



State of Puppet

Puppet Labs: by the numbers

	Jan 2012	Jan 2013
Employees	55	110
Customer Countries	29	42
Office Space	836 m ² 9,000 ft ²	2,232 m ² 25,000 ft ²



Puppet Labs: A Great Place to Work!

Weekly Company Lunch



Awesome Espresso & Tea



Photos by Gary Larizza

We're Hiring!

Future Opportunities - Internships

Future Opportunities - Other Departments

VMware Alliance Manager (San Francisco)

Professional Services Engineer (USA)

Professional Services Manager (London)

Professional Services Manager (Portland, OR/West Coast)

Sales Engineer (New York Based)

Sales Engineer (UK, London Based)

Support Engineer

Support Team Lead

Engineering Intern (Analytics)

Engineering Intern (PuppetDB)

Future Opportunities - Software Development

Lead Developer

QA Toolsmith

Release Engineer

Technical Integration Engineer

GL Accountant

HR Coordinator

Events Marketing Manager

Front-End Engineer

Future Opportunities - Product Management

Managing Editor

Technical Marketing Manager

Future Opportunities - Sales

Training Sales Specialist

Technical Operations Engineer



Who uses Puppet?

FINANCIAL



TELCO/SP



INTERNET



TECH



GOVERNMENT



DEFENSE



EDUCATION



MANUFACTURING



RETAIL



MEDIA



Strong Community (Jan 2013)

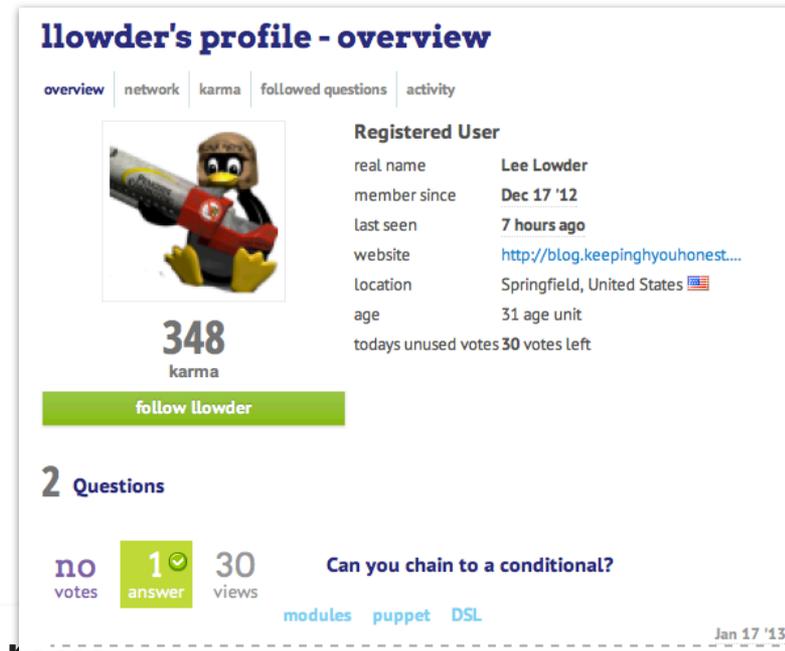
Forum	Members	Messages
puppet-users list	5255	1029
puppet-dev list	952	127
ask.puppetlabs.com	205	383
#puppet	938	
Redmine	3839	

Repository	Forks	Watchers
Puppet	466	1145
MCollective	149	103



How can you take part in the Puppet Community?

- Help with Documentation
- Ask/Answer questions
 - <http://ask.puppetlabs.com>
 - mailing lists
 - IRC
- Help with bug triage
- Contribute code
- Contribute modules on the Forge
- Visit <https://puppetlabs.com/community> to learn more



llowerder's profile - overview

overview | network | karma | followed questions | activity



Registered User

real name	Lee Lowder
member since	Dec 17 '12
last seen	7 hours ago
website	http://blog.keepingyouhonest...
location	Springfield, United States 
age	31 age unit
todays unused votes	30 votes left

348
karma

[follow llowerder](#)

2 Questions

no votes | **1** answer | 30 views

[Can you chain to a conditional?](#)

[modules](#) [puppet](#) [DSL](#)

Jan 17 '13

Puppet?



Puppet is not ... DIY System Management

```
#!/bin/sh

USER=$1; GROUP=$2; HOME=$3

if [ 0 -ne $(getent passwd $USER > /dev/null)$? ]
then useradd $USER --home $HOME --gid $GROUP -n; fi

OLDGID=`getent passwd $USER | awk -F: '{print $4}'`
OLDGROUP=`getent group $OLDGID | awk -F: '{print $1}'`
OLDHOME=`getent passwd $USER | awk -F: '{print $6}'`

if [ "$GROUP" != "$OLDGID" ] && [ "$GROUP" != "$OLDGROUP" ]
then usermod --gid $GROUP $USER; fi

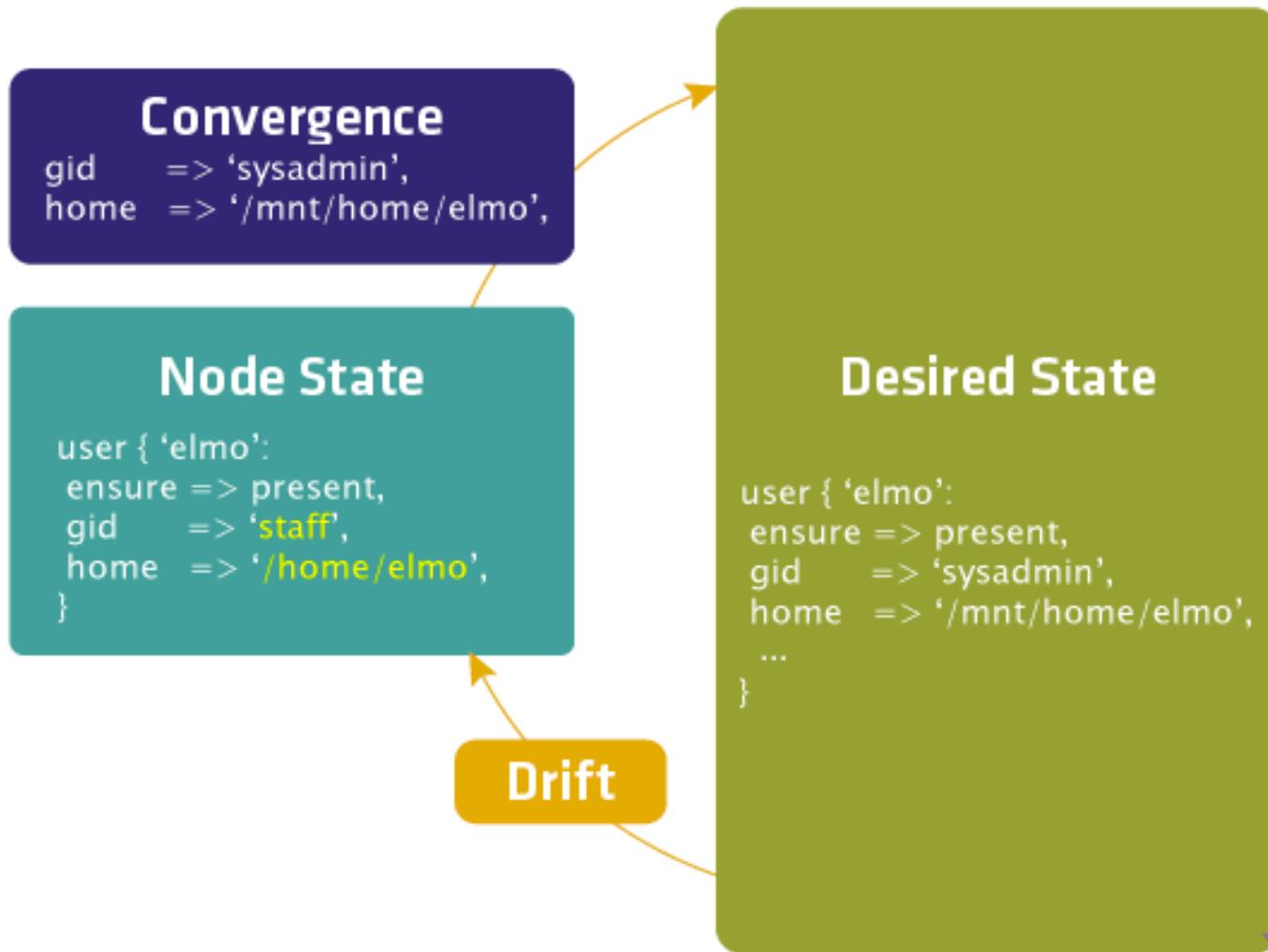
if [ "$HOME" != "$OLDHOME" ]
then usermod --home $HOME $USER; fi
```



