

Google App Engine Overview



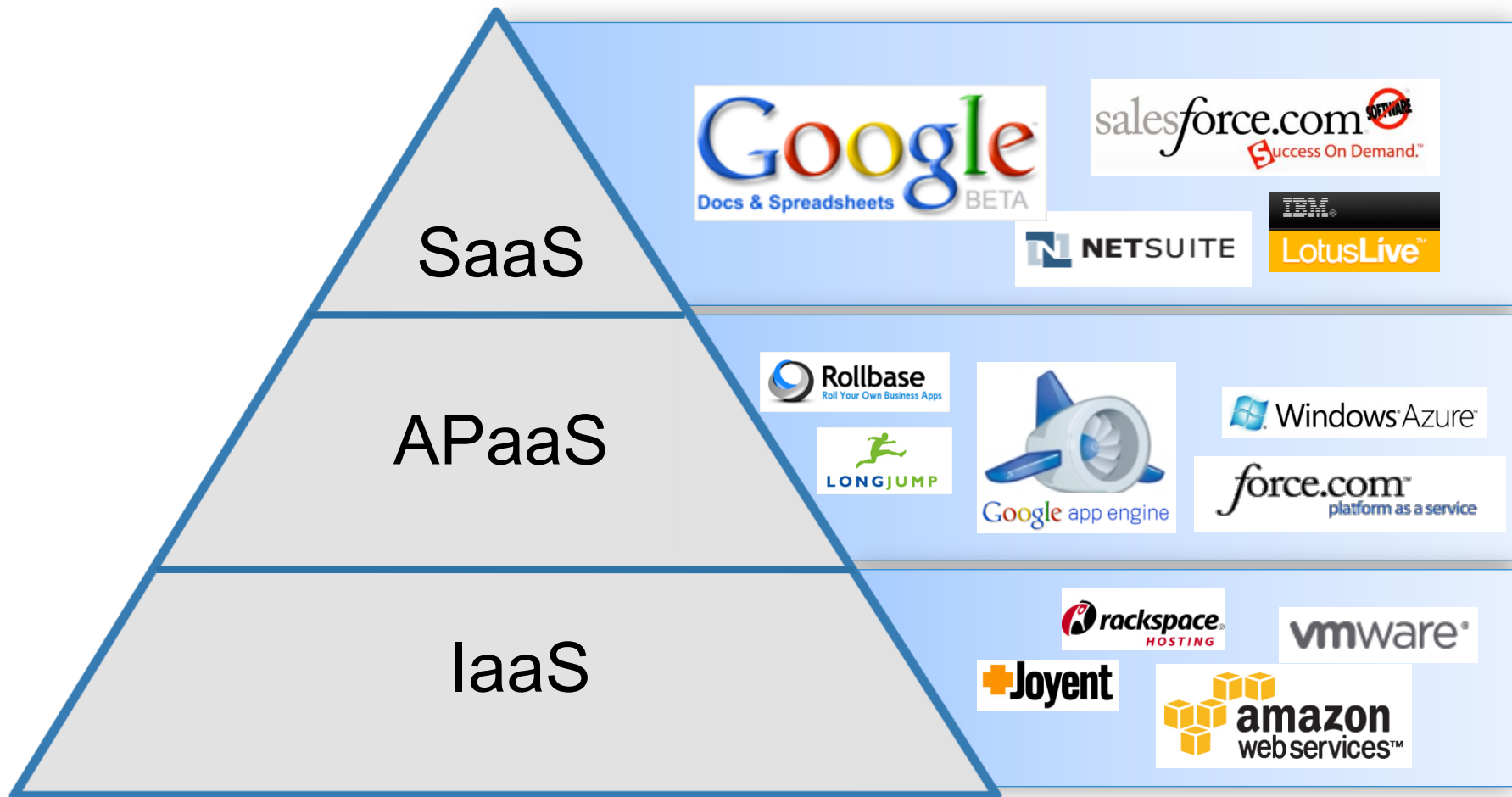
Chris Schalk
Developer Advocate

<http://twitter.com/cschalk>

**What is
cloud
computing?**

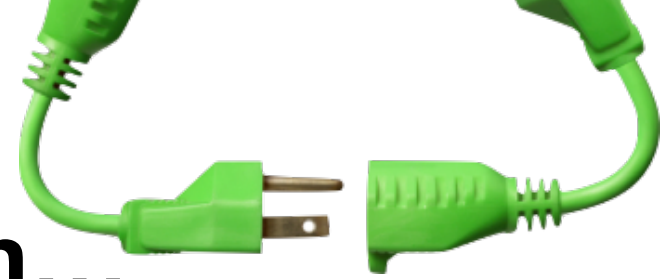


Cloud Computing Defined



Source: Gartner AADI Summit Dec 2009

laaS value proposition...



APaaS value proposition...



Google App Engine

- Easy to build
- Easy to maintain
- Easy to scale



By the numbers

250M+
260,000+

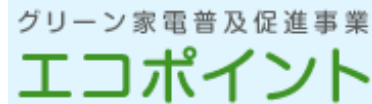
daily
DevOps
Pageviews

In a word... via Wordle



Word source: http://en.wikipedia.org/wiki/App_Engine

Some App Engine Partners



Socialwok

[about](#) | [contact us](#) [Login to your Socialwok](#)

socialwok

[Home](#) [Video Tour](#) [Enterprise](#) [Blog](#) [Realtime News](#)

The missing Social App for Google Apps

Your own feed based social network in Google Apps to create and share links, Google Calendar, Docs and more...

