Power, Cooling and Energy Consumption for Petascale and Beyond

SC07 Birds-of-a-Feather
14-Nov-07

Agenda

- ASHRAE TC9.9 Overview   (Tim McCann, SGI)
- The Green Grid^{SM} Overview   (Tahir Cader, ISR)
- Other Initiatives   (Tim McCann, SGI)
- Discussion

Overview of The Green Grid

Issues of Data Center Energy

- ## Energy consumption is one of today's most compelling and important IT issues:
    - Data center efficiency and productivity
    - Global environmental impacts
    - Future IT growth and requirements
    - Measurement of total data center energy consumption
    - Best practices, new techniques, technologies and metrics

- ## Guidelines and resources needed to drive change:
    - Guidelines and standards of energy measurement
    - Clear roadmaps for future data center design and operation

What is The Green Grid?

the green grid ^{SM}

- A global consortium bringing together industry leaders and end-users from critical segments of the data center ecosystem to develop a unified voice around data center energy efficiency

- A consortium dedicated to developing and promoting energy efficient data centers by:
  - Defining meaningful, user-centric <u>models and metrics</u>
  - Developing <u>standards</u>, <u>measurement methods</u>, <u>best practices,</u> and <u>technologies</u> to improve performance against the defined metrics
  - Promoting the <u>adoption of energy efficiency standards</u>, processes, measurements, and technologies

The Green Grid Initiatives...

Creating a framework for best practices:

- Create shared definitions, benchmarks and metrics to enable real-time measurement, monitoring, and control of data center efficiency and productivity

- Create baseline 'state-of-the-industry' documentation, including benchmark architectures and a repository of data center efficiency knowledge

…The Green Grid Initiatives

Creating a framework for best practices:

- Create a comprehensive technology roadmap for future data center design to maximize efficient and productive operations

- Assess new and alternate data center technologies

- Monitor progress on all fronts and provide periodic updates

The Green Grid Milestones

- February 2007: The Green Grid launches
- April 2007: Holds its first Technical Summit and welcomes 28 new members
- August 2007: Details its technical roadmap and key deliverables
- September 2007: Signs memorandum of understanding with the Department of Energy, forms two EMEA working groups, announces total membership is over 90 companies

Joining The Green Grid

the green grid ᔆᴹ

Membership is open to any company developing products and technologies aimed at the data center market, as well as information technology professionals tasked with data center operations

For more information
- – Visit: www.thegreengrid.org
- – Membership Contact: The Green Grid Administration
    admin@lists.thegreengrid.org
    O: (503) 619-0653

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