System Management: The Puppet Way

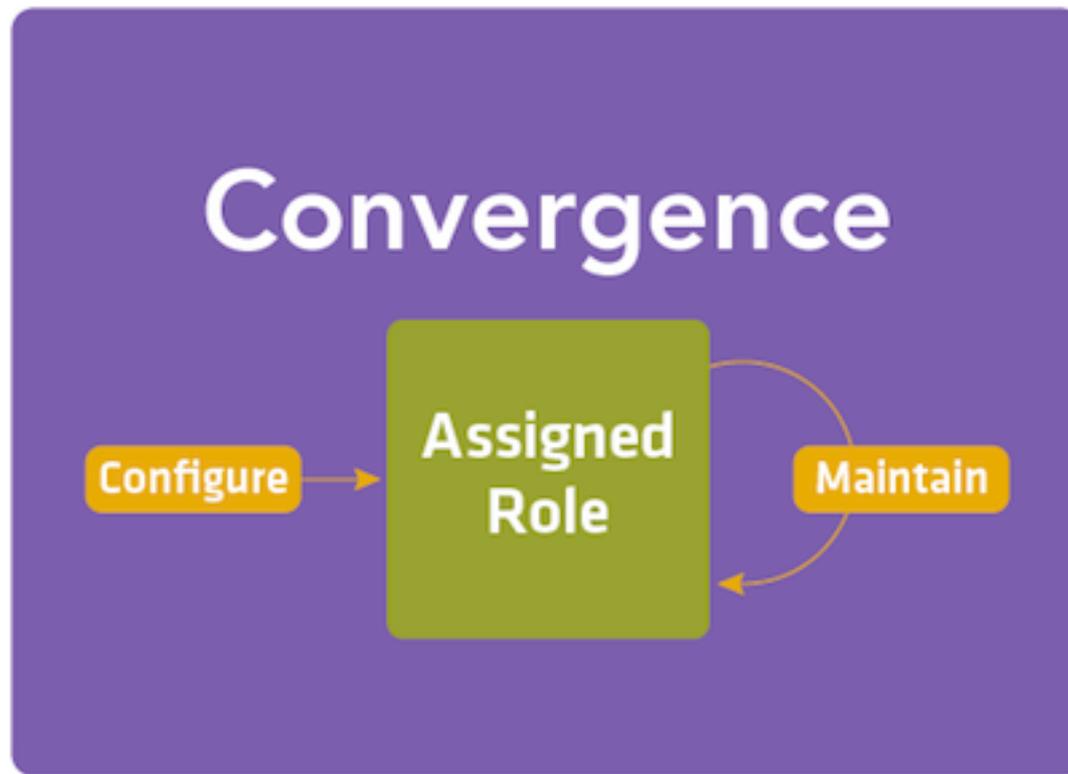
```
user { 'elmo':  
  ensure    => present,  
  gid       => 'sysadmin',  
  home      => '/mnt/home/elmo',  
  managehome => true,  
}
```

Defining a Desired State



Maintaining Desired State

- Provision a Node
- Describe how it should look
- Let Puppet manage it



Puppet Enterprise?



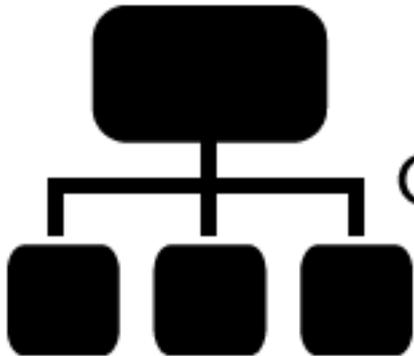
Puppet Enterprise



GUI



Cloud
Provisioning



Orchestration



Compliance

GUI for Puppet

The screenshot displays the Puppet Enterprise console interface. At the top, there is a navigation bar with links for Nodes, Groups, Classes, Reports, File Search, Inventory Search, Compliance, Live Management, and Help. On the left sidebar, the 'Background Tasks' section shows 'All systems go' with a green checkmark. Below it, the 'Nodes' section provides a high-level summary: 10 Unresponsive, 0 Failed, 0 Pending, 6 Changed, 20 Unchanged, and 2 Unreported, totaling 38 All. The main content area features a 'Daily run status' chart showing the number and status of runs over the last 30 days. The chart is a stacked bar chart with categories for Unchanged (green), Changed (blue), Failed (red), and Unresponsive (grey). Below the chart is a table with tabs for 'All', 'Unresponsive', 'Failed', 'Pending', 'Changed', and 'Unchanged'. The table includes columns for Node, Latest report, Total, Failed, Pending, and Changed. A list of nodes is shown with their respective status icons and report times.

