Ignite Innovation by turning your Developers loose on Hybrid Cloud

JARET CHILES CLOUD SOLUTIONS ARCHITECT, ENTERPRISE CLOUD SOLUTIONS

TERRENCE DEJAGER SENIOR MANAGER, ENTERPRISE CLOUD SOLUTIONS

JUNE, 2013













The changing priorities of IT

DELIVER APPS FASTER 59%

BETTER ALIGN WITH BUSINESS 48%

EXPAND USE OF AGILE 44%

INCREASE INNOVATION 38%

Stephen O'Grady

The New Kingmakers

How Developers Conquered the World



"Developers are the most-important constituency in technology. They have the power to make or break businesses, whether by their preferences, their passions, or their own products"

> - STEPHEN O' GRADY THE NEW KINGMAKERS

Driving the Shift:





HOW COMPANIES WOO DEVELOPERS



000	Developer Tools : Amazon 🗙		
←⇒C	aws.amazon.com/developertools		
	web services	Sign Up	My Account / Cons
	AWS Products & Solutions -	Developer Tools 👻 🔍	Developers

Browse By Category

- Amazon CloudFront
- Amazon Elastic Compute Cloud
- Amazon Elastic MapReduce
- Amazon Fulfillment Web Service
- Amazon Mechanical Turk
- Amazon Relational Database Service
- Amazon Route 53
- Amazon SimpleDB
- Amazon Simple Email Service
- Amazon Simple Queue Service
- Amazon Simple Storage Service
- AWS CloudFormation
- AWS Data Pipeline
- AWS Elastic Beanstalk

👔 Developer Tools

Developer Tools help developers create and manage applications built on AWS. Both Amazon and the AWS developer community have produced a large number of tools to assist developers optimize their productivity by making good use of AWS. You can browse through these tools here.



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AWS Management Console

Access and manage Amazon's growing suite of infrastructure web services through a simple and intuitive, web-based user interface. The AWS Management Console provides convenient management of your compute, storage, and other cloud resources through an easy-to-use graphical user interface.

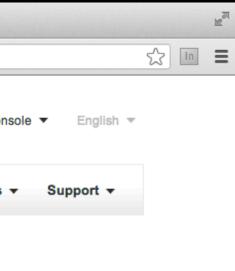
AWS Toolkit for Eclipse

The AWS Toolkit for Eclipse is a plug-in for the Eclipse Java IDE that makes it easier to develop, deploy, and debug Java applications using Amazon Web Services. The AWS Toolkit for Eclipse includes the AWS Explorer which enables you to interact with many AWS services from inside the Eclipse IDE. The toolkit has integrated support for AWS Elastic Beanstalk which makes it easy for you to deploy your Java application to AWS. The toolkit includes the latest version of the AWS SDK for Java.

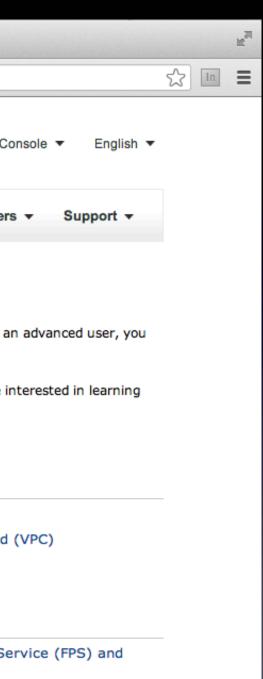
AWS Toolkit for Microsoft Visual Studio

The AWS Toolkit for Microsoft Visual Studio is a plug-in for the Visual Studio IDE that makes it easier to develop and deploy .NET applications that use Amazon Web Services. The AWS Toolkit for Visual Studio includes the AWS Explorer which enables you to interact with many AWS services from inside the Visual Studio IDE. The toolkit's support for CloudFormation makes it easy for you to deploy your .NET Framework application to AWS. The toolkit includes the latest version of the AWS SDK for .NET.

Featured Developer Tools



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amazon web services		Sign Up My Account / Co
AWS Products & Solutions		Documentation - Q Developers
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 Sample Code & Libraries Developer Centers 	Read the AWS documentation on Amazon Kindle.	Networking
Java	Getting Started with AWS	Amazon Route 53
JavaScript	Getting Started with AWS Free Usage Tier	Amazon Virtual Private Cloud (
 Mobile 	AWS Getting Started Guides for Common Use	AWS Direct Connect
PHPPython	Cases About AWS Account Billing	Elastic Load Balancing Payments & Billing
 Ruby 	Compute	Amazon Flexible Payments Ser
Windows & .NET	Amazon Elastic Compute Cloud (EC2)	Amazon Simple Pay
	Amazon Elastic MapReduce	Amazon DevPay
	Auto Scaling	Software Development Kits (SDKs)
	Content Delivery	AWS SDK for Android
	Amazon CloudFront	AWS SDK for iOS
	Database	AWS SDK for Java





www.windowsazure.com/en-us/develop/net/

Windows Azure

DOWNLOADS HOME PRICING DOCUMENTATION STORE COMMUNITY SUPPORT ACCOUNT overview services v developer centers v resources v

.NET DEVELOPER CENTER

Create highly available & scalable multi-tier applications

// Deliver great SaaS solutions with Windows Azure Cloud Services // Support automated deployments & elastic scale

tutorial: multi-tier app ⊙

Tutorials and Resources



Compute







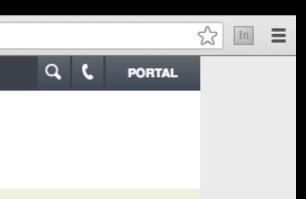
App Services

Quick Links

install the SDK SDK release notes get help on forums

Reference Docs

- Access Control / REST Blob Service / API / REST CDN Cloud Service Caching / API
- Cloud Service Diagnostics / API

