



# FAST DATA SEARCH

## SEARCH PORTLET FOR BEA WEBLOGIC 8.1

version 3.2.6

### MODULE GUIDE

**REVIEW DRAFT 1**  
**FEBRUARY 11, 2004**

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# About this Guide

## Purpose of this Guide

This guide describes how to install and use the Search Portlet for BEA WebLogic 8.1. It includes the following chapters:

- Chapter 1 *Product Overview* provides a brief introduction to the product and its features.
- Chapter 2 *Installation* provides steps for installing the software and using the portlet in the WebLogic environment.
- Chapter 3 *Configuration* describes the portlet properties and discusses briefly how to customize the portlet by modifying the JSPs.
- Chapter 4 *Operation and Verification* describes the available search features of the portlet and provides an example of a search.

## Audience

This guide provides information for web developers who need to use the Search Portlet for BEA WebLogic 8.1.

## Conventions

This guide uses the following textual conventions:

- Terminal output, contents of plaintext ASCII files will be represented using the following format:  
Answer yes to place the node in the known\_hosts file.
- Terminal input from operators will be in the same but bold format:  
**chmod 755 \$HOME**
- Input of some logic meaning, will be enclosed in <> brackets:  
setup\_<OS>.tar.gz

where <os> represents a specific operating system that must be entered.

- URL's, directory paths, commands and the names of files, tags, and fields in paragraphs appear in the following format:

The default home directory is the *C:\DataSearch* directory.

- User Interface page/window texts, buttons, and lists appear in the following format:  
Click **Next** and the **License Agreement** screen is displayed.
- *\$FASTSEARCH* (UNIX) or *%FASTSEARCH%* (Windows) refer to an environment variable set to the directory where FAST Data Search is installed.



## Chapter 1

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# Product Overview

## Introduction

The Search Portlet for BEA WebLogic 8.1 allows a WebLogic web application to query and process search results from FAST Data Search. You can use the portlet as provided or modify the user interface to comply with your company preferences and policies.

## Supported Features

- Simple installation for use in Weblogic Workshop and Weblogic Portal Administration.
- Configurable preferences to customize the portlet.
- Access to many search features in FAST Data Search.
- Java Server Pages (JSPs) that can be customized for the application.

## Supported Versions

- BEA Weblogic Platform 8.1
- FAST Data Search 3.2



## Chapter 2

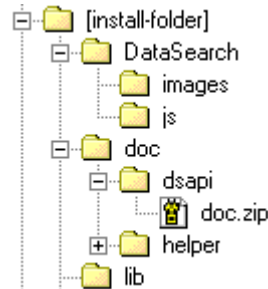
# Installation

## Installing the Portlet

The portlet code is distributed in a zip file named **FDSBEAPortlet.zip**.

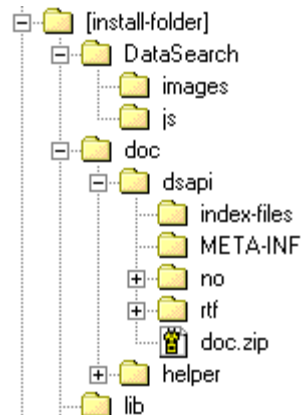
- 1 Unzip the package to a location accessible from your Workshop IDE, in this example **[install-folder]**.

The resulting structure is shown here:



- 2 (Optional) To use the Fast Search API Javadoc, unzip the file **doc/dsapi/doc.zip** into **[install-folder]**.

The resulting structure is shown here:



The contents of the zip file is as follows:

<b>Folder</b>	<b>Contents</b>
DataSearch/search.portlet	the main portlet file
DataSearch/search.portlet.full	the main portlet file, with all available preferences
DataSearch/search.jsp	the main JSP of the portlet
DataSearch/clusters.jspf	file that displays top concepts of the retrieved documents
DataSearch/style.css	style sheet used by the search JSP
DataSearch/images/*.gif	various images for the GUI
DataSearch/js/*.gif	various images for tree-based navigation of categories
DataSearch/js/*.js	Javascripts used with the search page
lib/xmlrpc-1.1.jar	library used for communicating with a Data Search Server for config info
lib/dsapi.jar	main API for performing a search and traversing the results
lib/fast_portlet.jar	helper classes for the search page
doc/ <a href="#">TBS</a>	this document
doc/javadoc/dsapi	Javadoc for the FAST Data Search Java API
doc/javadoc/helper	Javadoc for the helper classes

## Adding the Portlet to a Web Application

- 1 Copy or import files to your portal project in Workshop as described in the following table:

<b>Package content</b>	<b>Copy or import into:</b>
<b>DataSearch</b> folder	<PORTAL_APP>/<project>/portlets
<b>lib</b> folder	<PORTAL_APP>/WEB-INF/lib

- 2 Save your project files.

