



Systems Administration in the Cloud

Lessons learned from building a Platform as a Service

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www.workxpress.com



Introduction

- Me
- WorkXpress
- Goal - providers are different!
- Our history with cloud





Why Cloud Infrastructure?

- No hardware
- No bandwidth
- Rapidly scalable
- Pay as you go
- Easy Duplication for QA
- Use of snapshots





Why NOT Cloud Infrastructure?

- No physical access
- No control when service is down
- Possible security issues
- ...And all the things the sales guy didn't explain to me





Primer - Virtualization and Cloud

- Server != Hardware, anymore
- Private clouds - standard formats
- Public clouds - proprietary formats
- Rapid Spin up and Scalability
- Resource allocation is more flexible (sort of...)





Rackspace

- Many OS options
- Fully coupled resources
- No pay-as-you-use
- Is this cloud?



rackspace®
IT HOSTING





GoGrid

- Limited OS options - no Ubuntu
- Fully coupled resources
- Unclear processor allocation
- No pay-as-you-use
- Cloud?





CloudSigma

- Complete OS control
- Fully decoupled resources
- Pay-as-you-use
- Modeled Rackspace's API calls
- Entrepreneurial - willing to work with you





Amazon - Features

- OS limitations, but wide support
- Coupled RAM and Processor,
decoupled storage
- Pay-as-you-use
- Lack functionality in their API for ISV's
- Wide range of supporting services
(EBS, CDN, FPS, S3, etc.)





Amazon – In Depth

- Instances and storage are NOT persistent - RISKY!!
- EBS and S3
- Manual RAID setup
- Use of XFS or growable file system
- Access to storage scales with processor
- Limitations on # of IP's, Instances, EBS's, buckets (S3) per account
- Backup method - S3 snapshots
- Automated load balancing





Recap

- Huge benefits to the cloud
- Not as easy as the websites suggest
- Each provider has significant differences
- Cloud servers - one more tool in the sys admin tool box