Login using Google Apps enter your email or domain **Login**

TechCrunch50 2009 Demo Pit Winner

App Engine @

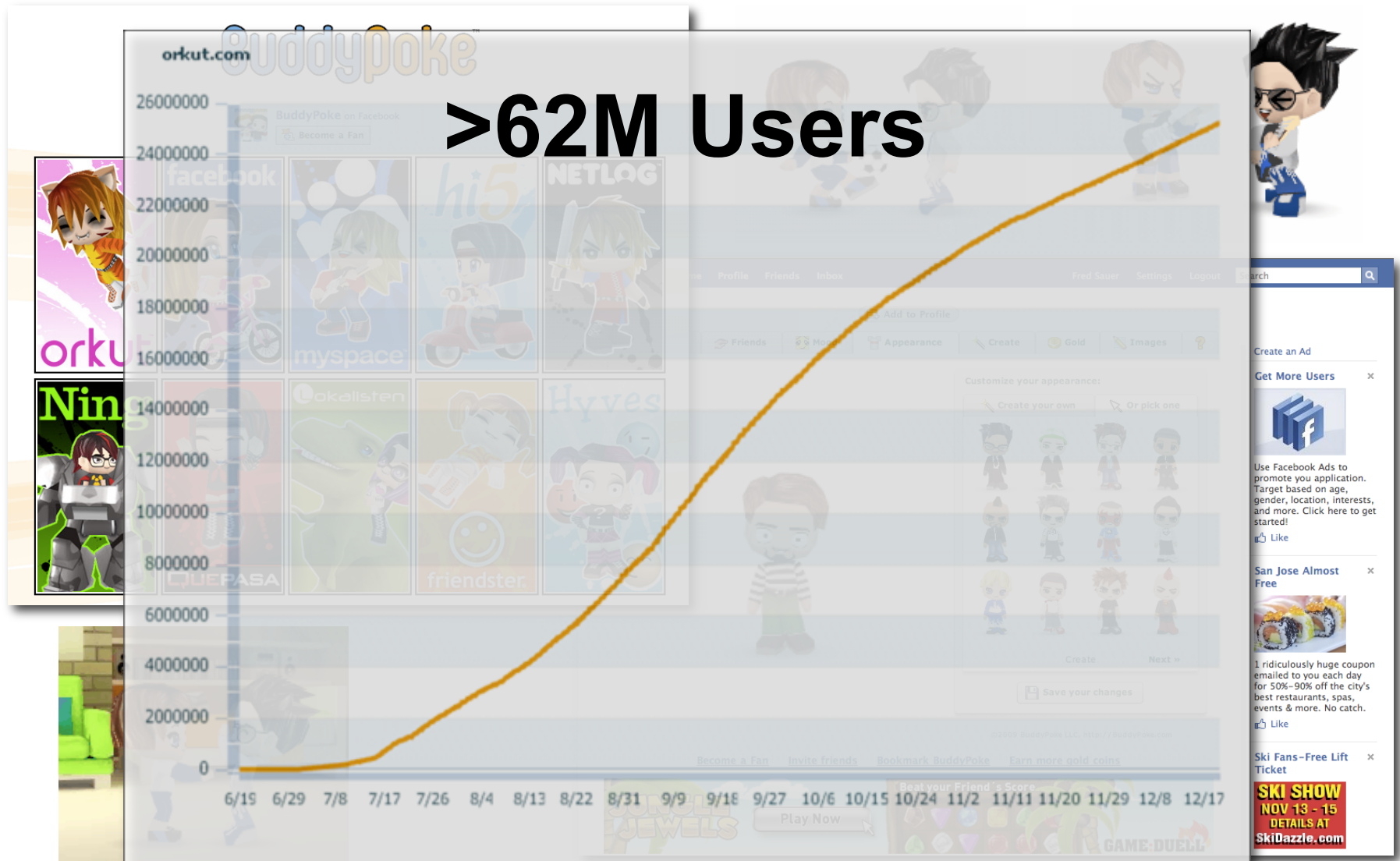


The collage displays four distinct web applications:

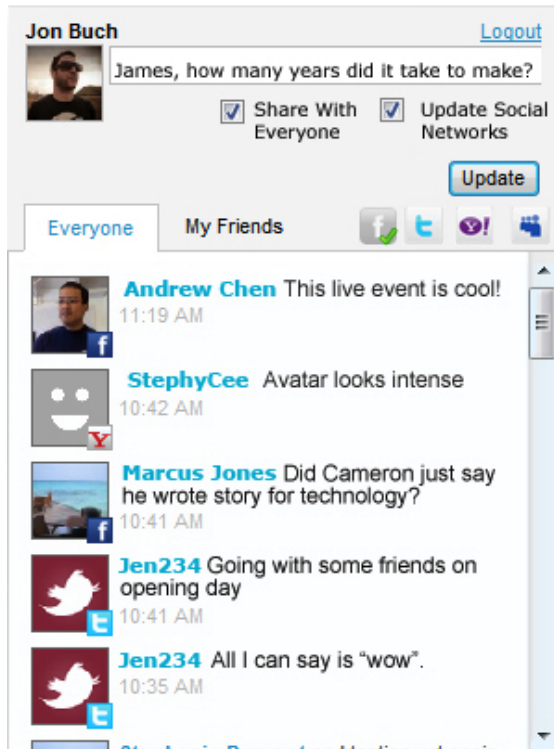
- GIFTAG:** A website with a blue header, a sign-up form (Email: fredsa@google.com), and a list of items under 'Most Recent Items'.
- TWELPFORCE:** A Twitter profile page for 'TWELPFORCE' with a bio, tweets, and a 'Join today!' button.
- skcd store:** A store listing items with images and descriptions.
- Nextuesday:** A widget page with a video player and an embed code box.

Social networking at scale

BuddyPoke™

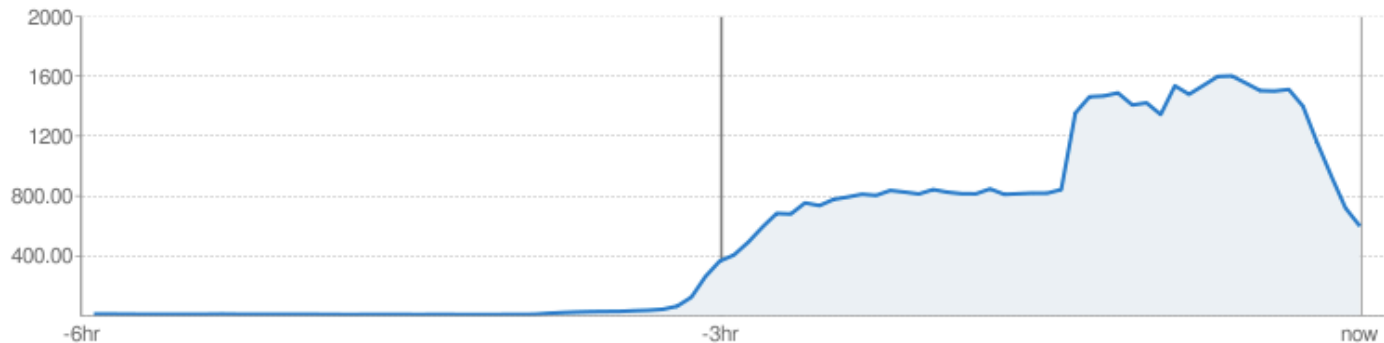


gigya Socialize



gigya Socialize

Flexible Scalability



"Although we typically host all our services in-house, on our own infrastructure, we felt that GAE would be a better fit for the live chat feature because of its unique traffic pattern, which is characterized by very low traffic most of the time with very high bursts during high profile events."

Raviv Pavel, Gigya VP of Research and Development

<http://googleappengine.blogspot.com/2010/02/scalability-means-flexibility.html#links>

Why App Engine?

