



# OpenSearch

## v.1.1 Draft 3 Cheat Sheet

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**Sources:** Information compiled from [www.opensearch.org](http://www.opensearch.org) and [http://developer.mozilla.org/en/Creating\\_OpenSearch\\_plugins\\_for\\_Firefox](http://developer.mozilla.org/en/Creating_OpenSearch_plugins_for_Firefox)

Cheat sheet v. 1.5 (September 2008) by Gareth J M Saunders

### INTRODUCTION

OpenSearch is a collection of simple formats for the sharing of search results. The OpenSearch description document format can be **used to describe a search engine** so that it can be **used by search client applications**. For example, in Firefox 3.0 (below left) the search box glows yellow when a site with an OpenSearch description is discovered; in Internet Explorer 7 (below right) the button glows orange:



The OpenSearch response elements can be used to extend existing syndication formats, such as RSS and Atom, with the extra metadata needed to return search results.

### AUTO-DISCOVERY OF SEARCH PLUG-INS

Search engines that publish OpenSearch description documents can assist search clients in the discovery of OpenSearch interfaces through the use of "link" elements. To support auto-discovery you simply need to add one line to the **<head>** section of your web page:

```
<link rel="search"
      href="http://example.com/opensearchdescription.xml"
      type="application/opensearchdescription+xml"
      title="Content Search" />
```

### ELEMENTS

TAGS	FORMAT	REQUIRED	ATTRIBUTES	CHAR LIMIT	DESCRIPTION
<code>&lt;xml version="1.0" encoding="utf-8" ?&gt;</code>					
<code>&lt;OpenSearchDescription&gt;</code>	Plain text	Yes	-		Root node of the OpenSearch description document.  The xmlns attribute is important, without it you could get an error message indicating that "Firefox could not download the search plug-in from: (URL)".  Two xmlns attributes can be used, the first is the default:  <code>xmlns="http://a9.com/~spec/opensearch/1.1/"</code>  the second is for Firefox and optional:  <code>xmlns:moz="http://www.mozilla.org/2006/browser/search/"</code>
<code>&lt;ShortName&gt;</code>	Plain text	Yes	-	16	Human-readable title that identifies this search engine.
<code>&lt;Description&gt;</code>	Plain text	Yes	-	1024	Human-readable title description of the search engine.
<code>&lt;Url&gt;</code>	Plain text	Yes			Interface by which a search client can make search requests.
		Yes	template		Search URL template to be processed, use {searchTerms} parameter, e.g. <code>&lt;Url template="http://www.st-andrews.ac.uk/search?q={searchTerms}&amp;site="StAndrews_ITS"&gt;</code>
		Yes	type		MIME type of search result format, e.g. <code>type="application/xhtml+xml"</code> or <code>type="application/rss+xml"</code> . There are two URL types that Firefox supports: <code>type="text/html"</code> is used to specify the URL for the actual search query itself; <code>type="application/x-suggestions+json"</code> is used to specify the URL to use for fetching search suggestions.
		No	method		Options are POST and GET, note that IE7 doesn't support POST.
		No	indexOffset		Index number of first search result (integer; default=1).
		No	pageOffset		Page number of first search results (integer; default=1).
<code>&lt;Param&gt;</code>	Plain text	No			Used within the <code>&lt;Url&gt;</code> element, the parameters that need to be passed in along with the search query, as key/value pairs. When specifying values, you can use {searchTerms} to insert the search terms entered by the user in the search bar. Note: IE7 does not support this element.
<code>&lt;SearchForm&gt;</code>	Plain text	No			<b>Firefox-only</b> The URL to go to to open up the search page at the site for which the plug-in is designed to search. This provides a way for Firefox to let the user visit the web site directly.  Since this element is Firefox-specific, and not part of the OpenSearch specification, we use the "moz:" XML namespace prefix in the example above to ensure that other user agents don't support this element can safely ignore it, e.g. <code>&lt;moz:SearchForm&gt;http://www.google.com/&lt;/moz:SearchForm&gt;</code>
<code>&lt;Contact&gt;</code>	Email	No			Email address of the maintainer of the description document.
<code>&lt;Tags&gt;</code>	Plain text	No			Keywords to identify and categorize this search content. Single words, delimited by spaces " ".
<code>&lt;LongName&gt;</code>	Plain text	No		48	Extended human-readable title that identifies this search engine.

