



Cloud Platform Warfare in 2013 and Beyond

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Agenda

- Cloud Platform Terminology
- The Forrester Analyst View
- An Independent View
- The Big Players
- Other Emerging Providers
- Data Type/Concentration & Cloud Computing
- Hub & Spoke Public/Private Cloud Model
- Case Study
- Q & A

Cloud Platform Terminology

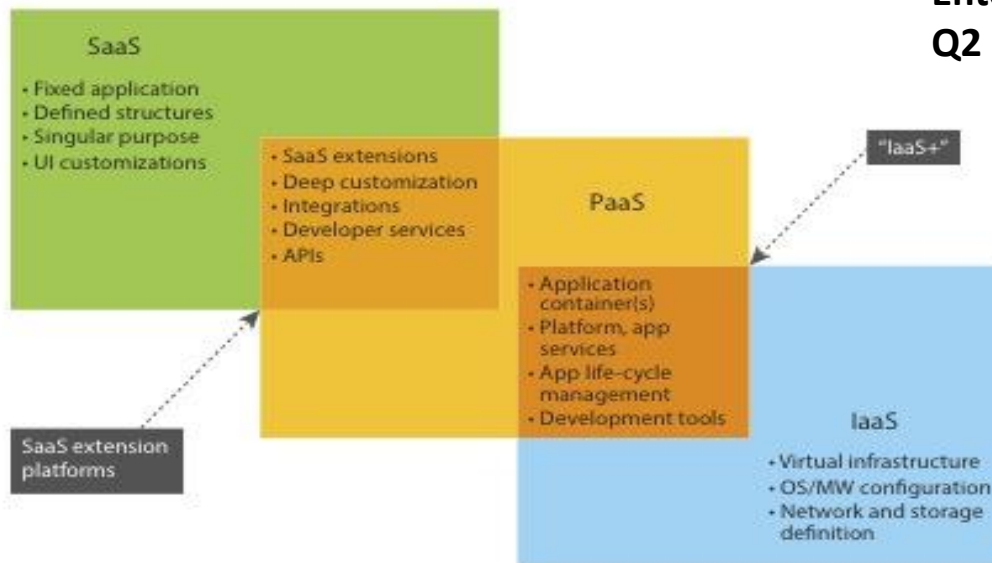
- Cloud Platform → • Integrated Tools & Services to Build & Run Cloud Applications
- Public Cloud → • Cloud Platform Consumed on Demand from Public Internet
- Private Cloud → • Cloud Platform Used Inside (Behind) a Firewall. Limited, Secure Access

Cloud Platform Terminology

- IaaS →
 - Servers, Storage, Switches, Routers, Load Balancers, Security Devices, Virtualization
- PaaS →
 - Developer Tools for Building and Deploying Cloud Applications
- SaaS →
 - Business and Consumer Applications Delivered on Cloud Platforms