## Testing the Portlet

Test the portlet from the Workshop IDE as described in the following:

- 1** Create a new portal, or identify an existing portal on which you want to use the portlet.
- 2** Drag and drop the search portlet onto the empty page of the new portal, or onto a page on the existing portal. Save your files.
- 3** Select the portal by clicking on it, and then select Portal > Open Current Portal from the main menu bar. The portal with the new portlet is displayed in a web browser window.



## Chapter 3

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# Configuration

### Modifying the portlet properties

In order to perform searches with the portlet, you need access to a FAST Data Search installation. If you want to change this and other configurable properties of the portlet, go to the Weblogic Portal Administration interface, as described in the following:

- 1 Login to the portal administration interface.
- 2 Select the portal to which you copied and saved the FAST Data Search portlet in the Workshop IDE.
- 3 Add the portlet to an existing page, or create a new page to which the portlet is added.
- 4 Select the desktop that the page is contained in, and select View Desktop. The portlet will now display on the page where you placed it.

The following is a list of preferences that can be modified for the search portlet in order to modify its behavior.

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**Note!** All preferences from DataSearchHost to and including SortFields are directly available in the administration GUI for direct configuration. The remaining preferences must be added manually with the exact names/cases as shown in the table. This is due to a known issue with the BEA Weblogic Portal product

(see <http://e-docs.bea.com>). The portlet works even if these are not added, using the default values shown in the table.

<b>Preference</b>	<b>Description</b>	<b>Default value</b>
DataSearchHost	The fully qualified host name of the FAST Data Search installation.	localhost
DataSearchPort	The port number for accessing the Config server.	16005
Logo	The name of an image file to use as logo. Must be located in the image directory.	fast_qt.gif
DataFields	A list of fields to be displayed with each search result.	title, body, url, modified, size
MetaFields	A list of meta fields to display with each search result.	rank, collection
ShowCategories	If true, categories of the result set are displayed.	true
CategoryField	The field to search for categories.	urls
AllowSorting	If true, the user can specify sorting criteria with a search.	true
SortFields	A list of fields that is sortable. Comma first makes sure no field is selected by default.	modified, size
ShowAdvanced	If true, the advanced search options are available.	true
Cluster	The search engine cluster to search.	webcluster
AllowSelectCollection	If true, the user can select which collection to search in.	true
DefaultCollection	The name of the collection to search in	""
ShowLeafs	If true, also show nodes of the category tree that only has a single document.	true
ShowConcepts	If true, show top concepts of the search results.	true
ConceptMinTerms	The minimum number of terms in identified concepts.	2



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<b>Preference</b>	<b>Description</b>	<b>Default value</b>
ConceptDocCount	The maximum number of search results to use for identifying concepts.	20
ConceptMaxLength	The maximum character length of concepts.	100
ConceptOrderByName	If true, order the concepts alphabetically, rather than score.	false
ShowDrillDown	If true, drill down navigators are displayed.	true
AutoResubmitQuery	If true, resubmits query when there are 0 hits and available query transformations.	false
ShowActualNavDocCounts	If true, shows the number of documents for each drill down link.	false

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## Customizing the portlet

In addition to the portlet preferences, you can modify the portlet by changing the source JSP to obtain a different look and feel, or behavior. Consult the available Javadoc for the search API of FAST Data Search and the helper classes.

```
[install-folder]\doc\dsapi\index.html  
[install-folder]\doc\helper\index.html  
test
```



## Chapter 4

# Operation and Verification

If the portlet preferences are set with default values, the portlet is displayed on the screen as follows:



## Simple search

To perform a simple search, do the following:

- 1 Enter one or more search terms in the main input field, replacing the '\*'.
- 2 If desired, select a Sort by criterion to sort results by values of certain fields. Also choose descending (Desc) or ascending sort order.
- 3 If desired, select a particular Collection in which to search. By default, all available collections are searched.
- 4 Click Submit Query.

## Advanced search

If you want more control of the search, click on the Advanced link to access additional search features.

You can use the following features to use to modify your query:

Table 4-1

<b>Search type</b>	Decide whether you want to perform an AND'ed, OR'ed, phrased, or advanced search query. The latter allows you to use logical operators like AND, OR, ANDNOT and parenthesis with your search.
<b>Filter</b>	You can add filter terms to your query. These will limit the search results as ordinary query terms, but will not be subject to linguistic analysis such as spell checking. You can add '+' or '-' in front of filter terms to specify whether or not the terms will be included in the retrieved documents.
<b>Hit and offset</b>	You can specify how many hits you want returned, and the offset into the results set.
<b>Category</b>	A category that the retrieved documents should belong to.
<b>Similar to and Similar type</b>	A document vector that the retrieved documents should be similar to. Consult the FAST Data Search Integration Guide for details on this feature. 'Similar type' may be either 'find', 'exclude', or 'refine'.

