



The Pragmatic Cloud

what development should care about

Michael Côté, RedMonk

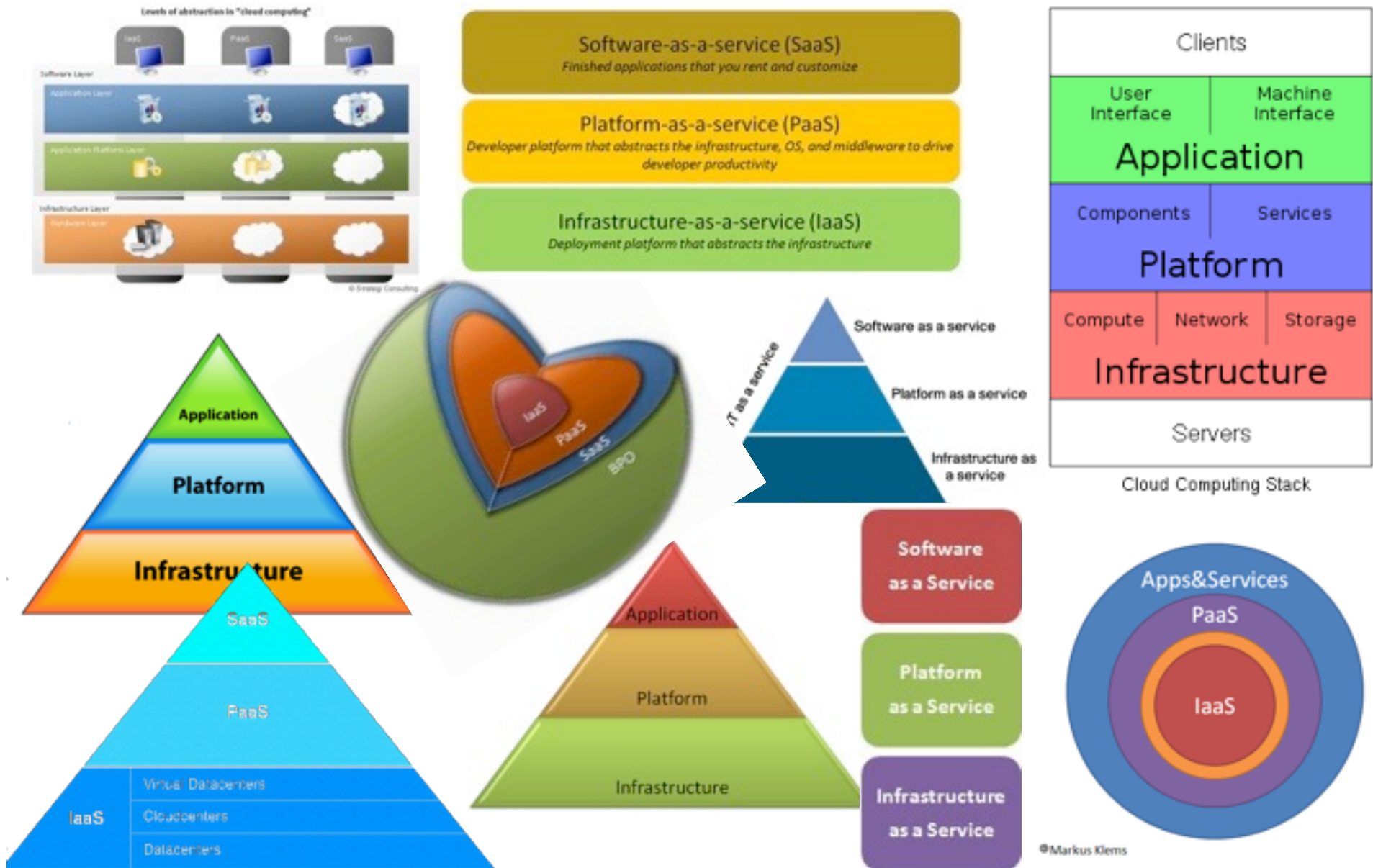
PeopleOverProcess.com

@cote

conclusions

- Happier users with better applications - it's not just about the software anymore
- Thus far, most cloud-talk is operations focused
- Development should start taking advantage of cloud technologies, responsibilities
- Agile is a good start

what is “cloud”?



