

Puppet

“People are finally figuring out puppet and how it gets you to the pub by 4pm.

Note that I’ve been at this pub since 2pm.”

- Jorge Castro





Use case

Business with 300 customers

-> Maintaining 300 server instances

+ Every month 50 new instances





What are the challenges?

Agility & speed of service delivery

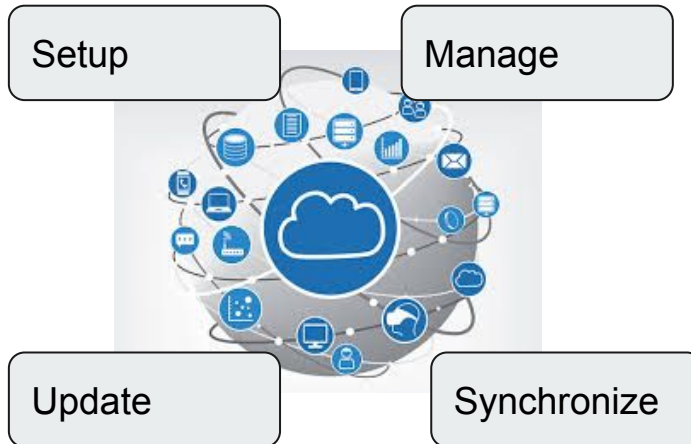
Stability of service delivery





What is Puppet?

Open Source Configuration Management tool for your infrastructure to:

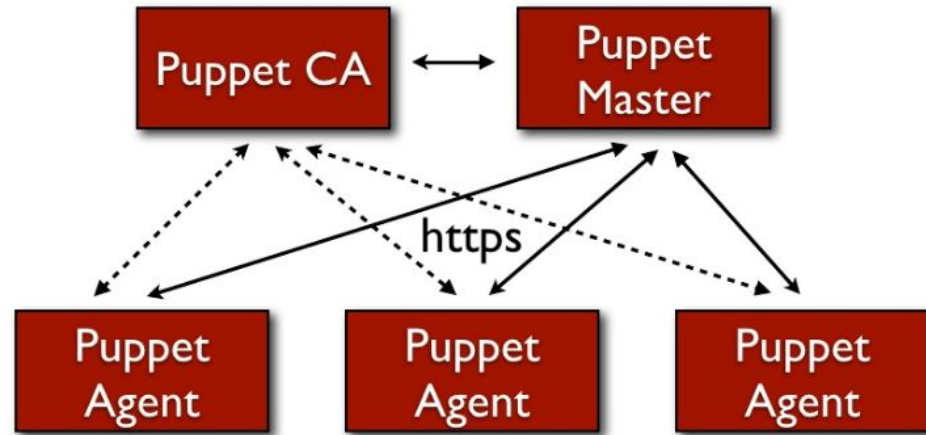


Architecture 1/3

Puppet CA: Distributes CRL

Puppet Master: Command and Control Server

Puppet Agent : Agen on supervised clients

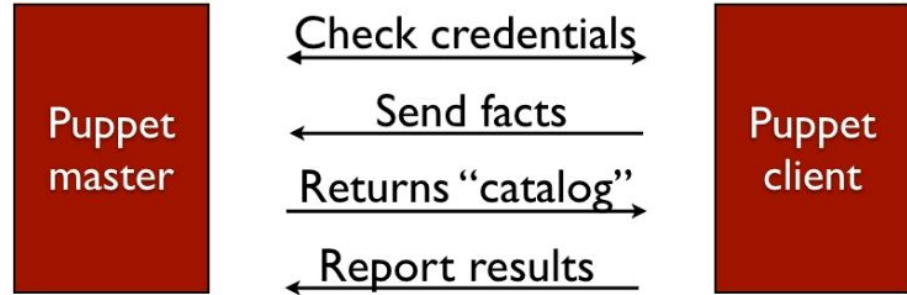




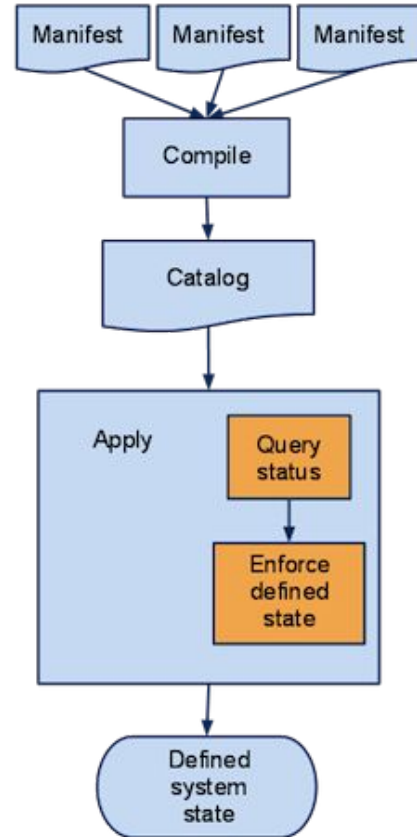
Architecture 2/3

Facts: \$operationsystem

Catalog: Contains desired machine state



Architecture 3/3





Key Principles

- Configuration is declarative code
- semantics matter
- reproducible
- shareable
- maintainable
- extensible