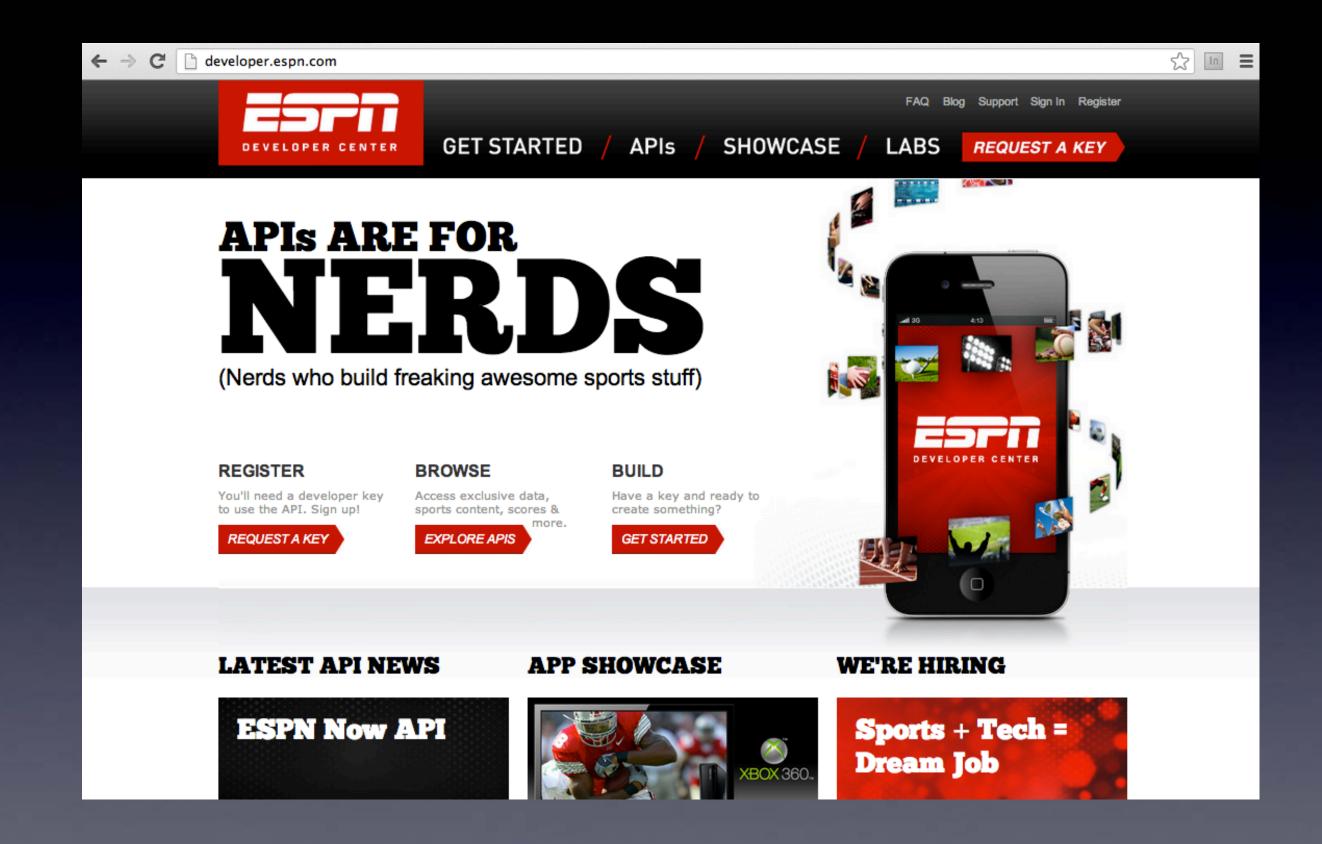


source code on GitHub



NOT JUST CLOUD PROVIDERS





The New York Times

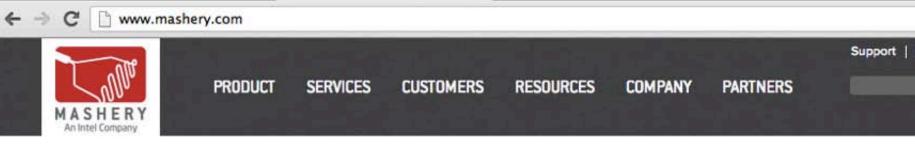
Developer Network^{BETA}

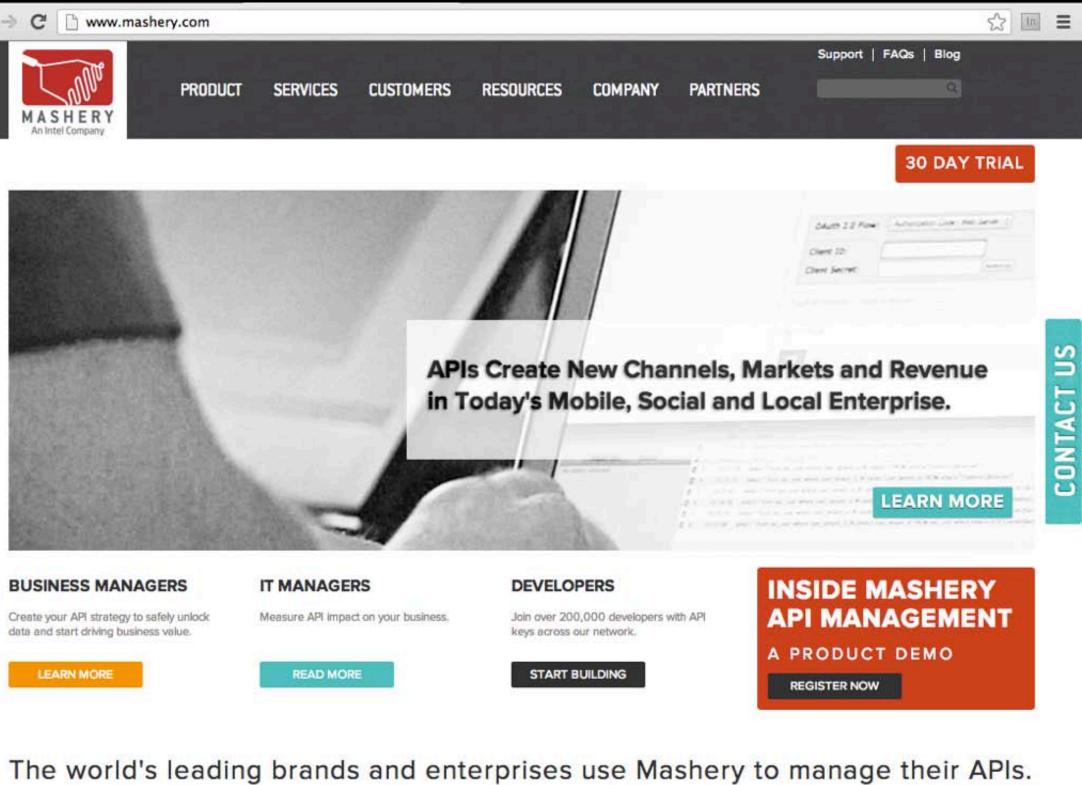
API Documentation and Tools

You already know that NYTimes.com is an unparalleled source of news and information. But now it's a premier source of data, too - why just read the news when you can hack it?

Overview	Getting Started	Go to Open Blog »	
APIs	The Times Developer Network is our API clearinghouse and community. Here's how to get started:	Blogroll	
Keys	, v	NOTABLE SITES	OPEN-
Tools	Request an API key Read the API documentation, FAQ and Terms of Use	Amazon Web Services The AWS blog	The A Found
Forum	· Use the API Tool to experiment without writing code	BBC Backstage The BBC's developer network	 Djang MySQ
Gallery	Browse the application gallery Connect with other developers in the forum	Daylife Google Code	- PHP - Ruby
API Console	To see your API keys and rate limits, visit the Keys page.	Mashable Programmable Web ReadWriteWeb	JOURN - Adrian Create
	News	Reuters Labs The Sunlight Foundation Yahoo Developer	 NICA The N Comp Report
	New York State Legislature API Deprecated		repor
