

Introduction

Search Lucene API is an easy-to-install module that integrates Lucene searching into Drupal. It is built on top of the Zend Framework's PHP port of Lucene, so no applications or services outside of Drupal are required to use this module. For convenience, the Search Lucene Content project comes bundled with Search Lucene API to provide a full-featured alternative to the core content search. The module implements the core Search API, so it can live alongside existing solutions without conflict.

The Problem with Drupal Search

Although the Drupal Search module provides a solid interface to build on top of, the Node module's implementation is lacking in features and scalability. Because it is SQL based, full-text searches are inefficient and limited in functionality. The core search is so resource intensive that larger sites are often forced to disable it or move the database to another server. Unfortunately, many search alternatives are difficult to install and configure while others require core patches. Developers are usually left with little choice but to install the Google Custom Search Engine module which cannot take advantage of metadata such as taxonomy.

Why Search Lucene API?

Search Lucene API provides the advanced functionality the core content search lacks. Lucene is the most advanced open source search engine library to date and is found in many applications and websites. After enabling the bundled Search Lucene Content module, end users will immediately notice that more relevant results are returned by searches, while power users will make use of the advanced Lucene syntax to refine their queries and target the content they are looking for.

Compared to other alternative solutions, Search Lucene API is the only self-contained module to provide such advanced search capabilities. Other contributed modules rely on applications outside of Drupal that are difficult to set up and maintain. Since Search Lucene API *is* the application, installation is done entirely through Drupal making the process familiar and simple. Furthermore, Lucene indexes are file-based which improves scalability by eliminating the SQL bottlenecks of the core search. Although Search Lucene API and Search Lucene Content are designed to work out of the box with no configuration, site administrators can customize many aspects of the modules via the administrative settings page.

As the name suggests, Search Lucene API exposes an *application programming interface* which allows developers to build and extend Search Lucene API modules. The interface was designed with extensibility in mind, so custom solutions can often be built with little programming. There are many contributed modules that extend the API, so check drupal.org to see if a solution already exists to help you meet your goals.

Maintainer

Search Lucene API is developed and maintained by Chris Pliakas of CommonPlaces e-Solutions, LLC located in Hampstead, New Hampshire. Chris is an open source enthusiast who has been tinkering with Drupal since March of 2008. He can be found on drupal.org under the handle 'cpliakas', or you can follow him as '@cpliakas' on Twitter. Chris is a Zend Certified PHP 5 Engineer, a MySQL Certified Developer and Administrator, and he holds a Linux Professional Institute Level 1 Certification.

Module Version

The Search Lucene API project maintains a consistent versioning system for site administrators to determine the state of the code they are using. Like most contributed modules, Search Lucene API is built for a specific version of Drupal. As an example, the 5.x-1.1 release is designed solely for Drupal 5 and will not work with Drupal 6 installations. You can find the version of Drupal your site is running by navigating to *Administer > Reports > Status report*.

Significant changes in module are denoted by its *major version*. The 6.x-1.1 and 6.x-2.1 releases differ in their major versions and are not considered to be compatible. Upgrading from the 1.0 API to its 2.0 counterpart will break contributed modules and custom code that depend on Search Lucene API.

Bug fixes and small changes are flagged in the module's *minor version*. For example, the 6.x-1.1 and 6.x-1.2 releases differ in their minor versions. Bugs exist in the 6.x-1.1 release that are fixed in 6.x-1.2. Upgrading from one minor version to another is considered safe, but it is strongly advised to thoroughly test the upgrade before going live with the changes.

Stable Releases

All versions listed above are examples of *stable* releases. Code flagged as stable has been tested and implemented on production environments, and it has progressed through the various development stages illustrated in the 'Development Releases' section below. Once code is deemed stable, the API does not change regardless of any design flaws. No new features are added, and bug fixes are applied only when necessary.

Development Releases

Pre-stable versions of Search Lucene API are released to the public for testing and review. Development releases have an extra alphanumeric character string appended to the end of the version. Examples of versions denoting development releases are 5.x-1.x-dev, 6.x-1.x-beta5, and 6.x-2.0-alpha1. Programmers might choose to use development releases when they must have the latest feature set available to them, but there is no guarantee the API will remain consistent. The various stages of development used by Search Lucene API are defined below:

- **dev**: Code is in flux and should not be depended on for consistency. Features are added and removed on a daily basis. Please DO NOT post bug reports on drupal.org for code in this state. Feature requests and suggestions are more than welcome.
- **alpha**: The module is still fluid but in a working condition and ready for testing. The API and feature set may change, but it is a good preview of what is to come. Please post bug reports on drupal.org for code in the alpha state.
- **beta**: All major goals have been met. The API will not change unless a significant design flaw is discovered. Small features are still being added, but development is coming to a close.
- **rc**: Release candidates are ready to go stable. The API will not change unless absolutely necessary. No features will be added or removed.

Installation

Before installing Search Lucene API, make sure you review the “Installing contributed modules”

tutorial located at <http://drupal.org/node/70151>. Search Lucene API is installed like any standard Drupal module with one exception; The required Zend Framework components must be downloaded separately. Due to Drupal's strict licensing policy regarding non-GPL code, the ZF components cannot be bundled with the module on Drupal.org. However, no action other than retrieving the files from the *Search Lucene API Library* project on SourceForge.net and moving the extracted directory to the correct location is required. Complete installation instructions are as follows:

1. **Download the Search Lucene API module** from <http://drupal.org/project/luceneapi>. Make sure the version of the module matches your version of Drupal. For example, the 6.x-2.0 version is suitable for Drupal 6 but will not work for Drupal 5.
2. **Extract the files.** Modules downloaded from drupal.org are *compressed* to reduce their size and must be *extracted* before they can be used on your website. The result of this action will be a 'luceneapi' directory containing the module's source code files. For a tutorial on how to extract compressed files, please refer to the “Installing contributed modules” tutorial.
3. **Download the required Zend Framework components** from the *Search Lucene API Library* project on SourceForge.net. Match the release of the ZF components to the version of the module downloaded in step 1. For example, the 6.x-2.0 version of Search Lucene API requires the 6.x-2.0 version of the ZF components. If there is no exact match, download the latest available version of the ZF components up to, but not exceeding, the the minor version of the downloaded module. The *Status report* page in the administration section of your website will alert you if the ZF components require updating.

Project page: <http://sourceforge.net/projects/luceneapi>

4. **Extract the ZF components files** as done in step 2. The result of this action will be a directory named 'lib'.
5. **Move the 'lib' directory into the 'luceneapi' directory.** From this point forward, it is assumed the 'luceneapi/lib' directory contains the requires ZF components.
6. **Upload the 'luceneapi' directory** to your Drupal installation. In most cases, the module will reside in 'sites/all/modules'. Please refer to the “Installing contributed modules” tutorial for more information.
7. **Enable the modules.** Navigate to *Administer > Site building > Modules* and check the 'Enabled' box next to Search Lucene API and Search Lucene Content. Scroll down to the bottom of the page and click the 'Save Configuration' button.
8. **Run cron** to update your index. For more information on configuring cron, please refer to the tutorial on <http://drupal.org/cron>. It is critical that cron is run otherwise the index will not be populated and no search results will be returned. Navigate to *Administer > Reports > Recent log entries* to confirm the cron run was successful. You will see 'Index update started' and 'Index update completed' messages if all went well.