From William Vambenepe (@vambenepe)

burgers & aaSes

- SaaS, PaaS, IaaS - application, middleware, servers
- Public or private
- Amazon and everyone else
- Usually: virtualization, model-driven automation, web apps, dev/ops



things to point at

- IaaS - Amazon EC2, S3, etc.
- PaaS - Force.com, Microsoft Azure, IPP, Heroku
- SaaS: Salesforce, Zoho, Google Apps, Paglo (Citrix), Service-now.com



for users

- SaaS - Google Apps, Salesforce, etc.
- Business apps that behave like consumer web apps - *better* applications
- Lower cost & faster delivery
- Remote control for the cloud



for operations

- “Cloud” - moving infrastructure off premise
- “Private cloud” - automating, virtualizing, self-service
- Focus on infrastructure, not applications



for developers

- Becoming ops friendly - or subversive if you dare
- Using cloud tools & practices to deliver applications
- Getting closer to the user with faster delivery



making users happy

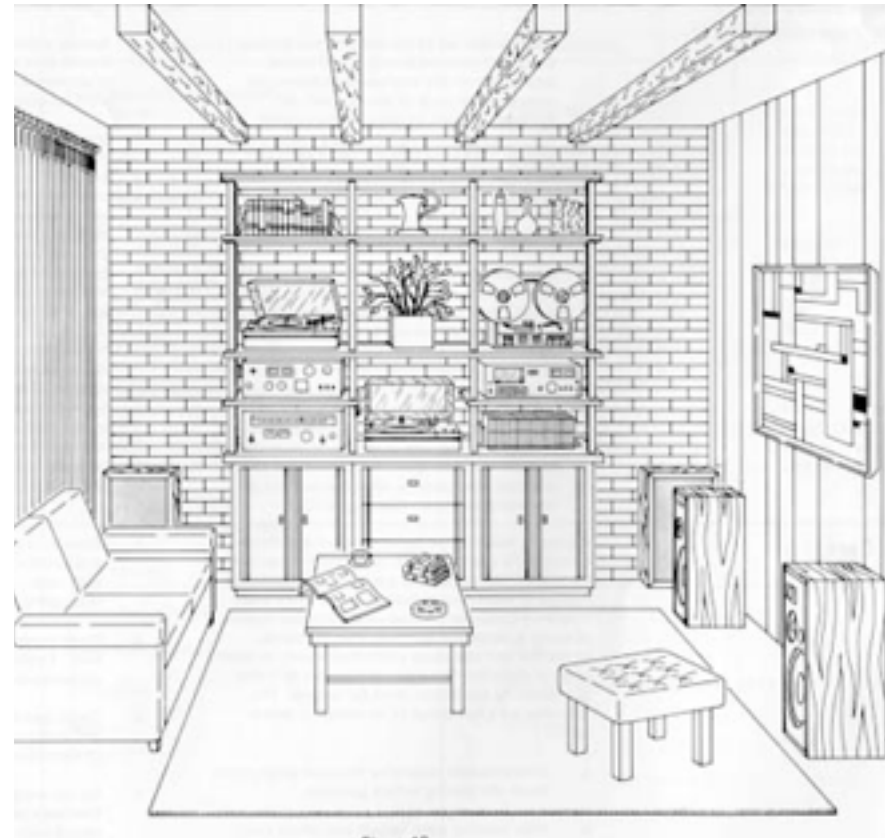
- Face it: most IT is terrible, boring, & complex
- Continually simplifying
- Lusting for cheap feedback

“The computer is a moron.”