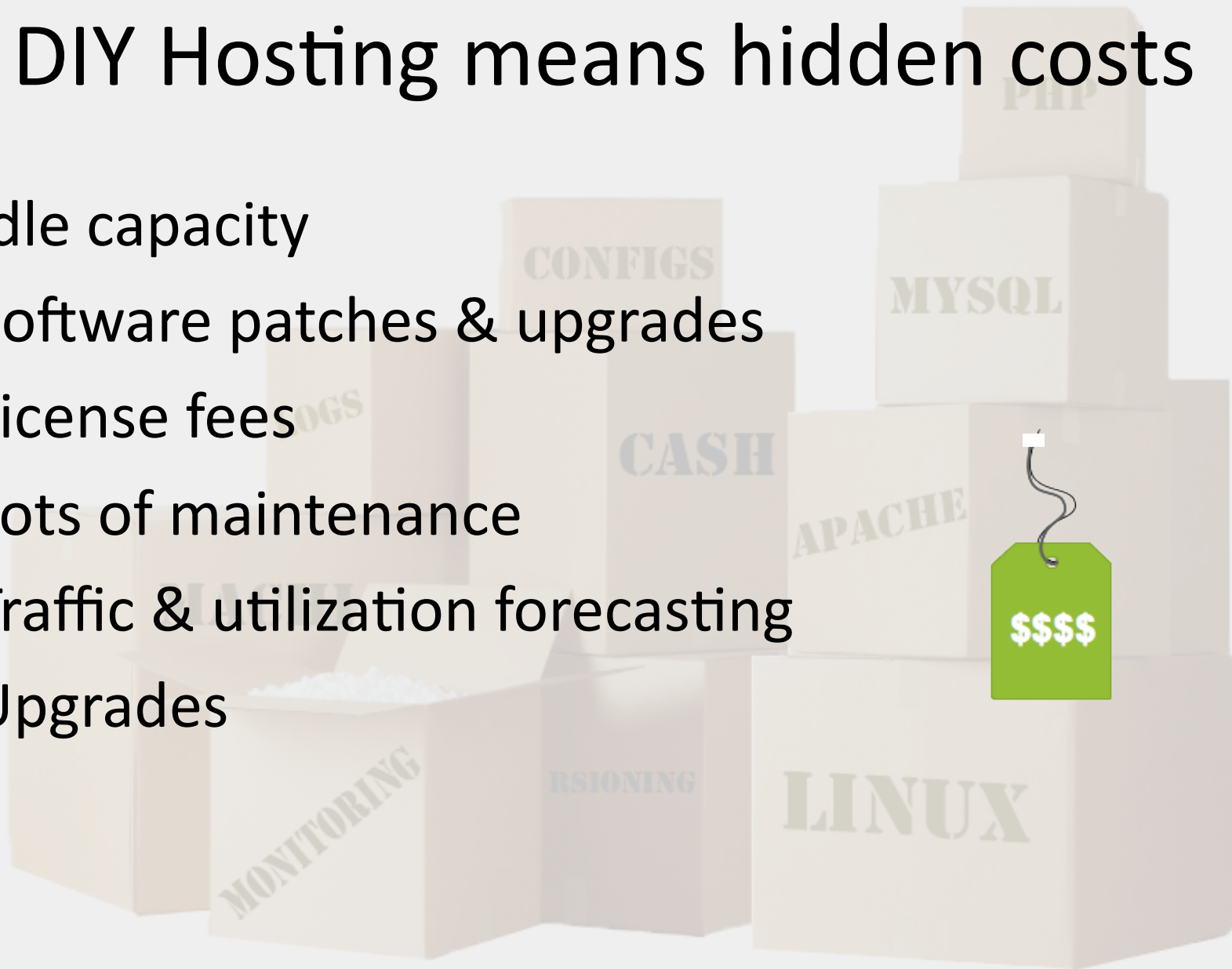
Managing Everything is Hard





DIY Hosting means hidden costs

- Idle capacity
- Software patches & upgrades
- License fees
- Lots of maintenance
- Traffic & utilization forecasting
- Upgrades



Cloud development in a box

SDK & “The Cloud”

