

# Environmental Assessment Services



A PROVEN METHOD TO AUDIT THE EFFICIENCY OF YOUR DATA CENTER



## BENEFITS AT A GLANCE

- Onsite and On-Call Assistance
- Maximize Return on Investment
- Recommendations to Improve Power, Cooling and Facility Utilization
- Reveal Hidden Environmental Problems
- Improved Security and Business Intelligence

## SERVICE OVERVIEW

### Environmental and Readiness Services for the Data Center

The ever-growing challenge for companies who design the chips, circuit boards and the electronics boxes itself are being faced with the task of carrying the heat away from the equipment in the room. This is more of an electrical cooling problem than a room cooling or ventilation issue.

Design engineers for data centers now need a way of predicting the effect of changes in heat load and distribution and how alternative cooling solutions will perform. Verari's Environmental Assessment Services provides the means to create a virtual facility to address the issue. Our services can be used:

- To aid in configuring equipment
- To aid in configuring the facility, its overall constructions and mechanical infrastructure
- As a conceptual, layout and test tool for the room and facilities IT equipment
- For ongoing management of equipment and configuration so updates can be tested before implementation

The creation of a thermal model of the facility generally results in a full inventory of the room, including cabinets, IT equipment, power systems, cooling systems and ventilation grilles.

### Facility Design

Verari's Environmental Assessment Services can evaluate the performance of load versus cooling for any given equipment distribution in a facility by creating a virtual diagram of the data center.

These service consultations can continue to form the basis of further optimization for the facility design. For a typical pressurized floor facility, these can include:

- Floor void depth analysis against pressure distribution
- Size and distribution of air
- Floor tile layout and the subsequent airflow
- Equipment load distribution
- Failure analysis

### Troubleshooting

For existing data centers with problems or expansion plans, Verari's Environmental Assessment Services provide onsite measurement and advisory services that complement the creation of the virtual facility diagram. These include:

- Temperature data logging
- Pressure data logging
- Airflow measurements
- Fan performance
- Equipment inventory logging

The results of the above surveys are then matched against the theoretical performance of the virtual facility diagrams. These comparisons would then provide the basis of a more accurate evaluation of the performance of the data center as a whole. This calibrated "baseline", the virtual facility diagram, is then used in order to troubleshoot or define any new expansion in capacity for the data center.

### Environmental Assessment

Environmental conditions such as high temperature, hot spots, poor airflow and cooling, can effect hardware reliability. Up to 27% of hardware failures are attributed to poor data center environments.

A Verari Technologies Environmental Audit and Readiness Assessment reveals the hidden environmental problems that may be present in your data center. This detailed service includes thorough onsite inspection and detailed environmental analyses using state-of-the-art thermal imaging and modeling tools.

In addition, suggestions and justifications will be provided to support future business requirements to ensure maximized return on investment by modeling the impact of new hardware being introduced into the data center.

With the Environmental Assessment Service, Verari Technologies applies a proven methodology to deliver expert advice so that you can take action before system interruption occurs. The service is delivered without disrupting day-to-day operations. Benefits include:

- Reveal hidden environmental problems
- Prevent potential downtime
- Maximize return on data center investment
- Detailed analyses using thermal imaging and modeling tools
- Advice for deployment of blade technology
- Recommendations to improve power, cooling and facility utilization



Through innovation, Verari Technologies has developed and implemented equipment and procedures that achieve more by using less. Verari has made environmental responsibility a manufacturing priority by increasing the overall energy effectiveness of all our product lines while keeping the vision of the green data center in mind. Verari Technologies, through voluntary action, is committed to the reduction of e-waste utilized in the production of computers and other technological devices.

Energy Efficient Products: Facilities Category Winner

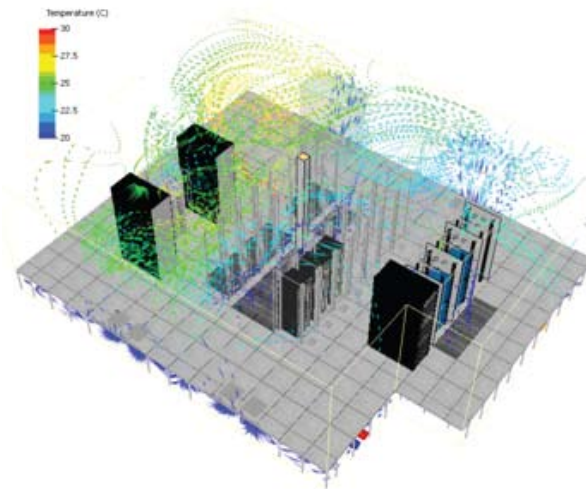
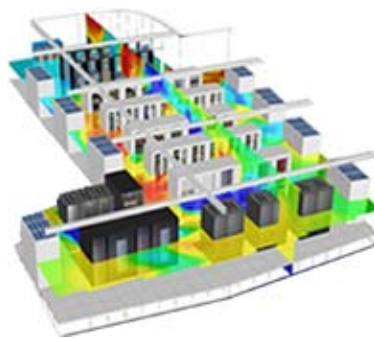
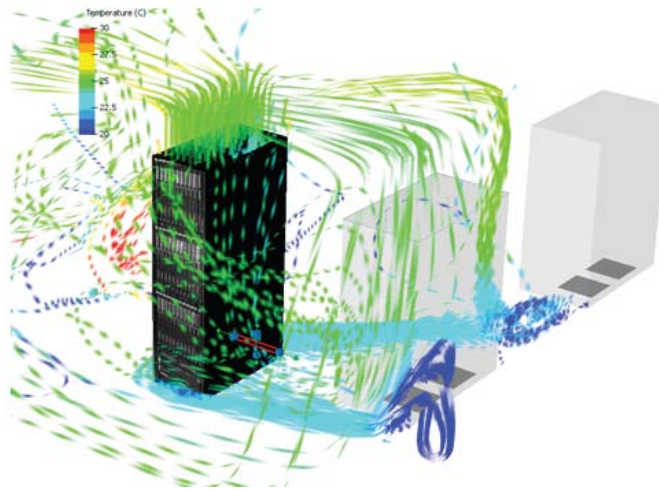


**SERVICES AND SUPPORT**

The mission of our Product Service and Support Team is to “Build and Preserve Customer Loyalty”. To that end, our Technical Support and Professional Services staff are experienced industry veterans with relevant industry and Verari Technologies product certifications. Our incident tracking system triggers notifications to both management and senior technical support staff through automated time based alerts and escalation, ensuring timely action and resolution of service requests 24/7.

**ABOUT VERARI TECHNOLOGIES**

Verari Technologies, Inc. is the premier developer of scale-out blade-based computing and storage platforms for Cloud, Web 2.0, and the global enterprise. Verari provides scale-out solutions for the world’s largest data centers that reduce power and cooling demands while achieving the best density, availability, and energy efficiency for the highest total value of ownership. Organizations such as Virgin America, Morgan Stanley, Wachovia, Microsoft, Qualcomm, Johns Hopkins, EMC, CGGVeritas, Petrobras, Harris, Lockheed Martin, Northrop Grumman, and Sony Imageworks, as well as top universities and research institutions worldwide, are among the customers who have chosen Verari Technologies’ award-winning containerized data centers and high density blade-based platforms.



*Note: The images on this page represent simulated airflow patterns within various data center layouts.*