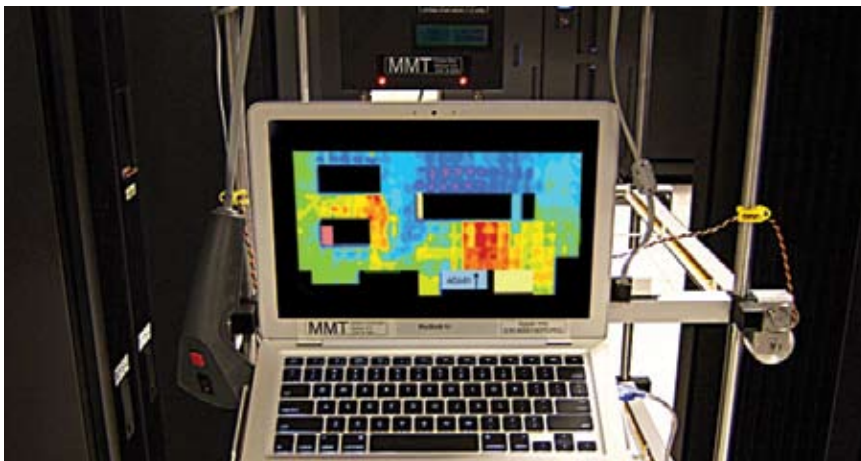


Data Center Thermal Measurement & Analysis Utilizing IBM Mobile Measurement Technology

Improve the energy efficiency within your data center



Offering Highlights

IBM Systems Lab Services and Training provides a service utilizing the IBM® Research developed Mobile Measurement Technology (MMT) to help visualize and understand the thermal profile of your existing data center and IT power and cooling systems.

MMT results are used to identify, diagnose, and remedy trouble spots and energy inefficiencies.

The key benefits and features of this offering may include:

- **Measurements of tens of thousands of data center temperature and humidity values at multiple floor elevations.**
- **Survey of computer room air conditioning airflows and temperatures, perforated tile airflows, IT power and equipment layout using MMT methodology.**
- **A 3-dimensional thermal map of the data center for in-depth analysis and troubleshooting.**
- **Recommendations with actionable steps to remedy hot spots and inefficiencies and to aid future planning.**
- **Help lower data center costs by improving cooling efficiency.**

What the future brings

Data center managers across the globe are looking to resolve the impacts of rising operational expenses for data center cooling, reliability and availability risks posed by thermal problems, limitations on IT growth posed by data center cooling issues, and inefficient cooling of existing compute capacity.

Utilizing MMT and the expertise and experience of IBM Systems Lab Services and Training, a thermal profile of your existing data center is created to identify possibilities for improved cooling efficiencies. IBM Systems Lab Services and Training has identified potential energy savings opportunities equivalent on average of 12% of IT power costs and 23% of cooling power costs for data centers ranging from 3,000 to 85,000 square feet. Actual client results may vary.

Offering Description and Value

There are many factors and variables that interact to affect the thermal profile of a data center. MMT uses a multi-level cart design and networked sensors to measure thousands of data center temperature and humidity data points. Tile by tile, the cart collects data which is transformed into a 3D thermal map to help pinpoint trouble spots that indicate power and cooling inefficiencies.

Typical Project Tasks

An MMT engagement may include:

- *A 3D thermal scan of the data center using the IBM Mobile Measurement Technology tool*
- *MMT analysis presentation with temperature maps and potential energy savings opportunities*
- *Survey of the data center computer room air conditioning units, IT power equipment and perforated tiles*
- *Analysis of key metrics for potential energy savings opportunities*
- *Recommendations to client in the form a detailed roadmap to achieve forecasted savings.*

Analysis may include:

- *Rack Inlet Hotspots - Identifies IT equipment with the hottest inlet temperatures. Locates areas affected by recirculation of warm exhaust air as well as undercooled and over provisioned areas.*
- *Data Center Air Flow - Measurements of airflow from computer room air conditioning units and through perforated tiles near rack inlets. Targeting of areas with low airflow possibly caused by under-floor blockages and restrictive perforated tiles.*
- *ACU Utilization - The ratio of the heat removed by an ACU over the nominal ACU heat removal capacity. It also identifies which ACU's can be turned off with the least impact.*

Pricing

Contact an opportunity manager for an estimate of the time required to evaluate IT infrastructure.

Who We Are

IBM Systems Lab Services and Training is one of the fee service organizations of IBM's world renowned Systems and Technology Group development labs. Through IBM Systems Lab Services and Training you can bring the expertise of the development community on the latest technologies to your enterprise. We can help you with your most difficult technical challenges. IBM Systems Lab Services and Training exists to provide you with successful implementations of emerging technologies to help accelerate your investment ROI and help increase your satisfaction with IBM hardware.

For More Information

To find out more about the Data Center Thermal Measurement & Analysis Utilizing IBM Mobile Measurement Technology and other related products and services, contact IBM Systems Lab Services and Training at datactr@us.ibm.com.



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