Breaking through the clouds

Andy Piper
@andypiper
Hello I’m Andy
Developer Advocate @ Cloud Foundry
social web enthusiast
maker, educator, LEGO fan
OSS contributor
Eclipse Project Lead (Paho / MQTT)
excited by “what’s next”, Internet of Things, etc.

@andypiper
apiper@gopivotal.com

a few things about me
Developer Advocate? hell yeah!
3 themes to consider openness, cloud computing, and where they intersect
1. Why be / do / think Open?
2. What about Cloud?
3. Why is an Open Cloud Platform important?
1. Why be / do / think Open?
Hello everybody out there using minix -
I’m doing a (free) operating system (just a hobby, won’t be big and professional like gnu) for 386(486) AT clones.
~21 years later: Linux has won
Linux runs everywhere (even old versions, on crashy airline entertainment systems...)

#P0WN ALL TEH GADGETZ!
Announcing New Windows Azure Services to Deliver “Hybrid Cloud”

6 Jun 2012 1:03 PM  Bill Laing  3

“Hybrid cloud” – the use and building of applications that connect to data and services across a mix of datacenters – is the reality for cloud computing today. Your businesses and applications will move to the cloud in their own unique way, at their own unique speed. Supporting this change requires a cloud solution that provides the necessary flexibility for the different ways you will architect, develop and deploy your applications and IT solutions—be it on-premises, in the cloud, or a mix of both.
The Penguin is triumphant! (maybe not this one...)
Linux is ubiquitous

(but often invisible)
It works.
2. What about Cloud?
3 layers

IaaS, PaaS, SaaS

Software

Platform

Infrastructure

Gmail, Salesforce, Flickr, Google Docs...

Google AppEngine, Heroku, Cloud Foundry, EngineYard, OpenShift, Azure, Apprenda...

Amazon EC2, Google CE, OpenStack, vSphere, Joyent, Rackspace, Cloud Stack, Eucalyptus...
How did we get here?
Infrastructure Clouds
- consumer web companies built out according to their own needs to support Software
But - still need to build & manage Platform
Google AppEngine, Heroku, Cloud Foundry, OpenShift, Stackato, Cloudbees, AppFog, Amazon Elastic Beanstalk, Apprenda, anynines
Why is it so hard...?  A real deployment flow (!)
deploy <my cloud>
target <my cloud>
push <my app>
bind <my services>
scale <my app> +100
add_capacity <my cloud>

An alternative approach...
3. Why is an Open Cloud Platform important?
Platform risk: lock-in

Welcome to the Hotel California
Such a lovely place
Such a lovely face
Plenty of room at the Hotel California
Any time of year, you can find it here

Last thing I remember, I was
Running for the door
I had to find the passage back
To the place I was before
‘Relax,’ said the night man,
‘We are programmed to receive.
You can checkout any time you like,
But you can never leave!’
Cloud Foundry - the Open PaaS

Public Clouds

Private Clouds

Micro Clouds

CUSTOM SERVICES

FRAMWORKS

CLOUDS

CUSTOM RUNTIMES

Open Source

SERVICES

postgresql

Redis

MySQL

RabbitMQ

mongoDB
Architectural view
All about Choice

Private Clouds

Public Clouds

Micro Clouds

Build your own from github.com/cloudfoundry, buy from Pivotal, or run a compatible private version.

Run on run.pivotal.io or any Cloud Foundry-powered PaaS.

Run in a local virtual machine with identical services and runtimes (nise-bosh, cf-vagrant).
All the pieces to make your own!

“if you can’t open it, you don’t own it” (O’Reilly/MAKE)
Open & public from the start

Code all on Github
Not all PaaSes are created equal...
Pivotal
A NEW PLATFORM FOR A NEW ERA

Learning how to be open

What is Pivotal?
Pivotal’s Cloud vision: Open by Default

Cloud Fabric is OSS
4. Where are we, 18 months on?
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version 2.0 all the shiny toys!
Welcome, IBM! the Open PaaS of choice, on top of OpenStack and Linux
In a Nutshell, Cloud Foundry...

...has had 25,747 commits made by 773 contributors representing 574,744 lines of code

...is mostly written in Ruby with a very low number of source code comments

...has a codebase with a long source history maintained by a very large development team with increasing Y-O-Y commits

...took an estimated 155 years of effort (COCOMO model) starting with its first commit in January, 2009 ending with its most recent commit 1 day ago

Activity

30 Day Summary
Jun 24 2013 — Jul 24 2013
1284 Commits
165 Contributors including 75 new contributors
9 New Languages:
  Groovy added Jul 12
  Make added Jul 11
  C added Jul 11
  Go added Jul 11
  D added Jul 1
  JavaScript added Jul 1
  HTML added Jul 1
  Ruby added Jun 28

12 Month Summary
Jul 24 2012 — Jul 24 2013
14728 Commits
Up +5885 (66%) from previous 12 months
664 Contributors
Up +520 (361%) from previous 12 months

Velocity

growing community, moar committers!
Build-it-yourself use Vagrant to run a local instance for testing
Cloud Foundry Blog

Want to Contribute to Cloud Foundry? Come on in!

Posted on May 16, 2013 by Andy Piper

Cloud Foundry is an Open Platform-as-a-Service, and an Open Source project. It has attracted phenomenal interest from the community - including partners, companies using the code internally, and those individual developers with a passion for getting involved. You can find the source code on Github. Community contributions are what help to make the platform so extensible. We are always happy when we receive a Github pull request to offer new functionality or fixes! We also appreciate bug reports submitted through Github Issues.

Looking at the Cloud Foundry project as a whole though... where should you start?
Platform - platformcf.com

the Cloud Foundry conference, Sept 8-9, Santa Clara
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• Build your own Heroku video http://www.youtube.com/watch?v=e0EprkBamvQ