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OpenText™ AppEnhancer Indexing Service

User Guide

This guide provides instructions about installing, configuring, and using AppEnhancer Indexing Service.

EAXCORE240200-AIS-EN-1

OpenText™ AppEnhancer Indexing Service
User Guide
EAXCORE240200-AIS-EN-1
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Table of Contents

1 Starting Indexing Service implementation 5

1.1 Introduction to Indexing Service 5

1.2 Configuring AppEnhancer to Use the Indexing Service 6

1.2.1 xPlore Full-Text Engine 6

1.2.1.1 Full-Text Indexing 6

1.2.1.2 Full-Text Searching 7

1.2.1.3 Building Full-Text Search Expressions 7

1.3 Creating the Impersonation Account 10

1.3.1 Creating the Indexing Service Impersonation Account 11

1.3.2 Adding Advanced Rights to the Indexing Service Impersonation Account 12

2 Installing, Configuring, and Using xPlore for AppEnhancer 13

2.1 Installing xPlore and Configuring the Primary Server Instance 13

2.1.1 Installing xPlore 20.2 13

2.2 Configure Indexserverconfig.xml for AppEnhancer Full-Text 15

2.3 Creating xPlore Domains and Collections 16

2.4 Configuring Applications to use xPlore Full-text Engine in AppEnhancer Administrator 17

3 Registering Indexing Service via Component Registration Wizard (CRW) and Configuration Indexing Service 19

3.1 Registration Overview 19

3.2 Configuring Indexing Service Overview 19

3.2.1 Configuration through Administrator 20

3.2.1.1 Storage Management 20

3.2.1.2 Service Credentials tab 20

3.2.1.3 Settings tab 20

3.2.1.4 Queues 21

3.2.2 Configuration through Configuration file (XtenderSolutions.IndexingService.exe.config) 21

3.3 xPlore Temporary Folder 23

3.4 Managing Queues 24

3.4.1 Adding a New Queue 24

3.4.2 Modifying a Queue 25

3.4.3 Deleting a Queue 25

3.4.4 Moving Queues between Available Queues and Processing Queues lists 26

4 Managing the Indexing Service 27

4.1 Resubmitting Documents to the Indexing Service 27
4.2 Controlling the Indexing Service 27
4.3 Monitoring the Indexing Service 27
4.3.1 Viewing Indexing Service Activities 27
4.3.2 Viewing the Indexing Service Footprint in Registered or Running Components 28
4.4 Logging 28

Chapter 1

Starting Indexing Service implementation

The Indexing Service, previously known as Index Agent, is an optional module that adds full-text indexing and OCR functionality to AppEnhancer systems.

This chapter describes implementation of the Indexing Service. It covers the following topics:

- "Introduction to Indexing Service" on page 5
- "Configuring AppEnhancer to Use the Indexing Service" on page 6
- "Creating the Impersonation Account" on page 10

1.1 Introduction to Indexing Service

Users can submit text to Indexing service for full-text indexing. With full- text indexing, users can search for documents in AppEnhancer Web Access .NET by index values and/or keyword content within the document.

To submit text to the Indexing Service, users can submit entire AppEnhancer documents to the server for indexing. They can also submit scanned documents and pages to the server to be processed using OCR and have the resultant text added to Indexing Service automatically. Users can also submit documents to Indexing Service for OCR processing only.

The mechanism in which documents are submitted is in the form of job queuing. This is the method used for both full-text indexing and OCR processing. The user either uses Web Access .NET to submit the full- text queues and OCR queues. The Indexing Service polls the queues for the next job (document or page) to process. Queues are set up to accommodate jobs from multiple workstations, and can be configured at any Indexing Service computer. The queues are database table rows (in the AppEnhancer database) that track which documents are processed by Indexing Service.

Note: Full-text queues and OCR queues are created and monitored using AppEnhancer Administrator. Once you create a queue, you must designate the queue as a processing queue. This can only be done using the AppEnhancer Administrator. For more information on designating a queue, see "Adding a New Queue" on page 24 and "Moving Queues between Available Queues and Processing Queues lists" on page 26.

1.2 Configuring AppEnhancer to Use the Indexing Service

The following instructions describes how to configure the AppEnhancer system to use Indexing Service.

