App Engine of Grand Cloud

http://ae.grandcloud.cn

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Overview

- The project was kicked off on June 2012
- Launched on September
  - http://ae.grandcloud.cn
- Deployed on our IaaS platform
- Leverage open-source software

Current status

- Still in Beta
- Totally free!
- Hosted apps > 300
  - *http://yourapp.sdapp.cn*
- A cluster of 30 VMs

Features

- Multiple programming languages
  - Java, PHP, Python, Ruby
- User interface
  - Web console & app dashboard
  - Cmd-line tool
- Multiple backend data services
  - Relational DBs
  - Filesystem
  - Key-value store

Python Support

- Just launched this week☺
- Still premature currently
  - Django only
  - Lack of sample apps

Software Stack

- Nginx as load balancer
- Our own CloudFoundry branch
  - Various optimizations & twists
- OpenTSDB/HBase as monitoring metrics store
- Java based frontend console and dashboard
- HTTP servers
  - Apache for PHP
  - Webrick for Ruby
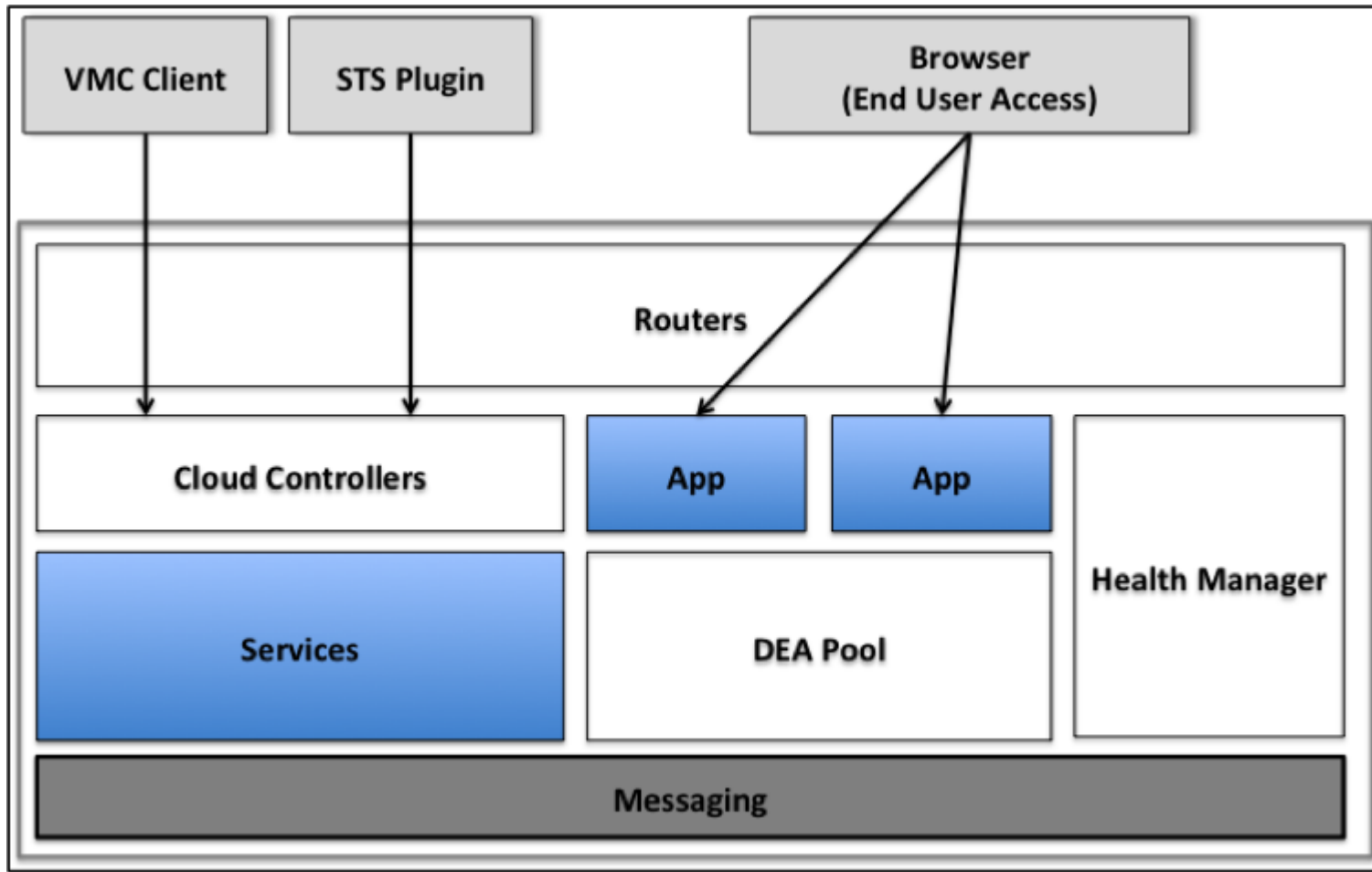 - Tomcat for Java
  - Gunicorn for Python

Architecture

Figure source – http://cloudstory.in

Backend Services

- ## Relational databases
  - MySQL, Postgres
  - Elastic block storage for data persistence

- ## Filesystem service
  - Multi-tenant sharing on a cluster filesystem
  - Isolation & access control

- ## Key-value storage service
  - Memcached protocol compatible
  - Multi-tenant, scale-out, replicated and persistent

App Market

- "*Platform as a community*"
- Quick deployment by clicks
- Developers are rewarded to share apps

Roadmap

- Stability improvement
- Performance profiling
- Developer tools
  - git/svn integration
  - DB admin console
- App management
  - Single-tenant DEA
  - Better resource isolation via Linux Containers

Thank You

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