

Open Cloud Operations: Applying DevOps to Cloud Infrastructure



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Open Cloud Operations

- * Intersection of two major technology waves:
 - * Operational Automation (DevOps)
 - * Open Source Cloud (OpenStack)
- * Together, a practical approach to cloud scale
 - * Manages elastic resources
 - * Embraces constant change
 - * Productizes best practices



Lessons from Hyper-scale

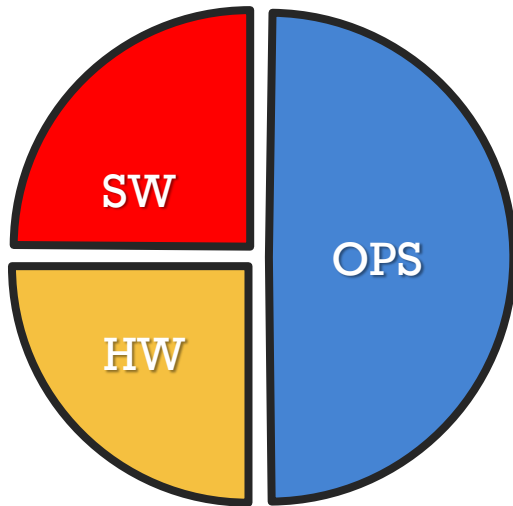
- * Hyper-scale (1000s of servers) forced customers to change their core assumptions.
- * To operate large systems, customers
 - * Embraced scale out design (inconsistency is OK)
 - * Eliminated hardware redundancy (too expensive)
 - * Shunned manual steps (too slow)

Lessons from Public Clouds

- * Cloud servers forced customers to change their core assumptions.
- * To operate remote virtualized systems, customers
 - * Embraced scale out design (to get elastic growth)
 - * Lived with weak SLAs (that was all that was offered)
 - * Worked around lack of physical access (not available)



Clouds require an Operational Focus



- * Clouds demand significant operational and process controls
- * Operational decisions drive hardware and software decisions
- * We are finding ways to productize operations into best practices

DevOps Addresses Challenges

- * DevOps is an **operational approach** that automates system configuration and management.
- * To manage cloud systems, customers
 - * Need to manage servers as groups
 - * Must respond to rapid infrastructure changes
 - * Have repeatable automated deployments

Missing Cloud Infrastructure

The cloud market was highly fragmented

- * Amazon dominated but was not public domain
- * VMware was building on their enterprise base
- * Microsoft was taking the PaaS route
- * Many small players but no community projects
- * Service Providers could not agree on APIs

Community Cloud Infrastructure

We needed Cloud Infrastructure that

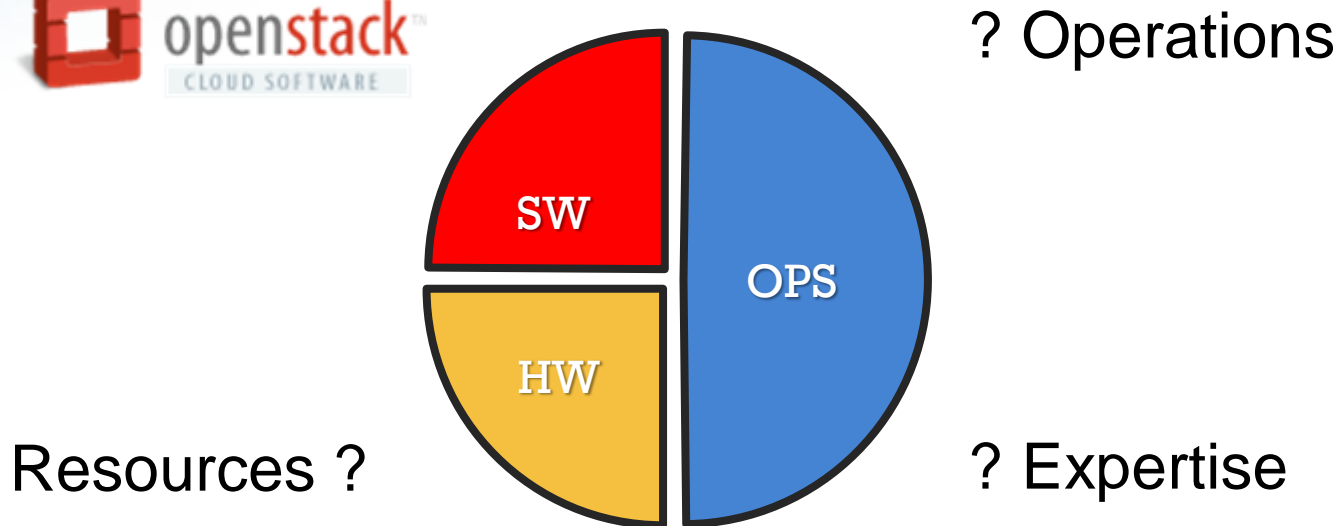
- * Had support from major industry players
- * Was collaboratively developed without a single owner
- * Had an API that was Service Provider license friendly
- * Could be demonstrated to run at scale
- * Was built on open source components
- * Had global reach and support



