

Automatic Update of Drupal website running on a "wamp" desktop environment.

Server Environment

Uniform Server <http://www.uniformserver.com/>

Drupal 6.x <http://drupal.org/>

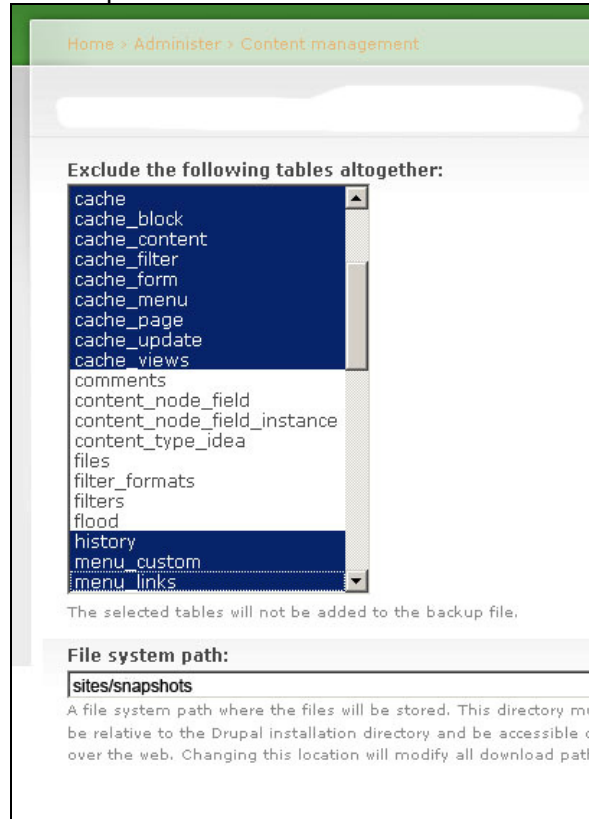
Part 1 Creating Drupal Snapshots / Drupal Module

- PHP Script/Drupal module to package a snapshot of a Drupal website
 - Dump Database (selected tables only)
 - Collect associated files
 - Query Database for changed files since specified date
 - Zip changed files and database dump
 - Manage snapshots
 - View and delete snapshots
 - Publish Listing of snapshots (for the below script to consume)

Pages:

Configure of snapshots

Set the location to save zip files, and select the database tables to not include in the snapshot.



Home > Administer > Content management

Exclude the following tables altogether:

cache
cache_block
cache_content
cache_filter
cache_form
cache_menu
cache_page
cache_update
cache_views
comments
content_node_field
content_node_field_instance
content_type_idea
files
filter_formats
filters
flood
history
menu_custom
menu_links

The selected tables will not be added to the backup file.

File system path:

sites/snapshots

A file system path where the files will be stored. This directory must be relative to the Drupal installation directory and be accessible over the web. Changing this location will modify all download paths.

List of snapshots – admin

A list of snapshots should be accessible from the administration area allowing the user to view the details of each, and to delete a snapshot. Delete would remove the zip file and the records from the database.

Version 1 CD	12/10/2008 09:34 am	1.65 MB	download	delete	details
Ver 1.1 new files	12/10/2008 09:34 am	11/25/2008 03:42 pm	933.4 KB	download	delete

List of snapshots – public

Version 1 CD	12/10/2008 09:34 am	1.65 MB	download
Ver 1.1 new files	12/10/2008 09:34 am	11/25/2008 03:42 pm	933.4 KB

Snapshot Detail View

Details for a snapshot would include. Date-time stamp, Unique Title, files included in the snapshot, and a link to the zip file created.

Title: Version 1 CD

Version:

Body: All assets from the first distribution of the sales docs update tool.

Build Date:

Changed Since Date:

Zip File:

Zip File Size:

Files included in the patch:

/sites/files/Blah.pdf

/sites/files/BlahBlah.ppt

/sites/files/Other.doc

/sites/files/OtherBlah.xls

Add a snapshot

Snapshots fields should include

a title.

a unique version number (user entered)

a date-time stamp (time of creation)

a date-time stamp (start date, see below)

A notes field (to contain a description of the nature and contents of the snapshot.)

When creating a snapshot one should be able to select a start date:

The start date will be used to select the file attachments that should be included in the snapshot. The selection methods should include.

Explicit date entry.

Shorthand value “complete” indication include all. (date 1AD for example)

Select a previous snapshot from a list by title/version number, and use the value

The screenshot shows a web form titled 'Create Page' with a breadcrumb 'Home > Create content'. The form contains the following fields and controls:

- Title:** A text input field with an asterisk (*) indicating it is required.
- Version:** A text input field.
- Body:** A large text area for content.
- Changed since CCYY-MM-DD HH:MM:SS:** A text input field containing '2008-12-30 00:00:00' and an 'Apply' button to its right.
- Complete:** A checkbox labeled 'Complete'.
- Since Previous Snapshot:** A dropdown menu showing 'Version 1 CD' and 'Ver 1.1 new files'.