-Peter Drucker

less to manage

- This probably means delivering as a SaaS
- Perhaps with a PaaS - lockin risks
- Cloud-friendly, if needed



“apps” vs. “applications”

“What we are looking to do is find other small areas that we can build **a nice small app** that’s done really well **that can help hundreds of thousands** of the QuickBooks millions.”

-Brian Sweat, Product Manager at Alterity, Inc.

Flexible
&
Cheap

Marketplaces
&
Feature delivery

User
Expectations

beyond tracking suffering

“I can actually **look at [a feature] and say, ‘nobody uses feature X.’** It's not even being looked at. And it really **helps us shape the future of the app** which, on a desktop product, we don't have a lot of data like that.”

-Brian Sweat, Product Manager at Alterity, Inc.

User
analytics

Aggregate
analytics

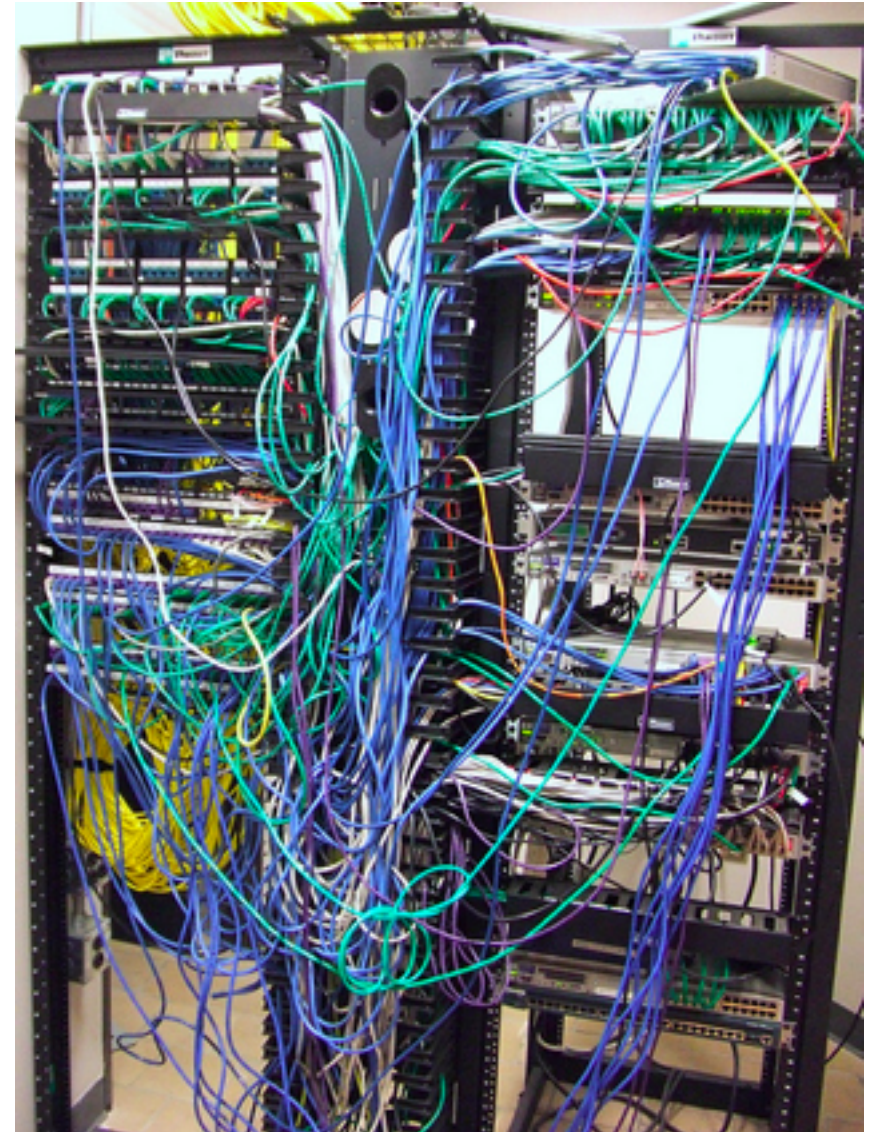
Feature
analytics

operations as bottle-neck

- While developers have been delivering faster, operations has used process as armor
- “Change management” means “preventing change”
- But, they can’t be blamed - they need help!

