Staging Drupal

Change Management Strategies for Drupal

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Introductions

Erich Beyrent

http://twitter.com/ebeyrent

http://drupal.org/user/23897

My Modules

- Permissions API
- Crowd SSO
- LDAP Extended Groups
- Search Lucene Biblio
- Search Lucene Attachments
- Search Lucene OG
- Visual Search API

Agenda

- Playing well with others
- Managing code changes
- Managing database changes
- Deployment strategies

The only thing that's constant is...

Staging? What is that?

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"Staging" is the process of delivering changes from one environment to another.

DO NOT WANT

- I develop on the live server.
- I work alone.
- Backups?

The Manual Process

- Point.
- Click.
- Wait.
- Rinse and repeat.

TOTAL FAIL

Why it fails

- It's tedious.
- It's time-consuming.
- It's error-prone.
- It's risky.

A traditional approach

- Use source control

Use source control

- Essential to the development and staging process
  - Creates a flow from Dev → QA → Production
- Manages changes to the code over time
- Use a standard repository layout consisting of “tags, branches, trunk”
- Use multiple repositories to separate core code from project code

What goes into source control

- Code, configuration, theme-based files
- Use source control templates
- What about database snapshots?
- DON'T manage user-generated content in source control

A traditional approach

- Use source control
- Manage changes in code

Manage database changes

- Export your views, panels, and content types to code
- Use exportables and ctools to export other data
- Manage configurations with Strongarm
- Use Permissions API for roles and permissions
- Use Features!

Why should we do this?

- Multiple environments need to be updated
- Allows for a phased approach to change management
- Saves time and money
- Is fully testable and reproducible
- Minimizes downtime and helps manage expectations

Source Control and Update Scripts: Friends with Benefits

- All changes can be viewed, compared, and reverted in version control, which helps with debugging
- Deployment processes are reproducible, and become part of QA
- Changes become portable and can be easily replicated in multiple environments

Choose Wisely

- How many changes are there?
- How long will it take to write the update code?
- How many environments need to be updated?

A traditional approach

- Use source control
- Manage database changes in code
- Use deployment tools

Use deployment tools

- Source control as a deployment tool
  - SVN update, post-commit hooks
  - GIT push
- Make, rsync
- Aegir, Phing/Ant, Capistrano, Hudson

The process

- Import current database snapshot into your sandbox
- Update your codebase
- Develop, commit, update
- Promote changes to QA environment, test
- Tag and release
- Drink beer

The specifics

- Changes are coded in a module
- The module implements `hook_update_N()`
- *BUT WAIT, THERE'S MORE*
  - Installing a module does NOT invoke any `hook_update_N()` implementations
  - `hook_install()` and `hook_update_N()` must be in sync

The specifics

- Use the APIs (node, user, etc) instead of writing queries
- Use smaller update functions for maintainability

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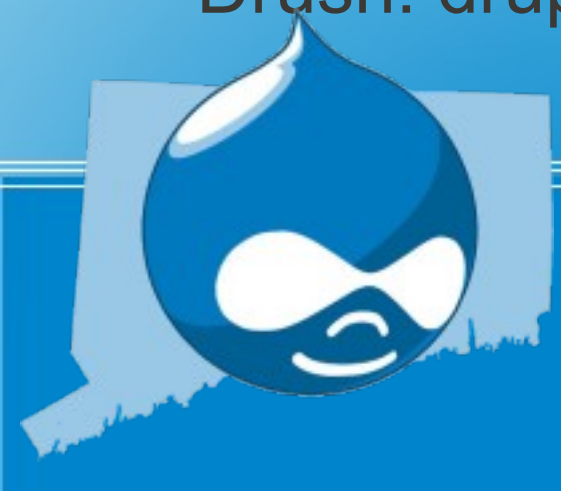
The Problems

- Inconsistent and incomplete export functionality
- Primary key issues with content
- Dependencies
- Requires technical proficiency

Drupal Tools

- Devel: Generate: drupal.org/project/devel
- Demonstration Site: drupal.org/project/demo
- Node Export: drupal.org/project/node_export
- Permissions API: drupal.org/project/permissions_api
- Views Export: drupal.org/project/views
- CCK: Content Copy: drupal.org/project/cck
- Drush: drupal.org/project/drush



More Drupal Tools

- Variable Dump: drupal.org/project/variable_dump
- Exportables: drupal.org/project/exportables
- Transformations: drupal.org/project/transformations
- Migrate: drupal.org/project/migrate
- Deploy: drupal.org/project/deploy
- Features: drupal.org/project/features
- Strongarm: drupal.org/project/strongarm

Questions?