# ${ m CloudML}$ - A DSL for model-based realization of applications in the cloud

## Spring 2012

Built: February 8, 2012

## Abstract

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## 1 Introduction (30)

## 1.1 Introduction and methodology

Short and sharp

- Main introduction
- Write lastly

#### Methodology

#### 1.2 Problem definition with examples

- Outline the problem
  Where do I get the challenges from?
  - Information dependency at runtime
  - Technical competence/level expectations
  - Reproducibility
  - Robustness
  - Complexity
  - Shareable
- Why is it important to solve the problems
  - 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

#### 1.3 Requirements to solution (with table)

• Copy in my existing table from the essay Requirements = challenge = problem?

#### 1.4 Evaluation of existing solutions

Even more examples in mOSAIC articles

- Identify *properties* (problems in reality)
- Find more sources
- Model driven
  - Amazon CloudFormation
  - CA Applogic

- APIs
  - libcloud
  - jclouds
  - Deltacloud
- Deployments
  - Amazon Beanstalk
  - simplifying-solution-deployment-on-a-cloud-through-composite-appliances
  - $\ {\rm architecture\text{-}for\text{-}virtual\text{-}solution\text{-}composition\text{-}and\text{-}deployment}$

## 2 Contribution (40)

- 2.1 Vision, concepts and principles
- 2.2 Analysis and design
  - Copy chap 3 from CloudMDE
  - Weaknesses

#### 2.3 Implementation/realization

- More info than CloudMDE
- Technologies chosen
- Why technologies were chosen

## 2.4 Validation on example/experiments

• How BankManager proves concepts of the templates (subsection 1) with cloudml-engine

## 3 Conclusions (20)

#### Short and sharp

- Summary of CloudML
  - What subsection in solution solves what subsection in problem
- CloudML
- Implementation
- Perspectives (2 paragraphs, can be section)
  - Look into the future
    - \* Deployments
  - short term
  - long term

## Bibliography

# Appendix (CloudMDE)

(Maybe)