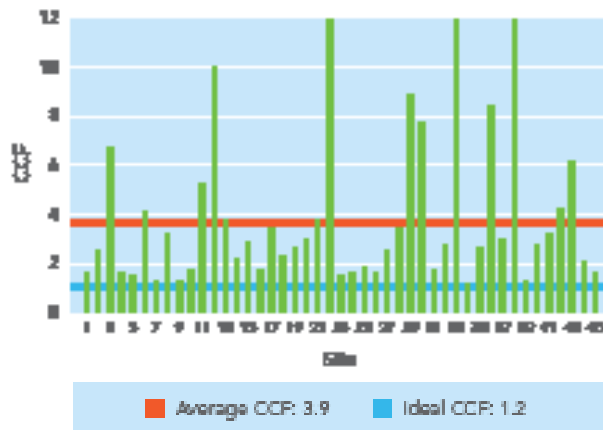
Understanding Your Cooling Capacity

Before making any further investments in your data center's infrastructure, it's vital to fully understand your Cooling Capacity Factor (CCF). This simple metric reveals the utilization of the most costly component in the data center—your cooling infrastructure. Realizing your CCF is the quickest and easiest way to determine IT cooling infrastructure utilization and identify potential gains that can be achieved via AFM improvements. Determining your CCF is the first step towards improving energy efficiency, reducing operating expense, improving the room environment, and supporting an increased server density.

Identify the Savings Opportunities

Upsite Technologies developed the Cooling Capacity Assessment to help data center managers benchmark existing conditions, identify opportunity for improvement,
and provide recommendations on a path forward. Whether you're thinking about another cooling unit purchase, adding more IT equipment, expanding the data center, or looking to reduce energy costs, the first step is to assess your cooling capacity. Upsite then takes the analysis a step further by recommending best practices and essential AFM solutions that can lead to significant cost savings and improved efficiency. The end goal is a 'right-sized' cooling infrastructure that yields an ROI in only months—not years.

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Average & Ideal Cooling Capacity Factor (CCF)

Average CCF: 3.9   Ideal CCF: 1.2

We'll Help You Right-Size Your Cooling

Upsite's Cooling Capacity Assessment delivers the following service features:

1. Cooling Capacity Factor (CCF) Calculation: Using Upsite's CCF methodology, establishes the CCF rating and identifies the potential for cooling energy efficiency improvements and cost savings that can result from improved cooling distribution.

2. Stranded Capacity Analysis: Provides specific recommendations to optimize performance, reduce power consumption, and improve efficiency via an analysis of the data center cooling capacity and air management.

3. Airflow Management (AFM) Review: Assesses the current effectiveness of cooling infrastructure , such as hot and cold spots (ASHRAE recommendations), bypass airflow, and air distribution.

4. Data Center 'Best Practices' Review: Highlights areas offering the greatest potential for possible savings and carbon footprint reduction through an in-depth review of data center industry 'best practices' implementation.

5. Thermographic Analysis: Provides a visual representation of the often invisible patterns of fluid and thermo dynamics.

See an ROI in Months

Upsite's Cooling Capacity Assessment will provide you with a full understanding of your current cooling infrastructure, enabling you to confidently 'right-size' your cooling capacity to your IT needs. Benefits of right-sized cooling include:

- Improved cooling unit efficiency through increased return-air temperatures

- Improved IT equipment reliability through elimination of hot and cold spots

- Reduced operating costs by improved cooling effectiveness and efficiency

- Increased room cooling capacity from released stranded capacity

- Enabled business growth by increased capacity to cool additional IT equipment

- Deferred capital expenditure for additional cooling infrastructure or new data center construction

- Improved PUE from a reduced cooling load

- Reduced carbon footprint from reduced utility usage

We'll Help You Right-Size Your Cooling

To understand your cooling infrastructure potential and identify cost saving opportunities, schedule a Cooling Capacity Assessment with Upsite Technologies today.

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Upsite.com/services/cooling-capacity-assessment