Node	Latest report	Total	Failed	Pending	Changed
enka1.puppetlabs.com	2011-11-01 19:54 UTC	367	0	0	0
rpm-builder.puppetlabs.lan	2011-11-01 19:51 UTC	263	0	0	0
shell.puppetlabs.com	2011-11-01 19:46 UTC	313	0	0	0
qa.puppetlabs.lan	2011-11-01 19:45 UTC	339	0	0	0
clippy.puppetlabs.lan	2011-11-01 19:45 UTC	348	0	0	8
bacula01.puppetlabs.lan	2011-11-01 19:44 UTC	382	0	0	0
net02.dc1.puppetlabs.net	2011-11-01 19:43 UTC	349	0	0	0
deb-builder.puppetlabs.lan	2011-11-01 19:43 UTC	315	0	0	0
urd.puppetlabs.lan	2011-11-01 19:43 UTC	271	0	0	0
web01.puppetlabs.com	2011-11-01 19:42 UTC	419	0	0	0
vor.puppetlabs.lan	2011-11-01 19:41 UTC	323	0	0	0
dave.dc1.puppetlabs.net	2011-11-01 19:40 UTC	276	0	0	0
yo.puppetlabs.lan	2011-11-01 19:40 UTC	364	0	0	0
xaman.puppetlabs.lan	2011-11-01 19:39 UTC	335	0	0	0
webstage.puppetlabs.lan	2011-11-01 19:39 UTC	54	0	0	0
pluto.puppetlabs.lan	2011-11-01 19:36 UTC	2869	0	0	0
wordtodapress.puppetlabs.lan	2011-11-01 19:35 UTC	330	0	0	0
mon0.puppetlabs.lan	2011-11-01 19:32 UTC	876	0	0	0

High level status for nodes

Time-based display for insight into rate of change

Detailed node status to pinpoint specific issues



PE Live Management

The screenshot shows the Puppet Enterprise console interface. At the top, the navigation bar includes 'Home', 'Nodes', 'Groups', 'Classes', 'Reports', 'File Search', 'Inventory Search', 'Compliance', and 'Live Management'. The 'Live Management' section is active, showing a 'Cloning user: games' dialog. The dialog includes a 'Node Search' field with 'Wildcards allowed' and a 'Search' button. Below the search field, there are 'Select: All' and 'None' buttons. A list of nodes is shown, with several selected (checked). The 'Cloning user: games' section includes a 'Clone' button and a 'Cancel' button. Below this, there are instructions: '1. Find or select the nodes to which you want to clone this resource. 2. Click "Preview" and you'll see what we expect to happen.' The 'Manage Resources' section has tabs for 'Invoke Agents' and 'Control Puppet'. Below this, a message states: 'We expect that cloning the User 'games' to these Nodes will yield the following results:'. A table shows the results, with 3 overwrites. The table has columns for 'Source' and '3 nodes'. The table content is as follows:

	Source	3 nodes
comment	games	games
ensure	present	present
gid	60	100
home	/usr/games	/usr/games
password	*	*
password_max_age	99999	99999
password_min_age	0	0
shell	/bin/sh	/sbin/nologin
uid	5	12

Browse for managed nodes in your infrastructure

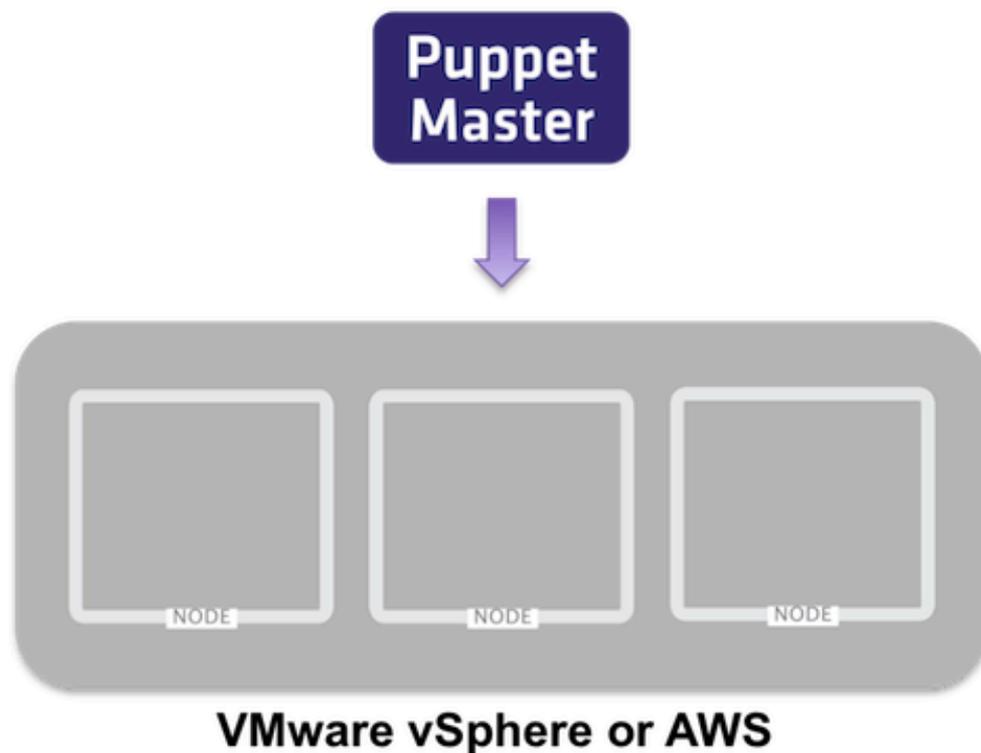
Choose nodes to clone to ensure consistency

Preview the impact before you clone nodes



VM/Cloud Provisioning

- 1. Create VM node capacity**
using VMware vSphere or AWS
- 2. Automatically install**
the Puppet Agent on new nodes
- 3. Configure nodes**
using existing definitions



PE Compliance

- Establish baseline of desired state
- Visualize changes to desired baseline
- Accept or reject changes to baseline

puppet enterprise console

Nodes Groups Classes Reports File Search Inventory Search Compliance Live Management Help

• Compliance • hawks group

Thursday, July 14, 2011

Unreviewed: 3 nodes, 6 differences
Accepted: 0
Rejected: 0

Change date ...

