



Extending IBM® WebSphere® Portal search

Efficiency & productivity through effective information location

Extended Search for IBM WebSphere Portal

Efficiency and productivity - effective information location

Find it. Act on it. Finding the information you need rapidly and intuitively from across the entire enterprise.

Extend and enhance the reach and capability of WebSphere Portal search to federate searches across all systems. Search content, data and text, across systems for meaningful results delivered in context.

Increase results accuracy, pertinence and relevancy using advanced analysis techniques.

Maximise daily performance by reducing the time taken by each individual to locate and access the information they require from across the organisation's systems.

Gain from significant enhancements in scalability, performance and the ability to pull content from many more enterprise repositories.

Benefit from additional search features and functions and enhance the end user's experience and productivity.

Extend your WebSphere Portal capabilities and functionality using the IBM® strategic enterprise search middleware platform - IBM OmniFind® Enterprise Edition.

WebSphere Portal Search Engine technology provides the ability to index and search portal portlets and pages via portal site search (including Web, Public IBM Workplace Web Content Management™ and WebSphere Portal Document Manager content and attachments).

Now you can enable portal users (and others) to search for and locate information across the enterprise information domain, including structured and unstructured data sources (file

systems, databases, document management systems, Lotus/Exchange...) with one search.

With ever increasing volumes of data and information being stored in diverse systems and locations it is becoming more and more difficult to locate the pertinent information one desires.

It is becoming harder to locate any given piece of information using the normal navigation methods and keyword search capability.

Estimates vary but analyst research indicates that a typical knowledge worker spends 1.5 hours to 3 hours (or about 15% to 35%) of their time at work, just searching for information.

Benefits of Enhanced Search:

With enhanced search using IBM OmniFind Enterprise Edition you can improve search results quality, increase daily productivity and increase the benefits to be gained from your WebSphere Portal implementation.

Benefits of more effective and intuitive search include:

- Higher efficiency
- Greater productivity
- Reduced costs
- Increased job satisfaction
- Greater opportunity for innovation
- Greater performance
- Improved decisions through greater insight
- Improved team work

To add even greater value, your ability to run effective internal audits and demonstrate compliance is enhanced, thus improving the posture of the organisation as a whole.

For international and global organisations the ability to extract meaning from multiple languages, whilst including the capabilities described below, adds to the ability of individuals to gain maximum benefit and re-use of the organisation's vast store of information.

Enhancing search results:

At the 'basic' level enhanced search extends the reach and coverage of WebSphere Portal search to enable a single, secure search capability across all appropriate repositories (allowing a single search request to return a consolidated results list from across all repositories whilst maintaining the access rights and security model of the underlying system(s)).

This 'federated search' enhances accessibility and ease of use. The real power then comes from the information filtering process which ensures that the results hit-lists are relevant, pertinent, of value and easy to navigate.

To enhance search results the first task is to assess the widest possible set of potentially

relevant items and then rapidly define the most pertinent items for the specific query. This requires an understanding of the terms searched for, the language structure for the language being used, and the context of the search.

Key capabilities include:

In addition to WebSphere Portal search functions enhanced search from Diegesis using IBM OmniFind and extended capabilities enabled by UIMA can provide:

- Search across your entire information domain with appropriate user security and access controls maintained.
- Search on document content not just titles and file names. Go beyond keyword search and beyond Google™ style search to gain search results based on the *meaning* of words in context.
- Natural language search terms. Write the search the way you would ask it of another person – not just keywords.
- Semantic search and disambiguation. For example, when your search includes the word 'set', or 'polo', or 'June', which definition of those words do you want results for? The search engine helps resolve this through linguistic analysis and user navigation support, ensuring the results set is as pertinent as possible to the user's intent.
- Enhanced results navigation with document summaries, 'found term' highlighting and collapsible results based on categories across information sources.
- Enhanced language support
- Enterprise security features

