Configuration Management and Systems Orchestration

See also: Configuration Management for Tiki Projects

The challenge: You have a big Tiki project and you want to use the traditional development, testing, acceptance and production setup (DTAP)

How do you deal with:

- Generic code that will be upstreamed
- Custom code that won't be upstreamed (but should be versioned locally)
- Custom theme/design (which should be versioned locally)
- Content (in database)
  - Content via Wiki Plugins is routinely used to do stuff we used to do in PHP
- Configuration, typically in database, but can be in text files via System Configuration
- Translations that will be upstreamed
- Translations that won't be upstreamed (but should be versioned locally) (could be in DB or lang/xx/custom.php)
- Maintainability of advanced configurations of features

On a related note, here is a Messaging systems evaluation

Examples

- Content evolve in prod (user generated content)
- A new feature is in development, so code needs to be merged from dev to testing. But often preferences and modules need to be configured.
  - If you refresh the testing data from the production server (like as Pre-Dogfood Server, you will loose your preferences & module configurations.

Wishes

- A way to easily check on which server I am (which doesn't get overwritten with rsync)
  - This is to avoid mistakes
- Quick way to compare the configurations between the 2 to 4 sites and have a way to merge data / propagate some data
- Make it possible to identify a site as staging or development and have different settings, such as
  - `<meta NAME="ROBOTS" CONTENT="NOINDEX, NOFOLLOW">`
  - Don't send out notification emails
  - Site closed

Dev, Test, Prod

- Dev: 10.x
- Test: 9.x latest
- Prod: 9.x older

Before doing svn up on prod, we do svn up on test, and we do a diff of:

- svn diff test
- svn diff prod
Idea
If both sites have shell and use System Configuration, maybe use something like http://www.fossil-scm.org/ to compare/merge...

Who
• Marc Laporte
• you? (Add your name to join the working group)

Related links
• Read-only mode (ex.: when migrating a Tiki to a new server and you want the old one to still show content but not have edits)
• Easy way to compare configuration of 2 Tiki sites
• show.tiki.org
• WikiFarm
• TRIM
• Backup
• Infrastructure Revamp
• Monitoring and Email alerts of hard errors
• Recovery
• System Configuration
• Database Schema Upgrade
• Server tools
• Server Check and Compatibility
• URL Rewriting Revamp
• Logs
• htaccess
• Operating System independence
• Performance
• Reverse proxy
• Permission Check
• Pre-Dogfood Server
• Maintainability of advanced configurations of features
• Custom installation version
• Continuous Integration
• Continuous Testing Server
• Distributed revision control
• Distributed data
• Tracker Synchronization
• Command-line tool
• http://en.wikipedia.org/wiki/Development,_testing,_acceptance_and_production (DTAP)
• http://en.wikipedia.org/wiki/Development_environment_(software_development_process)
• The Drupal community is working on this:
  • http://groups.drupal.org/node/155559
  • http://london2011.drupal.org/sites/default/files/Content_Staging_and_Deployments_in_Drupal_0.pdf
  • http://groups.drupal.org/build-systems-change-management/cmi
• https://en.wikipedia.org/wiki/Orchestration_(computing)
• http://heyrocker.com/cmi-feature-freeze
Options on Ohloh.net

Overview
T-DOSE 2012 Toshaan Bharvani, Puppet, Chef, CFEngine, Ansible, Salt, different approaches


Puppet

Salt

- Black Duck Software Names 2011 Open Source Rookies of the Year
- http://opencredo.com/blog/a-dive-into-salt-stack
- uses YAML
- http://www.theregister.co.uk/2013/01/16/open_and_shut/
- Salt business model
- http://missingm.co/2013/06/ansible-and-salt-a-detailed-comparison/

Chef

Free hosted version up to 5 nodes: http://www.opscode.com/chef/

Just scheduled for Jul 31: Thomas S. Hatch - SaltStack update (http://saltstack.com/community.html). We had him on back in Nov 2011, but a lot has happened in the Salt world, including bare metal provisioning, and a lot of other cloudy things.

CFEngine

Bcfg2

- http://docs.bcfg2.org/
- To make a bcfg2 bundle for Tiki, we first should make DEB Packaging

cdist

Quattor

Juju

Crowbar

Nuri
Managing TikiWiki CMS with Nuri

Ansible

- http://server.dzone.com/articles/ansible-cm-deployment-and-ad
- Uses YAML
- http://ansible.cc/faq.html
- http://www.arrfab.net/blog/?p=361
- http://fourkitchens.com/blog/2012/06/29/ansible-simple-configuration-deployment
- https://en.wikipedia.org/wiki/Ansible_(software)
- http://ansible.cc/docs/modules.html
  - SVN, Git, hg, mysql_db, mysql_user, nagios, apt/yum
- http://missingm.co/2013/06/ansible-and-salt-a-detailed-comparison/

Alexandre Bourget demos Ansible:

Fredistrano

OCS Inventory NG

Radmind

Rudder

Spacewalk

Software Test Automation Framework (STAF)

Ganeti

"Ganeti is a cluster virtual server management software tool built on top of existing virtualization technologies such as Xen or KVM and other Open Source software."
http://code.google.com/p/ganeti/

Serf

Serf is a decentralized solution for cluster membership, failure detection, and orchestration. Lightweight and highly available.

Phing

PHing Is Not GNU make; it's a PHP project build system or build tool based on Apache Ant.

Archipel

"Archipel is a solution to manage and supervise virtual machines. No matter if you have a few locally on your computer or thousands through data centers, Archipel is a central solution to manage them all. You
can perform all basic virtualization commands and many other things like live migration, VMCasts, packages, etc."

Capistrano

http://capistranorb.com/

Roboconf

Related: Vagrant

alias

- DTAP
- Configuration Management
- Systems Orchestration
- Bcfg2
- Salt
- Chef
- CFEngine
- cdist
- Quattor
- Juju
- Crowbar
- Ansible
- Fredistrano
- OCS Inventory NG
- Radmind
- Rudder
- Spacewalk
- STAF
- Software Test Automation Framework
- Ganeti
- Roboconf