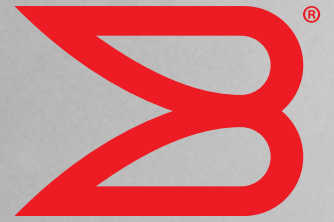


BROCADE ENERGY EFFICIENCY REVIEW



PROFESSIONAL SERVICES

The Data Centre Crisis

Senior decision makers throughout the IT world are increasingly concerned that data centre environments are now at breaking point. Major concerns include the soaring costs of energy, carbon footprint issues, and of course the key role currently played by data centres in the spectrum of IT-intensive processes demanded by today's businesses. It is fair to say that many critical business processes are more at risk than ever before.

Many of the data centres in use today were built over ten years ago, and have been packed to capacity with new, power hungry equipment as demand has risen. Unfortunately, most of these original facilities were not designed to handle the requirements of modern, densely packed, IT equipment.

In some cases, organisations have undertaken the daunting task of retrofitting existing data centres, often adding new electricity feeds, more powerful cooling systems and more efficient transformers. The challenge of obtaining sufficient energy to power the servers, storage systems, network switches and all the ancillary equipment that sits around them is particularly challenging. There is also the

issue of dealing with the extra heat that modern systems now generate – a factor that can trigger sluggish performance, machine shutdown or even complete failure if not managed diligently.

To ensure these facilities continue to function as the nerve centre of the enterprise, senior managers need to know exactly how their data centre environment is performing – not just in terms of cooling and air distribution, but of energy distribution, usage and quality, as well as space and rack utilisation.

That's where the Brocade® Energy Efficiency Review comes in. We will examine your entire data centre environment, establish a baseline of existing environmental conditions, identify design or implementation areas in need of improvement and provide a plan for optimizing energy usage, cooling and general environmental conditions at the facility.

UNDERSTANDING YOUR IT ENVIRONMENT

Reducing the carbon footprint of your data centre is ecologically responsible and can also significantly reduce your operational

energy costs. But the process must start with a thorough knowledge of what's going on within your data centre environment. The Brocade Energy Efficiency Review is designed to provide a clear picture of existing environmental conditions, identifying design or implementation areas in need of improvement and providing a plan for optimizing energy usage, cooling and general environmental conditions at your facility.

This service provides an in-depth technical evaluation of your data centre energy use, cooling capacity, air distribution and other environmental factors that can impact both operational costs and reliable service. It will enable you to:

- **reduce energy costs**
- **maximise system reliability**
- **reduce your company's impact on the environment**
- **take advantage of energy incentives**
- **demonstrate your company's Eco-Responsibility**

HOW DOES IT WORK?

The Brocade Energy Efficiency Review provides a comprehensive site assessment and customised site planning guide.

Professionally prepared and presented to your site support team, the service is an essential tool for the creation and maintenance of high availability, mission critical data centre infrastructures.

The assessment process will provide you with a detailed picture of the actual room conditions at the time of the assessment, as well as the ability of your facility to provide stable and appropriate conditions that consistently meet the specific requirements of the hardware.

While it will provide a useful report of conditions, the primary focus of the assessment is to help identify any actual problems or potential susceptibilities that could impact hardware operations. It will provide you with a customised site planning guide that includes recommendations for corrective actions, and useful reference material regarding the hardware and environment.

The service is delivered as a four-part package, designed to provide you with all the information from which to make key decisions regarding environmental improvements.

THE FOUR SERVICE ELEMENTS

1. Project Planning:

Our experienced environmental engineers will undertake a preliminary briefing to explain all elements of the service to you

and develop an outline Project Plan for addressing the specific logistics at your site. During the planning stages, and prior to the site visit, data regarding the subject area and the site in general will be collected through questionnaires and telephone interviews (as available and appropriate).

2. Site Visit:

A site visit will be scheduled with the purpose of examining your facility and it's environmental conditions in detail, recording and collating all information necessary in order to perform the formal evaluation and prepare a factual report.

3. Data Analysis & Report Preparation:

Following the site visit, the data collected will be analysed in detail, providing key information from which a Report of Findings can be prepared.

This report will include a detailed description of the assessment service activities performed, full documentation and analysis of the observations taken and data gathered, and will be presented in clear graphical and tabulated form.

Key elements of the report will include the assessment of your data centre practices compared to industry-recognised standards, evaluation of existing monitoring capabilities to identify areas where stability and efficiency can be improved, and conditions evaluated to optimise your existing IT infrastructure.

In addition, we will examine temperature and relative humidity profiles to evaluate cooling and infrastructure improvements, including air conditioning efficiency, airflow balance and the design of existing environmental support equipment in relation to site conditions and computer hardware requirements.

We will also evaluate electrical & cooling loads and electrical infrastructure, with a view to identifying vulnerabilities, improving efficiency and planning for eco-savings. Aspects of this include the arrangement of hardware, distribution of equipment heat load within racks, arrangement of racks in relation to each other (intake & exhaust aisles), and orientation of racks in relation to air conditioning and supplemental cabinet-level cooling. This will enable us to identify high density areas for correction and produce heat density calculations for future planning.

4. Presentation:

Finally, we will present the assessment findings to your site team, briefing them fully on all aspects of the report, advise on implementation and provide bound copies of the report for detailed review and reference.

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