Hardware

Networking

Operating system

Application runtime

Java, Python

Static file serving

Services

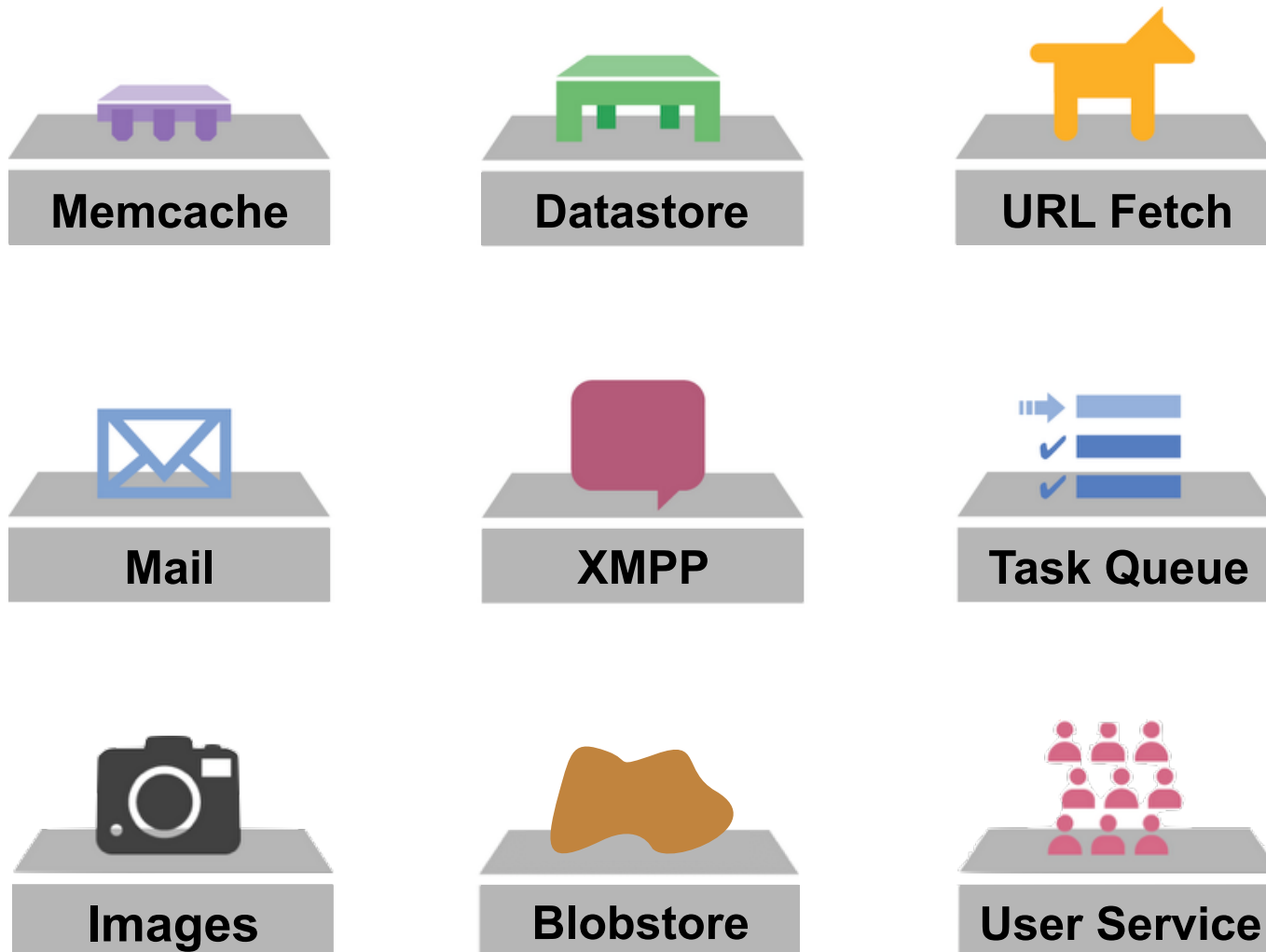
Fault tolerance

Load balancing

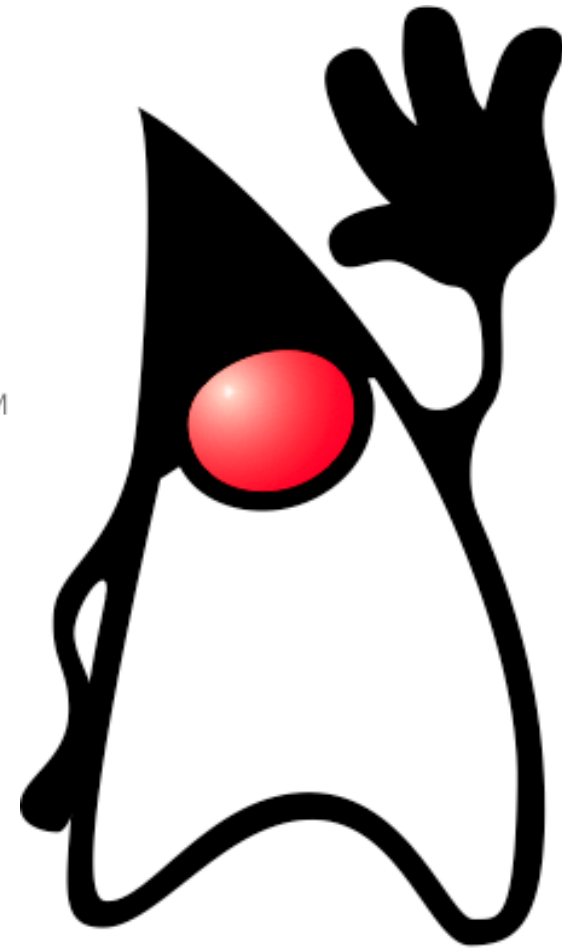


App Engine Details

Specialized Services

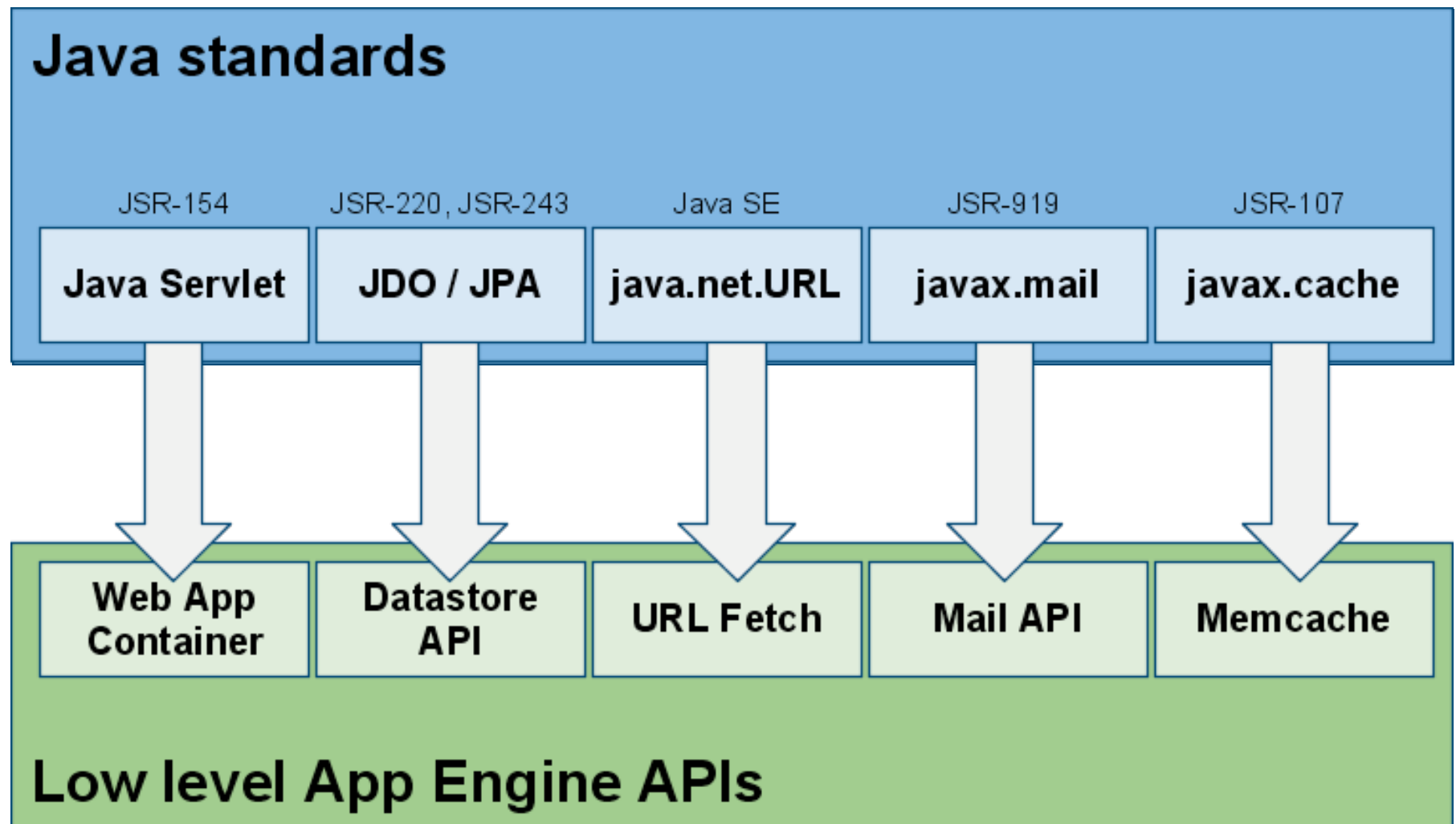


Language runtimes



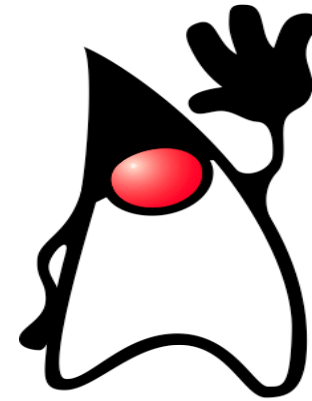
Duke, the Java mascot
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Ensuring Portability



Extended Language support through JVM

- Java
- Scala
- JRuby (Ruby)
- Groovy
- Quercus (PHP)
- Rhino (JavaScript)
- Jython (Python)