	As of April 15, the New York State Legislature API is no longer supported. Learn more on the Open blog.		
	Article Search API: Full Service Restored	Get the Silverlight kit for N	ew York I
	Jan. 30: After an outage over the weekend, the Article Search API is now working properly. Thanks for your patience.	Microsoft* Silverli	aht
	API Logos and Branding Guide	JIVEIII	gnt
	Get Times API logos for your apps: review The New York Times Branding Guide and the Attribution Guidelines.		

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Amazon Web Services The AWS blog	- The Apache Software Foundation	
BBC Backstage The BBC's developer	 Django 	
network	MySQL	
- Daylife	· PHP	
Google Code	Ruby on Rails	
Mashable Programmable Web	JOURNALISM & TECHNOLOGY	
Programmable Web ReadWriteWeb	Adrian Holovaty Creator of Diango	
Reuters Labs	Creator of Django • NICAR	
· The Sunlight Foundation	The National Institute for Computer-Assisted	
 Yahoo Developer 	Reporting	
Get the Silverlight kit for Ne	w York Times APIs.	
Microsoft* Silverlig	ght	





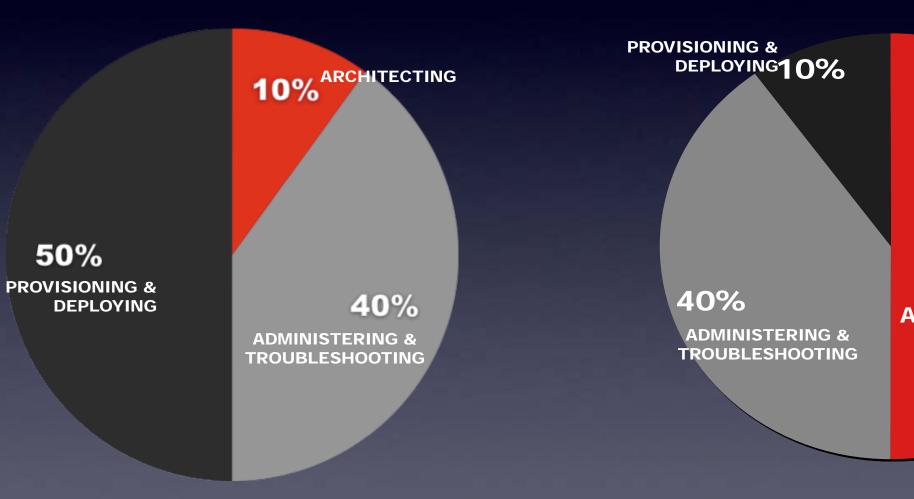
IMPLICATIONS FOR OPERATORS



The Evolution of Fanatical Support

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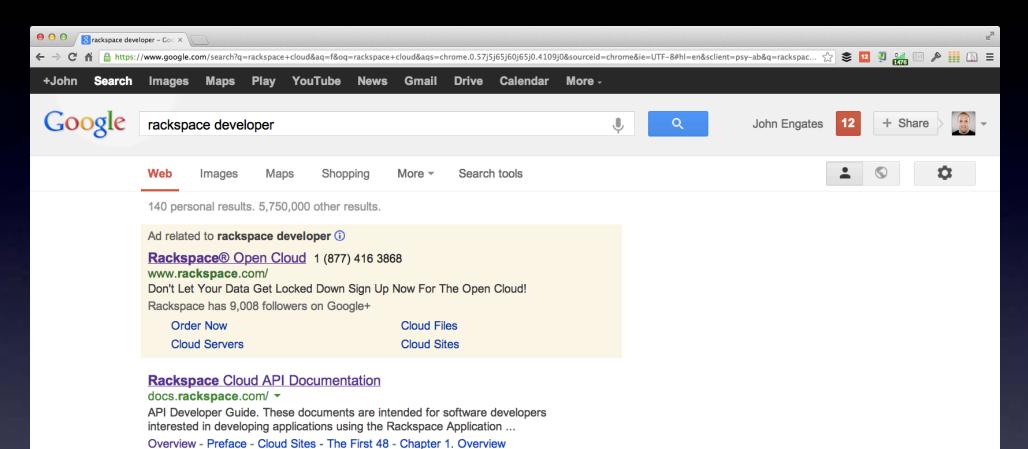
TO:



50%

ARCHITECTING

Developers Typically Start



Rackspace

www.rackspace.com/ -

More than 205000 businesses trust Rackspace, the open cloud company. ... Rackspace Launches Mobile Cloud Stacks to Accelerate Development of Mobile ... You, Lew Moorman, BK Box and 12 other people +1'd this

Rackspace Cloud Load Balancers Developer Guide - Rackspace ...

docs.**rackspace**.com/loadbalancers/api/v1.0/clb-devguide/.../index.html ▼ This document is intended for software developers interested in ...

Cloud Files[™] Developer Guide - Rackspace Cloud API ...

docs.**rackspace**.com/files/api/v1/cf-devguide/content/index.html This document is intended for software developers interested in ...

Preface - Next Generation Cloud Servers[™] Developer Guide - API v2 docs.rackspace.com/servers/api/v2/cs-devguide/.../ch_preface.html ▼ Some of these extensions are generally available through OpenStack while others implement Backspace-specific features to meet customers' expectations and

Developers Developers Developers



SDKs and APIs

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RACKSPACE DEVELOPERS			C	Get Rackspace Cloud
Community SDKs & Tools - Se	rvices OpenStack Suppo	ort - DevOps Bl	og	
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Rackspace is dedicated to op	en source and open com	munity. We w	ant to empower	and support
developers to rapidly innovate,	build applications on Op	penStack cloud	ds and to make	a difference in
	the communit	ty.		
Community	SDKs & Tools	Services	OpenStack	
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contribute back to the engineering & developer community. Join us on Github!

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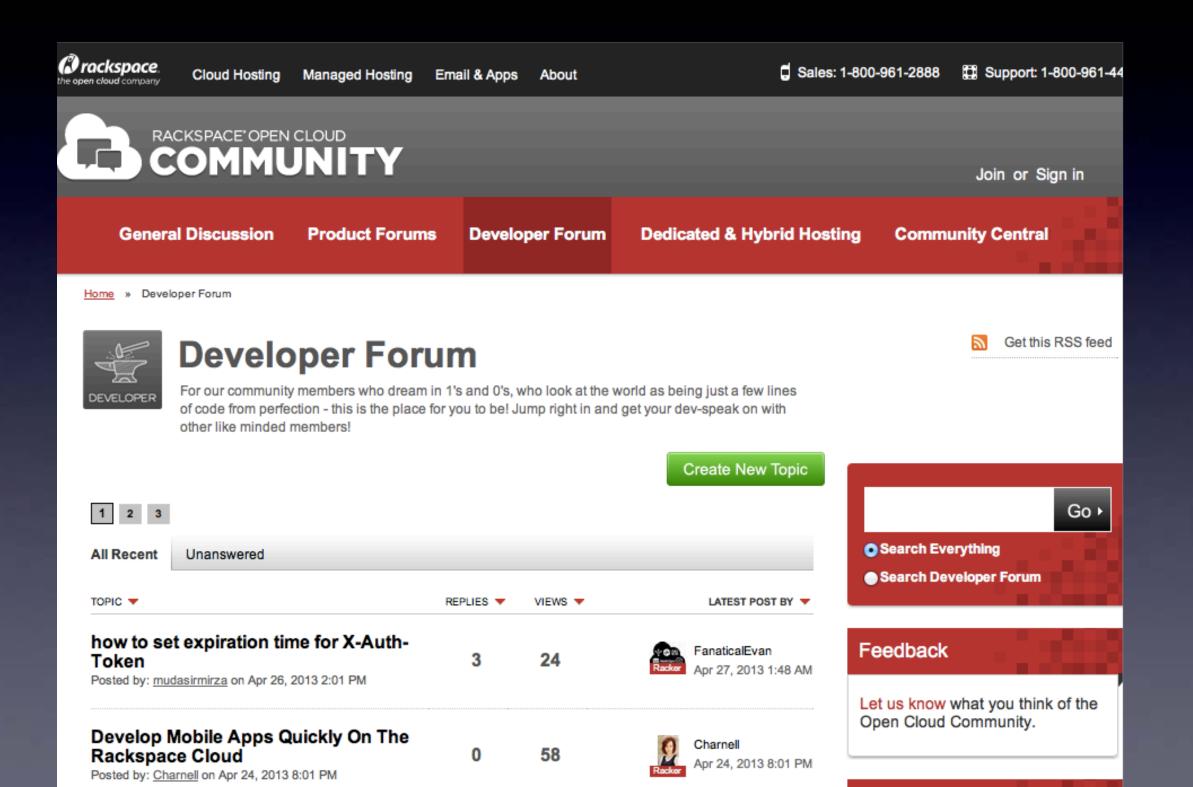
On GitHub

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Rackspace Hosting	jclouds-examples forked from jclouds/jclouds-examples examples of how to use jclouds	Java 🚖 0				
 San Antonio, TX http://developer.rackspace.c 	Last updated 7 hours ago					
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Community



DevOps Blog

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Orackspace Developer Center Developer Community Launch Guide Events >	
API Information Reference Architecture SDKs System Status	Search
	Empowering
MAR 14TH, 2013	successfully co on the Racksp
Vagrant Now Supports Rackspace Open Cloud by Tomaz Muraus	Recent Po
Vagrant	Thoughts from
f i n R +1	Getting started using Hortonw
We are happy to announce support for Rackspace Open Cloud in <u>Vagrant 1.1</u> !	Cloud Monitor PagerDuty Inte
Vagrant is a Ruby-based tool for building and deploying virtualized development environments.	Displaying prep syntax highligh
Developers love it because it allows them to easily create and deploy reproducible development environments.	Love, Magic, &
With Vagrant 1.1 and the new Rackspace driver you aren't limited to your local machine and	GitHub R
VirtualBox anymore. You can now also run your development machines on Rackspace Open	iclouds