Common Differences Individual Differences

This is a list of all resources with the same inspected state on more than one node.

File[/etc/profile]

There are 2 conflicting inspected states for this resource. You must accept 1, or reject them all.

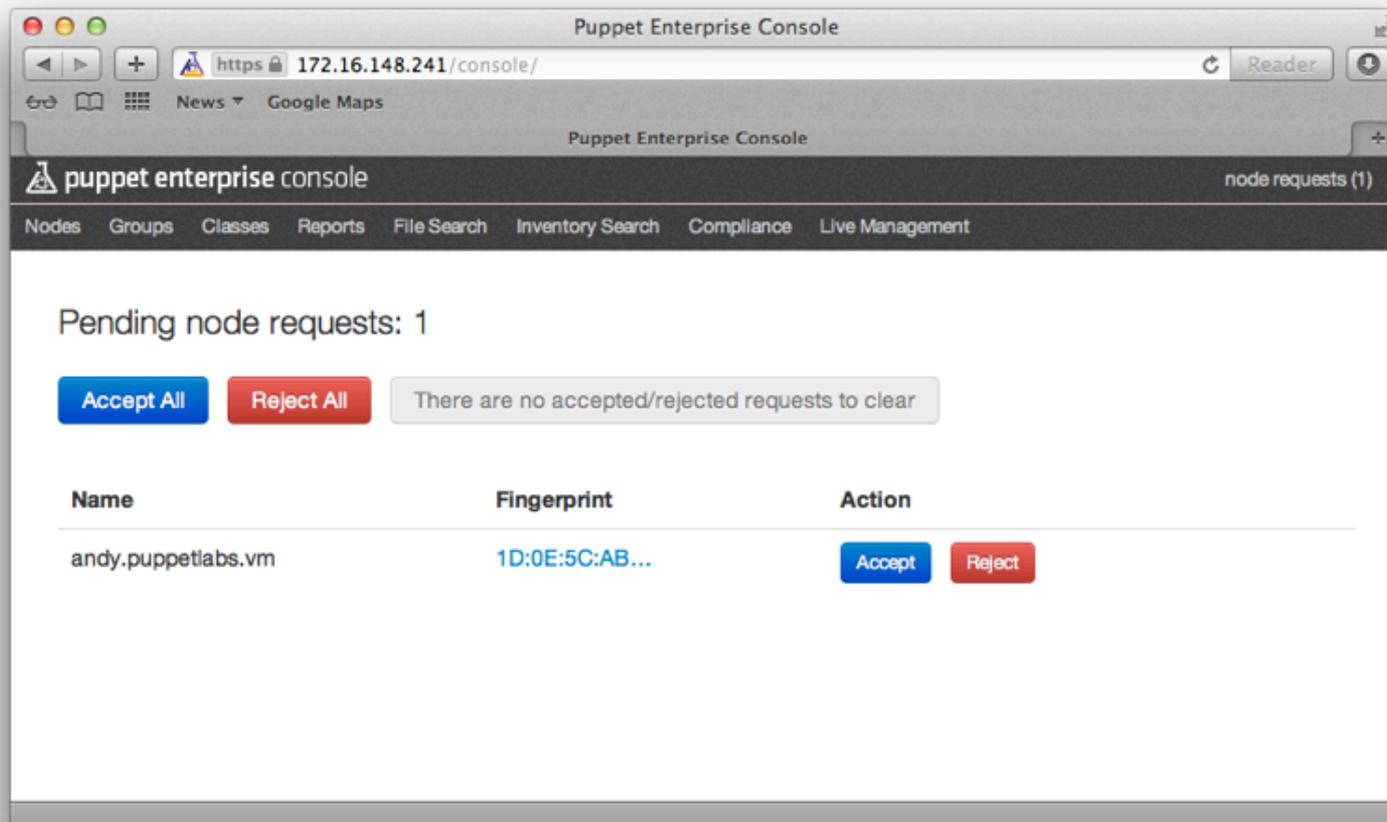
	PROPERTY	BASELINE	INSPECTED
1 nodes	content	See file contents	See file contents
	ctime	2010-04-09 13:52 UTC	2011-07-14 19:36 UTC
	mtime	2009-09-21 23:27 UTC	2011-07-14 19:36 UTC
2 nodes	ctime	2010-04-09 13:52 UTC	2011-07-13 19:31 UTC
	mtime	2009-09-21 23:27 UTC	2011-07-13 19:31 UTC

User[nick]

3 nodes	comment	--	--
	ensure	present	absent
	expiry	absent	--
	gid	506	--
	groups	--	--
	home	/home/nick	--
	password	!!	--
	password_max_age	99999	--
	password_min_age	0	--
	shell	/bin/bash	--
	uid	506	--

