

How a BigCo actually got some innovation done

The Longer Story of Crowbar

Michael Coté
[@cote](#)



The Setup

- We, here, all know what DevOps is, so I won't talk about that
 - Most of us would love to work on a product, some of us do
 - Getting stuff done in the small is well documented, but not in large companies
 - Here, I go over lessons learned for getting a DevOps product out the door and (bonus!) traction in a large company
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- P.S.: these are my views after studying and interviewing the team and ecosystem. They're not not official, sanctioned Dell views (never mind this template).



Conclusions

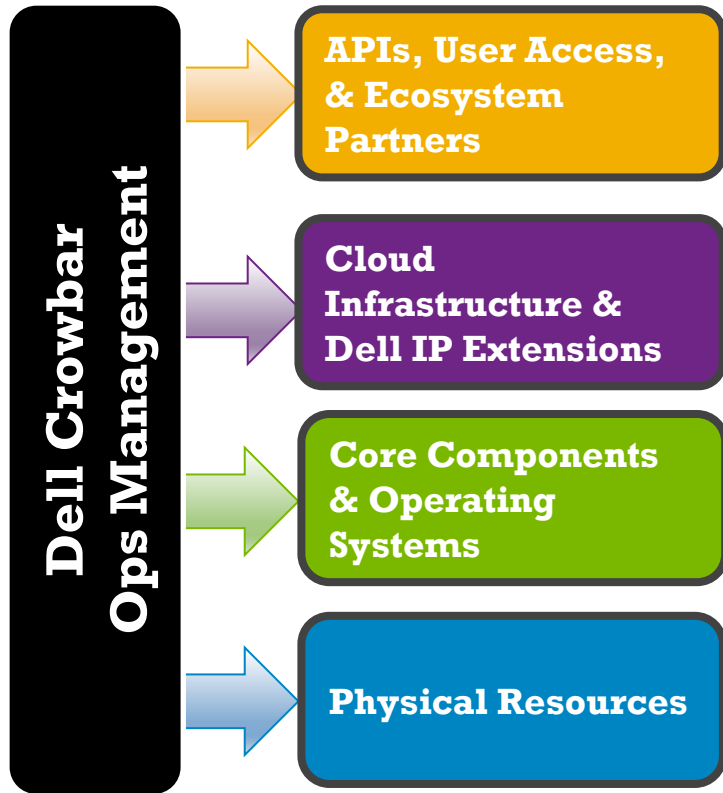
- **There are two types of people in the world...** - those that understand DevOps, and those who don't
 - **Always Be Coding, not educating** - Be comfortable with people not understanding, you can't educate forever
 - **Get Customers/Users ASAP** - drives your own process, use to explain yourself
 - **Work the Iron Triangle** - when you're young being awesome is better than being on-time
 - **Find the right context** - getting pulled to do something is easier than pulling something along
 - **Hiding Out** – things are easier when no one knows they should care
 - **Get by with just enough architecting & abstracting** - you probably are gonna need it, but you can finish it later
 - **Don't open source a box of junk** - bring something to the party
 - **Market the right stuff** - top-down marketing & bottom-up marketing
-



Crowbar: how
does it work?

(As if / could tell you!)

What Crowbar is



- Includes all the components required to implement an *entire* cloud infrastructure including components from ecosystems partners
- Pluggable components deploy cloud infrastructure
- Allow for expansion by the community services and customers
- Can integrate with existing products
- Delivers basic data center services and required cloud infrastructure
- Provision bare-metal servers from box to cloud WITHOUT user intervention, other than racking/cabling and some minimal configuration questions

It's got a UI!

CROWBAR

The cloud unboxer.

There are 12 nodes available in the system.

a4-ba-db-70-f8-74

- da4-ba-db-17-47-69
- da4-ba-db-17-44-3f
- da4-ba-db-14-98-0a
- da4-ba-db-14-70-21
- da4-ba-db-15-19-b4
- admin
- d00-21-9b-99-9a-4f

a4-ba-db-88-92-07

- d60-eb-69-08-17-86
- d60-eb-69-07-de-58
- dc8-0a-a9-03-44-46
- d00-26-9e-cd-e0-c6
- dc8-0a-a9-03-44-70

Provided by  CloudEdge Solu

Dashboard Barclamps Proposals Active Roles Help

CROWBAR

The cloud unboxer.

da4-ba-db-17-44-3f (Edit)

Full Name da4-ba-db-17-44-3f.dell.com
State Ready
Uptime 3 hours 36 minutes 25 seconds
Switch Name/Port a4-ba-db-70-f8-74 / 2
MAC Address a4:ba:db:17:44:3f
Allocated true