1.2.1 xPlore Full-Text Engine

OpenText Documentum xPlore is a multi-instance, scalable, high-performance, full-text index server that can be configured for high availability and disaster recovery. xPlore is the new full-text engine for AppEnhancer.

Note: xPlore 20.2 or later is required.

The following tables list out full-text indexing, searching, and using multiple processors in xPlore:

- "Full-Text Indexing" on page 6
- "Full-Text Searching" on page 7
- "Building Full-Text Search Expressions" on page 7

1.2.1.1 Full-Text Indexing

The following table describes how xPlore full-text processing engine processes each page type:

Page Type	xPlore
Image	Indexing Service uses OCR on each image file to generate a text file for xPlore to index.
COLD/Text	xPlore indexes the COLD/Text file. Areas normally covered by redactions and non-transparent text annotations are replaced with blank spaces before indexing.
PDF	Indexing Service does not convert PDF files into text files. xPlore indexes each PDF file directly. If a PDF file is an image-only PDF file, Indexing Service uses OCR to generate a text file for xPlore to index.
RTF	Indexing Service does not convert RTF files to text files. xPlore indexes each RTF file directly.
HTML	Indexing Service does not convert HTML files to text files. xPlore indexes each HTML file directly.

Page Type	xPlore
Foreign	Indexing Service does not convert foreign files to text files. xPlore indexes each foreign file directly.
OLE Embedded files	Indexing Service does not process OLE files.

1.2.1.2 Full-Text Searching

The following table describes the appearance of full-text search results in Web Access .NET:

Page Type	xPlore
Image	AppEnhancer highlights the hit results using the text view of the image in the native AppEnhancer viewer.
COLD/Text	AppEnhancer highlights the hit results in the native AppEnhancer viewer. Areas normally covered by redactions and non-transparent text annotations are replaced with blank spaces. Annotations and form overlay do not apply. You can use the text view toolbar button or menu item to switch to normal text display mode with annotations and form overlays.
PDF	AppEnhancer highlights the hit results in the native AppEnhancer viewer.
PDF Image	AppEnhancer highlights the hit results in the native AppEnhancer viewer.
RTF	AppEnhancer highlights the hit results in the Foreign File Viewer.
HTML	AppEnhancer highlights the hit results in the Foreign File Viewer.
Foreign	AppEnhancer highlights the hit results in the Foreign File Viewer.

1.2.1.3 Building Full-Text Search Expressions

You can select one of the full-text search options for your query. The options include: All Words, Any Words, Exact Phrase, or Expression.

This section describes how to build full-text search expressions with xPlore full-text engine.

Note: You must enclose the words and text strings in single quotation marks.

The following is a list of expression operators supported by the xPlore full-text engine:

Operator	Example	Within the Documents	Highlighted Occurrences	Detail
ftand	‘AEX’ ftand ‘Simon’	Both AEX and Simon	AEX and Simon	When you use the ftand operator between two words, AppEnhancer searches for documents that contain both words.
ftor	‘AEX’ ftor ‘Simon’	Either AEX or Simon	AEX and Simon	When you use the ftor operator between two words, AppEnhancer searches for documents that contain at least one of the words.
ftnot	‘AEX’ ftand ftnot ‘Simon’	AEX but not Simon	AEX	When you use the ftnot operator before a word, AppEnhancer searches for documents that do not contain the word.

Operator	Example	Within the Documents	Highlighted Occurrences	Detail
?	‘A?X’ with wildcards	A string of 3 consecutive characters, in which the first must be A, the second may be any character, and the last must be X	Matching words	When you use a question mark (?) in a string of text with wildcards, AppEnhancer searches for documents that contain that string of text, except when other any single character replaces the question mark. (If you are searching for multiple words, make sure that another operator is used between each word.)
*	‘S*’ with wildcards	Any string that begins with S	Matching words	When you use an asterisk (*) in a string of text with wildcards, AppEnhancer searches for documents that contain that string of text, except when any other characters or even lack of a character replaces the asterisk. (If you are searching for multiple words, make sure that another operator is used between each word.)