Recent Features

- Certificate Signing from the GUI
- Authentication with LDAP and oAuth



Resources for Success



Services
&
Support



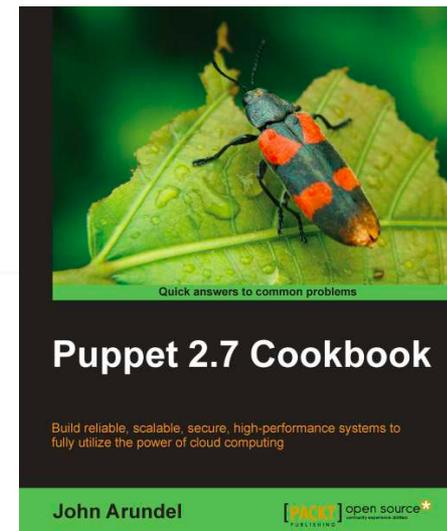
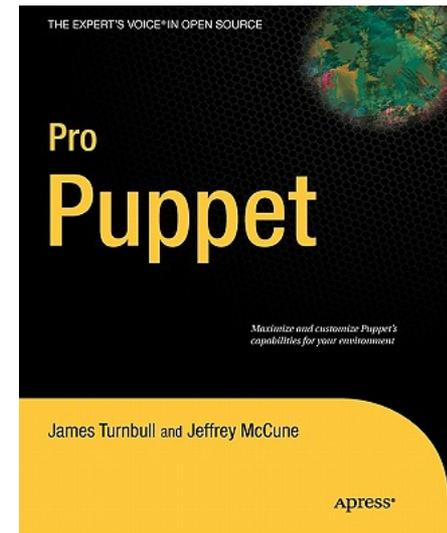
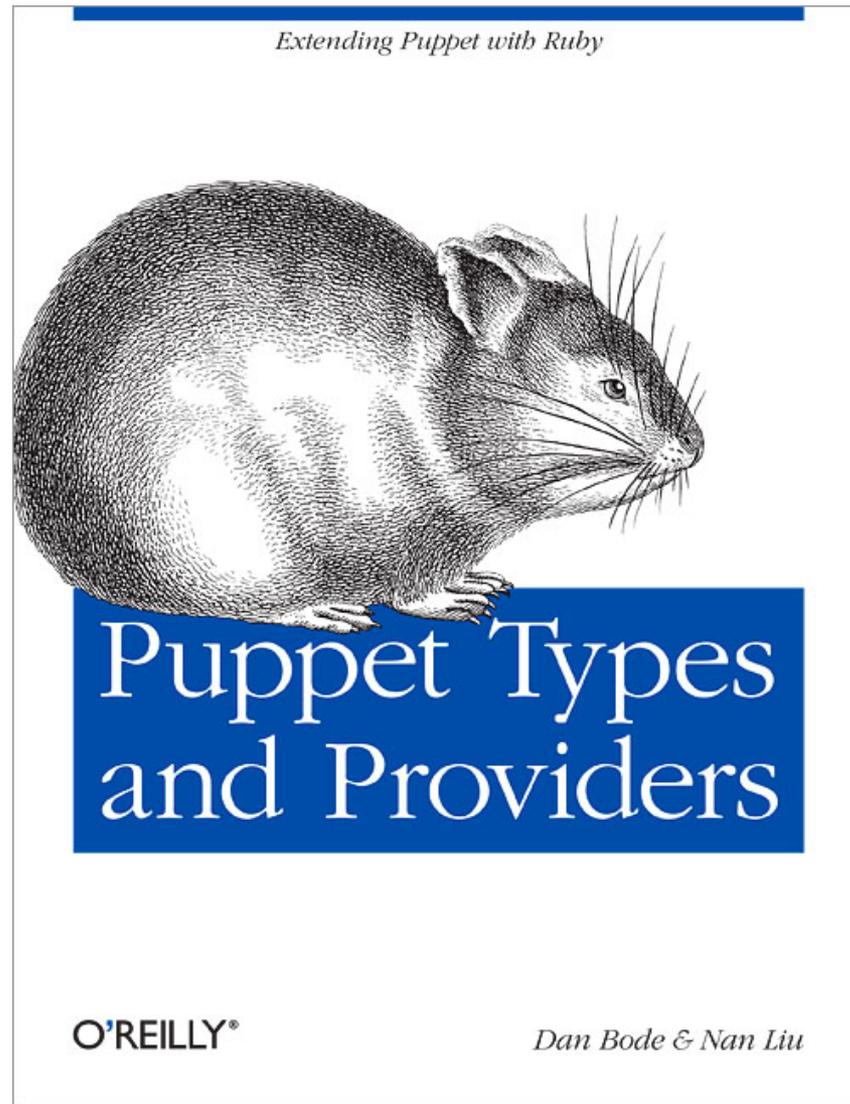
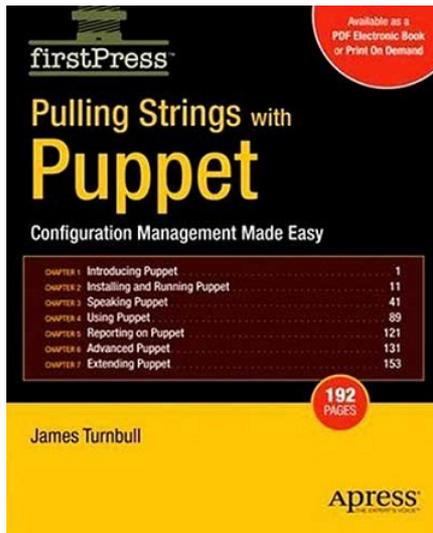
The
Forge



Training

Puppet Happenings





Puppet 3 Developments

- Removal of dynamic scoping
- Extensions loaded from gems
- Full Ruby 1.9.3 support
- Pluginsync by default
- Data Separation with data binding
- Performance improvements
- Better version numbers
- More platform support
- Code loading improvements
- Even more documentation



Scope

```
# dynamic scoping is gone
```

```
class parent {  
  $var = "from parent"  
  include included  
}
```

```
class included {  
  notify { $var: } ## NOT GONNA WORK  
  notify { $parent::var: } ## YUP  
}
```

