

Configuration Management with Puppet

client/server



Puppet client/server



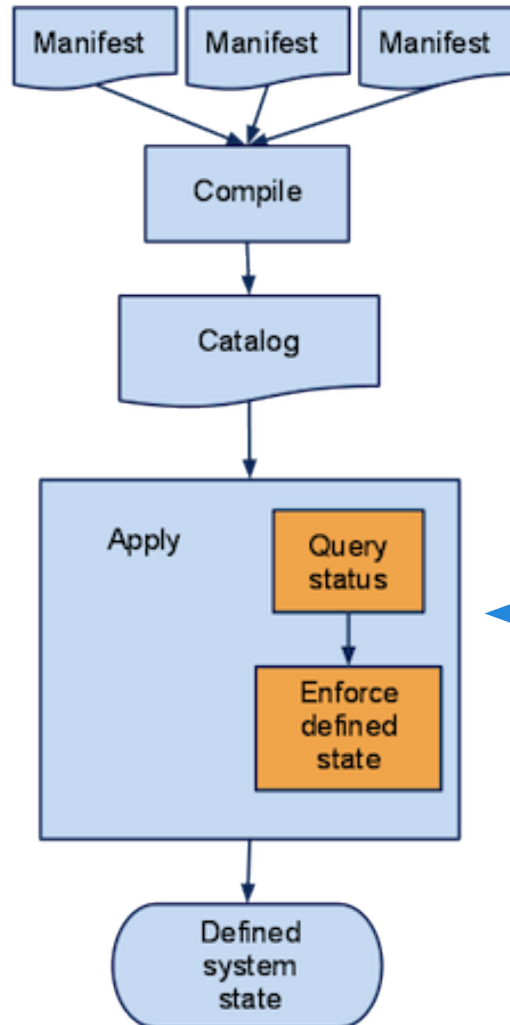
- Secure communication
 - over https
 - Uses x.509 certificates
- Ecosystem
 - Version Control
 - puppetdb
 - hiera
 - foreman
- Support Environments

Manifests Compile



Puppet-Dev

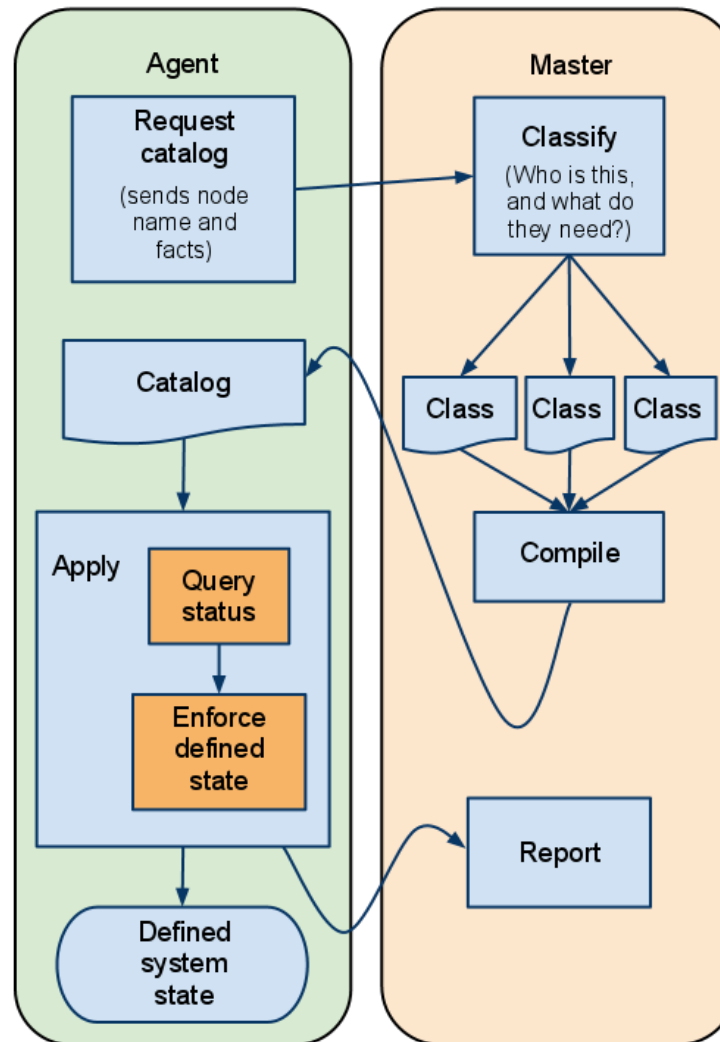
writes



transform

Managed-Node

Puppet run with C/S



Secure communication



1. Client generate Certificate
2. Client send certificate to puppet master
3. Puppet master stores client certificate request
4. Admin approve request
5. Client receive signed certificate
6. Client and Master can communicate

Ecosystem



- **hiera**
 - Tool to store manifests data.
 - Different Backends
 - hierarchical files, DB, Rest Application ...
- **puppetdb**
 - Tool to store catalogs, facts and reports in DB
 - Useful for “exported resources”
 - Tool to query your puppet nodes
- **Foreman**
 - swiss knife
 - Configure provisioning, communicate with the infrastructure, show graphical reports

Ecosystem



- version control system
 - To manage the puppet manifests/environments
 - Tools
 - Subversion (bad)
 - GIT (good)
 - Any other (mad)

Environments



Environments are isolated groups of puppet agent nodes. A puppet master server can serve each environment with completely different **main manifests** and **modulepaths**.

This frees you to use different versions of the same modules for different populations of nodes, which is useful for testing changes to your Puppet code before implementing them on production machines. (You could also do this by running a separate puppet master for testing, but using environments is often easier.)

<https://docs.puppetlabs.com/puppet/latest/reference/environments.html>

Environments



- Development /Test /Integration
- Separate code
 - departments
 - location
- Could be represented with branches