Duke, the Java mascot
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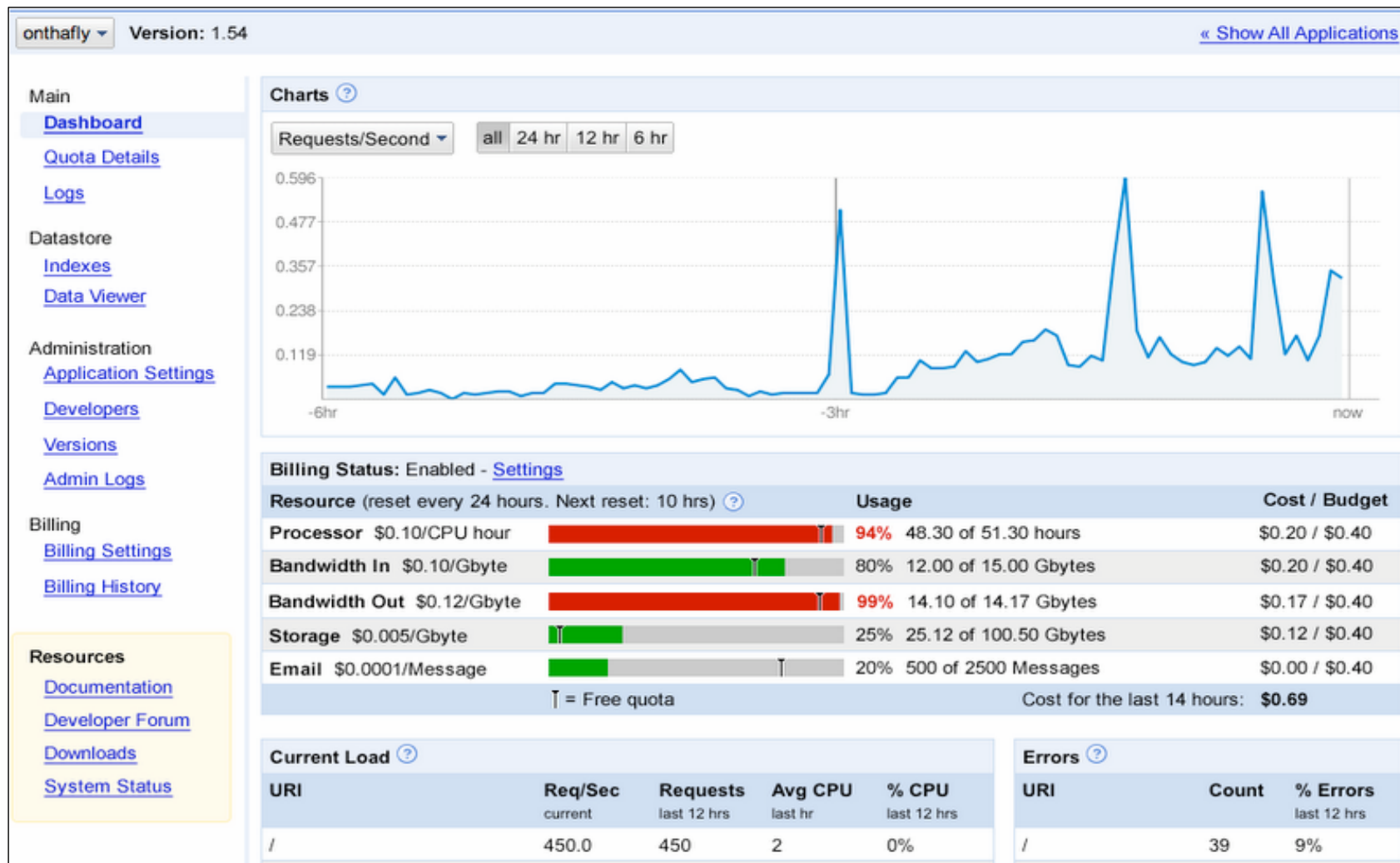
Always free to get started

- ~5M pageviews/month
- 6.5 CPU hrs/day
- 1 GB storage
- 650K URL Fetch calls/day
- 2,000 recipients emailed
- 1 GB/day bandwidth
- 100,000 tasks enqueued
- 650K XMPP messages/day

