



puppet
labs

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



CONDÉ NAST



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

llowder'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.keepinghyouhonest....>
location Springfield, United States 
age 31 age unit
todays unused votes 30 votes left

 348 karma

[follow llowder](#)

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
```

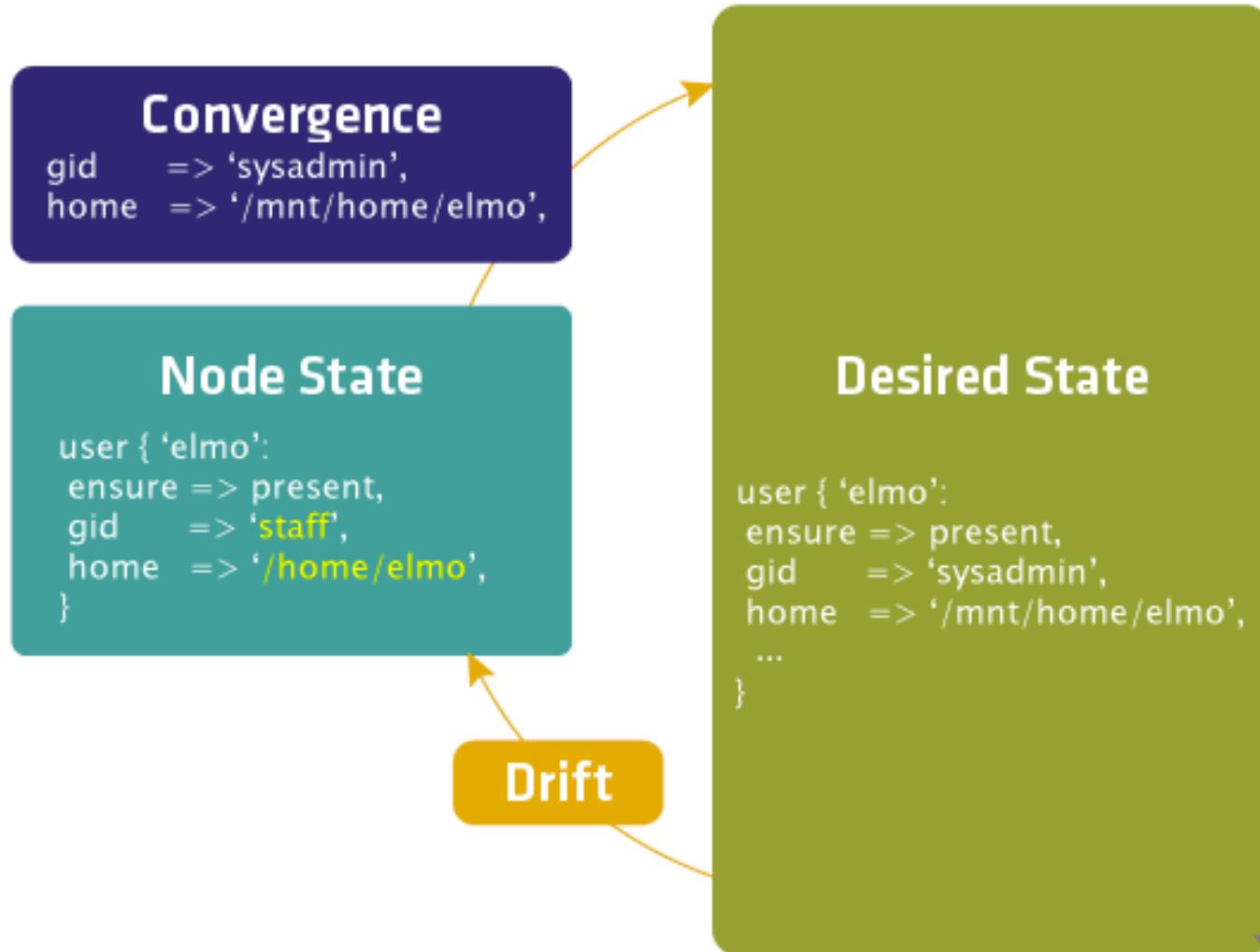


System Management: The Puppet Way

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

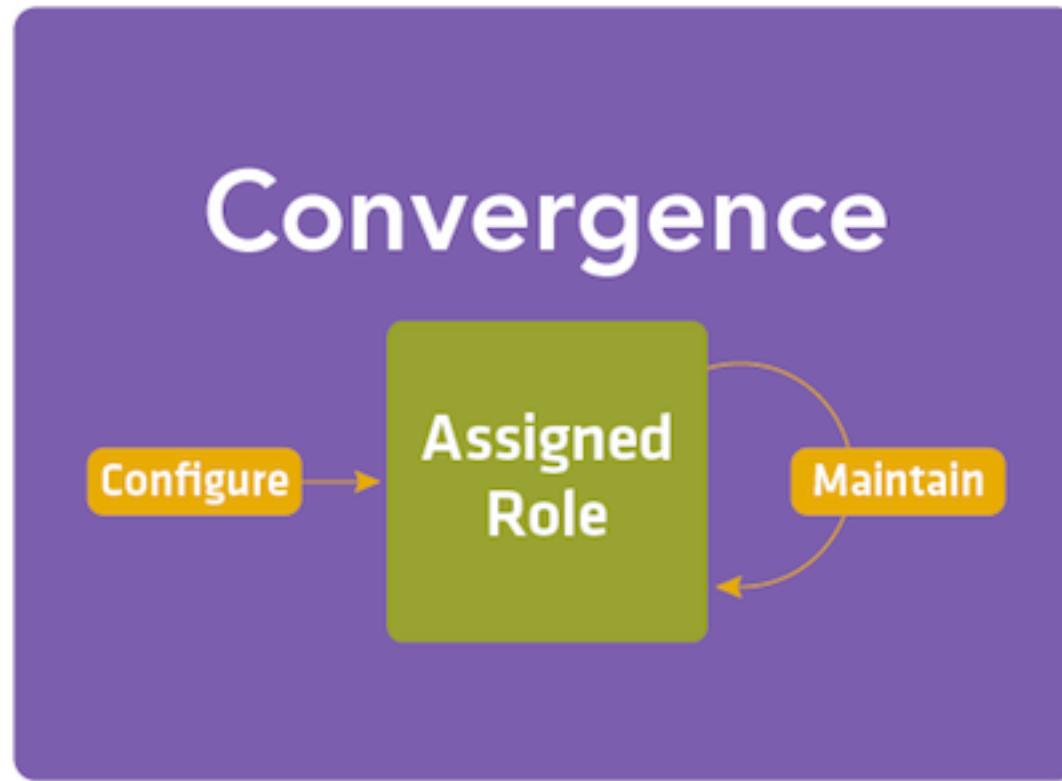


Defining a Desired State



Maintaining Desired State

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



Puppet Enterprise?



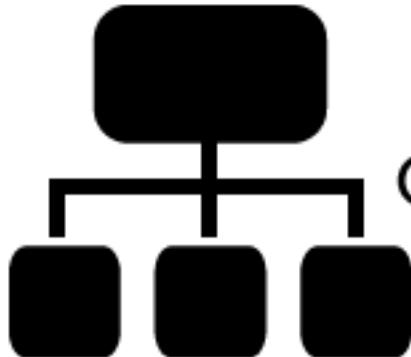
Puppet Enterprise



GUI



Cloud
Provisioning



Orchestration



Compliance



GUI for Puppet

puppet enterprise console

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

Background Tasks
All systems go

Nodes

- 10 Unresponsive
- 0 Failed
- 0 Pending
- 6 Changed
- 20 Unchanged
- 2 Unreported
- 38 All**

Daily run status
Number and status of runs during the last 30 days:

All **Unresponsive** **Failed** **Pending** **Changed** **Unchanged**

Export nodes as CSV

Node	Latest report	Total	Failed	Pending	Changed
Total		16665	12	0	118
enkal.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	30
wordtodiapress.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

Time-based display for insight into rate of change

High level status for nodes

Detailed node status to pinpoint specific issues

puppet labs

PE Live Management

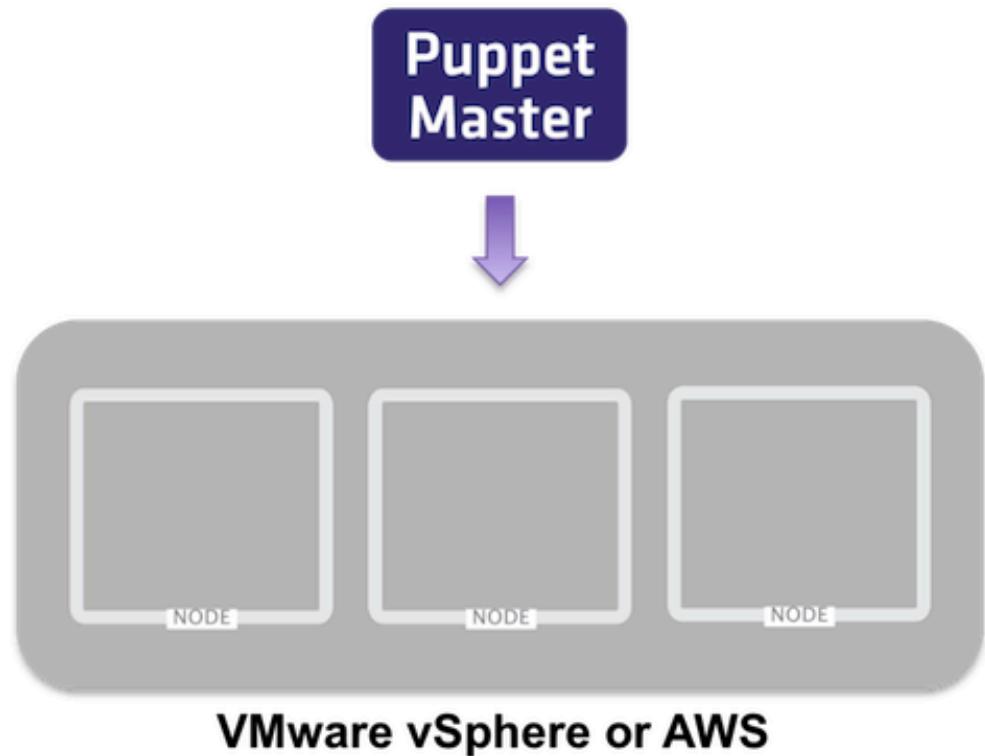
The screenshot shows the Puppet Enterprise console interface for Live Management. On the left, a sidebar lists managed nodes: li339-189, li339-19, li339-190, li339-191, li339-193, and li339-19. A callout bubble points to this list with the text: "Browse for managed nodes in your infrastructure". In the center, a "Cloning user: games" dialog is open. It shows the "Manage Resources" tab selected, listing properties for the "comment", "ensure", "gid", "home", "password", "password_max_age", "password_min_age", "shell", and "uid" parameters. A callout bubble points to the "Manage Resources" tab