In addition to the snapshot data records in the database, a zip file should be created containing all the file assets that have been updated after the “changed since” time, as well as the database dump.

A full human and machine readable listing (e.g. XML) of all patches should also be created as a static file in the same directory as the zip files. (such that they could be transported to and hosted as static files from any HTTP server and accessed by the **Downloading and applying snapshots** script discussed below.)

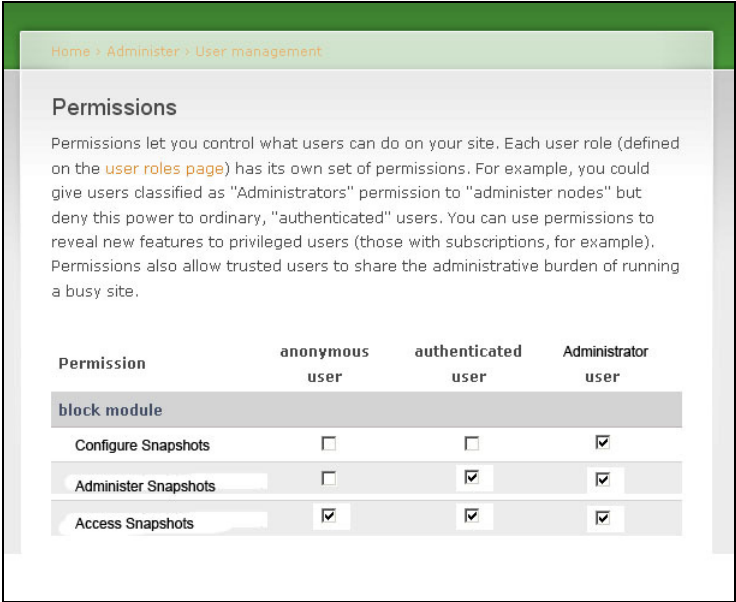
Additional Notes:

- See http://drupal.org/project/backup_migrate as a reference for a Database Snapshot Mechanism. This Mechanism does not provide all the features needed but could be a good start.
- Additional drupal modules may be used if useful (views, backup_migrate, services etc...)
- All attached files will exist in a the Drupal sites/files directory.
However the Zip file should include the directory structure starting from the root of the Uniform Server environment "udrive", and extract them there replacing any files that already exist in the current directory structure.
- Snapshot and configuration data should be kept in the MySQL database, in a similar way to other Drupal modules.
- The mechanism to create and manage the snapshots should be built into the Drupal administration pages. There should be 3 access levels of control with separate user permissions (see Drupal permissions)

One level will be configuration, where one can specify the tables to be backed up.

The second level will be to create and manage snapshots.

The third level will be a public access to view the snapshots



The screenshot shows the 'Permissions' page in a Drupal administration interface. At the top, there is a breadcrumb trail: 'Home > Administer > User management'. Below this, the title 'Permissions' is followed by a descriptive paragraph explaining that permissions control user actions and can be assigned to different user roles. The main part of the page is a table with columns for 'Permission', 'anonymous user', 'authenticated user', and 'Administrator user'. Under the 'block module' section, three permissions are listed: 'Configure Snapshots' (only Administrator has access), 'Administer Snapshots' (both authenticated and Administrator users have access), and 'Access Snapshots' (all three user types have access).

Permission	anonymous user	authenticated user	Administrator user
block module			
Configure Snapshots	☐	☐	☒
Administer Snapshots	☐	☒	☒
Access Snapshots	☒	☒	☒

Part 2 **Downloading and applying snapshots**

- PHP script to download and apply snapshot to desktop "WAMP" drupal environment.
 - Check snapshot Listing
 - If update available download and apply
 - unzip files to appropriate paths.
 - update database

The PHP script must run on windows XP and Vista in various desktop configurations. The Unified Server with PHP 5 will be available on the desktops as a runtime resource. The script needs to be able to be run from a shortcut, and scheduled to run on a periodic basis with windows task scheduling.

The PHP script should probably not depend on the Drupal framework, as it will be updating that system. Apache though a part of the Unified Server should not be used unless required.

The script may need to start the MySQL server as this will not be always running.

There is no graphical interface needed, and optimally no pop up console windows etc.

Attempted and successful updates should be logged.

On completing a successful update, the script should be able to launch another application, (which will notify the user of the update)

The script should be configurable, so as to read a list of servers to check for update patches on. (so that backup servers can be checked, and so that test servers can be added to development installations, and production servers to field installations)

The script should reside in the udrive path so that it and the configuration file can be updated.

The script will need to read a file or DB record listing the current version, and its date.

It should then check the index for available update patches of a Higher Version than the current installed version.

If it finds updated patches it should install the lowest numbered version update first.

It should update the record listing the current version and date, (perhaps included in the zip file, or the database dump)

It should then re-start the update check process. (starting from reading the current version again)

The mechanism for checking the patch listing and downloading the patch zip file should allow for the addition of authentication.