- Automatic spell check to suggest corrections for misspelled search terms
- Predefined links means that search results can include associated pre-defined links defined by the administrator
- Enhanced performance and use reports as well as problem reporting features
- Gain insight into other potentially pertinent information through linguistic analysis so that a search for 'vehicle' also returns results for *types of vehicles* e.g. lorry, car, truck, motorbike... Enable search for all variants of a verb. Enable a search for 'election' to also locate items with 'vote' or 'ballot' or other related terms.
- Automatically handle synonyms, acronyms, abbreviations, variant spellings and contractions - providing results for the contraction and its extended form and for accepted variant spellings - where beneficial to do so.
- Understand location concepts e.g. a search for South America can return results for countries and locations within South America – not just for items containing the term 'South America'.
- Extract telephone numbers even if they are not labelled as such.
- Search across multiple languages.
- Find 'people' even if you do not know their name(s).
- Embed multi system search into Portal to provide a seamless user interface which enables the power of portal search and OmniFind enterprise search to co-exist transparently to the user.

Using a combination of advanced techniques including natural language processing, linguistic analysis, semantic analysis, fuzzy matching, parametric search, federated search, lemmatization and normalisation the enhanced search capabilities delivered by Diegesis using IBM technology provide enhanced efficiency and productivity for users of WebSphere Portal environments.

Don't let valuable information and knowledge lie dormant – let your employees locate it quickly and intuitively.

Maximise the benefit available from the resources you have today.

Stop wasting time searching and spend more time performing.

If you could reduce the amount of time wasted searching for information by each knowledge worker by 30 minutes each day you would save in the region of 110 hours/person/year - or over 2 working weeks a year. That's around a 5% efficiency improvement throughout the organisation!

More effective information access supports more effective decision making and increases the speed with which the organisation can perform in the optimum manner.

Get the best from your people and your information and enhance user satisfaction.

Get started:

Diegesis skills and experience will enable you address your enterprise search needs and to enable your employees to work more effectively.

With 'starter editions' and sub-capacity licensing options deployment is cost effective for everything from small systems to enterprise-wide, multinational deployments.

Function/Capability	Option 1	Option 2
Coverage	Enterprise Search	Enterprise Search & Enhanced Insight
License upgrade/extension option	x	x
Scalability	50m+docs	50m+docs
System access		
▪ File system search	x	x
▪ Web/HTML search	x	x
▪ Database search	x	x
▪ Unstructured information search	x	x
Security		
▪ Single sign-on	x	x
▪ LDAP Integration	x	x
▪ Custom security interfaces	x	x
▪ Group-based security	x	x
▪ Detailed document & user level security	x	x
Multiple indexes	x	x
Standard search features		
▪ Synonyms	x	x
▪ Featured links	x	x
▪ Customizable ranking	x	x
▪ Customizable search interface	x	x
▪ Search custom meta data	x	x
▪ Dynamic faceted navigation	x	x
▪ Sorting by field	x	x
▪ Results grouping/collapsing	x	x
▪ Scopes, categorization	x	x
▪ Parametric Search	x	x
▪ XML mapping and XML search	x	x
▪ Semantic search	x	x
APIs		
▪ Search API	x	x
▪ Document push API	x	x
▪ Extensible architecture for open source/standards integration for additional analytics capabilities	x	x
Linguistic analysis for English and Western European languages	x	x
Linguistic analysis for 20+ languages	x	x
200+ file formats supported	x	x
Optional advanced linguistic analysis and support for additional languages including Chinese, Japanese, Arabic and Korean	x	x
Standard sw support available	x	x
System support available	x	x
Advanced analytics		
▪ Entity extraction	(x)	x
▪ Action recognition	(x)	x
▪ Relationship analysis	(x)	x
Advanced capabilities ²		
Search Features – specialised		
▪ Contextual understanding	(x)	x

(x) = licensed but not implemented within the scope of the option described

¹ Option 2 - not all capabilities are enabled on all source/information types

² Advanced capabilities such as Automated Classification, Sentiment Analysis, Keyword Frequency Analysis and Advanced Results Mining are available as separate chargeable items

Technical Information

IBM OmniFind Enterprise Edition uses the same underlying technology framework as Portal Search Engine and provides significant enhancements in scalability and performance. It has enhanced administrative tools as well as the ability to pull content from many more enterprise repositories. These capabilities paired with additional search features and functions add to the end user's search experience and make OmniFind Enterprise Edition the strategic IBM enterprise search middleware platform.