with the text: "Choose nodes to clone to ensure consistency". Below the table, instructions say: "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." A callout bubble points to this area with the text: "Preview the impact before you clone nodes". At the bottom right, there is a "Clone" button and a "Cancel" button.

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



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

The screenshot shows the Puppet Enterprise console's Compliance feature for the 'hawks' group. It displays a comparison between a baseline and the current state of three nodes.

Common Differences: This section lists resources with the same inspected state on more than one node. It includes a table for the 'File[/etc/profile]' resource and a table for the 'User[nick]' resource.

File[/etc/profile]:

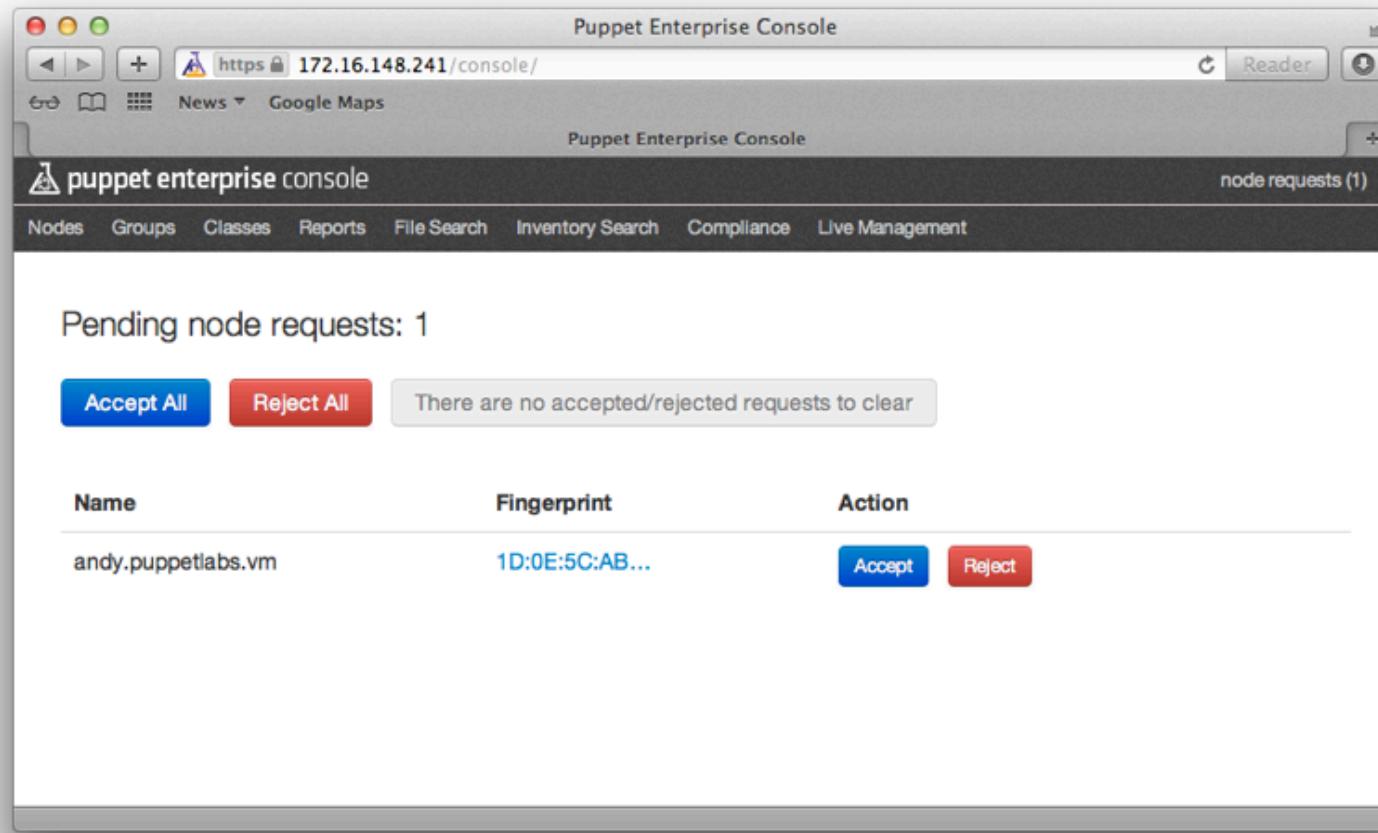
PROPERTY	BASELINE	INSPECTED
content	See file contents • Search for file 2010-04-09 13:52 UTC 2009-09-21 23:27 UTC	See file contents • Search for file 2011-07-14 19:36 UTC 2011-07-14 19:36 UTC
ctime	2010-04-09 13:52 UTC	2011-07-13 19:31 UTC