The Forrester View

Figure 1 The Boundaries Between SaaS, PaaS, And IaaS Are Blurring

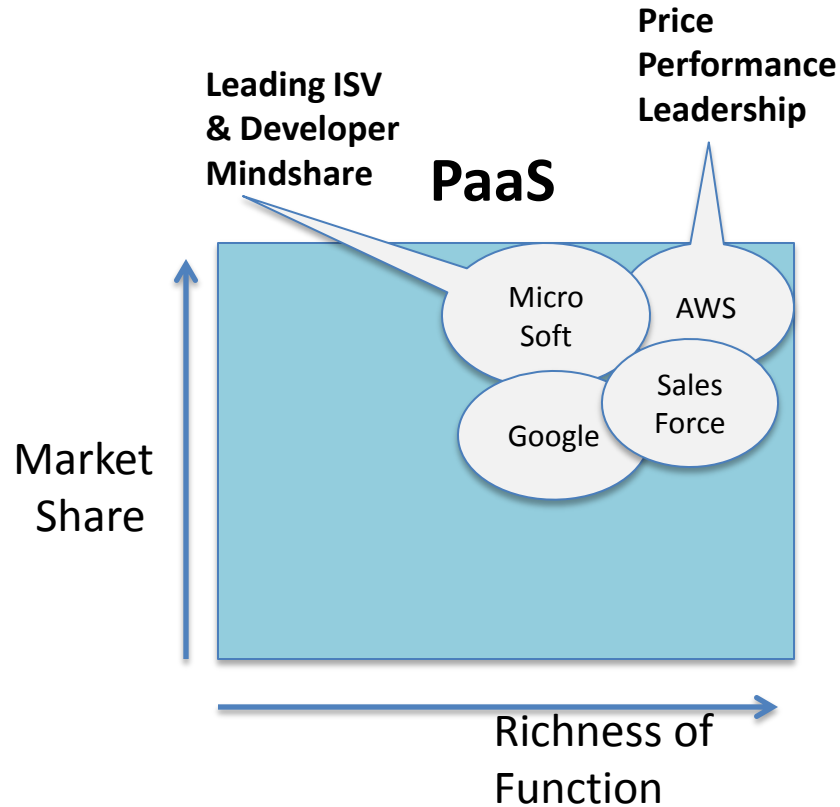


The Forrester Wave™: Enterprise Public Cloud Platforms Q2 2013

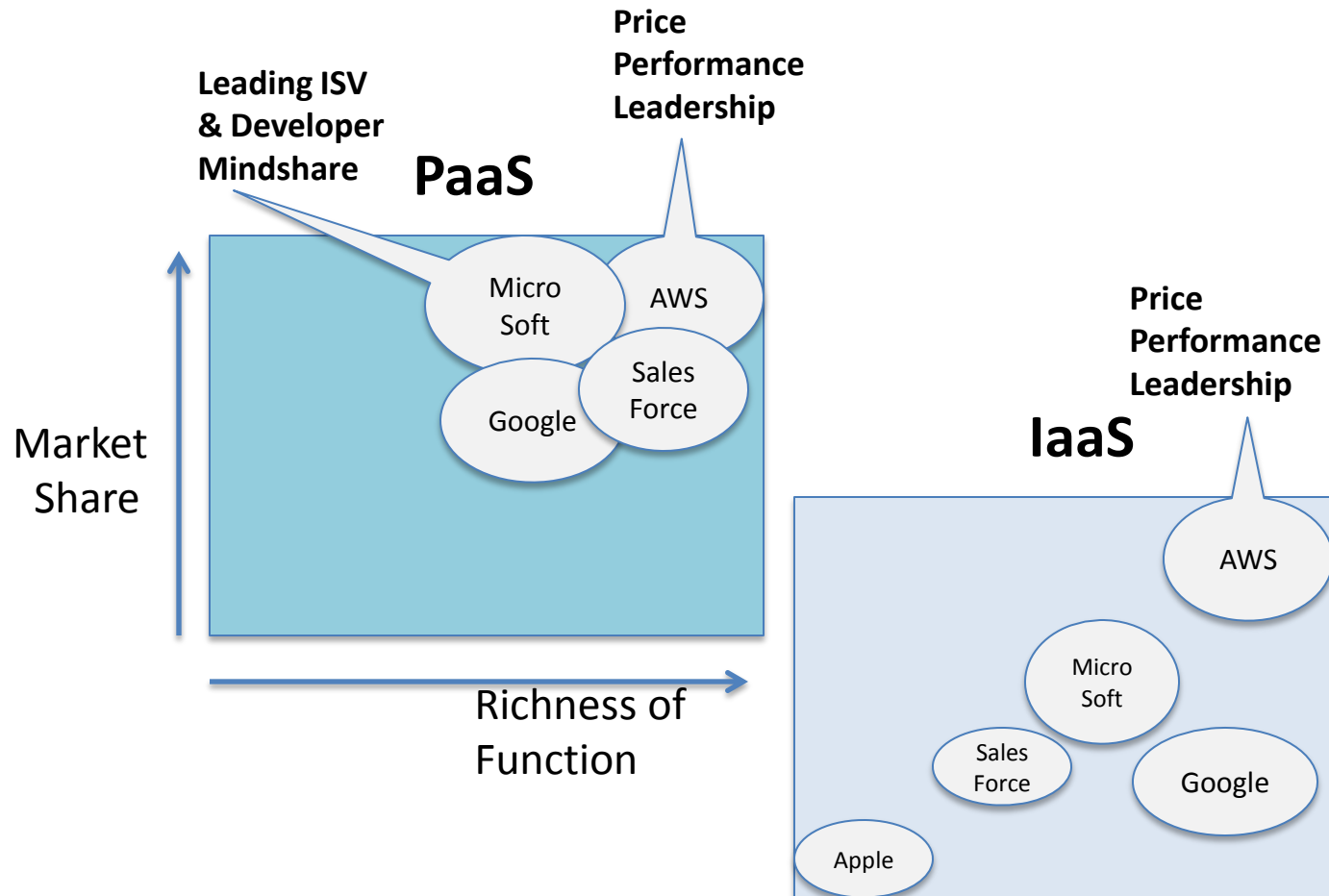
Cloud Platform Comparison: Top Players

	AWS	Google	Microsoft	Apple	Salesforce
IaaS					
Compute Resources	EC2	GCE	Azure VMs	-	-
Hadoop Map Reduce	Elastic Map Reduce	-	Azure HDInsight	-	-
Content Delivery Network	Cloudfront	Page Speed Service	Windows Azure CDN		3rd Party Integrations
Cloud API Storage	S3	CloudStorage	-	-	SaaS Apps & Database.com
Archiving/Backup	Glacier	CloudStorage	Azure Backup	iCloud Backup/Restore	Integrated with SaaS Apps
Direct VM Storage	EBS	-	Azure Drive	-	SaaS Apps & Database.com
Monitoring	Cloudwatch	-	-	-	-
Deployment Automation	Elastic Beanstalk	-	-	-	Force & Heroku
Collection Management	Cloud Formation	-	-	-	-
PaaS & App Platform					
App Dev Service	-	App Engine	Azure Tools for Visual Studio & Azure SDKs	Objective C APIs	Force & Heroku
Hosted Relational DB	RDS	Cloud SQL (My SQL)	Azure SQL Server	-	Database.com
Data Warehouse Service	Redshift	-	-	-	-
NoSQL Service	DynamoDB	Big Query	Azure Table	-	-
In Memory Cache	Elasticache (Redis + Memcached)	Memcached	Azure Cache	-	-
Other1	Simple Workflow Service	Prediction API	Azure SQL reporting	iCloud Keychain	Marketing Coud
Other2	Simple Queue Service	Translate API	Azure Mobile Services	iWork	Site.com (SaaS CMS)
SaaS & Apps					
E-tail App Marketplace	Marketplace	Play for Android	Azure Marketplace & Windows Phone Store	App Store	App Exchange
App1	-	Search	Office 365	iCloud Photosharing	Chatter
App2	-	Maps	Dynamics Nav 2013	Find My iPhone	Work.com
App3	-	Youtube	Dynamics GP 2013	Maps	Sales Cloud

