

CloudML - A DSL for model-based realisation of applications in the cloud

Spring 2012

Built: February 6, 2012

Abstract

...

Contents

1	Introduction	1
2	Background	2
3	State of the Art in Model-based Multicloud Provisioning	3
4	Problem	3
5	CloudML	4
6	Conclusion	4

1 Introduction

Short about my problem, why it's important and whats to be found in the thesis

- Summarize the **problem**
Challenges from CloudMDE
 - Information dependency at runtime
 - Technical competence/level expectations
 - Reproducibility
 - Robustness

- Complexity
 - Shareable
- Short description of terms used
 - Cloud (computing)
 - Model-driven engineering
 - Provider (cloud provider)
- Why is it an important problem
Ranting...
 - Cloud domain is state of the art
 - model driven approach with benefits (no special tooling)
 - Easier for businesses (especially SMBs) to reach out to Cloud
 - Easier for larger more time-constraint businesses to try out the cloud
 - Opening the eyes of big providers for a larger cross-cloud language
- Shortly mention CloudML
Summary from chap 3 in CloudMDE
- Shortly mention cloudml-engine
Copy/paste implementation paragraph from CloudMDE
- Summarize chapters of thesis

2 Background

Explain some of the topics in my thesis

- What is cloud computing and IaaS
 - Summarize nist definition of cloud
 - Short description of AWS
 - Short description of Rackspace
- What is model-based engineering and benefits.
Core concepts
- Business viable perspective.
Relevance to business...

3 State of the Art in Model-based Multicloud Provisioning

What have others done for multicloud provisioning

- Model driven
 - Amazon CloudFormation
 - CA Applogic
- APIs
 - libcloud
 - jclouds
 - Deltacloud
- Deployments
 - Amazon Beanstalk
 - simplifying-solution-deployment-on-a-cloud-through-composite-appliances
 - architecture-for-virtual-solution-composition-and-deployment

4 Problem

- Outline the problem
 - Challenges again - but more detailed
- State how the problem is not solved by any suggestions in my 'state-of-art' section
- Why is it important to solve the problem
 - Where can cloudml be used
 - Who would use it
- Introduce *BankManager*, case study
 - What it can do
 - Technologies used
 - Why it is relevant
 - * Enterpriseish setup
 - * Copy from CloudMDE chap 2

5 CloudML

- Templates (and account)
 - Copy chap 3 from CloudMDE
 - Weaknesses
- cloudml-engine
 - More info than CloudMDE
 - Technologies chosen
 - Why technologies were chosen
- Combination of cloudml-engine and *BankManager*
 - How BankManager proves concepts of the templates (subsection 1) with cloudml-engine

6 Conclusion

- Summary of CloudML
 - What subsection in solution solves what subsection in problem
- Templates (and account)
- cloudml-engine