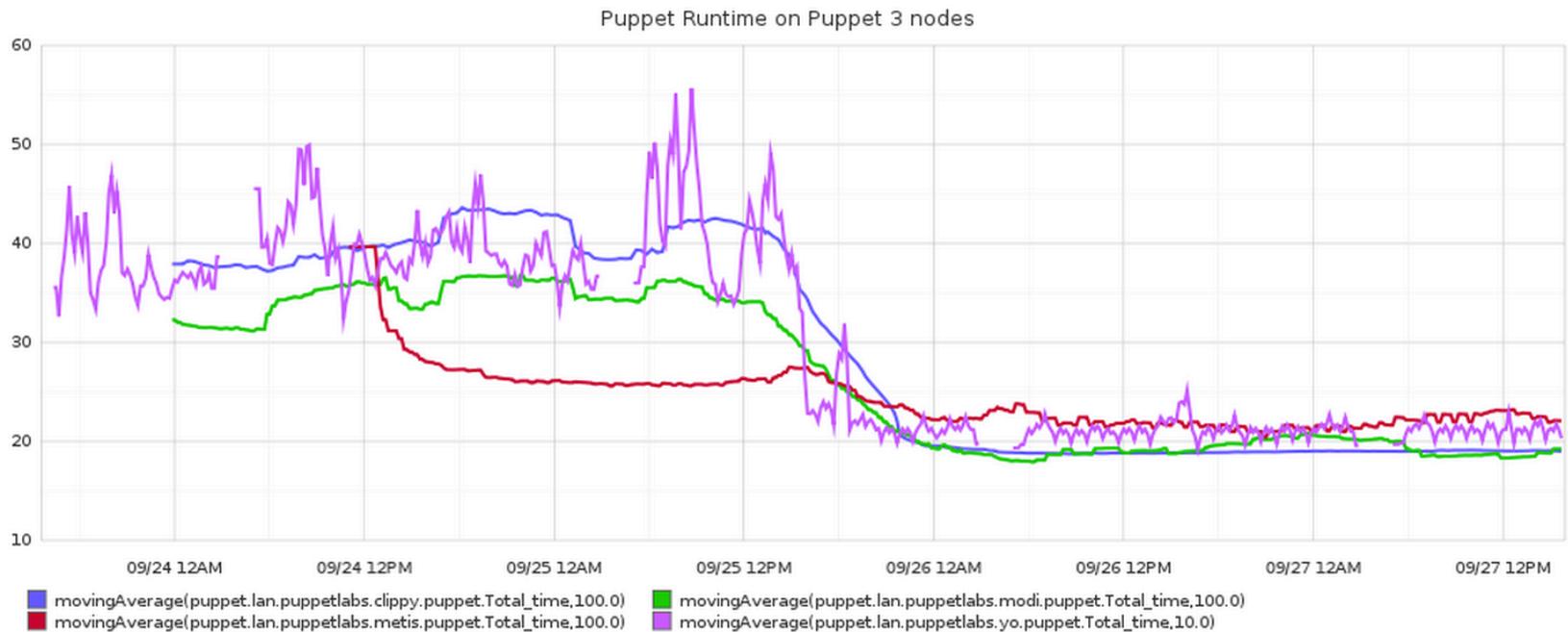
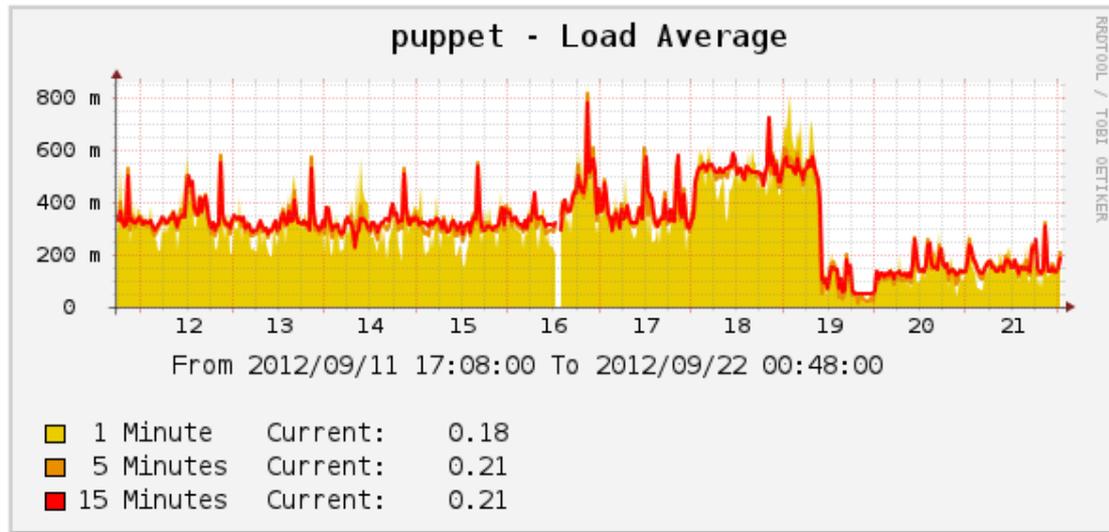
Data Binding

```
class ntp($server = hiera(ntp_server,  
    'time.apple.com')) {  
    ...  
}
```

can be changed to

```
class ntp($ntpserver = 'time.apple.com') {  
    ...  
}
```

Performance Gains



CHANGES?



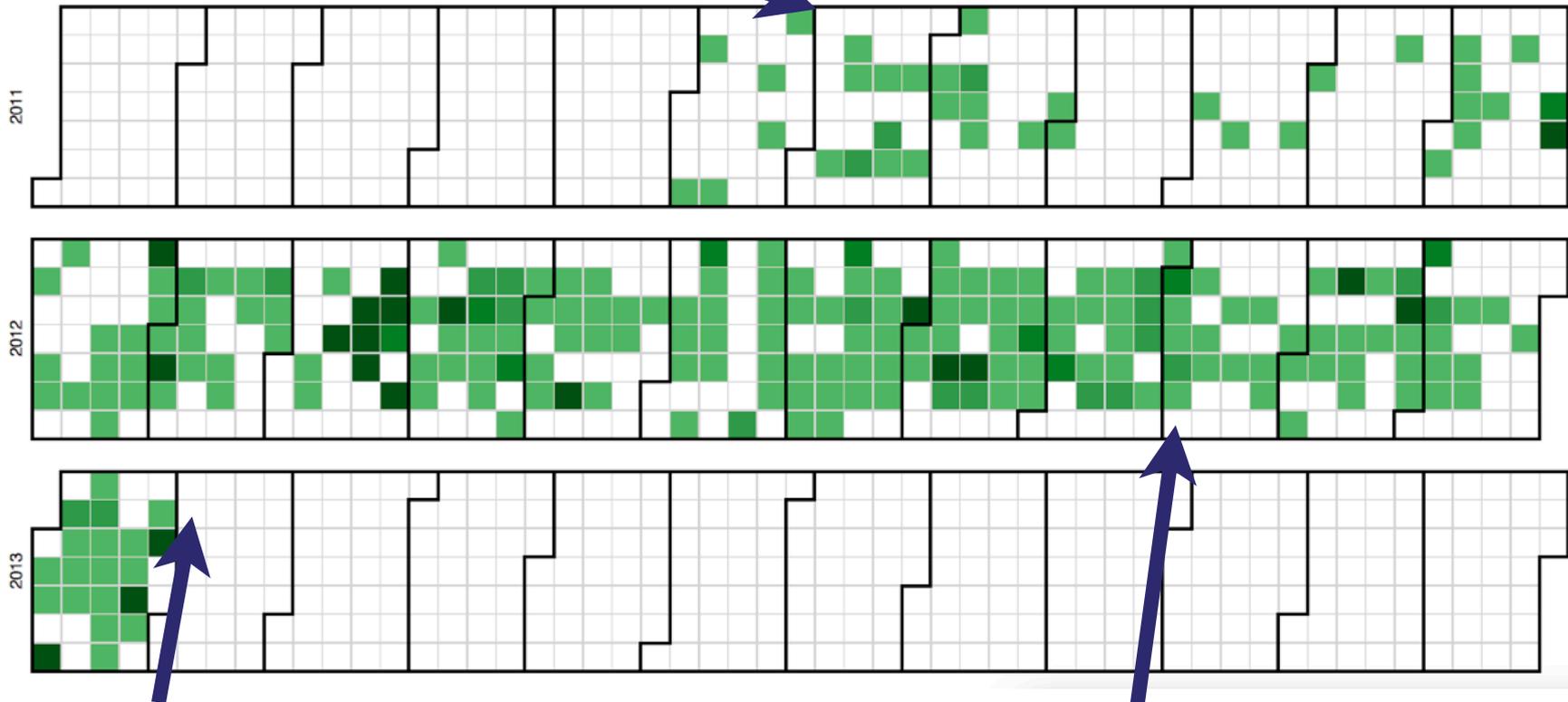
SEMVER ALL THE SOFTWARE!