Actuals for the Major Players...Visual & Comments

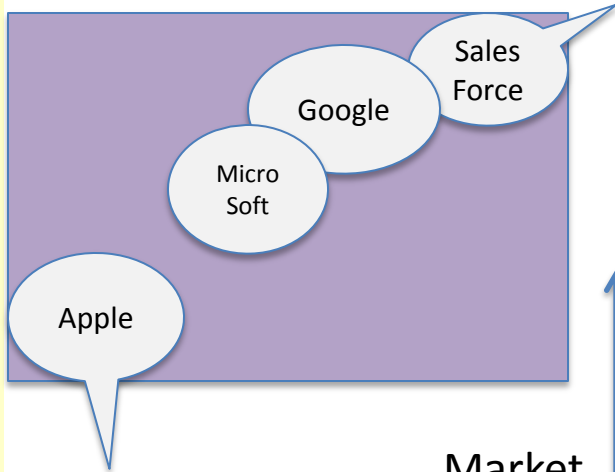


Actuals for the Major Players...Visual & Comments



Actuals for the Major Players...Visual & Comments

SaaS & Software E-tail



Driving High Margin SaaS Business

Leading ISV & Developer Mindshare

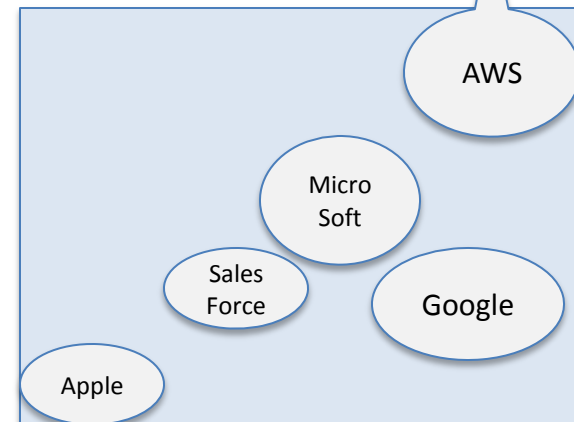
Price Performance Leadership

PaaS



Price Performance Leadership

IaaS



Device & Consumer Driven; Dangerous Under Investment

Market Share

Richness of Function

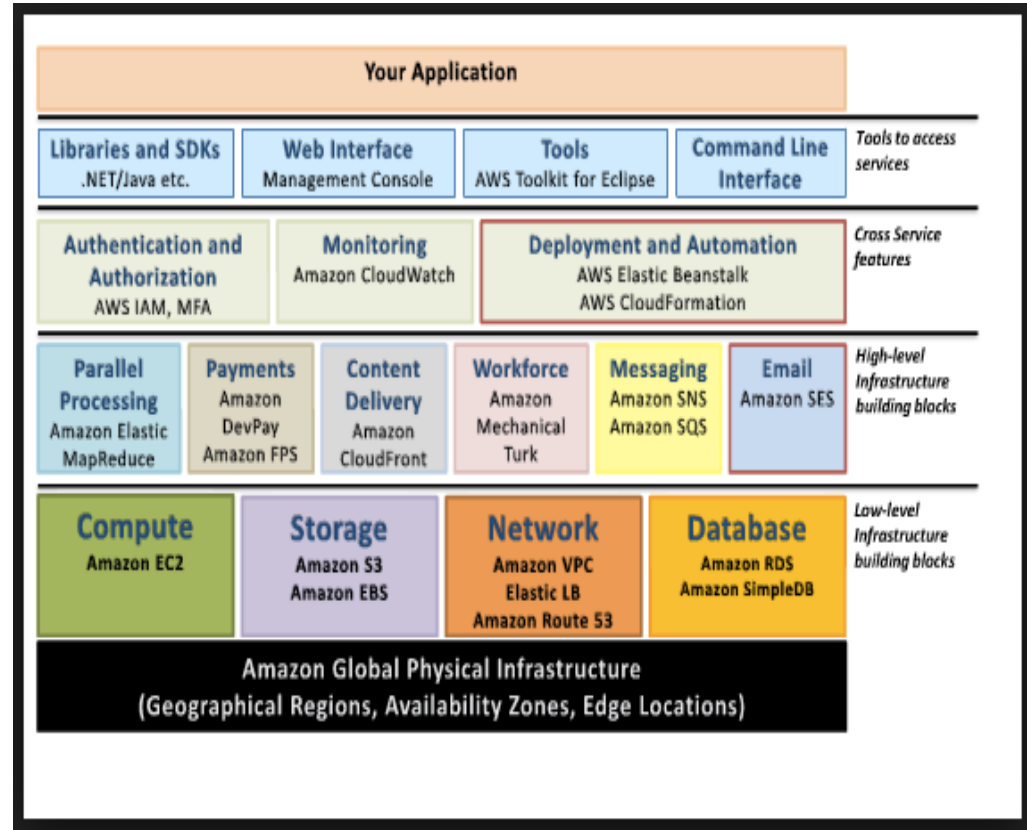
Cloud Platforms: Players to Watch

	Red Hat Openshift	VMware/Pivotal*	Oracle Cloud
IaaS			
Compute Resources	Gears	AWS + Openstack APIs	-
Hadoop Map Reduce	-	PivotalOne	-
Content Delivery Network	3rd Party	-	3rd Party
Cloud API Storage	-	-	-
Archiving/Backup	-	-	-
Direct VM Storage	Std PaaS Option	-	-
Monitoring	-	-	-
Deployment Automation	Jenkins/Puppet	-	-
Collection Management	-	-	-
PaaS & App Platform			
App Dev Service	Cartridges	Cloud Foundry	Oracle Cloud PaaS
Hosted Relational DB	MySQL & PostgreSQL	MySQL & PostgreSQL	Oracle Database Cloud Service
Data Warehouse Service	-	-	-
NoSQL Service	MongoDB	MongoDB	Oracle NoSQL
In Memory Cache	Memcached/Redis	Redis/Greenplum	Exadata/Exalogic
Other1	Openshift Enterprise	RabbitMQ	Oracle ERP Cloud
Other2	Openshift Origin (Open Source)	Scala	Oracle SCM Cloud
SaaS & Apps			
E-tail App Marketplace	-	-	-
App1	-	-	Human Capital Management
App2	-	-	Talent Management
App3	-	-	Rightnow Customer Experience