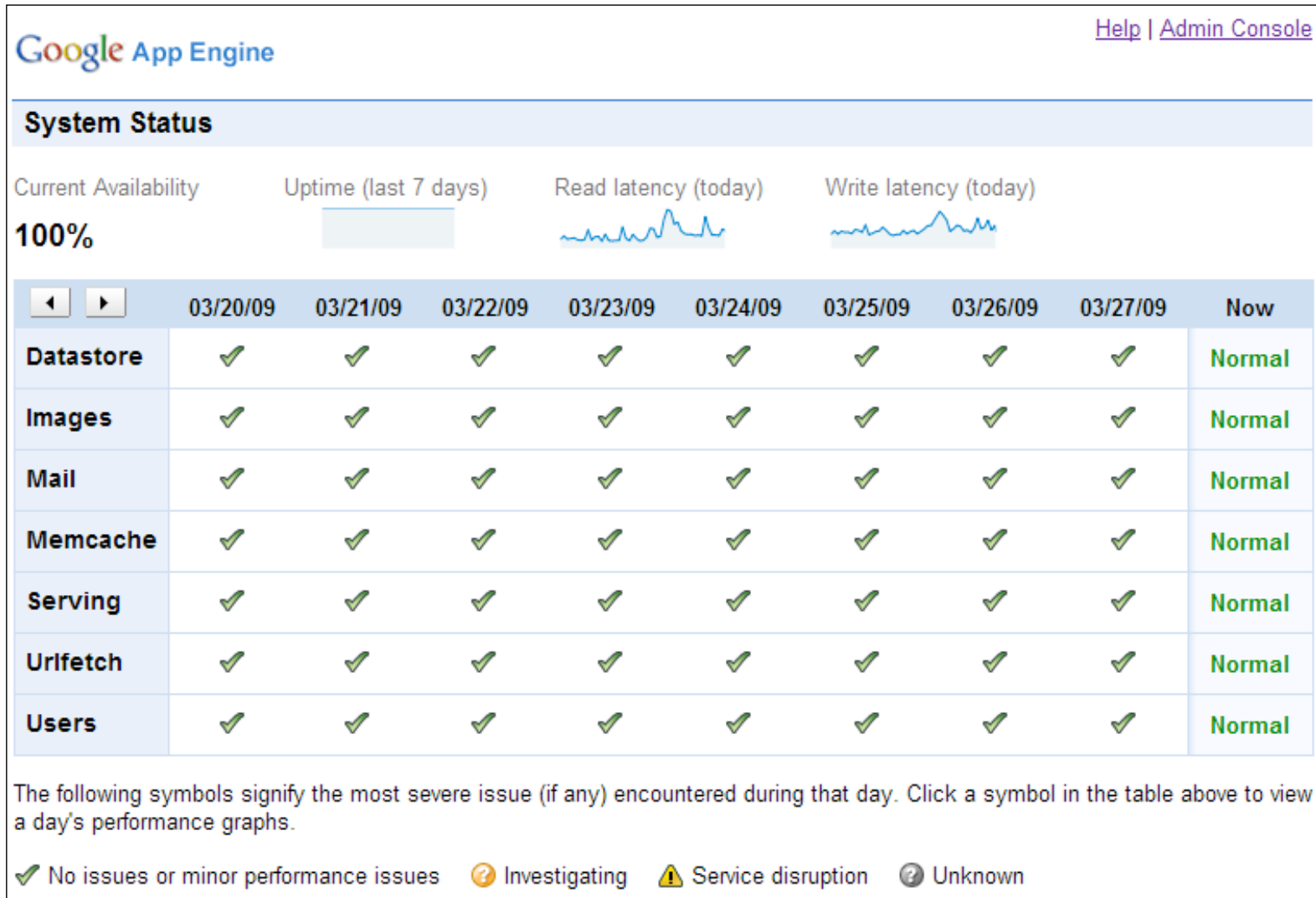


Application Platform Management

App Engine Dashboard



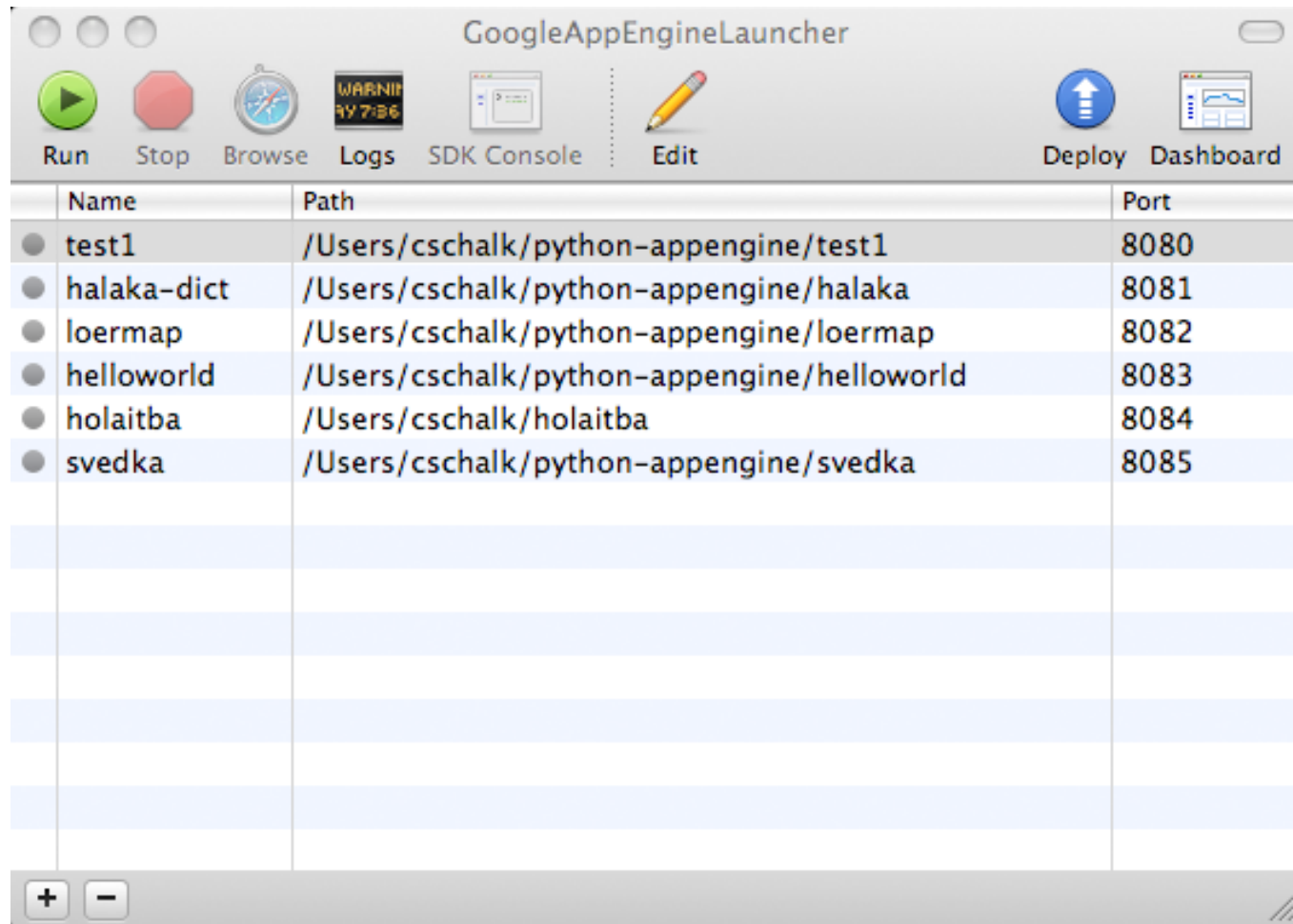
App Engine Health History



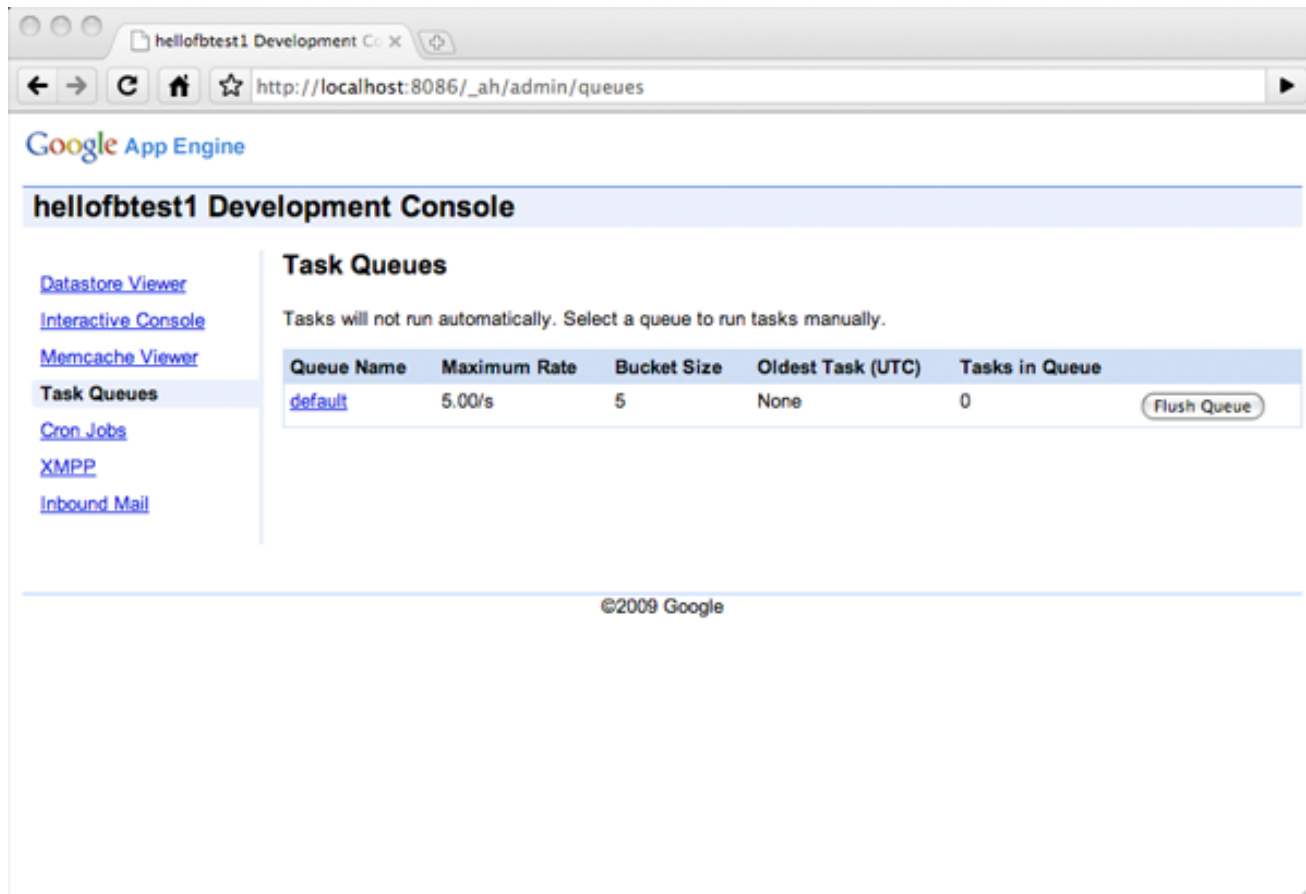


Development Tools for App Engine

Google App Engine Launcher



SDK Console



The screenshot shows a web browser window with the address bar displaying `http://localhost:8086/_ah/admin/queues`. The page title is "hellofbtest1 Development Console". On the left sidebar, there are links for "Datastore Viewer", "Interactive Console", "Memcache Viewer", "Task Queues" (which is highlighted), "Cron Jobs", "XMPP", and "Inbound Mail". The main