memegenerator.net



Puppet 3 moving on from 2.7

2.7.0 Release



3.1.0 Release

3.0.0 Release



Transparency in plans

Search:

Overview Activity Roadmap **Issues** Wiki

Backlog Query

→ Filters
→ Options

✓ Apply Clear

✓ #	Project	Priority	Subject	
ENC Service (1)				
Factor (5)				
Puppet (45)				
<input type="checkbox"/>	7316	Puppet	Immediate	puppet face applications (subcommands) delivered via modules should work
<input type="checkbox"/>	16426	Puppet	Immediate	Publish API documentation automatically
<input type="checkbox"/>	16753	Puppet	Immediate	Need the ability to list all nodes
<input type="checkbox"/>	16937	Puppet	Immediate	Improved Ruby DSL
<input type="checkbox"/>	17844	Puppet	Immediate	rename `my` in ruby dsl
<input type="checkbox"/>	17845	Puppet	Immediate	document stability of ruby dsl api
<input type="checkbox"/>	18023	Puppet	Immediate	Puppet needs a public, clearly-defined Ruby API
<input type="checkbox"/>	3691	Puppet	High	The Catalog should include both dependency and containment edges
<input type="checkbox"/>	5692	Puppet	High	Internally-generated state files should be written in an atomic way
<input type="checkbox"/>	7273	Puppet	High	Add additional signals for restarting Puppet agent runs
<input type="checkbox"/>	8040	Puppet	High	Classes should be able to contain other classes to provide a self contained module
<input type="checkbox"/>	11331	Puppet	High	Add 'foreach' structure in manifests
<input type="checkbox"/>	13196	Puppet	High	Powershell exec provider
<input type="checkbox"/>	14544	Puppet	High	The apply application should support writing the resources file and classes file

Issues
View all issues
Summary

Custom queries
Accepted but Unowned - Patches Welcome!
All tickets
Backlog Query
Open cron issues
Platform Report - 2 Week Activity
Puppet Solaris issues
Ruby 1.9 Issues
Support Customer Tickets
Support Tickets
Telly Deprecations
Tickets - Assigned to Me
Tickets - Authored by Me
Tickets - By Priority
Tickets - In Topic Branch Pending Review
Tickets - Top by votes
Tickets - Unassigned to a target release
Tickets - Unreviewed
Tickets - unreviewed and outside SLA
Tickets - waiting for action
Tickets with simple fixes



Forge Happenings



The Puppet Module Forge

- Repository of modules
- Written by the community
- Written for the community
- Identify the best ones out there
- Great place to contribute your own modules



By the Numbers

	Jan 2012	Jan 2013
Modules	260	750+
Users	930	2000+
Daily Downloads	500	2200



What changed?

- Dedicated team
- Show download counts
- More visible documentation

Latest release: **0.4.0**

Release date: Jan 24, 2013

Total downloads: 2,903

Other releases:

Module description

Puppet Razor module will perform the installation of Razor on Ubuntu Precise and RHEL/CentOS system. See [blog post](#).

It is considered part of the overall Project Razor infrastructure, so you can get help using the module or enhancing it over at the main Project Razor site on GitHub.



MCollective Happenings



The Marionette Collective

- Framework to build server orchestration
- Parallel job execution
- Real-time discovery of resources
- Target only the systems you want



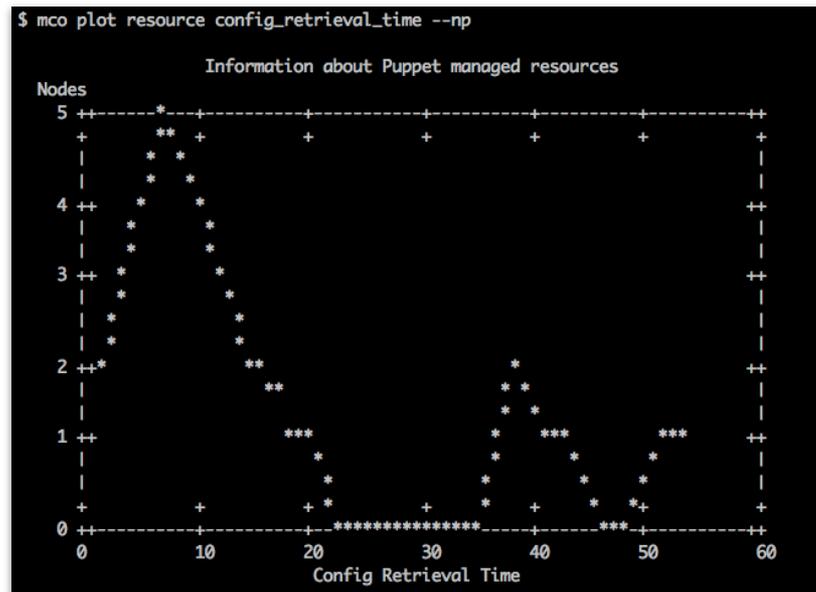
Continuous Release

- Agents in packages, real packages
- MCO does it, so you can make them too
- Continuously built, continuously released

S	W	Name ↓	Last Success	Last Failure	Last Duration
		MCO FileMgr Plugin Spec	1 mo 0 days (#3)	N/A	1 min 44 sec
		MCO Iptables Plugin Spec	18 days (#3)	1 mo 0 days (#1)	1 min 51 sec
		MCO NRPE Plugin Spec	18 days (#32)	1 mo 7 days (#21)	1 min 14 sec
		MCO Puppet Plugin Spec	1 day 16 hr (#13)	19 days (#6)	1 min 47 sec
		MCO Service Plugin Spec	11 days (#7)	12 days (#4)	1 min 57 sec
		MCO Trigger Build	1 day 16 hr (#21)	1 mo 0 days (#1)	1.2 sec

Usability

- Better docs
- More Complete applications
- Out of the box usability
- But still the framework it always was
- Full integration into puppet training



