

40. Linux User Meeting

Configuration Management @ DESY

Configuration Management - Intro

Configuration Management ... is a management process for establishing and maintaining consistency of a product's performance, its functional and physical attributes, with its requirements, design and operational information, throughout its life.



Configuration Management ... is a **management** process for establishing and maintaining **consistency** of a product's performance, its functional and physical attributes, with its requirements, design and operational information, **throughout its life**.

Configuration Management – IT Tasks

- Define software selection
- Mount shared file systems
- Configure login
- Manage running services

... per Node, per Group, per Site



Configuration Management – Status

- Salad is the CM system at DESY since 199x
 - Cross platform support
 - AFS centric
- Grid start to use Quattor
- Debian/Ubuntu use FAI
- All over the campus “mycm.sh”



Configuration Management – Targets

- Consolidation
- Better integration of groups and developers in CM
 - Buzzword: devops
- Utilize third party resources
 - NIH problem
- Better documented tools



Configuration Management – Puppet

What is Puppet?

Puppet is IT automation software that helps system administrators manage infrastructure throughout its lifecycle, from provisioning and configuration to orchestration and reporting. Using Puppet, you can easily automate repetitive tasks, quickly deploy critical applications, and proactively manage change, scaling from 10s of servers to 1000s



Puppet Introduction

- Manifests
- Declarative syntax
- Define system state
- Resources
- RAL
- Providers
- Facts
- Catalog
- Master/Agent scenario
- Reports

```
# manifest example

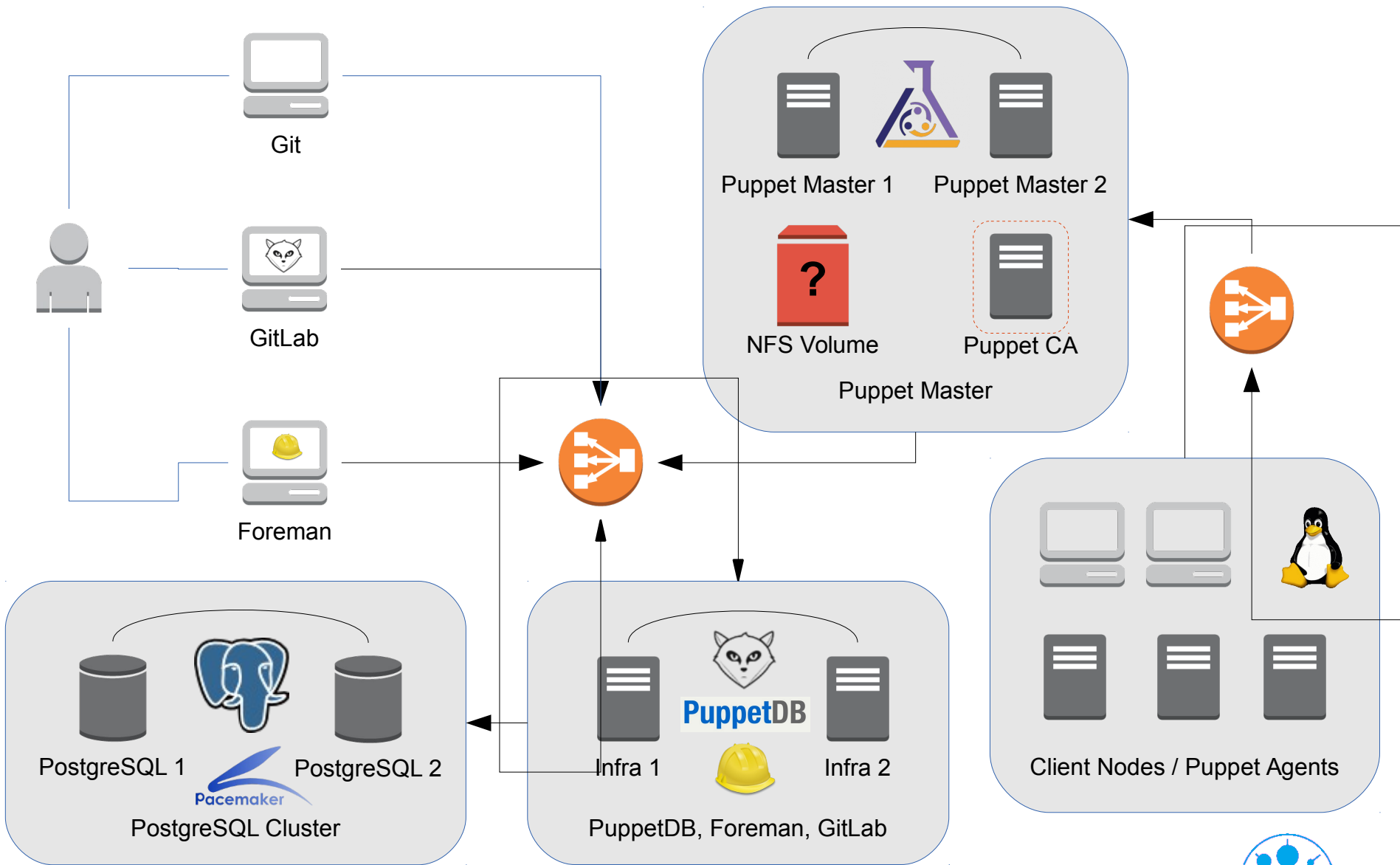
package {'htop':
  ensure => present,
}

file { ['/tmp/testfile':
  ensure => file,
  content => "Hi there!",
}

user { 'dave':
  ensure      => present, # absent
  shell       => '/bin/bash',
  home        => '/home/dave',
  managehome  => true,
}
```



Puppet Infrastructure @ DESY



Configuration Management – Changes?

- Registration still use wboom
 - There will be a change in the future
 - Only a small subset of flags is supported
- Beginning 1.1.2014 all new SL6 machines will be installed via puppet
 - SL5 is deprecated and will be supported till end of life with wboom/salad
 - SL6 before installed before 1.1.2014 will be slowly migrated if needed
- Configuration is managed through our version control system
 - Improve the co-operation
 - Gives a way to test own configuration
- Configuration will support SL and Ubuntu at the same time
 - Generally true ;-)
- Puppet defines system states not system transition
 - Local modification to system configuration could be overridden in certain cases



Configuration Management – Already done!

- DESY typical services are defined in puppet
- Grid is already migrated
- Bastion is migrated
- It-hpc is partly migrated
- Your WGS will be



Configuration Management – What can I do?

- To get access to our version control system write an email to it-puppet-admin@desy.de include
 - Login name
 - ssh key
- Go to <http://it-puppet-web.desy.de> and login with your DESY credential
 - After unlocking your account you can use our WIKI
 - Central point of cooperation in the future
- Come to one of our Hands-On courses