Key
Principles



Code Example of Manifest

Portable Resources

This:

```
apt-get install openssh-server  
vi /etc/ssh/sshd_config  
/etc/init.d/ssh start
```

Becomes:

```
package { ssh: ensure => installed }  
file { sshd_config:  
  name => "/etc/ssh/sshd_config",  
  source => "puppet://server/apps/ssh/sshd"  
}  
service { sshd: ensure => running, }
```



Core Features

- Orchestration
- Automated provisioning
- Configuration automation
- Visualization and reporting
- Code management
- Node management
- Role-based access control

puppet

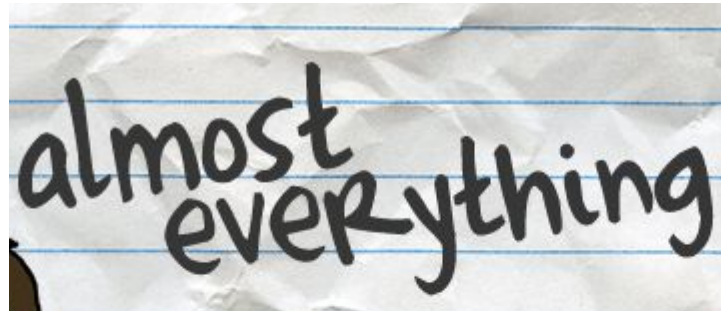




What can puppet manage?

Control your Servers, applications
and routers

48 resource types - file, cron, ssh_key
etc.





Modules

Module: collection of resources, classes templates

Used: easy distribution and code-reuse

Puppet modules



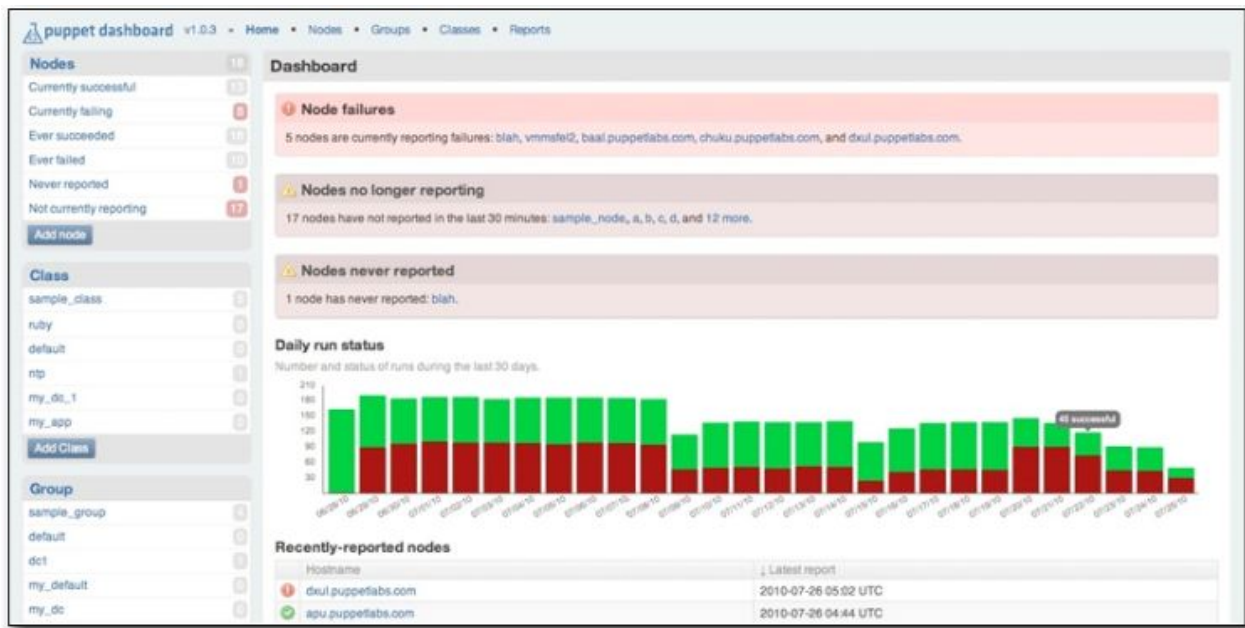


Not only configuration management

- ▶ Which systems running a database and have 16GB or less?
- ▶ Which systems are using <50% of available memory?
- ▶ Restart all apache services in timezone GMT+5.



Dashboard example





Who is using it?

- $\frac{2}{3}$ of the Fortune 100 Companies are using Puppet
- Amazon, Google, Intel, Twitter, RedHat, Spotify, GitHub and many more..





Pros

Pros:

- Strong compliance automation and reporting tools.
- Active community support around development tools and cookbooks.
- Robust, native capability to work with shell-level constructs.





Cons

Cons:

- Using multiple masters complicates the management process. Remote execution can become challenging.
- Lacks push system, so no immediate action on changes. The pull process follows a specified schedule for tasks.



Puppet open source vs Puppet Enterprise

great for individuals
managing a small
set of servers



- orchestration
- role-based access control
- full portability
- reporting
- compliance
- 24/7 support



Conclusion

Two main ideas about Puppet:

- The first one is the principle of **Consistency**.
- The second one is the **cloud automation**.



Barkeeper at 4 pm



Thank you for your attention

Any questions?