IP Address bmc: bmc: 192.168.124.173
nova_flocc: eth0.500: n/a
admin: eth0: 192.168.124.01
[not managed]: eth1:, eth2:, eth3:

Links IP Mgmt Interface, Nagios, Chef, Ganglia

Barclamps Bios Default, Deployer Default, Dns Default, Ganglia Default, Ipmi Default, Logging Default, Raid Default

Roles bios, deployer-client, dns-client, ganglia-client, ipmi-configure, logging-client, provisioner-base, raid-configure

Description
Hardware
CPU
Memory
Disk Drives

Not set
PowerEdge R710
Intel(R) Xeon(R) CPU E530 @ 2.40GHz

CROWBAR

The cloud unboxer.

Dashboard Barclamps Proposals Active Roles Help

Identify Power On Shutdown Reboot

Delete

a4-ba-db-70-f8-74

- da4-ba-db-17-47-69
- da4-ba-db-17-44-3f
- da4-ba-db-14-98-0a
- da4-ba-db-14-70-21
- da4-ba-db-15-19-b4
- admin
- d00-21-9b-99-9a-4f

a4-ba-db-88-92-07

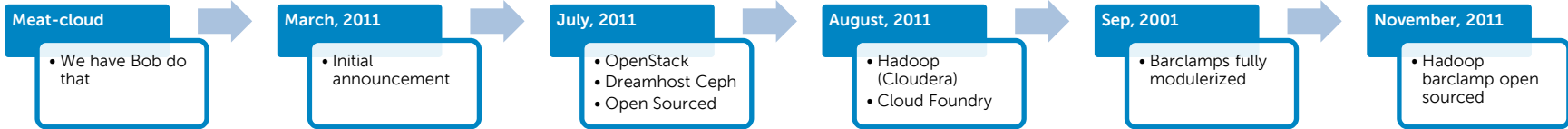
- d60-eb-69-08-17-86
- d60-eb-69-07-de-58
- dc8-0a-a9-03-44-46
- d00-26-9e-cd-e0-c6
- dc8-0a-a9-03-44-70

Proposals

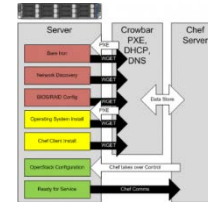
Barclamp	Status	Proposal	Description
Bios		default	manages bios configuration for Dell PEC hardware
Crowbar		default	Self-referential barclamp enabling other barclamps
Deployer		default	Initial classification system for the Crowbar environment
Dns		default	manages the DNS subsystem for the cluster
Ganglia		default	a common Ganglia service for the cluster that can be used by other barclamps
Glance		default	Created on Mon, 11 Jul 2011 12:20:25 -0500
Ipmi		default	The default proposal for the ipmi barclamp
Logging		default	centralized logging system based on syslog
Nagios		default	common monitoring service for the cluster that can be used by other barclamps
Network		default	Instantiates network interfaces on the crowbar managed systems. Also manages the address pool
Nova		default	Created on Mon, 11 Jul 2011 12:47:19 -0500
Ntp		default	Common NTP service for the cluster. An NTP server or servers can be specified and all other nodes will be clients of them.
Ntp		foo	Created on Mon, 11 Jul 2011 15:56:45 -0500
Provisioner		default	The roles and recipes to set up the provisioning server and a base environment for all nodes
Raid		default	The default proposal for the raid barclamp
Swift		QAdemo	Created on Mon, 11 Jul 2011 15:42:57 -0500
Test		foo	Created on Mon, 11 Jul 2011 15:30:17 -0500
Test		new	Created on Mon, 11 Jul 2011 15:55:36 -0500