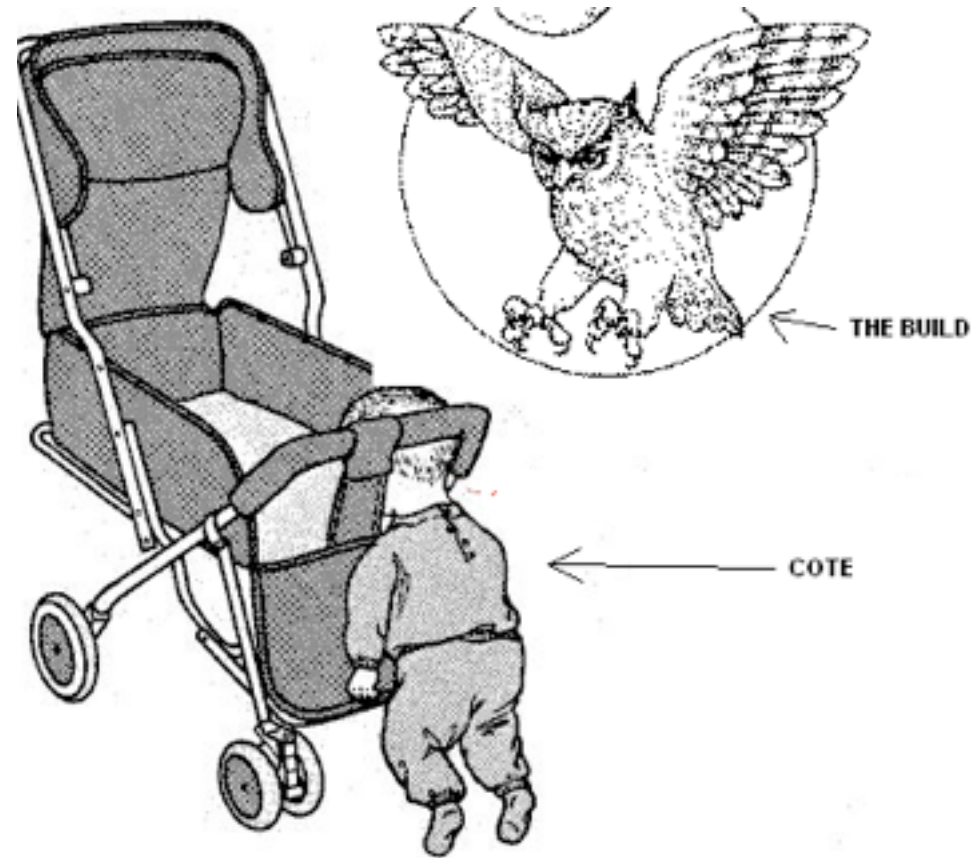
making friends with ops

- Learn what/how operations people talk & worry about
- Service desks, automation, service catalogs, SLAs, provisioning
- Know their ivory tower & their muck



developing for the cloud

- Application geared towards automated delivery
- Quick and easy to configure
- Development must *program* operations - modeling, instrumenting
- The window test



“operations as code”

