**THESIS**

**Structural overview**

Introduction

Motivation

State of the Art

Cloud management

General overview

Single data center management

Distributed data center management

KPI measures

Case Study

Power markets

Introduction to power markets

Characteristics of power markets

Deregulated energy markets

Bidding strategies

Challenges and possibilites

Forecasting

Introduction

Forecasting models

Categorizing forecasting models

Statistical vs Machine learning approaches

Accuracy Measures

Model selection

Energy price related forecasts

Cloud-based Simulator

Motivation

Structure of simulator

Functional requirements

Non-functional requirements

Incorporating forecast models

Simulation runs

Evaluation

Scenario definition

Simulation configuration

Simulation results

KPI measures

Impact of forecasting models

Energy price forecasting

Temperature forecasting

Application of different data sets

Conclusion

Discussion

Quality measures

Impact of forecasting

Applicability to real world scenarios

Simulator types

Error rates

Revenue increase estimation

Future work and conclusion

Trend of power markets

Mid- and long term forecasting

Energy related workflows

Cloud developments