* Investors Include GE, VMware, EMC

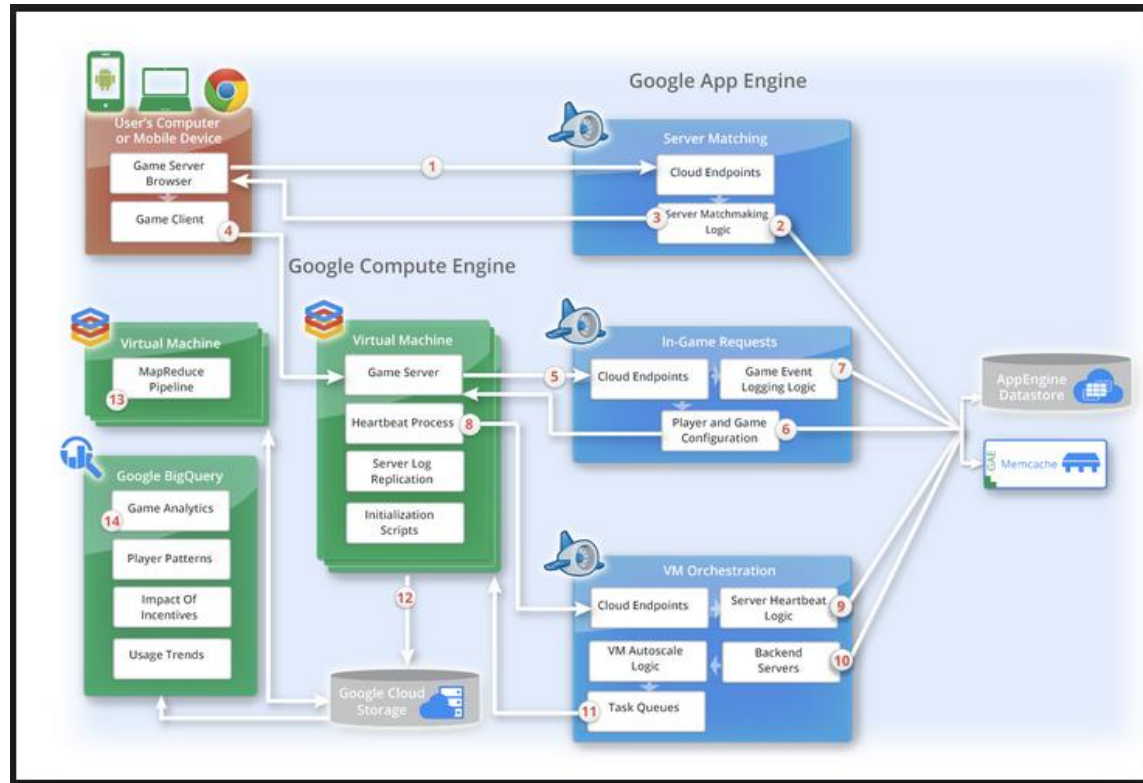
Amazon Web Services (AWS)

- Cost Leadership
- Scale Leadership
- Granular PaaS Tools & New Technology Leadership
- Massive AMI Library; Always Growing Ecosystem



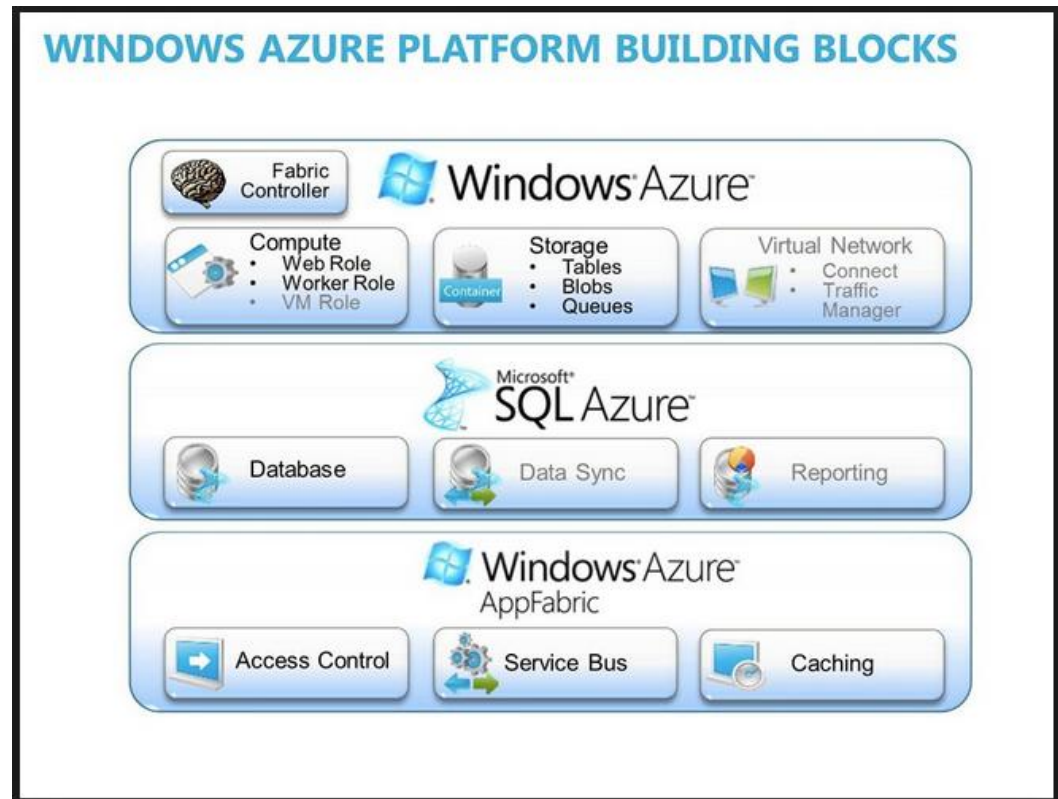
Google Cloud Platform

- Dominant SaaS Services:
 - Search
 - Mapping
 - Video
- Mortal Threat to Apple with Android + Cloud Platform
- Entering IaaS & Public Cloud Compute Segment