Puppet, Chef, PowerShell

```
Windows PowerShell

PS C:\> Get-Childitem 'MediaCenter\Music' -rec |
>> where { -not $_.PSIsContainer -and $_.Extension -match '.wmamp3' } |
>> Measure-Object -property length -sum -min -max -ave

Count      : 1307
Average    : 5491276.09563887
Sum        : 7177097857
Maximum    : 22946267
Minimum    : 3235
Property   : Length

PS C:\> Get-WmiObject CIM_BIOSElement | select biosv*, man*, ser* | Format-List

BIOSVersion : (TOSHIBA - 6040000, Ver 1.00PARTIAL)
Manufacturer : TOSHIBA
SerialNumber : M021116H

PS C:\> (cmdSearcher30'
>> SELECT * FROM CIM_Job
>> WHERE Priority > 1
>> '0).get() | Format-Custom
>>

class ManagementObject#root\
{
    Document = Monad Manifesto
    JobId = 6
    JobStatus =
    Owner = User
    Priority = 42
    Size = 1027088
    Name = Epson Stylus COLOR 7

PS C:\> $url = 'http://blo
PS C:\> $blog = [xml]$url
PS C:\> $blog.rss.channel.it

title
PME: What's Coming In PowerShell
PME: PowerShell Presence at PME
PME: Talk: System Center Poun

PS C:\> $host.version.ToString
Windows PowerShell: 1.0.0.0
PS C:\>
```

```
Java - Eclipse SDK - /Users/johnwillis/Documents/workspace

Package Expl | Hierarchy | default.rb

Cloudcamp.com
Opscamp.com
  src
  JRE System Library [JavaSE-1.6]
  cookbooks
    apache2
    mysql
      attributes
      libraries
      providers
      recipes
        client.rb
        default.rb
        server_ec2.rb
        server.rb
      resources
      templates
      metadata.json
      metadata.rb
      README.rdoc
    openssl
    php
    wordpress
      attributes
      recipes
        default.rb

default.rb:1
# Cookbook Name:: wordpress
# Recipe:: default
#
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# Licensed under the Apache License, Version 2.0 (the "License");
# you may not use this file except in compliance with the License.
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#   http://www.apache.org/licenses/LICENSE-2.0
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# Unless required by applicable law or agreed to in writing, software
# distributed under the License is distributed on an "AS IS" BASIS,
# WITHOUT WARRANTIES OR CONDITIONS OF ANY KIND, either express or implied.
# See the License for the specific language governing permissions and
# limitations under the License.

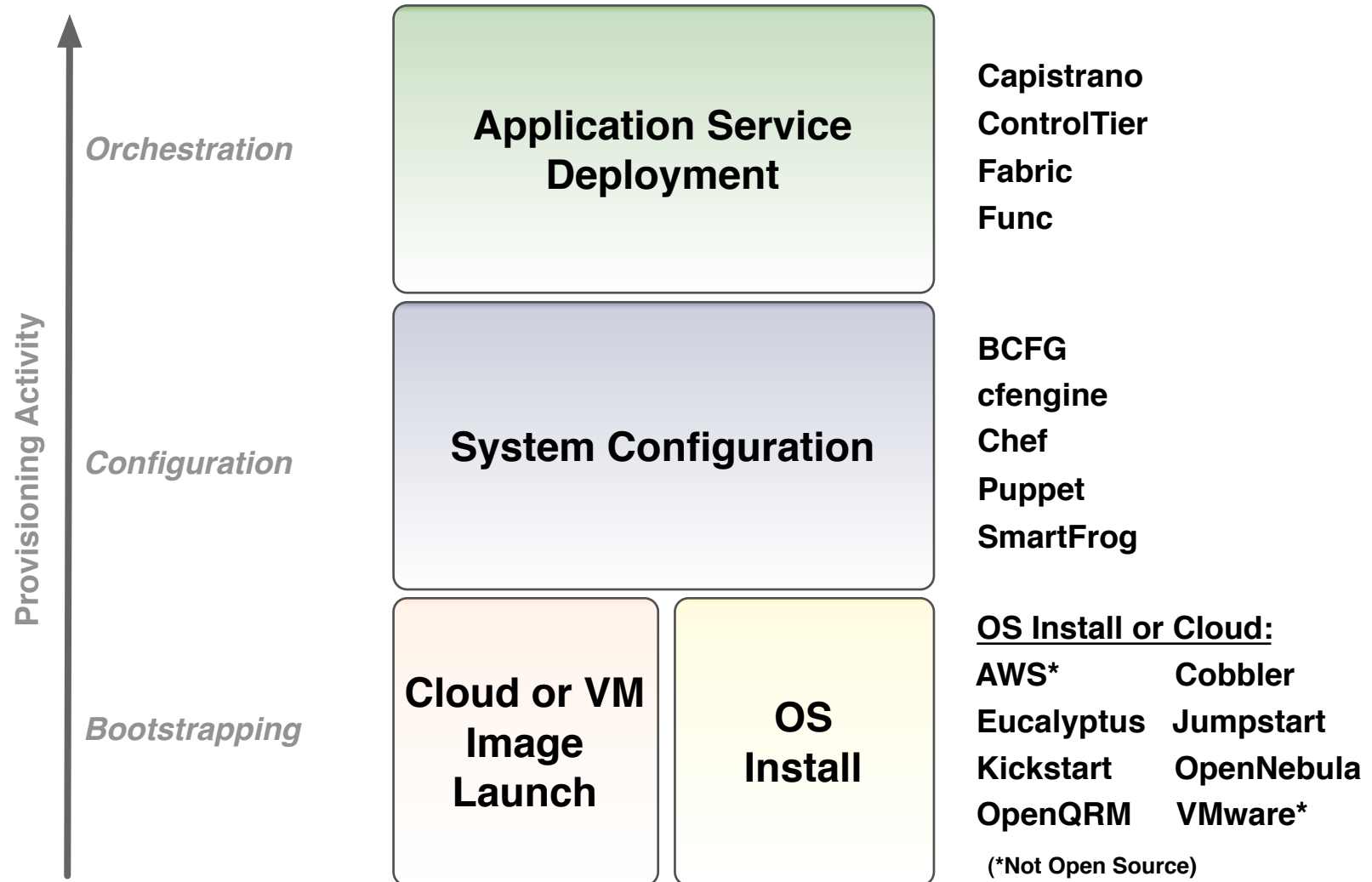
include_recipe "apache2"

if node.has_key?("ec2")
  server_fqdn = node.ec2.public_hostname
else
  server_fqdn = node.fqdn
end

remote_file "#{Chef::Config[:file_cache_path]}/wordpress-#{node[:wordpress][:version]}.tar.gz" do
  checksum node[:wordpress][:checksum]
  source "http://wordpress.org/wordpress-#{node[:wordpress][:version]}.tar.gz"
  mode "0644"
end
```

