

# Introduction To Puppet And Usage In Cloud

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- Challenges faced by a System Administrator
- Why scripts fail to scale
- Need of a config management tool, Puppet
- Puppet installation and configuration
- Centralized infrastructure management
- Cloud Is Different
- Cloud Intelligence For Puppet
- Scaling Puppet master

# Challenges Faced By A System Administrator



- New servers. New applications. Updates.
- Initial Configuration. Management. Replication.
- New joinees. People Leaving Organization.

Read Again from first bullet. Essentially "SysAd Loop"

# Why Scripts Fail To Scale



- Looks Dirty, specially when exceed 1000 lines (50 for perl)
- Master Slave Transport: Usually SSH :(
- Changes with platform
- More focus on "how to do?" than "what to do?"
- Do you like to Document?

# Need Of A Config Management Tool, Puppet



- Centralized Configuration Management
- Easy To Introduce New Nodes
- Platform Independent Configs
- Clear Structure = Self Documenting
- Saves you from Carpel Tunnel!

# Puppet vs Chef



- Usually more people on IRC, faster replies on mailing lists
- Puppet is older, more recipes available
- Awesome documentation and reference books like Pro Puppet
- Derived from my limited experience, criticism welcomed

# Puppet Installation And Configuration



- yum, apt, gem
- Client-Server Architecture
- Preconfigured with basic setup.
- TLS security: Puppet CA
- The Magic File: site.pp

# Puppet Installation And Configuration

```
node 'localhost.localdomain' {
  include test
  include vim
  include apache
}

class test {
  file { ['/test']:
    ensure => directory
  }
}

class vim {
  package { "vim":
    ensure => installed,
  }
}
```

vim /etc/puppet/manifests/site.pp



# Puppet Installation And Configuration

```
/etc/puppet/  
|-- auth.conf  
|-- fileserver.conf  
|-- manifests  
|   |-- site.pp  
|-- modules  
|   |-- apache  
|       |-- files  
|       |-- manifests  
|           |-- init.pp  
|           |-- install.pp  
|           |-- service.pp  
|   |-- templates  
|-- puppet.conf  
  
6 directories, 7 files
```

tree /etc/puppet

# Centralized Infrastructure Management



- Manifests and Modules
- Classes and Nodes
- include and inherits
- Providers and Facts
- Serving Static Files



- Everything is Virtual
- On-the-fly Provisioning
- Puppet Needs to be Cloud Aware
- Plan for Capacity

# Cloud Intelligence For Puppet



- Update Config Frequently
- Handle Security Certificates of Clients
- Regex Awesomeness

# Scaling Puppet Master



- Webrick? Get Passenger/Unicorn
- Splitting off the File Server
- Load balancer and Puppet Cluster
- Git can do Magic!

# Questions?

Now is your chance :)