content area is titled "Task Queues" and contains the text "Tasks will not run automatically. Select a queue to run tasks manually." Below this is a table with the following data:

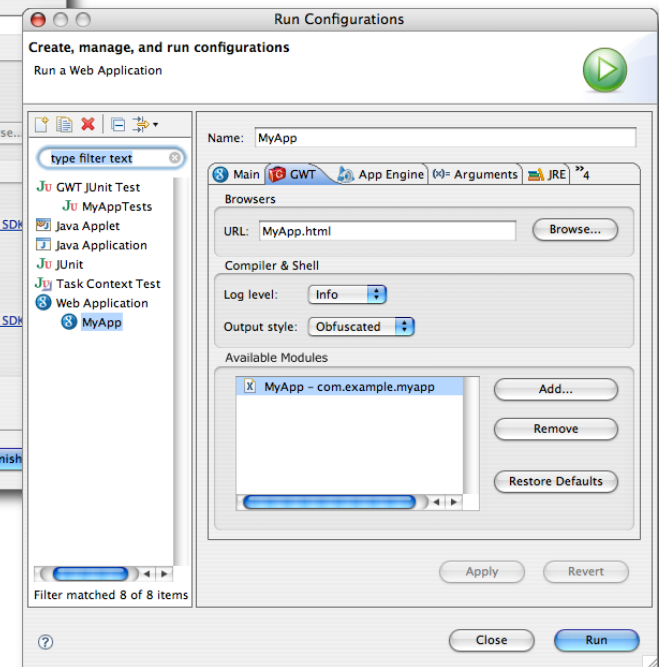
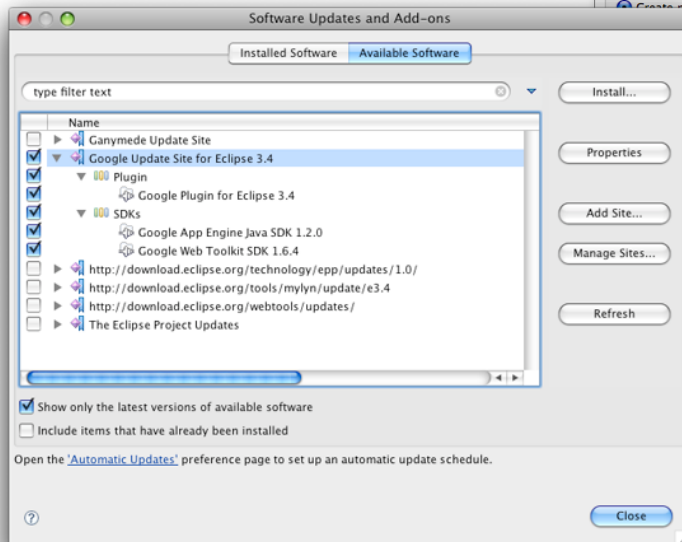
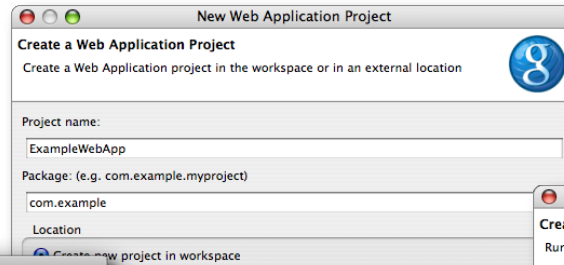
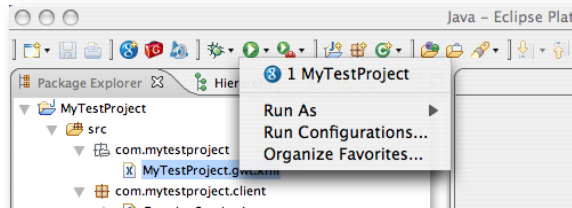
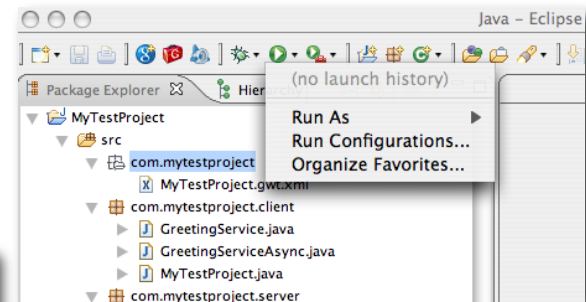
Queue Name	Maximum Rate	Bucket Size	Oldest Task (UTC)	Tasks in Queue
default	5.00/s	5	None	0

To the right of the "Tasks in Queue" column for the "default" queue is a button labeled "Flush Queue". At the bottom of the page, there is a copyright notice: "©2009 Google".