ELEMENTS / continued					
TAGS	FORMAT	REQUIRED	ATTRIBUTES	CHAR LIMIT	DESCRIPTION
<b>&lt;Image&gt;</b>	Valid URI	No		(10 KB)	<b>EITHER</b> URL that identifies the location of an image that can be used in association with this search content. May appear zero, one or more times.
	Base-64	No			<b>OR</b> Base-64 encoded 16x16 icons representative of the search engine. One useful tool you can use to construct the data to place here can be found at the URI kitchen: <a href="http://software.hixie.ch/utilities/cgi/data/data">http://software.hixie.ch/utilities/cgi/data/data</a>
	+Integer	No	height		Height in pixels (first image 16 x 16 pixels, second 64 x 64 pixels).
	+Integer	No	width		Width in pixels.
	MIME	No	type		MIME type of this image.
<b>&lt;Query&gt;</b>		No	role="example" searchTerms="cat"		Defines a search query that can be performed by search clients. OpenSearch description documents should include at least one Query element of role="example" that is expected to return search results. Search clients may use this example query to validate that the search engine is working properly.
<b>&lt;Developer&gt;</b>	Plain text	No		64	Human-readable name or identifier of the creator or maintainer of the description document.
<b>&lt;Attribution&gt;</b>	Plain text	No		256	List of all sources or entities that should be credited for the content contained in the search feed.
<b>&lt;SyndicationRight&gt;</b>	One of ...	No			A value that indicates the degree to which the search results provided by this search engine can be queries, displayed, and redistributed.
	open	Default			Request, display and pass on search results.
	limited				Request, display but not pass on search results.
	private				Request, but not display or pass on search results.
	closed				May not request search results.
<b>&lt;AdultContent&gt;</b>	Boolean	No			Boolean FALSE: false, FALSE, 0, no, NO Boolean TRUE: all other strings
<b>&lt;Language&gt;</b>	RFC 3066	No			String (conforming to XML 1.0 Language Identification) that identifies that the search engine supports search results in the specified language. May appear zero, one or more times ,e.g. <Language>en-gb</Language>
<b>&lt;InputEncoding&gt;</b>	UTF-8	No			String that indicates that the search engine supports search requests encoded with the specified character encoding.
<b>&lt;OutputEncoding&gt;</b>	UTF-8	No			String that indicates that the search engine supports search responses encoded with the specified character encoding.

TROUBLESHOOTING TIPS	
<b>Firefox Error Console</b>	The search plug-in service provides a logging mechanism that may be of use to plug-in developers. Within Firefox use <i>about:config</i> to set the preference 'browser.search.log' to true. Logging information will appear in Firefox's Error Console (Tools > Error Console) when search plug-ins are added.
<b>Image size</b>	Remotely fetched favicons must not be larger than 10 KB. (See <a href="http://bugzilla.mozilla.org/show_bug.cgi?id=361923">http://bugzilla.mozilla.org/show_bug.cgi?id=361923</a> .)
<b>MIME type</b>	Your server should serve OpenSearch plug-ins using the MIME type <code>application/opensearchdescription+xml</code> .
<b>Non-standard port</b>	Firefox is unable to add discovered search plug-ins from a URL with a non-standard HTTP port number. (See <a href="https://bugzilla.mozilla.org/show_bug.cgi?id=340208">https://bugzilla.mozilla.org/show_bug.cgi?id=340208</a> .)
<b>URL</b>	Note that you MUST include a <code>text/html</code> URL — search plug-ins including only Atom or RSS URL types (which is valid, but Firefox doesn't support) will also generate the "could not download the search plug-in" error.
<b>Well-formed XML</b>	Be sure that your Search Plug-in XML is well-formed. You can check by loading the file directly into Firefox. Ampersands in the template URL need to be escape with <code>&amp;amp;</code> ; and tags need to be closed with a training slash or matching end tag.
<b>XMLNS attribute</b>	The xmlns attribute is important, without it you could get an error message indicating that "Firefox could not download the search plug-in from: (URL)".

RESOURCES		
<b>Documentation</b>	Official documentation on OpenSearch	<a href="http://www.opensearch.org">http://www.opensearch.org</a>
	Wikipedia article about OpenSearch	<a href="http://en.wikipedia.org/wiki/OpenSearch">http://en.wikipedia.org/wiki/OpenSearch</a>
<b>Create</b>	Creating OpenSearch plug-ins for Firefox	<a href="http://developer.mozilla.org/en/Creating_OpenSearch_plugins_for_Firefox">http://developer.mozilla.org/en/Creating_OpenSearch_plugins_for_Firefox</a>
	Creating OpenSearch plug-ins for IE7	<a href="http://www.microsoft.com/windows/ie/searchguide/en-uk/default.aspx?dcsref=http://runonce.msn.com/runonce2.aspx">http://www.microsoft.com/windows/ie/searchguide/en-uk/default.aspx?dcsref=http://runonce.msn.com/runonce2.aspx</a>
	Creates OpenSearch plug-ins for Firefox and IE7	<a href="http://www.searchplugins.net">http://www.searchplugins.net</a>
	Creates OpenSearch plug-in for Firefox, IE7 and Google Toolbar	<a href="http://ready.to/search/en/">http://ready.to/search/en/</a>
<b>Example files</b>	Edgehill University	<a href="http://www.edgehill.ac.uk/search/description">http://www.edgehill.ac.uk/search/description</a>
	Technorati	<a href="http://technorati.com/osd.xml">http://technorati.com/osd.xml</a>
	University of St Andrews	<a href="http://www.st-andrews.ac.uk/opensearch/index.xml">http://www.st-andrews.ac.uk/opensearch/index.xml</a>