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jclouds

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ng developers to y consume and build (space <u>Open Cloud</u>

Posts

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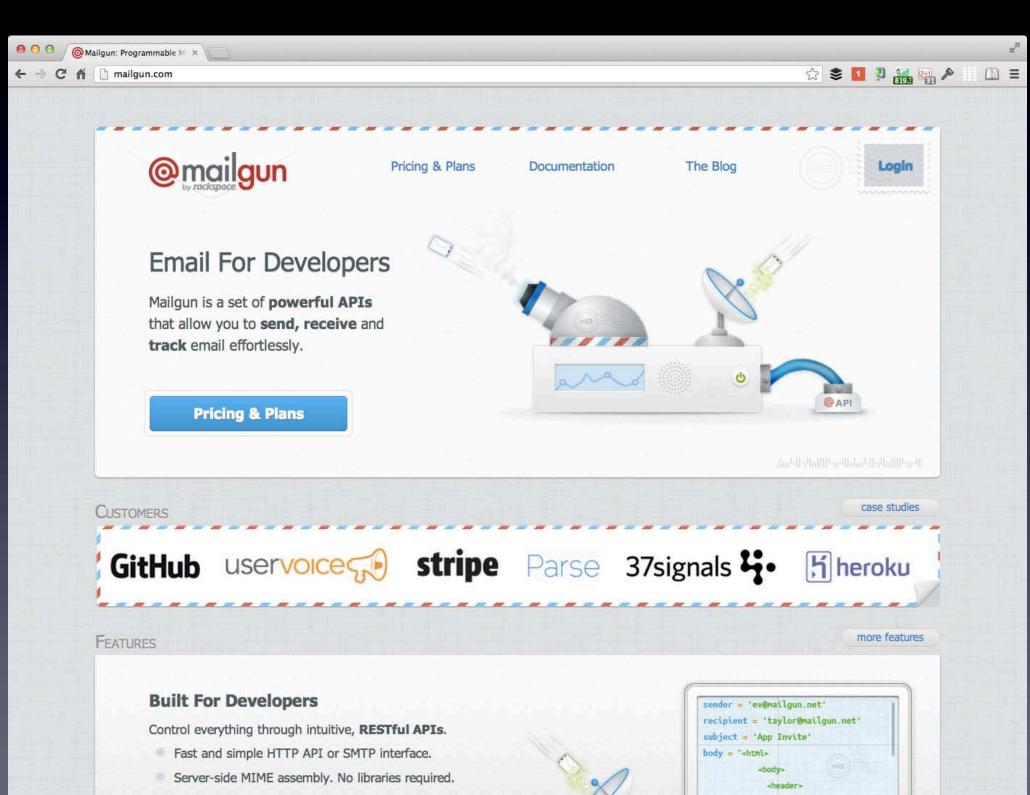
, & APIs

Repos

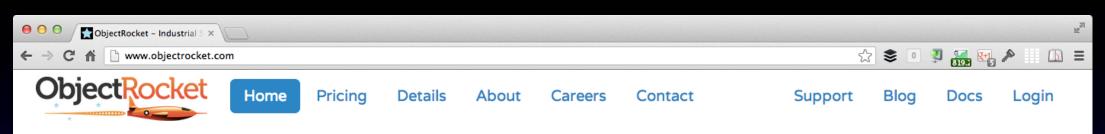
DEVELOPER TOOLS



Mailgun



ObjectRocket



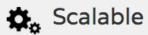
Say Hello to Industrial Strength MongoDB

Built from the ground up, ObjectRocket is the premium MongoDB database-as-a-service (DBaaS). The only solution that is by default highly available, automatically sharded and unbelievably fast.

Plans start at \$29/mo for pure SSD shards. First 30 days are free!