“fully Automated Provisioning”

*
One
vendor's
take



From <http://dev2ops.org/toolchain>

a tool: cloud labs

- Self-service sysadmin
- As with virtualization, dev & QA are early frontiers
- Build-farms, no IT hassle
- Provisioning vs. Configuration



The Crazy aaS Dream

One day, the development team will complete the iteration

Every story works, and the app is shippable

Minutes after the review meeting, operations clicks a button,
& the users start using the new features

Thank you!

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Credits & Co.

- Cloud model madness - <http://stage.vambenepe.com/archives/1355>
- Larry quote: http://news.cnet.com/8301-19413_3-10448200-240.html
- Burger, CC-BY: <http://www.flickr.com/photos/yogma/3630108509/>
- Woman “user”: <http://www.flickr.com/photos/smithsonian/2536001835/>
- Operations guy: <http://www.flickr.com/photos/doctorow/2698332863/>
- Crazy wiring: <http://www.flickr.com/photos/clonedmilkmen/3604999084/>
- Chef screenshot: John Willis (john@opscode.com)
- PowerShell screenshot: http://en.wikipedia.org/wiki/File:Windows_PowerShell_1.0.png
- Brian Sweat quotes: <http://www.riaweekly.com/2010/01/26/riaweekly069/>
- Fully automated provisioning: <http://dev2ops.org/toolchain>