

UPSITE COOLING SCIENCE SEMINAR



Unlock the Science of Data Center Airflow Management & Learn the Latest Trends in Cooling Efficiency

Realize Your Potential

With limited time and resources, data center managers can struggle to stay on top of the latest airflow management (AFM) trends and easily fall behind in implementing best practices. Since cooling consumes almost half of a data center's energy, it's an issue that can't be ignored. In fact, the average data center already has almost 4 times more cooling capacity than IT load.* This is because cooling problems are often misdiagnosed as a lack of capacity, when the true problem is poor airflow management. This leads to attempts to resolve problems by simply throwing more cold air at them. This strategy is like trying to cool a house by adding another air conditioner, but leaving the windows open. There is great potential for improvement.

AFM Knowledge

Upsite Technologies developed the EnergyLok Cooling Science Seminar to help customers understand the dynamics of airflow and thermal management. This unique education service delivers Upsite's industry-leading knowledge and experience directly to your data center, empowering your data center team to implement airflow management best practices quickly, resulting in a faster ROI.

Upsite's EnergyLok Cooling Science Seminar is a two-day combination of classroom and hands-on training that helps you better understand the science behind AFM and data center cooling. The number of participants is limited to 10 for best learning outcome.

Identify the Opportunity

- Increase cooling capacity to allow for installation of more IT equipment
- Identify isolated airflow issues negatively affecting IT reliability
- Optimize cooling airflow
- Eliminate hot and/or cold spots
- Improve energy efficiency
- Reduce bypass air leakage
- Increase cooling unit set points safely within ASHRAE limits
- Defer capital expenditures on cooling equipment
- Use the tools required for airflow management

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No Expensive Travel Required

Most industry training seminars require you to visit a hotel or company's campus at a very high cost per person involving tuition, travel, and lodging expenses.

Upsite's EnergyLok Cooling Science Seminar takes place at your site, offering unique advantages:

1. **Cost Effective:** Being very cost-effective per attendee, eliminating travel and lodging costs—as well as time out of the office—for your employees.
2. **Customized:** Our customized seminar specifically tailors its curriculum for your site conditions to help your company and employees immediately apply the lessons learned.
3. **Hands-On:** Day 2 of the seminar applies classroom training from Day 1 to your actual data center, with a hands-on explanation of management metrics and tool use.
4. **Collaborative:** When more employees are involved in the education process, it increases the likelihood of successful implementation. On-site education allows personnel from multiple departments to attend, including IT, Facilities, Finance, and Senior Management.

Trust the Experts

Contact us to learn more about the Upsite Cooling Science Seminar.

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888.982.7800

Upsite.com/services/cooling-science-seminar

Sample Seminar Agenda

Day One

- 8:30 Kickoff meeting
- 9:15 Tour computer room
- 10:00 Computer room cooling and AFM science fundamentals
- 12:30 Lunch
- 1:30 Computer room cooling science practice
- 4:30 Break for day

Day Two

- 8:30 Computer room cooling management
- 10:30 Tool use and data collection (in computer room)
- 12:30 Lunch
- 1:30 Review data collection
- 4:00 Q&A, go-forward plan, seminar concludes

Subtopics discussed

- PUE—calculations, importance, and limitations
- Cabinet circulation patterns
- ASHRAE TC 9.9 recommendations
- Cooling unit performance characteristics—sensible vs latent cooling
- Calculation and use of cooling capacity factor (CCF)
- Containment strategies
- Relative humidity considerations
- Cooling unit sensor calibration
- Cooling set point consideration
- Protocol for cooling optimization (The 4Rs)
- Identifying and releasing stranded capacity
- Raised floor open area management
- Fluid mechanics of raised floor cooling distribution
- Advantages and disadvantages of hot and cold aisle containment
- Management Metrics