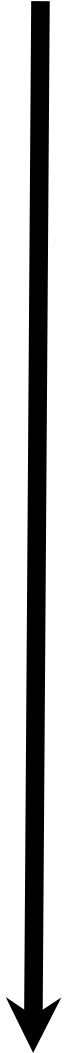
Google Plugin for Eclipse



```
private static native void jsniMethod(boolean sayHi)/*-{  
    // Display a pop-up  
    if (sayHi) {  
        var name = this.@com.example.myapp.client.MyApp::name;  
        window.alert('Hello, ' + name);  
    }  
}-*/;
```



20+ months in review



Apr 2008	Python launch
May 2008	Memcache, Images API
Jul 2008	Logs export
Aug 2008	Batch write/delete
Oct 2008	HTTPS support
Dec 2008	Status dashboard, quota details
Feb 2009	Billing, larger files
Apr 2009	Java launch , DB import, cron support, SDC
May 2009	Key-only queries
Jun 2009	Task queues
Aug 2009	Kindless queries
Sep 2009	XMPP
Oct 2009	Incoming Email
Dec 2009	Blobstore
Feb 2010	Datastore cursors

Happy Birthday App Engine!

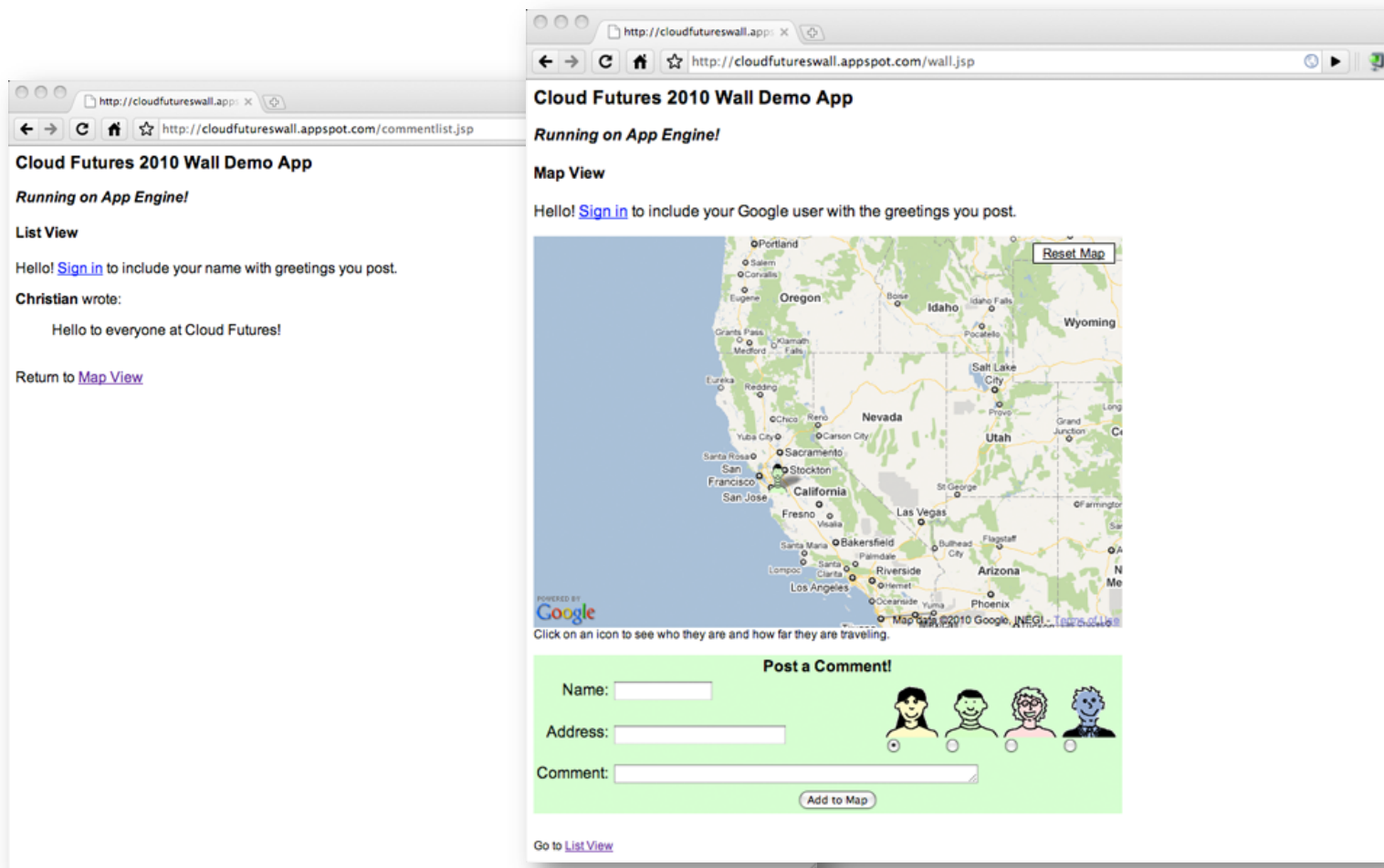


- Two years old as of Wed April 7th!
- Vibrant community of over 250k developers
- Over 250 million pageviews
- <http://googleappengine.blogspot.com/2010/04/happy-birthday.html>

Demos!

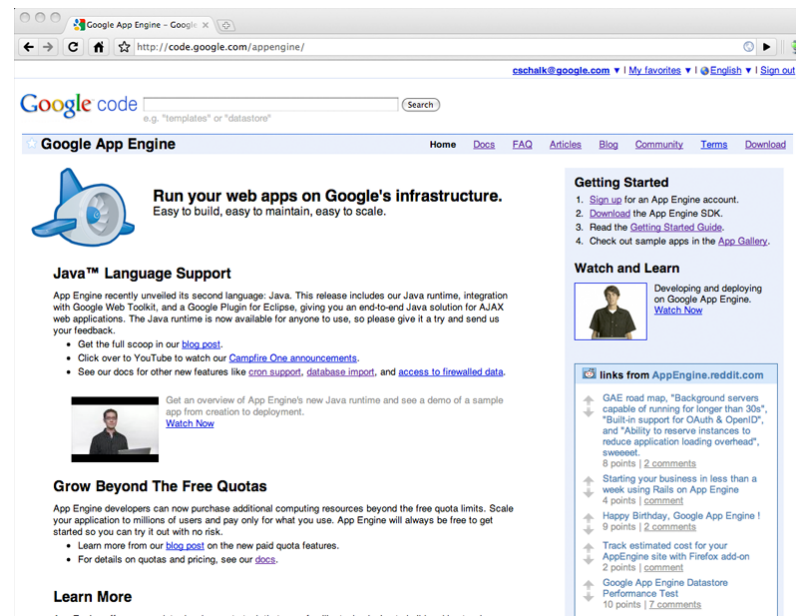
- Dashboard
- AppLauncher, Eclipse Plugin
- “Cloud Futures 2010 Wall” Demo App
- Codelab details
 - bit.ly/gcodelabs
 - See: “App Engine”

Cloud Futures 2010 Wall demo App



More Info on App Engine:

- <http://code.google.com/appengine>



- <http://googleappengine.blogspot.com/>
- <http://gae-java-persistence.blogspot.com/>

Questions/Contact info

Twitter

- twitter.com/cschalk