mtime	2009-09-21 23:27 UTC	2011-07-13 19:31 UTC

User[nick]:

PROPERTY	BASELINE	INSPECTED
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



The screenshot shows the Puppet Enterprise Console interface. At the top, the address bar displays `https://172.16.148.241/console/`. Below the address bar, there's a navigation menu with links for News, Google Maps, and a search bar. The main content area has a title bar labeled "Puppet Enterprise Console". Inside, a sub-header says "puppet enterprise console" and "node requests (1)". A message at the top states "Pending node requests: 1". Below this are two buttons: "Accept All" (blue) and "Reject All" (red). A note below the buttons says "There are no accepted/rejected requests to clear". A table follows, listing one pending request:

Name	Fingerprint	Action
andy.puppetlabs.vm	1D:0E:5C:AB...	Accept Reject



Resources for Success



Services
&
Support



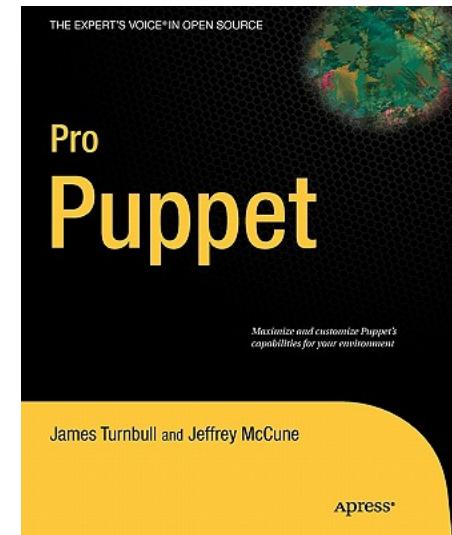
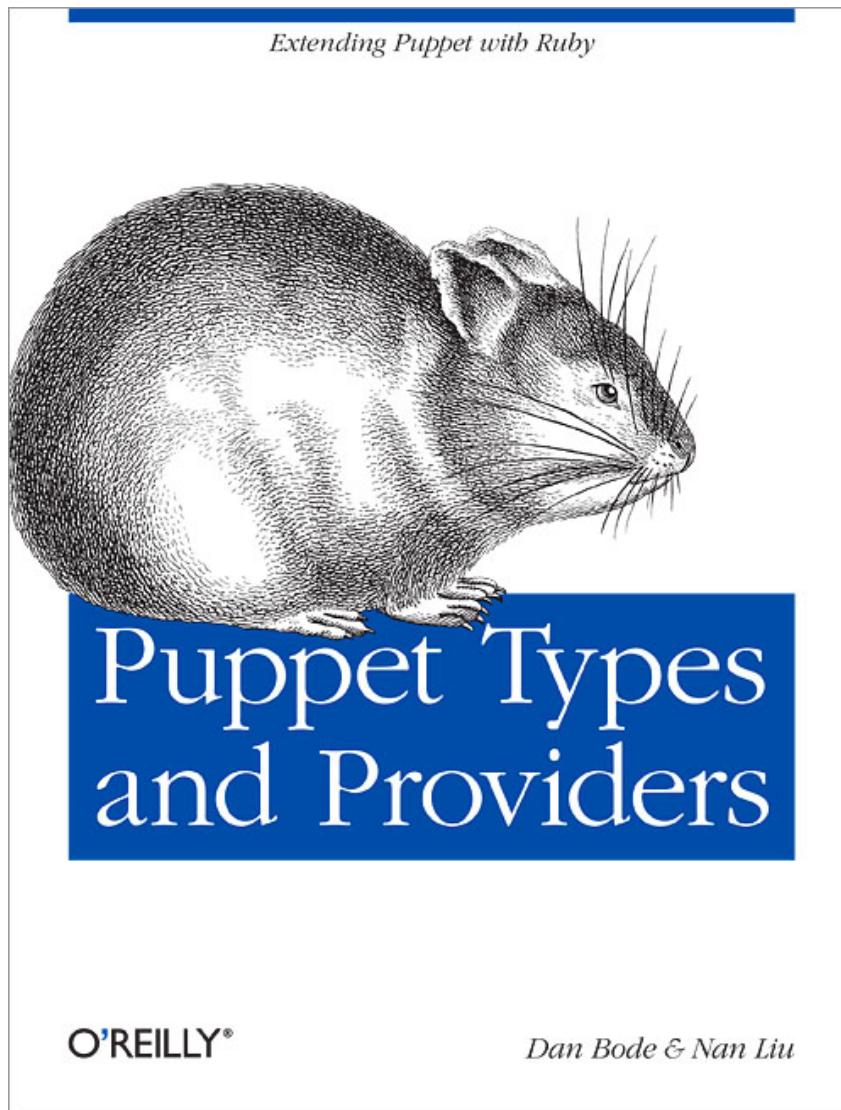
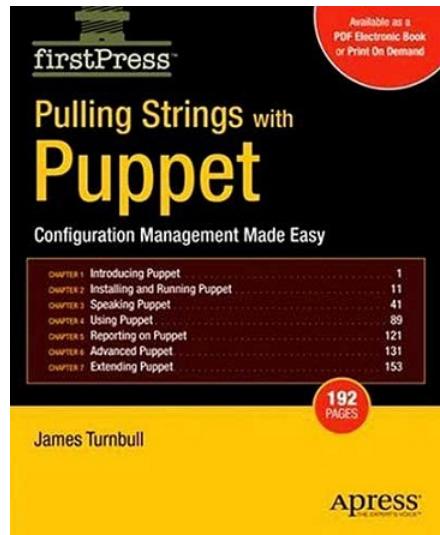
The
Forge



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  
}
```