History of Crowbar



Installing private cloud stacks was tedious – we want to do it 2-3 hours



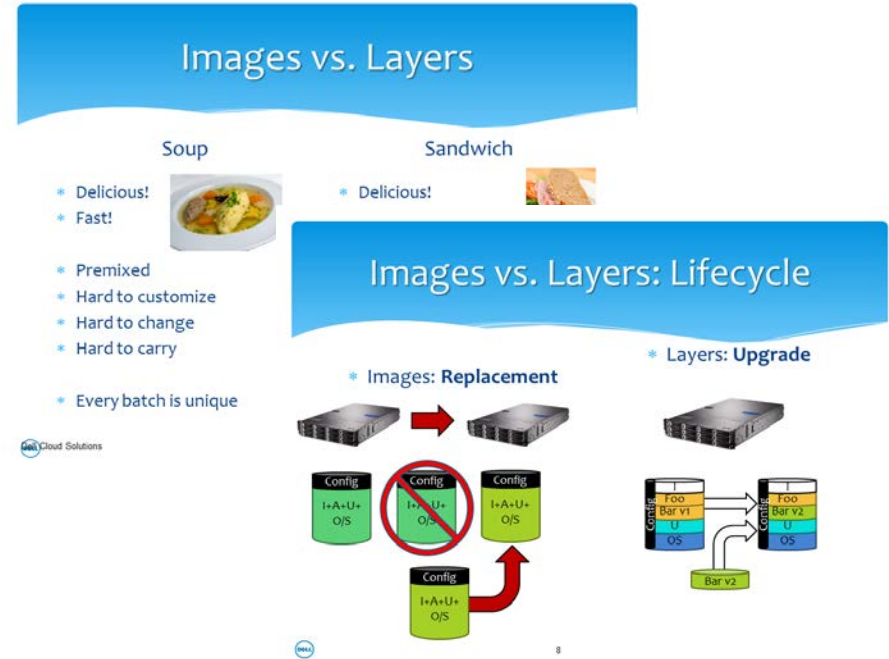
Lessons Learned

(Once again, all the usual things apply.)

There are two types of people in the world....

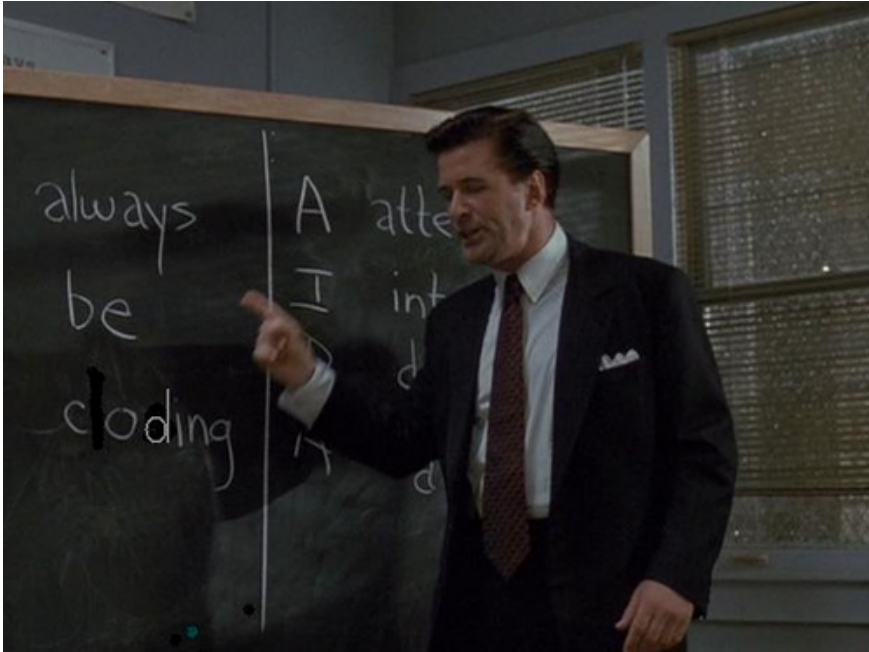
Those that understand DevOps, and those who don't

- Many people won't understand what you're talking about
- Come up with good metaphors
 - Soup vs. Sandwich (judgmental, benefits driven)
 - “And then what?” - Talk about the 2-3 year strategy
- Speak through your customers



Always Be Coding – Not Educating

Be comfortable with people not understanding, you can't educate forever



Professorial Shiny Object Syndrome:

- “What is DevOps?”?
- “What is Agile, Lean, etc?”
- “What is Big Data?”
- “What is cloud?”

