What’s New with Chef 11

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What's New Since Chef 0.10?

- Windows support
- Librarian
- Spiceweasel
- Foodcritic
- Cookbooks in separate repositories
- Private Chef
- Food Fight podcast
- knife plugins for openstack, hp, azure, gce
- 0.10 renumbered to Chef 10
- full-stack client
- why-run
- output formatters
- Test Kitchen
- Solaris support
- Chef Developer Summit(2!)
- Berkshelf
- ChefConf
- Fauxhai
- docs.opscode.com
- Hangouts for reviews
- nyan-cat output formatter
What is NOT in Chef 11

- CouchDB
- Ruby-based chef-server-api
- depsolver, gecode, treetop
- Merb
- OpenID support in Web UI
- Migration tooling (coming soon)
• PostgreSQL
• erchef
• nginx
• Rails
• bookshelf
• omnibus-chef server
What’s NEW in Chef 11

- chef-apply
- partial search
- users with key pairs
- partials in templates
- knife-essentials
Erchef + SQL RDBMS
• Erlang
• Concurrent, fault tolerant
• Distributed systems
• Complete Chef Server API rewrite
Let's see some graphs!
• Erchef + Ruby Chef
• 12 mo old
• 3 CPU aggregate
CouchDB Uptime - cron'd restarts

![Uptime couchdb - by year](image_url)

- Uptime in days
- Cur: 2.76
- Min: 0.00
- Avg: 3.57
- Max: 28.56
- Last update: Mon Mar 12 01:45:13 2012
Database system CPU Usage

**CouchDB**

**MySQL**

CPU usage - by year

Last update: Wed Feb 29 01:40:13 2012

Last update: Thu Mar 1 01:40:12 2012
Database system Memory usage

**CouchDB**

Memory usage - by year

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Last update: Wed Feb 29 01:40:14 2012

**MySQL**

Memory usage - by year

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Last update: Thu Mar 1 01:40:13 2012
Of course, we all know load average is not indicative of performance ;}

Database system Load Average

CouchDB

MySQL
Some other Erchef Features...

- Nginx reverse proxy, https
- WebUI is Ruby on Rails
- Bookshelf stores cookbooks, like S3
"Omnibus" Package

- full-stack for the Chef server
- RPMs, DEBs, Build your own?
  - opscode.com/chef/install
- chef-server-ctl
  - reconfigure
  - test
  - start/stop

http://apod.nasa.gov/apod/astropix.html
• Run a single recipe file
  • without modifying the node's run_list
• included with Chef, /usr/bin/chef-apply
• From a file, a string or stdin
% cat recipe.rb
package "git"
package "emacs"
git "git://github.com/jtimberman/.emacs.d.git" do
  action :sync
  user "jtimberman"
end

% sudo chef-apply recipe.rb
partial_search(:node, 'role:web',
  :keys => {
    'name' => ['name'],
    'ip' => ['ipaddress'],
    'kernel_version' => ['kernel', 'version']
  }
).each do |result|
  puts result['name']
  puts result['ip']
  puts result['kernel_version']
end

• instead of entire node, just the pieces you want
• massive reduction in bandwidth and memory
• users can have key pairs, just like clients
• knife actions as a user instead of a client
• post a public key when you create a user/client
• "knife user" (11.2.0)

http://www.flickr.com/photos/albill/sets/721576280463950000/
<?xml version='1.0' encoding='UTF-8'?>
<server xmlns="urn:jboss:domain:1.2">
extensions>
  <% if @infinispan -%>
  <extension module="org.jboss.as.clustering.infinispan"/>
  <% end -%>
  <extension module="org.jboss.as.web"/>
  <% if @webservices -%>
  <extension module="org.jboss.as.webservices"/>
  <% end -%>
  <extension module="org.jboss.as.weld"/>
  <% if @infinispan
  include_template "infinispan.xml.erb"
end -%>
  <% if @webservices
  include_template "webservices.xml.erb"
end -%>
<socket-binding-group name="standard-sockets">
  ........
</socket-binding-group>
</server>

• Thanks to Andrea Campi!

http://www.flickr.com/photos/modern_fred/2095565021/
- Treat local chef-repo and chef-server like a filesystem
- knife download
- knife diff
- knife show
- knife upload cookbooks/apache2
- knife list
• [http://docs.opscode.com/breaking_changes_chef_11.html](http://docs.opscode.com/breaking_changes_chef_11.html)
• chef-shell (formerly shef)
• no implicit node attributes (no more node['blah'] = 'foo')
• Attribute files may access role and environment attributes
• Delayed notifications run after failed converge
• Encrypted data bag item format change
• Chef-client lock so safe from simultaneous runs
• Commercial Support is now available for Open Source Chef, too.
What questions do you have?

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