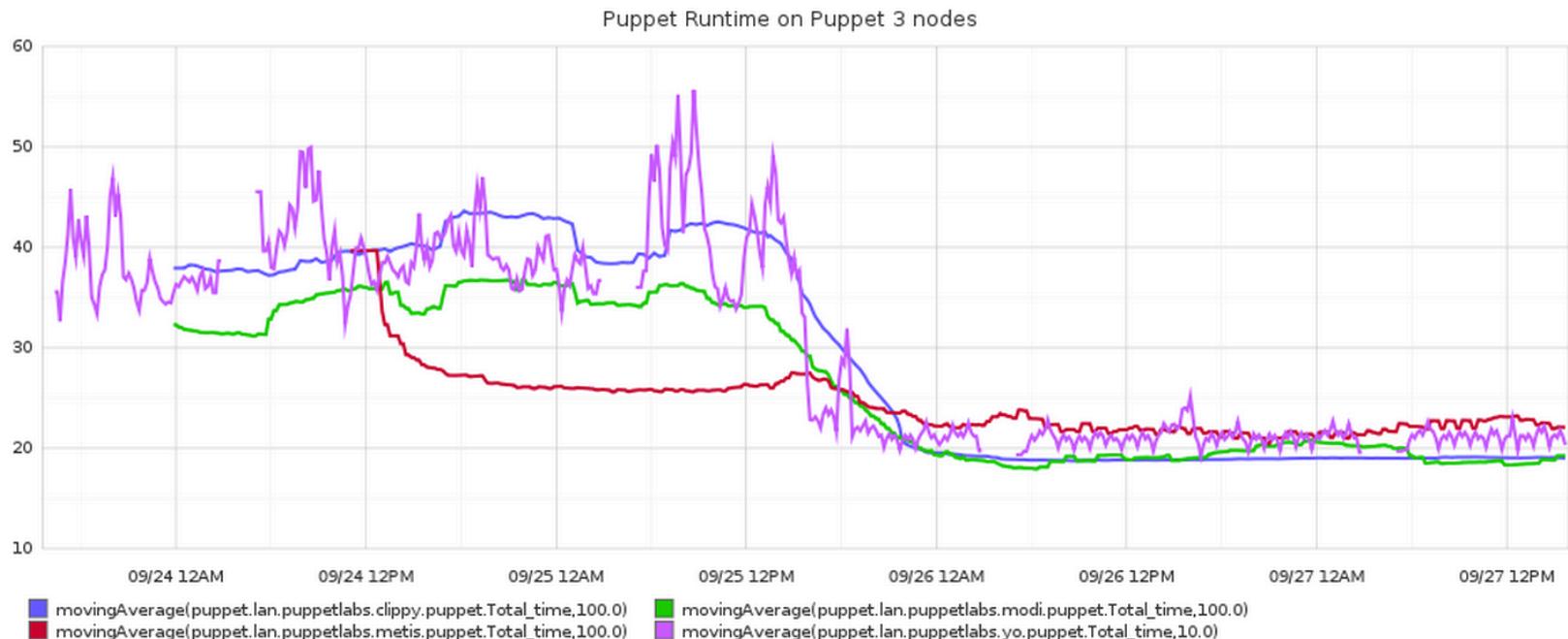
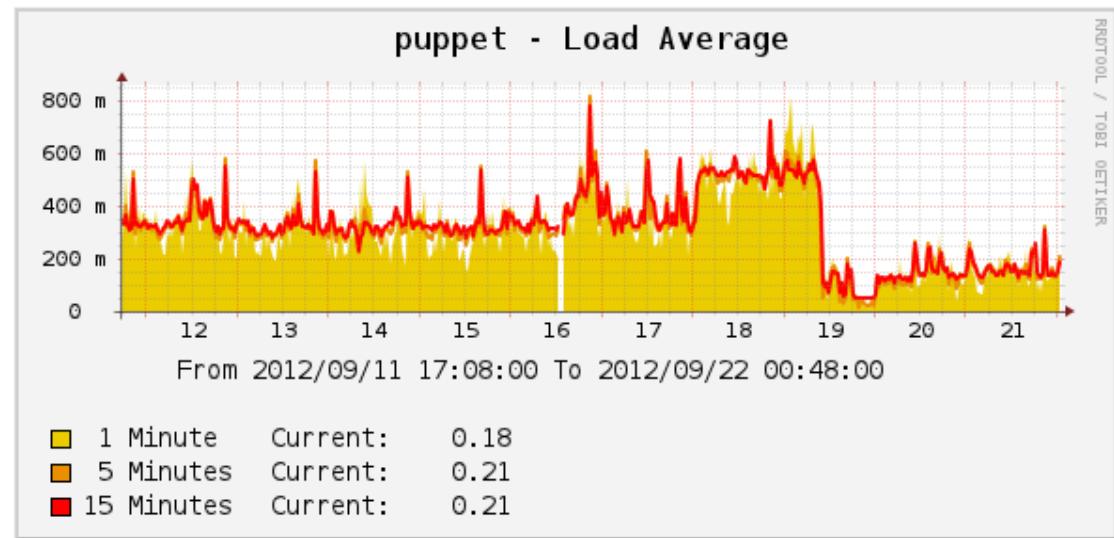