Microsoft Azure

- Leverage Existing Mindshare in ISV Community
- Gain Momentum in SaaS Applications on Azure
- Create a 3rd Party Marketplace
- Build Best of Breed PaaS Tools & Technology



SalesForce.com

- Deliberate Decision not to Expose Granular PaaS Technology or IaaS
- Premium Functions and Pricing on SaaS Applications
- Two Track PaaS Initiative with Force (organic) and Heroku (acquisition)



Apple

- Building Cloud App's and Services For:
 - Apple Device Experiences
 - Consumers
- The Embarrassment of Maps
- Looming Threat of Mobile Web
- AWS Preparing Free Smart Device Offerings
- Google Cloud Platform + Android Bringing Constant Pressure

**It's the easiest way to manage your content.
Because now you don't have to.**

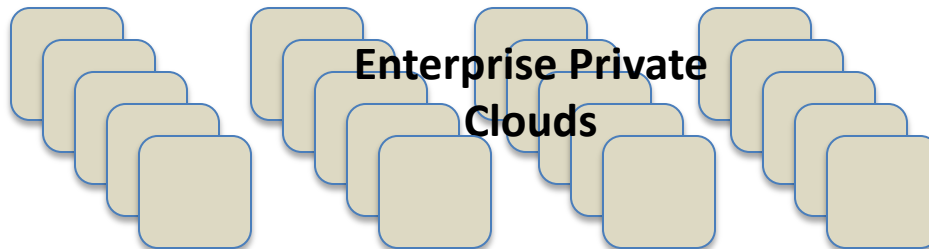
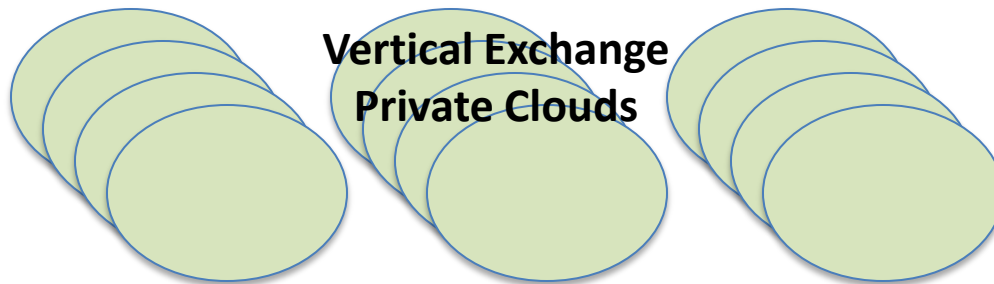
This is the cloud the way it should be: automatic and effortless. iCloud is seamlessly integrated into your apps, so you can access your content on all your devices. And stay up to date everywhere you go. [Watch the iCloud video](#) ›



Key Battle: AWS vs. Google

- AWS Advantages:
 - 5 + years head start
 - More mature platform and application services
 - Huge Base of 3rd Party AMIs in the Online Marketplace...Server Side VM Applications Marketplace
- Google Advantages:
 - Resale Business Model (Rightscale is the First)
 - Dominant web app's:
 - Search
 - Video
 - Maps
 - Rich Application Development services

