Cost aware resource management of distributed cloud data centers

Outline

Introduction

* Motivation
* Problem statement
* Aim of the work
* Methodological Approach
* Structure of the thesis

State of the art

* Energy price forecasting
* Optimize resource scheduling in geo distributed data centers
* Cost optimization in data centers
* Virtual machine migration

Data Analysis

* Day ahead and real time energy prices
* Characteristics of energy markets
* Energy price case study

Forecasting

* Introduction
* Methodologies
* Model generation
* Model selection algorithm
* R / Java simulation framework
* Forecast model evaluation

Simulation framework

* Architecture of simulation framework
* Modeling migration energy
* Cost optimization based on utility function

Evaluation and Results

* Definition of simulation scenarios
* Utility function optimization
* Simulation Results

Conclusion and Future Work

* Future Work