Data Binding

```
class ntp($server = hiera(ntp_server,  
    'time.apple.com')) {  
    ...  
}  
  
# can be changed to  
class ntp($ntpserver = 'time.apple.com') {  
    ...  
}
```



Performance Gains



CHANGES?



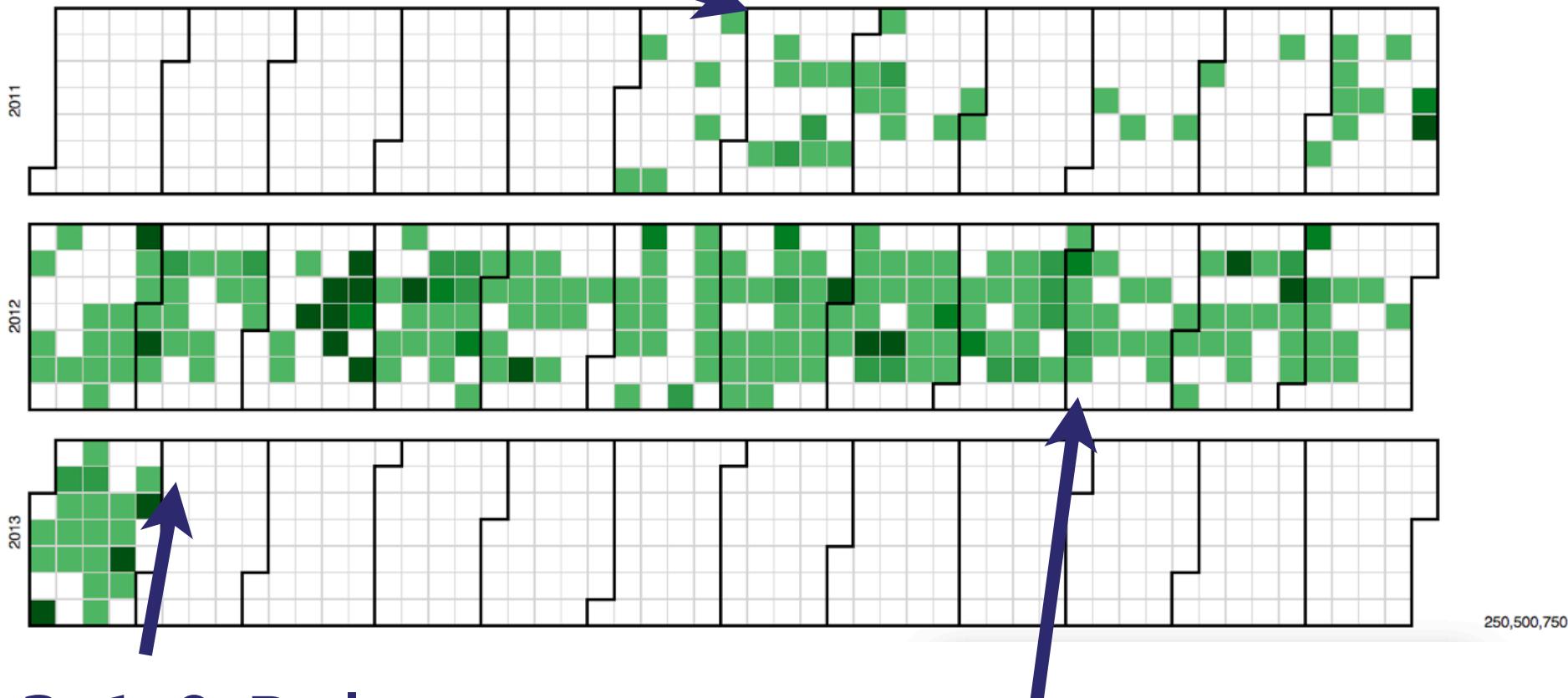
SEMVER ALL THE SOFTWARE!

memegenerator.net



Puppet 3 moving on from 2.7

2.7.0 Release



3.1.0 Release

3.0.0 Release



API Documentation!

Search: [Search](#) [Class List](#) [Method List](#) [File List](#)

[Index \(F\)](#) » [Puppet](#) » [Parser](#) » [Functions \(frames\)](#)

Module: Puppet::Parser::Functions

Extended by: Util

Defined in: lib/puppet/parser/functions.rb [more...](#)

Overview

A module for managing parser functions. Each specified function is added to a central module that then gets included into the Scope class.

Constant Summary

Class Method Summary

[+ \(Integer\) arity\(name\)](#)
Return the number of arguments a function expects.

[+ initialize_settings\(args = \[\]\)](#) [permalink](#)
This method returns an undefined value.

Initialize puppet's settings. This is intended only for use by external tools that are not built off of the Faces API or the Puppet::Util::Application class. It may also be used to initialize state so that a Face may be used programmatically, rather than as a stand-alone command-line tool.

Parameters:

- `args (Array<String>)` (*defaults to: []*) — the command line arguments to use for initialization

[\[View source\]](#)

Method List [Search](#)

- #<< (Puppet::Transaction::Report)
- [] (Puppet)
- #add_metric (Puppet::Transaction::Report)
- #add_resource_status (Puppet::Transaction::Report)
- #add_times (Puppet::Transaction::Report)
- #alias (Puppet::Parameter::Value)
- #aliases (Puppet::Parameter::Value)
- aliasvalue (Puppet::Parameter)
- #aliasvalue (Puppet::Parameter::ValueCollection)
- #allclear (Puppet::MetaType::Manager)
- #applicable_to_device? (Puppet::Type)
- #applicable_to_host? (Puppet::Type)
- apply_to (Puppet::Type)
- apply_to_all (Puppet::Type)
- apply_to_device (Puppet::Type)
- apply_to_host (Puppet::Type)
- #args (Puppet::Util::CommandLine)



Transparency in plans

Puppet Labs Puppet

Search:

Overview Activity Roadmap Issues Wiki

Backlog Query

Filters Options

Apply Clear

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

Tickets Backlog Query Open cron issue

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: 0.4.0 ▾

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

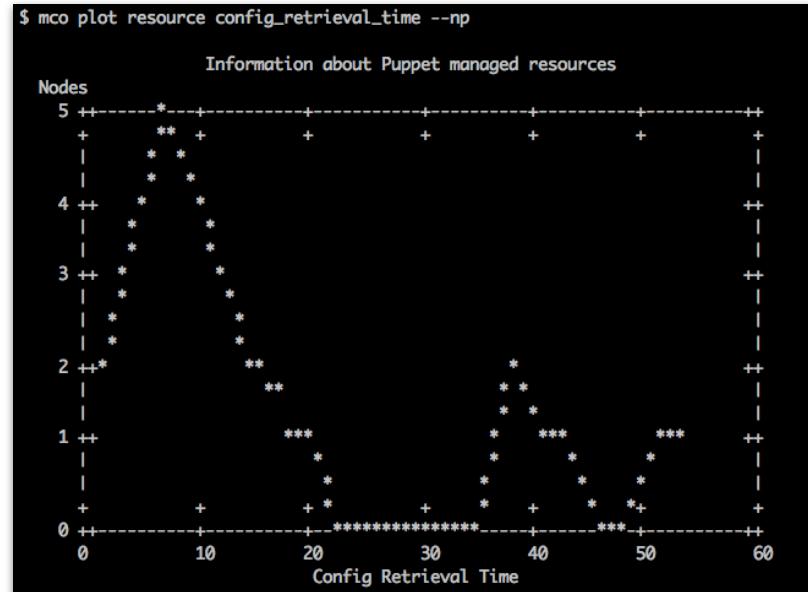
- Agents in packages, real packages
- MCO does it, so you can make them too
- Continuously built, continuously released

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



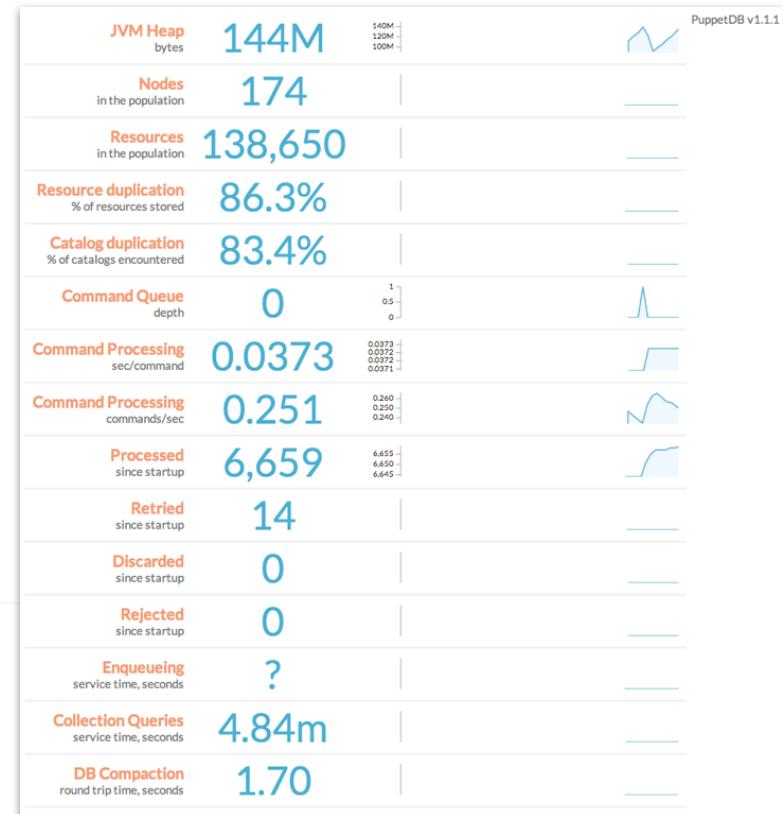
PuppetDB

- 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

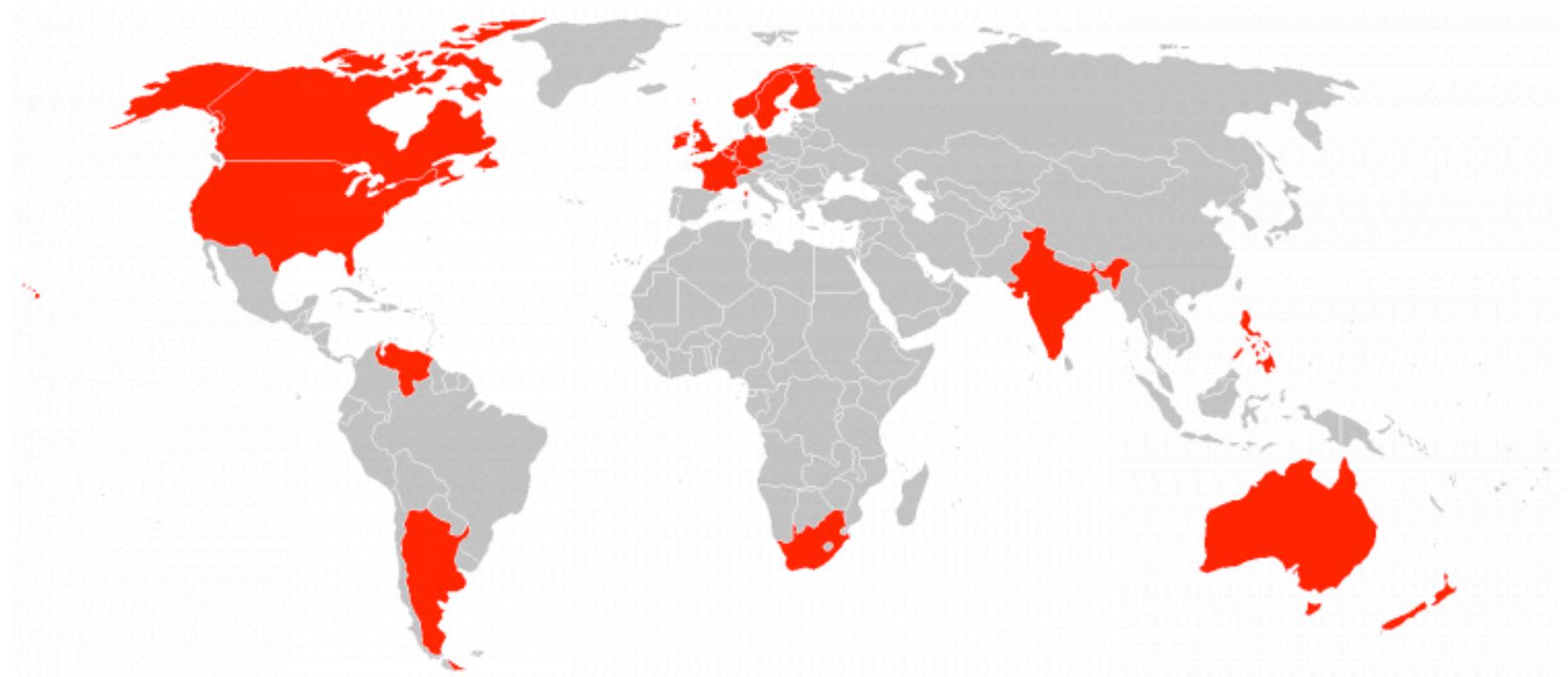
- Security audits, fixes in the 0.8.0 release
- Working on making releases for yum and apt
- Not yet ready for prime time
- Help us get it there
- File bugs, contribute to the community