Data Type/Concentration & Cloud Computing

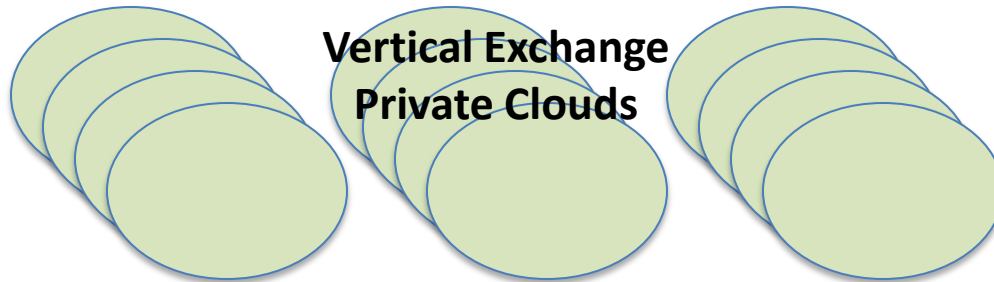


Data Type/Concentration & Cloud Computing

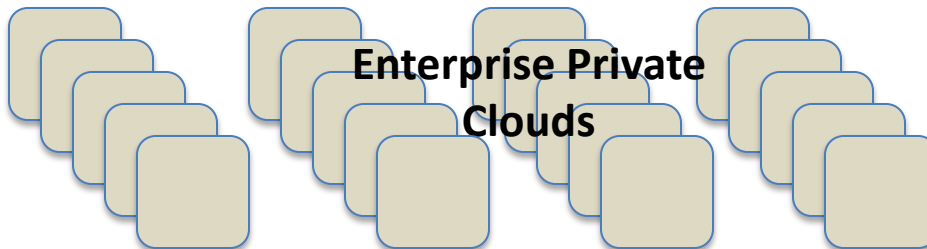
Under 10



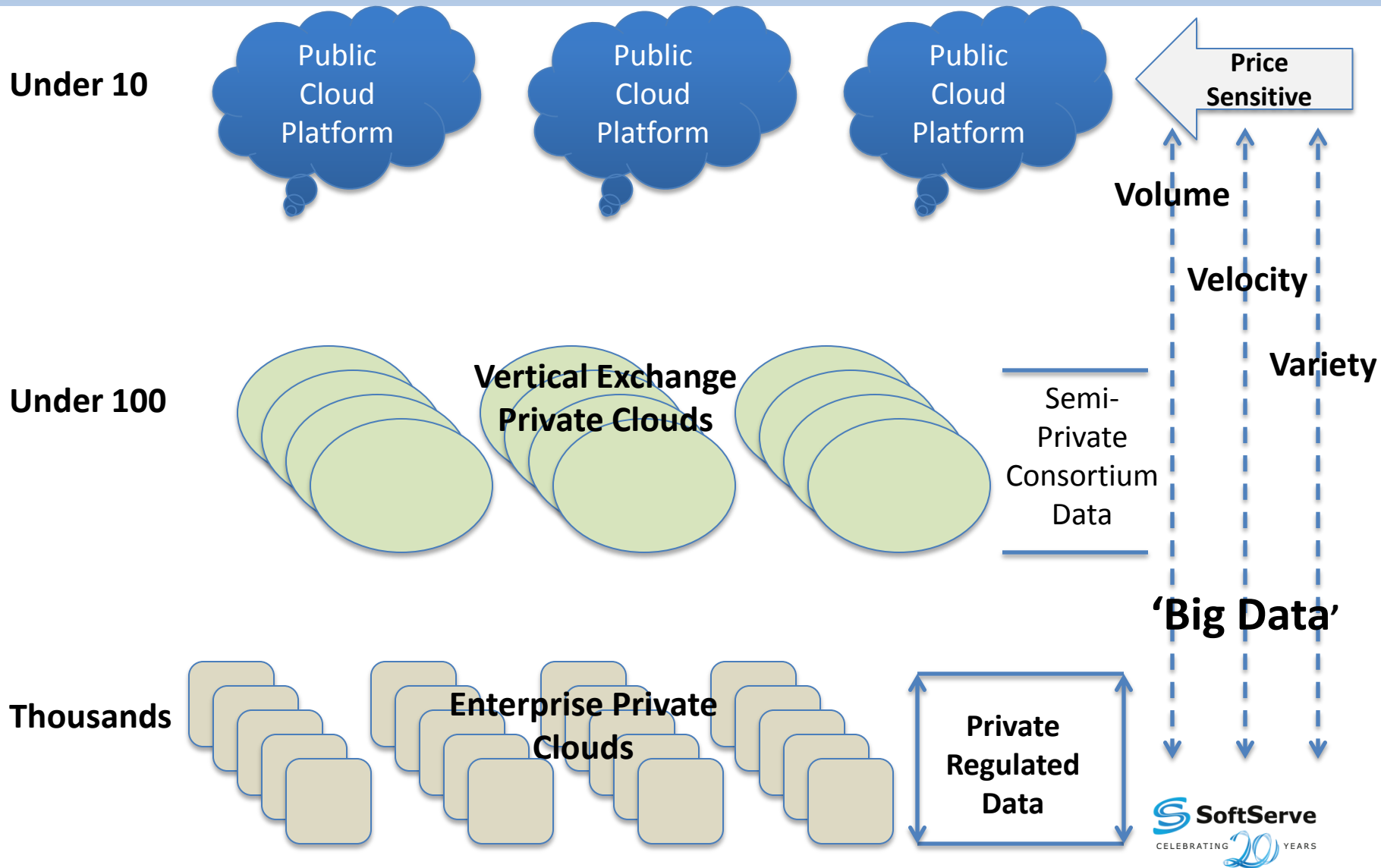
Under 100



Thousands



Data Type/Concentration & Cloud Computing

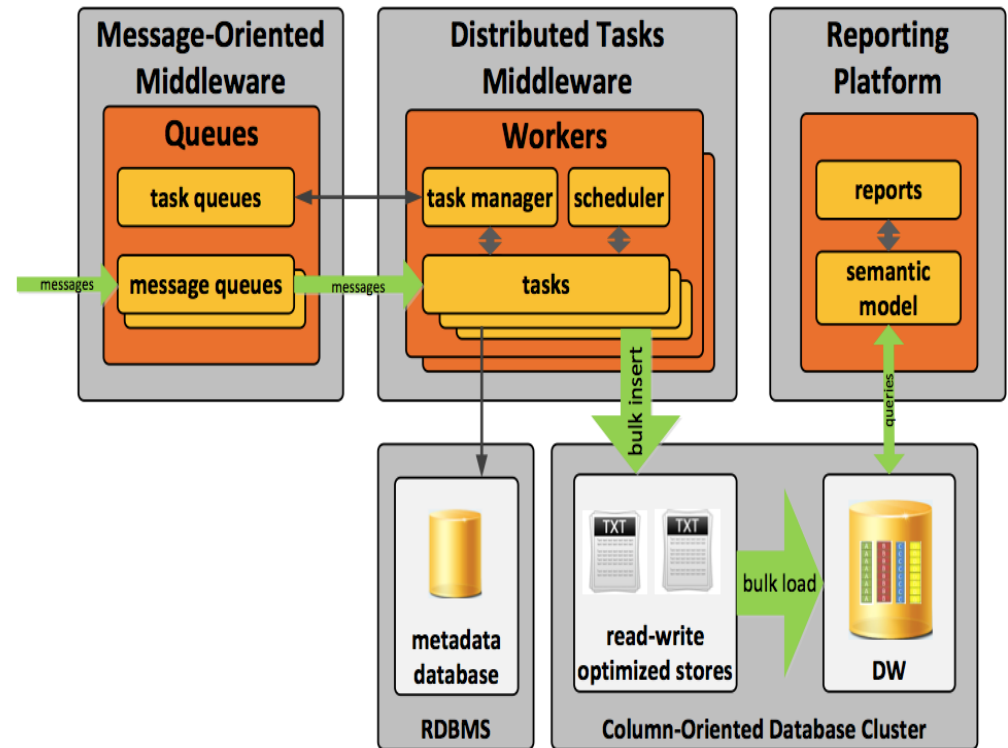


- Situation
 - ISV: One of the 3 Fastest Growing WW Providers of Mobile Enterprise Application Platforms (MEAPs)
 - Offshore Team Failing to Move Server Component to Cloud For Rapid On Demand Deployment & Usage (Slowing Company Growth)
 - SoftServe Architecture Group Steps In, Quickly Refactors Server to Exploit AWS Technology with Big Data Analytics