Start Your Free Trial





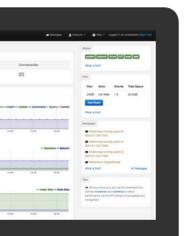
Most DBaaS solutions are

ObjectRocket is the only



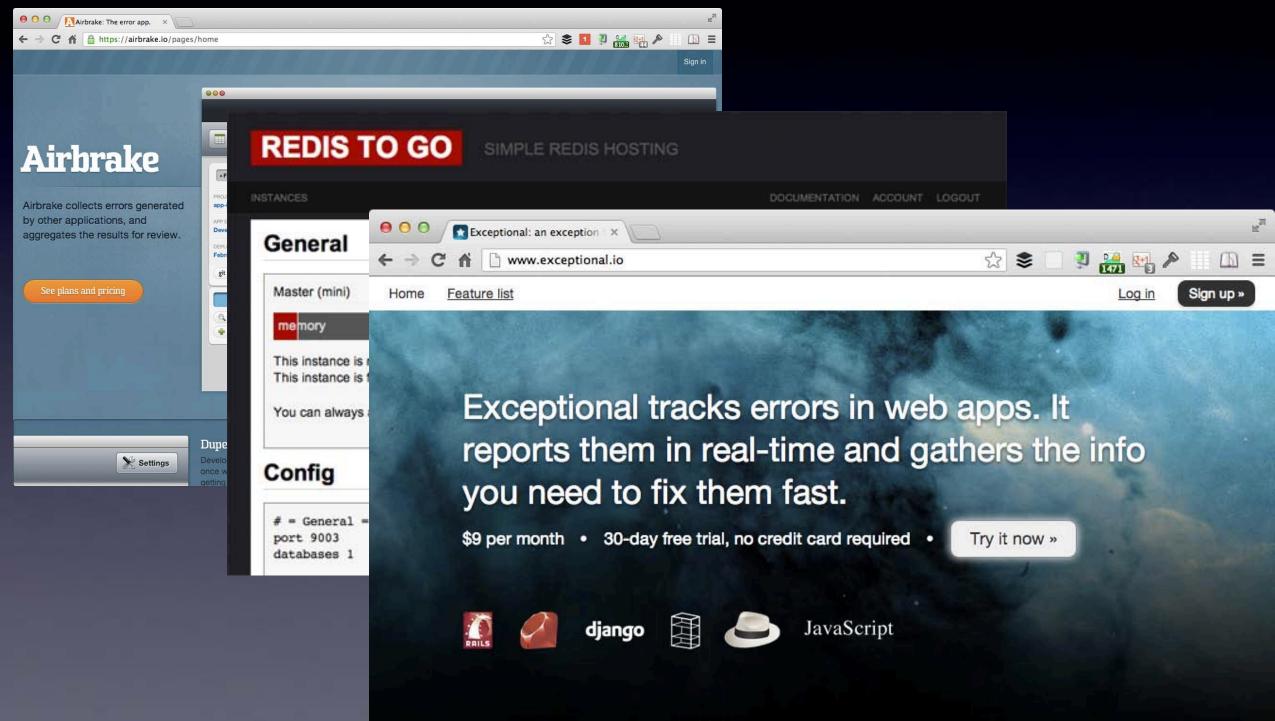


ObjectRocket has been



Performance

Exceptional Cloud Services

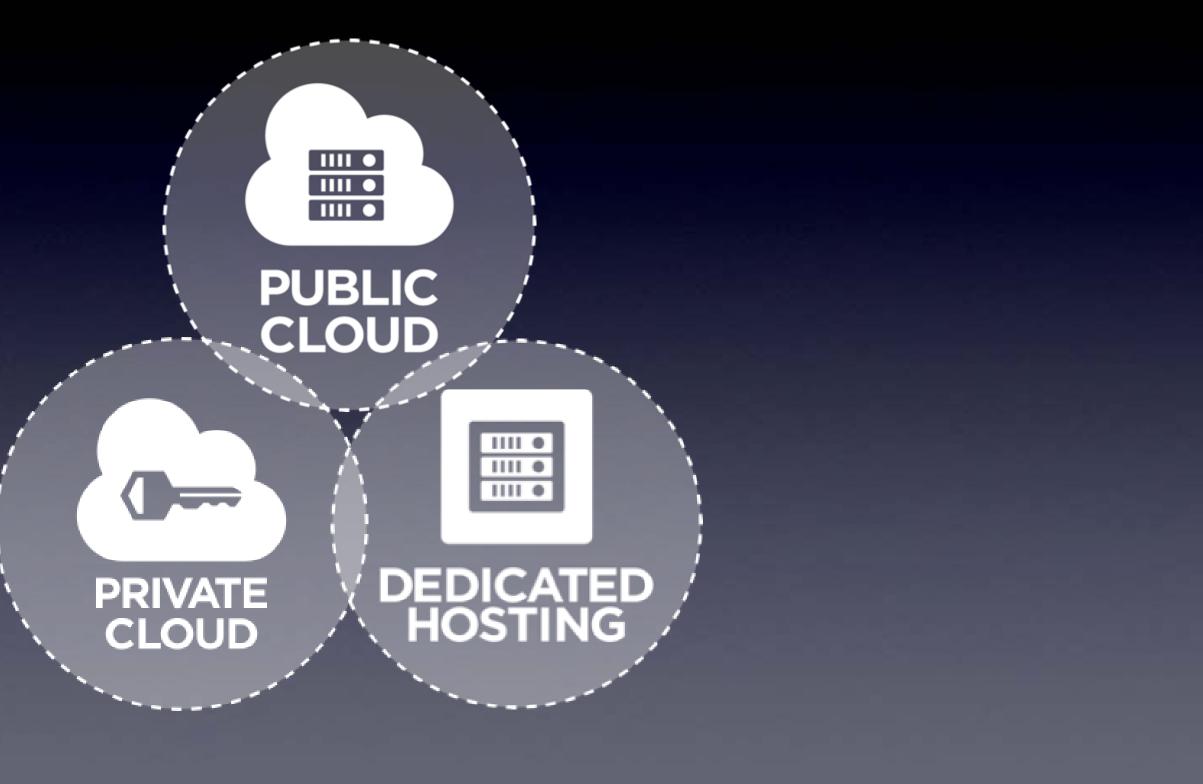


HYBRID CLOUD GIVES DEVELOPERS THE MOST POWER

HYBRID CLOUD



HYBRID CLOUD



WHY?

"2013: Year of the Hybrid Cloud"

"Savvy IT organizations are devising a hybrid IT strategy that is built on internal and external clouds" Gartner 2013 Cloud Planning Guide

"Three quarters of firms using IaaS today use or plan to use a hybrid cloud strategy" —Forrester Research, 2013 FORRESTER[®]

"I'm convinced 2013 is going to be the year of the hybrid cloud infrastructure." — Tracy Corbo, principal research analyst at Enterprise Management Associates.

