



Getting Started with Enterprise Search in SharePoint 2010 Products

Microsoft

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Introduction

This guide is an introduction to enterprise search in the Microsoft® SharePoint® 2010 Products line. Enterprise search in SharePoint 2010 Products spans many features, capabilities, and licensing models. The products are:

- SharePoint Foundation 2010
- Search Server 2010 Express
- Search Server 2010
- SharePoint Server 2010
- FAST™ Search Server 2010 for SharePoint

This guide will help you get started in matching the features and capabilities of these products to your organization's enterprise search requirements.

Getting Started

Search connects people to the information they need to get their jobs done. General productivity search solutions increase employee efficiency by connecting a broad set of people to a broad set of information. High-value search applications drive measurable returns on investment (ROI) by helping a specific set of people make the most of a specific set of information. Until now, organizations have had to purchase multiple products to address both scenarios—no single search solution was able to deliver the right functionality at the right price, forcing organizations to incur unnecessary costs, such as:

- Software costs – licenses, support, and maintenance costs for separate products.
- Headcount costs – dedicated positions required to design, deploy, and manage different search solutions.
- Opportunity costs – mediocre general productivity search and limited deployment of high-value search applications.

When assessing the landscape of enterprise search offerings from Microsoft, you should review the capabilities of the various products and match them to the needs of your organization. As the enterprise search maturity of your organization grows, so may the need for features and capabilities of the search technologies you use. Microsoft has produced a broad set of enterprise search capabilities based on SharePoint 2010 that serves the enterprise as growth, maturity, and changing business needs redefine your organizational enterprise search requirements.

Microsoft provides SharePoint Foundation 2010 and Search Server 2010 Express free of charge for you to use on licensed Windows® servers. These entry level products offer the ability to crawl and index content and provide a user interface for executing queries against the catalog of crawled content.

SharePoint Server 2010 and Microsoft Search Server 2010 offer improved scalability and options for indexing content from many different sources, while fulfilling the configurability, manageability, and reporting requirements of your organization. SharePoint Server 2010 provides a great platform for creating general productivity search applications.

FAST Search Server 2010 for SharePoint is a new product from Microsoft, and it delivers the power of FAST with the simplicity and total cost of ownership (TCO) benefits of Microsoft products. FAST Search Server 2010 for SharePoint delivers the best general productivity search on the market AND makes it easy and economical to build high-value search applications. FAST Search Server 2010 for SharePoint further enhances the crawling, content processing, user interface, and scale of SharePoint Server 2010.

Capabilities Comparison

The following table compares general enterprise search capabilities that were previously provided in Microsoft Office SharePoint Server 2007 with the new and enhanced features in SharePoint Server 2010 and FAST Search Server 2010 for SharePoint.

X = available in 2007 O = available in 2010 † = improved in 2010			
Features and Capabilities	Office SharePoint Server 2007	SharePoint Server 2010	FAST Search Server 2010 for SharePoint
People and expertise search Capture knowledge not found in documents by searching for people and expertise using SharePoint products.	X	O†	O†
SharePoint 2010 connector framework Securely connect to content in SharePoint sites and from sources across your enterprise. Use the Business Data Catalog to easily create your own connectors that work just like those available out of the box.	X	O†	O†
100m content volume with sub-second query response time Meet the scale and performance needs of your entire organization or the specialized needs of individual departments.	X	O†	O†
Search from Windows 7 & Windows Mobile Search beyond the search center. Conduct searches from the Windows 7 desktop and on your Windows mobile device.	X	O†	O†
Taxonomy tag integration Bring the power of taxonomy into search. Tag metadata is shown in results, and users can refine by taxonomy-based tags.		O	O
Metadata-driven refinement panel With the new refinement panel in SharePoint Server 2010 and FAST Search Server 2010 for SharePoint, users can narrow the results of their searches and navigate to the right content faster.		O	O