Supported Platforms:

- IBM AIX 5L™ Version 5.2, 5.3 (64-bit support)
- Linux
 - Red Hat Enterprise Linux AS 5
 - SUSE Linux Enterprise Server Version 10
- Microsoft Windows 2003 R2
- Solaris 9 (64-bit SPARC support)

Integrations and connectors:

Enterprise search offers a rich library of pre-built integrations to various enterprise data and content sources to help you unify vast amounts of diverse and widely-dispersed information into a searchable index.

These ready-to-deploy integrations help reduce time-to-value and the total cost of implementing an enterprise search solution.

Pre-built connectors are available for the following data sources:

- DB2® Universal Database for Linux®, UNIX®, Windows, z/OS, iSeries
- EMC/Documentum
- FileNet® Content Services. FileNET Content Manager

- Hummingbird DM
- IBM Content Manager for Multiplatforms. IBM Document Manager V8.3 (Via CM connector).
- Informix® Dynamic Server Version 9
- Lotus® Domino® Document Manager (including V8.0). Lotus Notes®/Domino Server (including V8.0). Lotus Domino QuickPlace® and Lotus Quickr™ (Domino and J2EE)
- Microsoft® Exchange Server 2000, 2003
- Microsoft SQL Server 2000
- Newsgroup (NNTP)
- OpenText Livelink Enterprise Server
- Oracle 9i, 10g
- Sybase 11.9.2, 12.0, 12.5
- UNIX file systems
- Windows file systems
- Web (HTTP or HTTPS)
- WebSphere® Portal Web pages
- WebSphere Portal Document Manager
- Windows SharePoint® Services, Service Pack 2, for Windows 2003
- Workplace™ Web Content Management
- JDBC databases accessible through the JDBC crawler (IBM DB2 Universal Database V8.2, Oracle 9i, Oracle 10g, Microsoft SQL Server 2000, and Microsoft SQL Server 2005 databases through Type 4 JDBC drivers)
- (Mainframe sources accessible through separate purchase, Federation for z/OS (VSAM, IMS™, CADatacom, Software AG Adabas))

Additional connectors can be written using the open interface.

About Diegesis

Diegesis provide consultancy, IT services, systems-integration and software to deliver 'business performance improvements'. Key areas of expertise include: enterprise search & knowledge discovery solutions, systems integration, and business insight/intelligence solutions.

We are an IBM Business Partner based in the UK with experience of deploying OmniFind Enterprise Edition as well as experience in other IBM technologies such as WebSphere (including integration, process management and Portlet Factory), DB2, and Enterprise Content Management.

Our industry experience includes aerospace, defence, intelligence, construction, engineering, retail, banking/finance/insurance, transportation, utilities, natural resources, public sector and others.

Diegesis can work with you on strategic objectives such as the 'Business Performance Framework' and 'information architecture' required to enable flexible and dynamic business improvements today and for the future, or provide you with niche solutions to specific challenges.

The **Diegesis** team has significant experience in 'business technology' and information technology; from needs analysis to cost/benefit analysis; from solution framework architectures to solution design; from software development to software package implementation; from systems integration to user training and support. We have particular experience in information management (including data and document/content management), data & document archiving, enterprise search & knowledge management, portals, systems

integration, and risk management systems. We prefer to deliver within an overall service oriented architecture, however we can deliver niche solutions if required.

Diegesis takes a phased approach to projects of significant customer value so that you are able to assess performance and value-for-money along the way. **Diegesis** focus on the business objectives and balance this with your Return on Investment (RoI), Cost/benefit and Total Cost of Ownership (TCO) requirements as well as your overall appetite for risk.

We deliver solutions which have practical applications to your business needs. We provide up front consulting where appropriate as a basis for ensuring everyone is clear of the business objectives and critical success factors. Any consulting is always focused on the end objective of delivering a practical solution to a business issue.

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