

RESEARCH STATEMENT

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Due to the rise of Big Data, cloud Computing and Internet of things (The 3 waves of Modern day Computing) the need of the data centers are obvious. Nowadays more and more people are dependent on the cloud, causing a rise in the consumption of the energy. My research interests are in developing theoretical foundations for designing and analyzing large-scale systems, such as data centers, and cloud computing infrastructures, Data Intensive Computing in Clouds, Energy Optimization in Data Centers and Software Defined Data Centers for Energy Efficiency.

Current Research:

Energy Optimization in Cloud Data Centers through various algorithmics related to energy tradeoffs, cluster and hadoop provisioning.

High Performance Big Data Analytics in the cloud is in final stage of development where some of the issues of using Cloud with economic ease and high performance is being measured.

Performance, Availability, Fault Tolerance and Load Balancing in the hadoop eco-system.

Future Research:

Short to mid-term plan.

Cost Optimization and Pricing Model in Clouds

Reliable Private Cloud-based Green Storage.

Disaster Recovery in Cloud

Collaborative Resource Sharing for Modern Day Computing

Real Time Big Data Analytics

Long-term plan.

My two long term research goals are to achieve effective data analysis on large, complex, and heterogeneous biological and medical data sets in order to advance the frontier of our understanding about complex biological systems, and to develop novel computational methods for mining large-scale and dynamic information networks.

THESIS TITLE (Proposed):

Energy Efficiency in Cloud Data Centers using Algorithmic for Thermal Aware Hadoop Cluster Provisioning