NETWORKWORLD





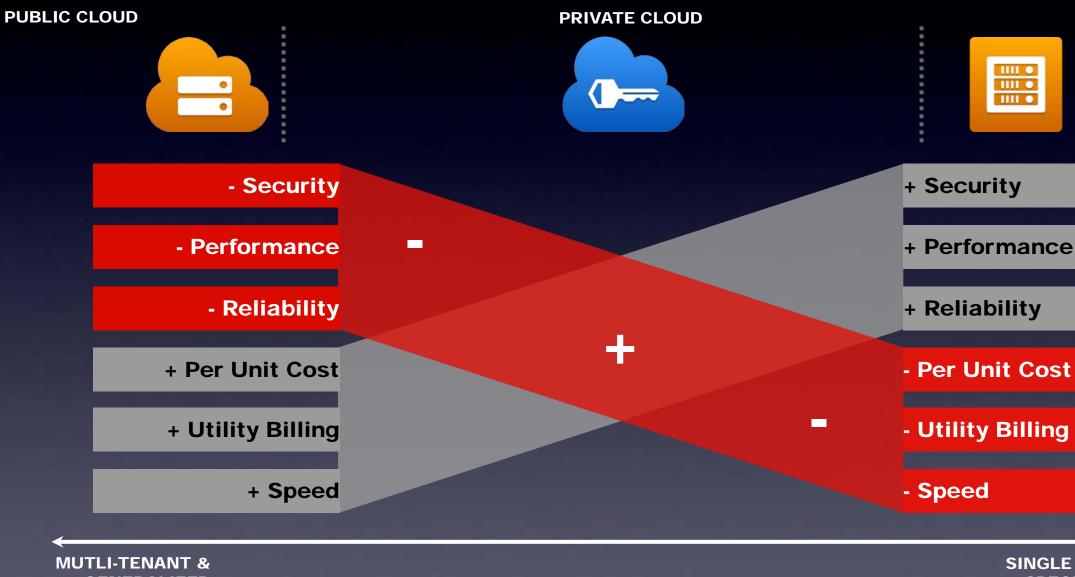
3 MYTHS

3 MYTHS OF PUBLIC CLOUD

- All apps run best in the public cloud
- It's always cheaper to run on public cloud
- Everything can be automated in a public cloud/(So who needs support?)



HYBRID CLOUD: THE RIGHT FIT FOR ENTERPRISE



GENERALIZED

Lowest Total Cost? Depends on your needs.

DEDICATED

SINGLE TENANT & SPECIALIZED



HYBRID CLOUD: THE RIGHT FIT FOR ENTERPRISE



On-Premise Data Center

PROVISIONING	months
CONTROL	
FLEXIBILITY	*
ELASTICITY	<►
SECURITY	
EXPENSE	\$\$\$\$\$ (capital)
PLANNING	
GEOS	*
PERFORMANCE	$\star \star \star \star \star$



Hosting



CONTROL





HYBRID CLOUD: THE RIGHT FIT FOR ENTERPRISE

	On-Premise Data Center	On-Premise Private Cloud	Dedicated Hosting	Hosted Priv Cloud
PROVISIONING	months	months	days	days
CONTROL	\$\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	\$\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	÷Č;÷Č;÷Č;	
FLEXIBILITY	*	****	***	$\star \star \star$
ELASTICITY			+	
SECURITY				
EXPENSE	\$\$\$\$ (capital)	\$\$\$ (capital)	\$ (operating)	\$ (operating
PLANNING		宜宜宜	Î	Ê
GEOS	*	*	$\star\star\star\star\star$	$\star\star\star\star$
PERFORMANCE	*****	*****	****	***

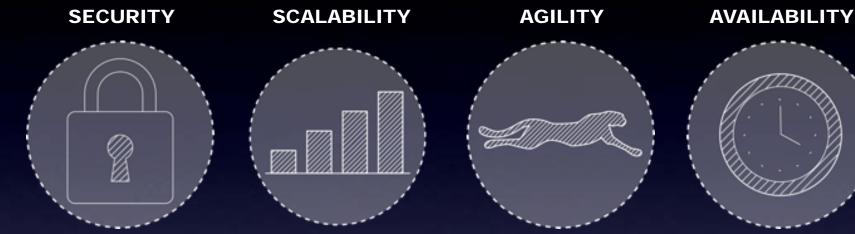
CONTROL







How do you meet all these needs?