Case Study...The Technology Solution

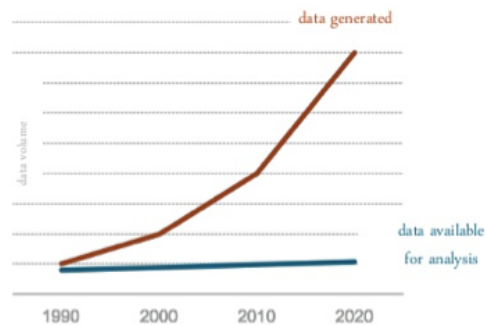
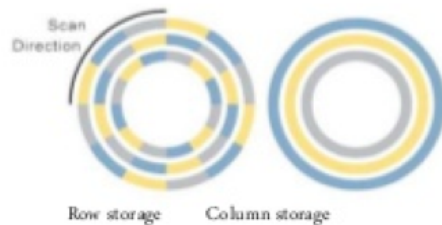
Technology Stack

- **Message Oriented Middleware**
 - RabbitMQ
 - Amazon SQS
- **Distributed Task Middleware**
 - Celery
- **Databases**
 - Amazon Redshift(column-oriented)
 - Amazon RDS (MySQL RDBMS)
- **Reporting Platform**
 - Jaspersoft
- **Mixing Best of Breed AMI's with Native AWS PaaS Services**



Case Study: Why a Cloud Platform Data Warehouse

Amazon Redshift



- Inexpensive
 - \$999 per 1 TB of compressed data per 1 year
- optimized for DW
 - I/O intensive workload
- data compression
- fast
- PB-scale

Columnar storages on premise

- HP Vertica
- ParAccel



Question and Answer

