

Web Server Configuration

PhotoStuff v. 2.0

1 Overview

This document provides a requirement overview and configuration profile for a Web server to use all of the features in PhotoStuff v. 2.0. We will detail the required software as well as their installation instructions. We note here that this manual assumes a UNIX or LINUX server is used.

2 General Technologies

Currently a Web server must have the following non-commercial technologies installed:

```
Python 2.3.3
BDB (sleepycat) 4.1
Apache 2.0.46
```

Additionally, Python must have the following modules installed:

```
Mod_Python 3.1.3
RDFLib 2.0.4
Egenix-mx-base 2.0.5
SimpleParse 2.0.1a3
```

2 Installation Instructions

First, the appropriate directory structure on the server must be created. This is accomplished by running the following commands:

```
$ mkdir -p /home/www/semspace/html/2004/submit-rdf
$ mkdir /home/www/semspace/html/2004/meta
$ mkdir -p /home/www/semspace/data/db
$ echo 1 > /home/www/semspace/html/2004/submit-rdf/num
$ echo 1 > /home/www/semspace/html/2004/submit-rdf/newsID
$ touch /home/www/semspace/data/outside-files
$ touch /home/www/semspace/html/2004/meta/meta.rdf
$ chown -R apache.apache /home/www/semspace/data \
/home/www/semspace/html/2004/meta \
/home/www/semspace/html/2004/submit-rdf
```

Additionally, various Python scripts are needed. They can be obtained from the following CVS repository:

<https://svn.mindswap.org/website/trunk/>

Once checked out, the following commands must be run to install the scripts (note these commands must be run from the trunk directory checked out):

```
$ cd querier
$ python setup.py install
$ cd ../swlib
$ python setup.py install
$ cd ../sites/
$ python install.py semspace
```

For configuring Apache, the following configuration portion must be used:

```
<VirtualHost *>
  ServerName SemSpace.mindswap.org
  ServerAlias gimli.mindlab.umd.edu
  ServerAdmin ronwalf@mindswap.org

  DocumentRoot /home/www/semSPACE/html
  ErrorLog logs/semSPACE.error_log
  CustomLog logs/semSPACE.access_log combined

  # Canonicalize hostname
  RewriteEngine on
  RewriteCond %{HTTP_HOST} !^SemSpace\.mindswap\.org [NC]
  RewriteCond %{HTTP_HOST} !^$
  RewriteCond %{SERVER_PORT} !^80$
  rewriteRule ^/(.*) http://SemSpace.mindswap.org:%{SERVER_PORT}/$1 [L,R]
  RewriteCond %{HTTP_HOST} !^SemSpace\.mindswap\.org [NC]
  RewriteCond %{HTTP_HOST} !^$
  RewriteRule ^/(.*) http://SemSpace.mindswap.org/$1 [L,R]

  ScriptAlias /cgi-bin/ "/home/www/semSPACE/cgi-bin/"
  #ErrorDocument 404 /missing.html

  DirectoryIndex index.py index.shtml index.html index.cgi index.php index.rdf
    index.owl
  AddType application/x-java-jnlp-file .JNLP .jnlp
  AddType application/x-java-archive .jar

  DAVLockDB /var/lock/apache/dav.semSPACE
  <Location /dav>
    DAV On
```

```

AllowOverride None
Options +Indexes
<LimitExcept GET HEAD OPTIONS>
    AuthType Basic
    AuthName "Mindswap"
    AuthUserFile /home/www/semSPACE/data/htpasswd
    Require valid-user
    Order allow,deny
    Allow from mindlab.umd.edu localhost
    Satisfy any
</LimitExcept>
</Location>

<Files *.py>
    AddHandler python-program .py
    PythonHandler swlib.DynamicHandler
    PythonOption swlib.configuration /etc/swlib/sw-semSPACE.py
    PythonDebug On
</Files>

<Directory /home/www/semSPACE/html>
    AllowOverride FileInfo AuthConfig Limit
    Options +Indexes +Includes +MultiViews
    MultiviewsMatch Handlers Filters
</Directory>

<Directory /home/www/semSPACE/cgi-bin>
    AllowOverride Limit AuthConfig
</Directory>
</VirtualHost>

```

For customization of the host name, directory structure, etc. of the site installation, all the configuration variables are under the trunk/sites/semSPACE/ directory.

In general, the configuration for a page is controlled first by the corresponding Python file, Config.py, under sites/semSPACE/website. Some additional important Python files worth noting here are the following:

- [instconf.py](#): Controls what pages are installed and to where
- [sw-semSPACE.py](#): Controls the template for the site, the location of the bdb database, the host name, what properties are used to label items, the log file, and the lock file names
- [website/manage/Config.py](#): Controls where rdf is stored, where meta-metadata is stored, and the location of CWM for N3 and N-Triples parsing.

Additionally, various ontologies must be pre-installed on the website:

- 1) Menu structure ontology
 - a. Copy <http://semspace.mindswap.org/2004/submit-rdf/menus.rdf> and edit the host names in the links to match your site
- 2) Ontologies for PhotoStuff pages to work
 - a. <http://xmlns.com/foaf/0.1/>
 - b. <http://www.mindswap.org/~glapizco/technical.owl>

Lastly, CWM must be checked out of CVS. Then, in order to configure CWM, create a symlink in the directory to which CWM was checked into. The following command is recommended in achieving this: 'ln -s . swap'.

Lastly, we will provide some relevant URLs which may ease the installation process:

- 1) Python - <http://www.python.org/>
- 2) Apache - <http://httpd.apache.org/>
- 3) Mod Python - <http://modpython.org/>
- 4) RDFLib - <http://rdflib.net/>
- 5) EGenix-mx-base - <http://www.egenix.com/>
- 6) SimpleParse - <http://simpleparse.sourceforge.net/>
- 7) CWM - <http://www.w3.org/2000/10/swap/>