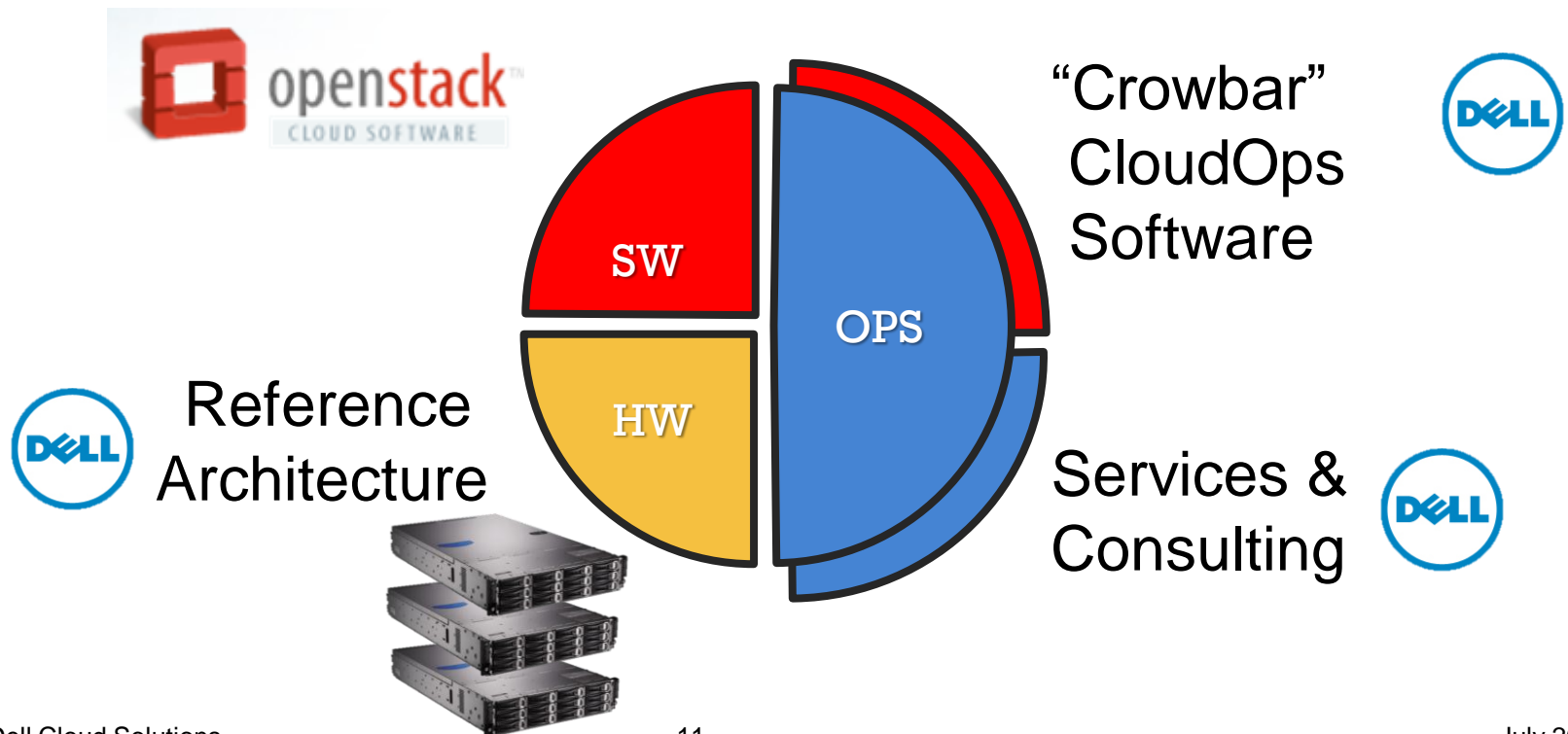
OpenStack!



Making an OpenStack Cloud



Dell OpenStack Cloud Solution



Questions?



More info:

- <http://Dell.com/OpenStack> - White Papers & More!
- <http://RobHirschfeld.com> – Technical & Agile
- <http://JBGeorge.net> – Business & Marketing