PuppetDB Happenings



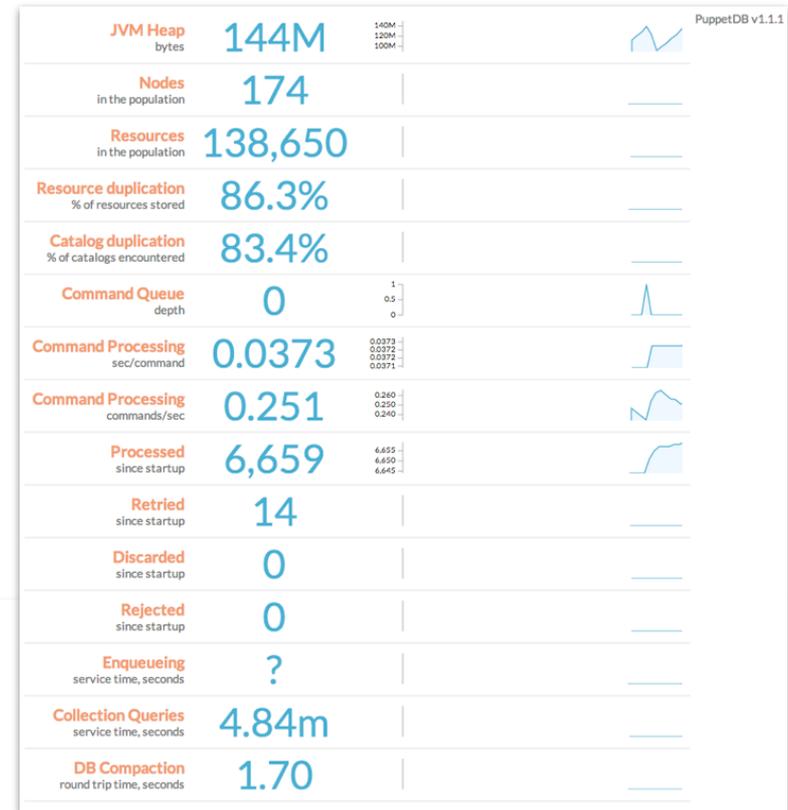
PuppetDB

- Central storage for catalogs and facts that are part of your puppet infrastructure
- Incredibly fast replacement for existing ActiveRecord storeconfigs
- Easily deployed via a puppet module from the Forge



Better Query, More Storage

- PuppetDB 1.1 released
- Enhanced Query API for facts, subqueries, regular expressions
- Report Storage
- Report Query in an experimental API



Razor Happenings



Razor Provisioning

- Rules-based provisioning for bare metal hardware and virtual servers
- Developed in cooperation with EMC
- Easily deployed via a puppet module from the Forge
- Automatically brings the new server into your puppet infrastructure
- Open, pluggable, and programmable



Razor Present and Future

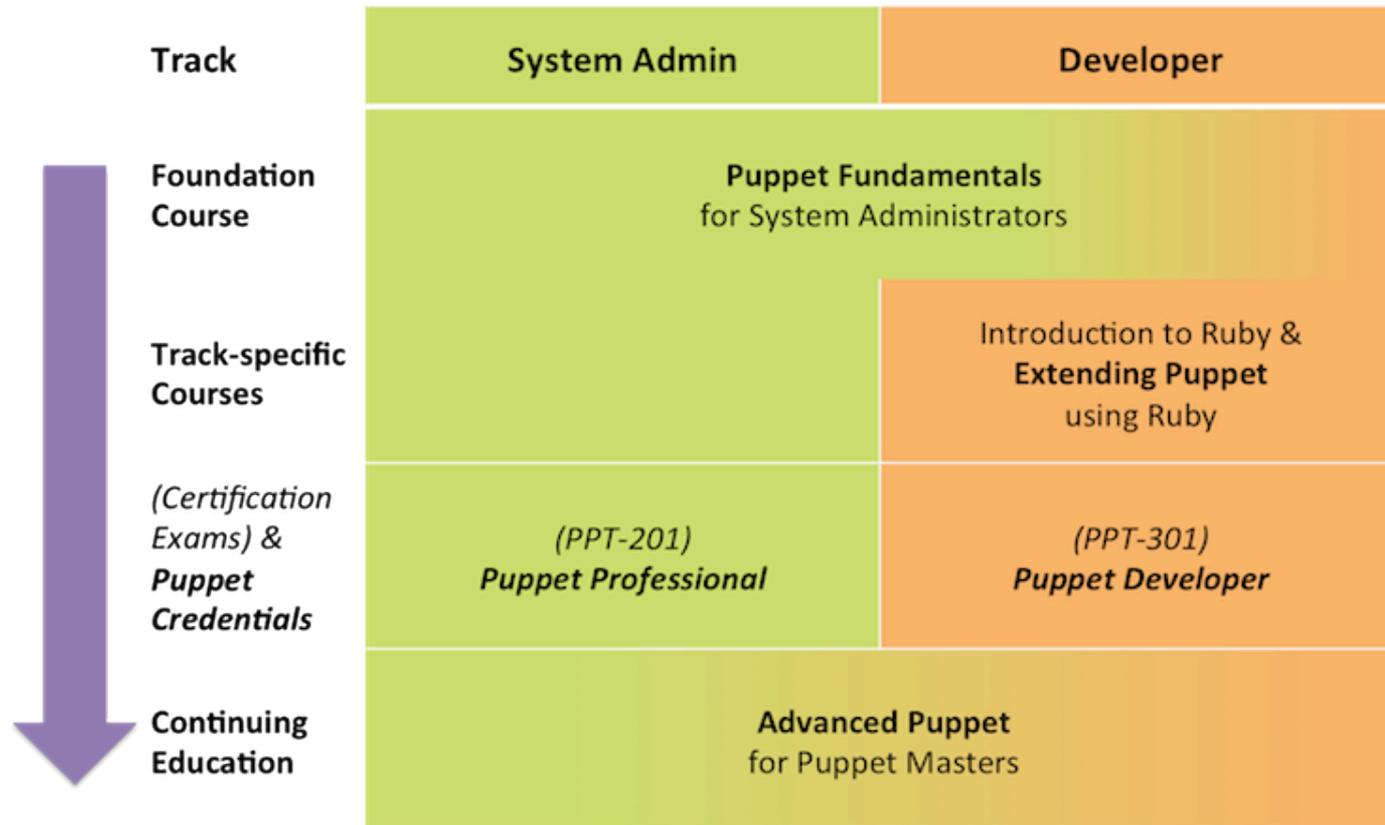
- Security audits, fixes in the 0.8.0 release
- Working on making releases for yum and apt
- Not yet ready for prime time
- Help us get it there
- File bugs, contribute to the community



Training & Certification



Puppet Education: Training and Certification Track





puppet
labs

Questions?



Thank You!

Learn More:

<http://puppetlabs.com>

<http://puppetlabs.com/community>

<http://puppetlabs.com/puppet/puppet-enterprise/>