Features and Capabilities	Office SharePoint Server 2007	SharePoint Server 2010	FAST Search Server 2010 for SharePoint
<p>Relevance improves with social behavior The click-through behavior of similar search queries affects the rank that documents receive. The more users click on a certain item, the higher its ranking for related queries.</p>		O	O
<p>Phonetic and nickname search Confidently search for a person's name as it sounds - without worrying about the exact spelling.</p>		O	O
<p>Contextual search Tailor different results and refinement options based on the profile of the user or audience.</p>			O
<p>Thumbnails and previews Thumbnails and previews make the results of a search query visual, allowing users to recognize the right content quickly.</p>			O
<p>> 500m content volume with sub-second query response time Scale to extremes with FAST Search Server 2010 for SharePoint while maintaining sub-second query response times.</p>			O
<p>Advanced content processing with advanced linguistics Extract and create metadata latent in documents to improve search results, sorting capabilities, and the refinement panel.</p>			O
<p>Search-driven applications Meet all the search application needs you have across your business. Common examples include 360° Customer Insight, Research and Development Innovation Portal, and Product Support.</p>			O
<p>Business Intelligence Indexing Connector Crawl Microsoft Excel® workbooks and Reporting Services Reports with improved results, descriptions, thumbnails, and refiners. Discover your business intelligence (BI) assets quickly and easily, navigate not only the document, but also the data behind the scenes, and access the information you need quickly and easily.</p>			O

Feature Comparison

You can use the following table to make quick comparisons of the enterprise search features provided by each product in the SharePoint 2010 Products.

Feature	SharePoint Foundation 2010	Search Server 2010 Express	Search Server 2010	SharePoint Server 2010	FAST Search Server 2010 for SharePoint
Basic site search	Y	Y	Y	Y	Y
Best Bets		Y	Y	Y	Y
Visual Best Bets					Y
Similar Results					Y
Duplicate Results	Y	Y	Y	Y	Y
Search Scopes		Y	Y	Y	Y
RSS Feeds for Search Results	Y	Y	Y	Y	Y
Alerts for Search Results	Y*	Y*	Y*	Y*	
Advanced Search Page		Y	Y	Y	Y
Search Enhancement based on User Contexts					Y
Crawled and Managed Properties		Y	Y	Y	Y**
Entity Extraction					Y
Query Federation		Y	Y	Y	Y
Query Suggestions		Y	Y	Y	Y
Sort Results on Managed Properties or Rank Profiles					Y
Relevancy Tuning by Document or Site Promotions		Y	Y	Y	Y**
Shallow Results Refinement		Y	Y	Y	Y
Deep Results Refinement					Y
Document Preview					Y
Windows 7 Federation		Y	Y	Y	Y
People Search				Y	Y
Phonetic Name Search***				Y	Y
Nickname Search***				Y	Y
Self Search				Y	Y

Feature	SharePoint Foundation 2010	Search Server 2010 Express	Search Server 2010	SharePoint Server 2010	FAST Search Server 2010 for SharePoint
Social Search				Y	Y
Taxonomy Integration				Y	Y
Multi-Tenant Hosting				Y	
Rich Web Indexing Support					Y

* For NTLM environments

** FAST Search Server 2010 for SharePoint provides enhanced capabilities in these areas.

*** For a subset of the supported languages

Note: For details on a specific feature, review the evaluation guides for the products.

First Steps

There are some general tasks you will need to perform when you are evaluating search products or implementing enterprise search solutions that meet your organization's requirements. The following sections can help you get started.

Identify your content

The first step you need to take before performing any actions is to identify the content in your organization that you want to index. Content from SharePoint sites is automatically included in all of the SharePoint search products, but you can also index content from file shares, Microsoft Exchange public folders, external Web sites, Lotus Notes databases, and your line-of-business applications.

You can also use SharePoint Designer 2010 or Visual Studio 2010 to create Business Data Catalog applications that enable custom databases, Web services, and other custom solutions to be indexed.

Note: SharePoint Foundation 2010 can only index content in SharePoint sites. All other enterprise search products from Microsoft can index content in the content repositories mentioned above by using the connector framework.

FAST Search Server 2010 for SharePoint also provides enhanced capabilities for indexing business intelligence data. You can obtain the Business Intelligence Indexing Connector to provide enhanced search and analysis for business intelligence assets.

Crawl your content

The next step is to crawl the content in the content repositories that you have identified. You can implement both full and incremental crawl schedules to ensure that indexed data is as fresh as possible.