Table 4-1

<b>Spelling</b>	If checked, a spell check is performed on the search terms and spelling corrections are suggested.
<b>Lemmas</b>	Perform search in the lemmatized version of a content field if checked.
<b>Proper name</b>	Proper name recognition is performed on search terms if checked.
<b>Show Similar</b>	Provide 'Show similar' search links with each search result if checked.
<b>All fields</b>	Display all fields with each search result if checked.
<b>Debug</b>	Display debug information if checked.

The following screen displays the search portlet with Advanced features.

## Example search

Searching with the query term 'basketball' gives the results as displayed below.

The screenshot displays a search interface with the following components:

- Categories:** Taxonomy (http: shopping.yahoo.com, uk.news.yahoo.com, bta.news.yahoo.com, www.cnn.com, ca.dir.yahoo.com, us.cnn.com, au.news.yahoo.com, search.news.yahoo.com, www.aol.com, cf.us.biz.yahoo.com) and Reset Categories.
- Navigators:** language (en (remove)), Character set (dropdown), Document Size (dropdown), and Reset All Drilldown.
- Clusters:** Top Concepts (buyer protection (4.99), protection review (4.99), top stories (4.93), full coverage (3.66), team sports (2.19)).
- Search Results:** 113 Results found in 0.512s. Results 1-10 are shown.
  - Rank 1:** title Basketball - Team Sports - Sports and Outdoors - Compare Prices, Read Reviews at Yahoo! Shopping. body ...bikes, ski, fishing, bowling Team Sports 6508 **Basketball** from 368 stores Show me: 1 product per store...Finder: Sport: Product: Brand: Price: \$ to \$ **Basketball**:NCAA Portable **Basketball** Hoop NCAA Portable **Basketball** Hoop Get a game... url shopping.yahoo.com/...b\_basketball\_27930281 (new window) modified Tue Jan 06 13:50:22 CET 2004 size 72604 Similar Find Refine Exclude
  - Rank 2:** title Basketball - Fan Gear and Memorabilia - Sports and Outdoors - Compare Prices, Read Reviews at Yahoo! Shopping. body ...bowling Fan Gear and Memorabilia 3916 **Basketball** from 224 stores Show me: 1 product...Sport: Product: Brand: Price: \$ to \$ **Basketball**:NBA Replica Jersey NBA Replica Jersey...Buyer Protection Review this merchant: **Basketball**:Reebok USA **Basketball** Customized Replica... url shopping.yahoo.com/...b\_basketball\_27930339 (new window) modified Tue Jan 06 16:38:57 CET 2004 size 80085 Similar Find Refine Exclude
  - Rank 3:** title Basketball Game Bombing Kills 10. body ...Science Oddly Enough Sport Reuters | AFP | Sky News | Photos Sunday January 4, 08:21 PM **Basketball** Game Bombing Kills 10 A bomb explosion at a **basketball** game in the southern Philippines has killed 10 people and wounded at least 40 others, including... url uk.news.yahoo.com/...elatu.html (new window) modified Tue Jan 06 07:09:27 CET 2004 size 15253 Similar Find Refine Exclude
  - Rank 4:** title NBA - Action Figures - Toys by Category - Toys and Baby - Compare Prices, Read Reviews at Yahoo! Shopping. body ...Protection Review this merchant more results from this store (5) compare NBA:Swish the **Basketball** Player Swish the **Basketball** Player Swish the **Basketball** Player's jumps shots and talented swishes make him king of the court. Sendable action... url shopping.yahoo.com/...b\_nba\_21269556 (new window) modified Tue Jan 06 16:56:35 CET 2004 size 55560 Similar Find Refine Exclude

There are four main areas of the results page:

### Document summaries

These show the information retrieved about the top hits. Each result comes with a set of meta fields and a set of data fields, as previously explained. Meta fields are to the left, and

data fields to the right. In this example, the meta fields are 'rank' and 'collection'. The rank is a computed relevancy and is determined from factors such as where the search terms were found in the document, or how many times they occurred. Below the data fields are three links that can be clicked to find similar/dissimilar documents to the one in focus.

### **Categories**

It is possible to browse a tree of categories that were found for the top N search results. By clicking on a link in the tree, a new search is performed, limiting the results to documents belonging to that part of the category tree.

### **Navigators**

These are drop down boxes that offer drill downs in the results set. For instance, there is one drop down box for 'Language'. The box contains languages found for the top N hits (N is configurable) with the percentage of each language, and when the user selects a language, a new search is performed with this an additional search criterion. This way, the user can restrict the results based on analysis of a gradually smaller result set, until the desired document(s) turn up.

### **Top concepts**

This is based on the distinguishing terms found from analyzing the top N hits. The most distinguishing concepts are listed first. By clicking on the links, a new search is performed with the phrased terms as an additional search term.