HYBRID CLOUD











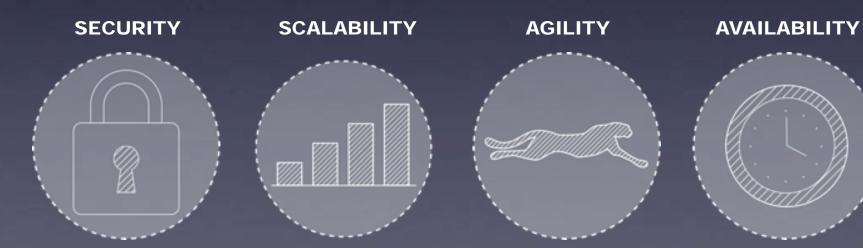






Every app = unique needs



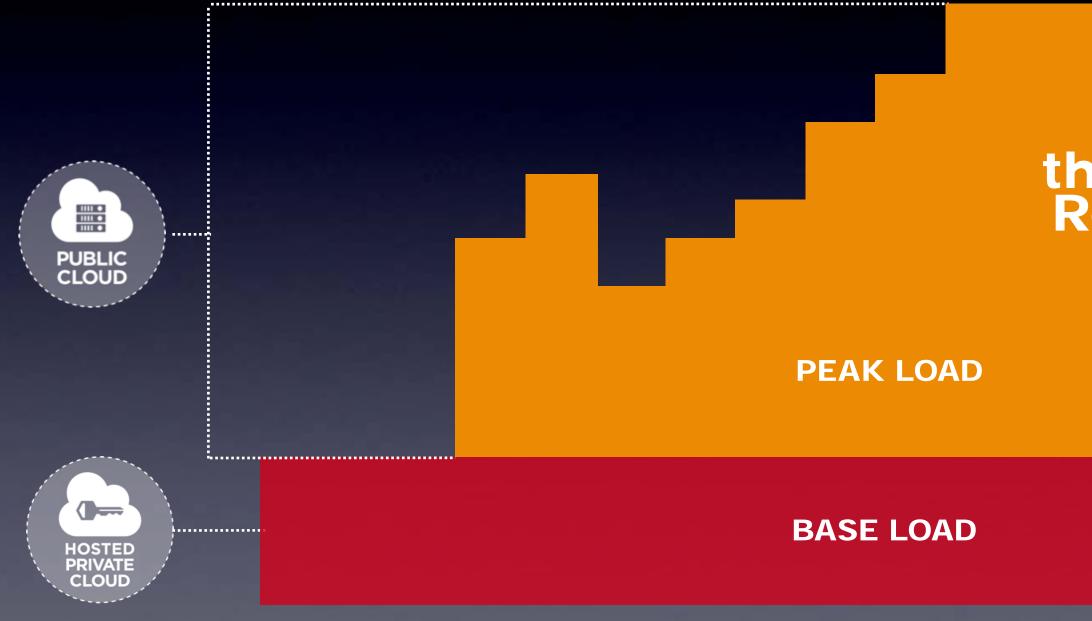








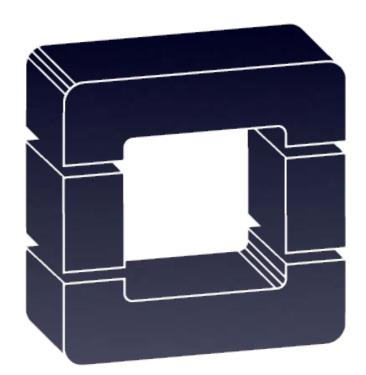
Hybrid Cloud



Own the base. Rent the peak.

Open Enables Hybrid

POWERED BY



openstack

Companies turning their developers loose on OpenStack

POWERED BY



Comcast
Bloomberg
Best Buy
PayPal
CERN
HubSpot

Comcast XFINITY X1 runs on OpenStack



xfinity.comcast.net

GUARDRAILS

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CASE STUDIES



CASE STUDY







SITUATION

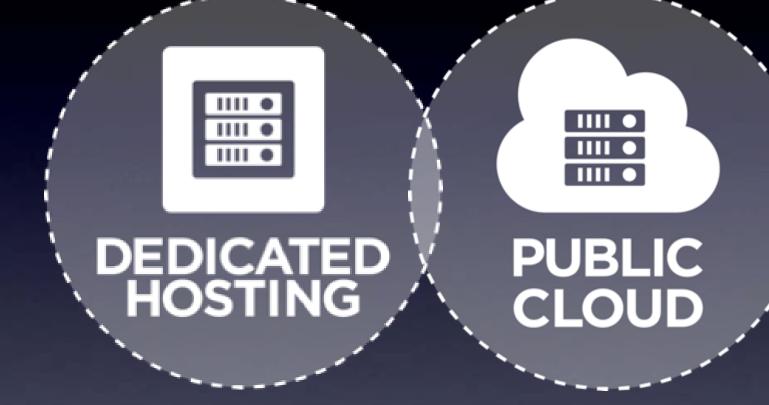
TAYLOR SWIFT

- Web-based music video and entertainment service
- 68 million visitors/month
- 3 billion video streams/month

CHALLENGES

• Storage and transfer of large media files





SOLUTION

- Hybrid solution
- RackConnect for management of large media files
- Dedicated environment
- Custom servers
- Managed storage
- Scalable compute in the cloud for CPU-intensive transcoding

CASE STUDY:

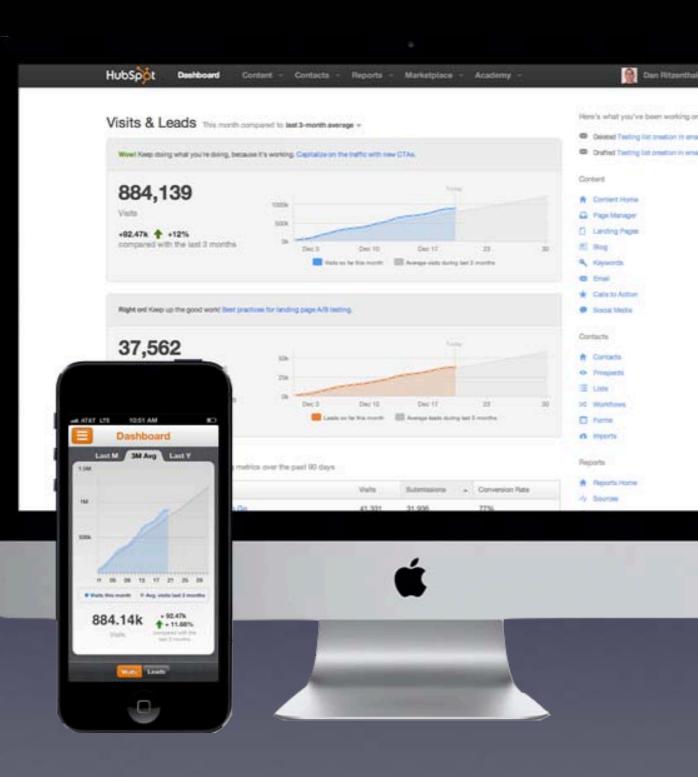


SITUATION

8,000 customers / 56 countries
Continuous deploy and provision
75 updates/day
Idea to production=20 mins.
Ran only Public Cloud

CHALLENGES

More control
More reliability (Goal=99.99%)
Image parity
Determine own destiny







SOLUTION

- Hosted Rackspace Private Cloud
- Dedicated (Bare Metal)
- Hybrid Cloud



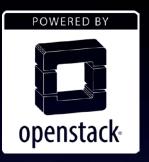




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-9 Diablo 108 Cores 0.9TB RAM

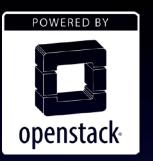




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11/2011

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 108 Cores
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RESULTS

EFFICIENCY IN THE SAME WORKLOADS

IMAGE PARITY





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Developers Rule Hybrid Cloud Gives Developers the Most Power and Freedom Developers with Power Drive Innovation



Ignite Innovation by turning your Developers loose on Hybrid Cloud

JARET CHILES CLOUD SOLUTIONS ARCHITECT, ENTERPRISE CLOUD SOLUTIONS

TERRENCE DEJAGER SENIOR MANAGER, ENTERPRISE CLOUD SOLUTIONS

JUNE, 2013