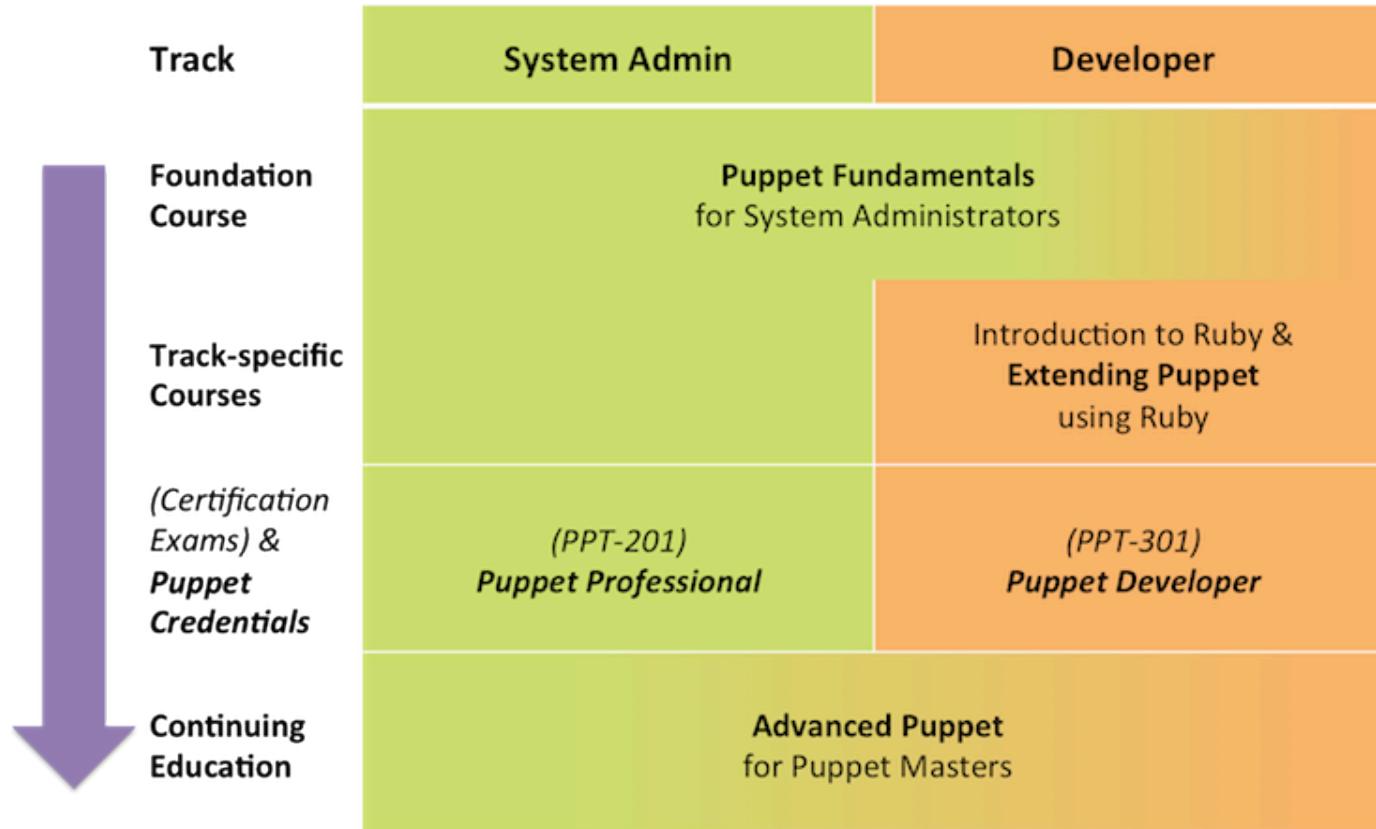
Training & Certification



Training by Country



Puppet Education: Training and Certification Track





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Questions?



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Thank You!

Learn More:

<http://puppetlabs.com>

<http://puppetlabs.com/community>

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