



Agile Puppet

Development process
for system administration

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Plan

- Puppet Show
- Manage sources
- Build a development environment
- Drive with tests
- Share, use external modules
- Deploy in stages



Puppet Show

- Describe your needs
- Let Puppet do (or wait) :
puppetrun -host ...
- Make like



Puppet Show

```
class postgresql {
  package { postgresql: ensure => present }

  service { postgresql:
    ensure => running,
    require => Package[postgresql]
  }

  etc_file { "postgresql/whitelist_clients.local":
    notify => Service[postgresql],
    require => Package[postgresql]
  }
}
```



Puppet Show

- Retrieve wanted configuration for node
- Check if status matches configuration
- Modify needed things



Sources

- Versionned sources
- Structured sources
 - Language : class / template / node
 - Defaults, variables, ...
- Reused sources
 - define, if, ...



Sources

- Changelogs
- Branches
- Code reviews
- Link source changes and tickets



Dev Environment

- Write sources, but where ?
- Local puppetmaster
- Sandbox



Dev Environment

- Run puppetmaster
- On your laptop
- In your home
- With your user



Dev Environment

- Play in a sandbox
- Not with your laptop system
- VM with target OS / distribution
- Use to test partial configuration
- Create, snapshot and destroy



Test

- Test Driven System Administration ?
- Test the expected behaviour and fail
- Write the needed configuration
- Update your sandbox
- Test again
- Rewrite and update until success



Test

- How to test a system ?
- Test features
- With Cucumber - <http://cukes.info/>



Test

Scenario: Accept mails for test@tryphon.test

When a mail is sent to test@tryphon.test

Then the mail should be accepted

Scenario: Reject mails for external domain

When a mail is sent to test@external-domain

Then the mail should not be accepted

Scenario: Visit postfixadmin login page

When I visit the page <http://mail.tryphon.test/admin/>

Then I should see "Postfix Admin"



Test

- Replace manuel checks
- By automated tests

- Check your changes
- Refactor
- Prevent regression



Share

- Modules
- Check your changes
- Refactor
- Prevent regression



Deploy

- Tags, branches
- Deploy and rollback
- Capistrano : <http://www.capify.org/>



Deploy

- Use stages
 - Staging (testing)
 - Production (stable)
- Staging environment with VMs
 - a dedicated domain
- Shared with applicative staging
- Rebuild from scratch



Gepetto

- Create new project
- Start local puppetmaster
- Build and start sandbox
- Generate base files for module, class
- Rake tasks

- RubyOnRails like



Questions

Puppet

<http://reductivelabs.com/products/puppet/>

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