The new index partitioning capabilities of Search Server 2010, SharePoint Server 2010, and FAST Search Server 2010 for SharePoint enable you to balance the indexing load (and query load) across servers that are dedicated to provide search for large amounts of content.

Scale your search infrastructure

One of the design goals for Search Server 2010 and SharePoint Server 2010 is to provide sub-second query response times for up to 100 million indexed documents. For FAST Search Server 2010 is designed to provide sub-second query response times for more than 1 billion indexed documents. To achieve sub-second query response times for your organization you may need to scale your server farm to include multiple query servers. Additionally, to ensure that indexed data is as fresh as possible when indexing a large number of documents, you may need to include multiple indexers. The highly componentized architecture of the enterprise search products from Microsoft enables you to do just that; for example, you can implement partitioned indexes on multiple indexers to be able to cope with crawling demands, and you can include multiple query servers to balance the query processing load at search time.

Customize the end-user search experience

Optionally, you may want to provide a customized user interface so that information workers can search for information and manipulate results in the most efficient way for your business. The Enterprise Search Center for SharePoint Server 2010 and the FAST Search Center are highly customizable without requiring developer effort. For example, you can create search scopes, modify properties of search Web Parts, apply XSLT styles, and apply themes to search centers with minimal effort. All of this can be done through the Web browser or by using SharePoint Designer 2010.

If you need to customize the search experience further, then developers can create a completely customized user interface by creating new Web Parts that inherit functionality from the existing search Web Parts. Furthermore, the search API is completely open so developers can create new paradigms and ways of working with search, such as by creating new Web Parts or even Silverlight applications that run searches and render results.

Customize the content processing pipeline

One of the key differentiators between FAST Search Server 2010 for SharePoint and other search products is the ease with which you can customize content processing at indexing time. FAST Search Server 2010 for SharePoint enables you to create your own metadata extractors that will be used in the content processing pipeline. This enables you to define how managed properties are populated from crawled content, and you can then use that metadata in deep refiners; you can then include these organization-specific vocabularies in the metadata refinement panel which enables you to provide search solutions in the terms and language of your business.

Evaluation Guides and Further Reading

In order to better understand the design goals and features available to organizations seeking to implement enterprise search, Microsoft has produced in-depth guides to help technical decision makers, IT professionals and developers assess the search capabilities of SharePoint 2010 Products and Technologies. You should use the following guides to further enhance your understanding of enterprise search from Microsoft:

- Microsoft Enterprise Search Center
<http://www.microsoft.com/enterprisesearch>
- TechNet Enterprise Search Technical Center:
<http://technet.microsoft.com/en-us/enterprisesearch/default.aspx>
- Microsoft Enterprise Search Blog:
<http://blogs.msdn.com/enterprisesearch>

Microsoft SharePoint 2010 Search Resources

- Microsoft SharePoint Server 2010 Search TechCenter
<http://technet.microsoft.com/en-us/enterprisesearch/ee441229.aspx>
- Microsoft SharePoint Server 2010 Enterprise Search Evaluation Guide:
<http://www.microsoft.com/downloads/details.aspx?familyid=13FB5242-AA6F-467A-9D5E-1833F2B73E2F&displaylang=en>
- Enterprise Search Administration (SharePoint Server 2010):
[http://technet.microsoft.com/en-us/library/ee792877\(office.14\).aspx](http://technet.microsoft.com/en-us/library/ee792877(office.14).aspx)
- Search Topology Management:
[http://technet.microsoft.com/en-us/library/ee805956\(office.14\).aspx](http://technet.microsoft.com/en-us/library/ee805956(office.14).aspx)

Microsoft FAST Search Server 2010 for SharePoint Resources

- Microsoft FAST Search Server 2010 for SharePoint TechCenter
<http://technet.microsoft.com/en-us/enterprisesearch/ee441234.aspx>
- Microsoft FAST Search Server 2010 for SharePoint Evaluation Guide:
<http://www.microsoft.com/downloads/details.aspx?FamilyID=c422d3c7-1443-41e4-b0fe-fc402ee4d8c1&displaylang=en>
- FAST Search Server 2010 for SharePoint TechNet Library:
[http://technet.microsoft.com/en-us/library/ee781286\(office.14\).aspx](http://technet.microsoft.com/en-us/library/ee781286(office.14).aspx)