Get Customers/Users ASAP

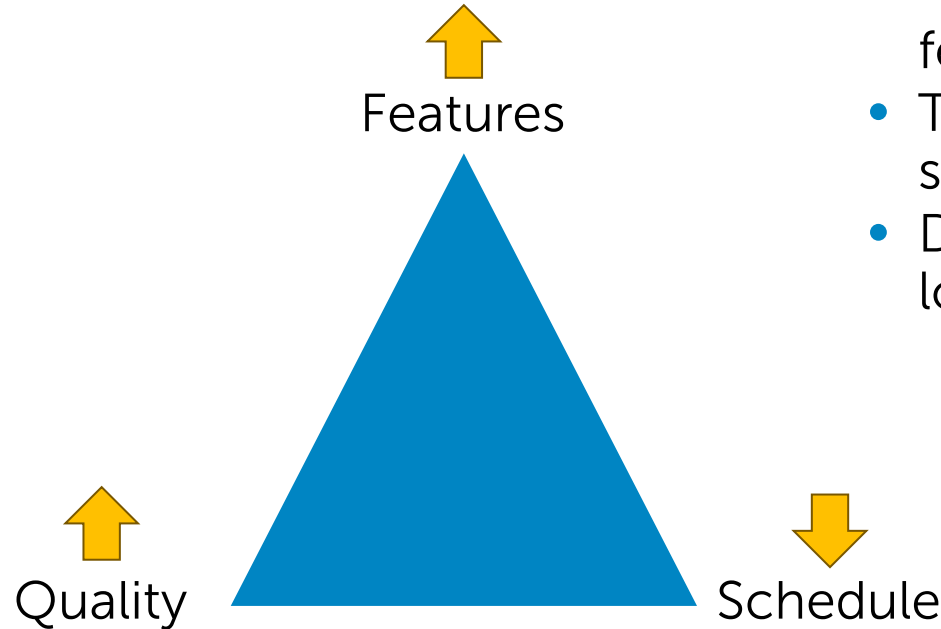
Drives your own process, use to explain yourself

- “Find 10 customers, no matter what size, segment, geography.”
 - Once you have traction, you’ll be taken seriously
 - You can have your customers explain what your doing to yourself
 - You’ll get excellent direction about what you should be doing
- If you think this is obvious, you don’t work at a BigCo

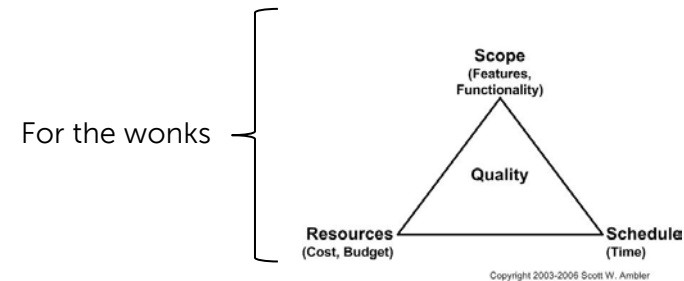


Work the Iron Triangle

When you're young being awesome is better than being on-time



- “If I wait a week, I’ll get another feature”
- The older the project, the more schedule matters
- DevOps is young, so schedule is lowest priority of the three



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Image from Scott Ambler: <http://www.ambyssoft.com/essays/brokenTriangle.html#Figure1>



Find the right context

Getting pulled to do something is easier than pulling something along

- Getting pulled to do something is easier than pulling something along
- Opportunistically look for chances to solve problems with your solutions
- Avoid gratuitously selling & pleasing



Hiding Out

Things are easier when no one knows they should care

- Carve out from the organization
- Don't over-hype and promise
 - Sets expectations that won't match process
 - Creates pull for you to education – cf. Professorial Shiny Object Syndrome
- Hiding out implies you'll have something worth-while once you emerge
- Narrow your explanation of what you're doing as needed, no matter what you're actually doing



Image from <http://www.flickr.com/photos/barretthall/121988215/>

Get by with just enough architecting & abstracting

You probably are gonna need it, but you can finish it later



“I really don’t know what I’ll need in the future”

- Build a platform
- Plan for the future
- But don’t go crazy
- You’ll argue this all the time
- Creates strong dependency on organizational knowledge

Image from <http://www.flickr.com/photos/neaajean/1596292769/>

Don't open source a box of junk

Bring something to the party

- Roll up your pre-opening cabal of partners
- If you're servicing an open source ecosystem, being open yourself is probably easier
- Know how to (internal) market OSS momentum
- Partnerships are much easier
 - Mechanics of participation
 - Good enough is often good enough



Image from <http://www.flickr.com/photos/cote/7014915367//>

Market the right stuff

Top-down marketing & bottom-up marketing



Hi Coté,

You did a podcast about [redacted] with me a few years back, at [redacted] I'm stuck in a room with four Dell UK account execs giving a presentation on their cloud management offerings. The Dell fellows are presenting Creator and AIM but haven't mentioned any of the cooler sh*t like **Crowbar**, Openstack, Joyent, and who knows what else.

Before landing over here I'd been living in a cave (read: startup) happily using AWS for years. Where best to get caught up with the state of the art here, especially as the tech applies to getting things done in an enterprise environment?

[redacted]

- “Why aren’t these guys telling me about Crowbar?”
- Marketing & PR from all angles
- Practitioner-to-practitioner
- BUT! You’d be surprised how hungry PR people are for genuine stories

Thanks!

For more: <http://presentnow.me/555>

Michael Coté

Michael_R_Cote@Dell.com

@cote