Operator	Example	Within the Documents	Highlighted Occurrences	Detail
()	‘AEX’ ftand (‘Simon’ ftor ‘Schiff’)	Either Simon or Schiff first, and of those documents, AppEnhancer finds ones that also have AEX	AEX, Simon and Schiff	By default, AppEnhancer interprets a search expression from left to right, interpreting each search operator one at a time, and narrowing the results with each subsequent search. You can use parentheses to group search expressions to control the order in which AppEnhancer performs these searches. When you use parentheses in an expression, AppEnhancer searches first for documents that contain the expression in parentheses.

1.3 Creating the Impersonation Account

The Indexing Service impersonation account grants security privileges to Indexing Service and is essential for Indexing Service to operate properly. Indexing Service uses the impersonation account to access remote and server resources, including AppEnhancer document paths, the License Server, the registry, and the image repository.

Because no login is required for the Indexing Service to run, some security context needs to be established, and this is done with the Indexing Service impersonation account. The Indexing Service uses the same security provider as AppEnhancer to sign in and access images and documents. The impersonation account must have the Log on as a service advanced user right.

If any of the components used by Indexing Service will be located remotely, the Indexing Service impersonation account must be added as a domain account on a domain that is trusted by the Indexing Service and License Server. For example, you may install Indexing Service on one computer and install SQL Server and AppEnhancer Web Access Server on another computer to allow for faster

processing. The domain account and the local accounts must be the same Windows account for account rights to translate across the domain to the local machines.

Also, in a native Active Directory environment, when domain-level permissions are active, they override local permissions, so it may be necessary to grant the two advanced rights at the domain level.

It is recommended that the Indexing Service impersonation account be created as a domain account and then added locally. By adding the domain account to the local Indexing Service, you ensure that only one account is used.

After creating the impersonation account, user will be able to verify this account in indexing service configuration of Administrator by saving the information. System validation will check. You must create and correctly configure an impersonation account to run the Indexing Service.

1.3.1 Creating the Indexing Service Impersonation Account

1. Sign in to the computer on which Indexing Service has been installed. Make sure that you are signed in as a member of the local Administrators group.
2. From the Windows Start menu, click **Programs** > **Administrative Tools** > **Computer Management**.

   The Computer Management console appears.
3. Click **System Tools** > **Local Users and Groups**. Right-click **Users**, and select **New User**.

   The **New User** dialog box appears.
4. Enter a **User name**, **Full name**, **Description**, **Password**, and **Password confirmation** in the available text boxes.
5. Disable the **User must change password** at next logon checkbox, and enable the **Password never expires** checkbox.
6. Click **Create**. The new account is created. Click **Close** to exit the **New User**dialog box. When you return to the Computer Management console, the list of local users should appear in the console's right-side pane (if it does not appear, click the Users folder, located beneath Local Users and Groups).
7. Right-click the account you just created and select **Properties**.

   The User Properties pages appear.
8. Click the **Member Of** tab.
9. Click **Add**.

   The **Select Groups** dialog box appears.
10. Select **Administrators** from the top Groups pane, and click **Add**. `DOMAINNAME\Administrators` should appear in the bottom pane. Click **OK** to return to the

User Properties page. Click**OK** again to exit the User Properties page and return to Computer Management.

11. Close Computer Management. You now need to configure the new account to have the following advanced right: Log on as a service.

1.3.2 Adding Advanced Rights to the Indexing Service Impersonation Account

The Indexing Service impersonation account requires the advanced right to Log on as a service.

1. Open the **Local Security Settings** utility. From the Start menu, select **Programs**, then **Administrative Tools**. From the **Administrative Tools** menu, choose **Local Security Policy**.

   The Local Security Settings Console appears.

   Note: This method may differ depending on your operating system.

2. Expand the **Local Policies** folder and then select **User Rights Assignment**. All user rights should appear in the right-side pane of the Local Security Settings Console.

3. Right-click **Log on as a Service** and choose **Security**.

   The **Local Security Policy Setting** dialog box appears.

4. Click **Add**.

   The **Select Users or Groups** dialog box appears.

5. Select the account you created to use as the Index Agent impersonation account from the top pane, and click **Add**.

   It should appear in the bottom pane as `DOMAINNAME\Account Name`.

6. Click **OK** and then click **OK** again to return to the Local Security Settings Console.

7. Close the Local Security Settings Console.

   Your impersonation account for Indexing Service can now be entered onto the Setup tab of the Indexing Service Configuration dialog box.

Chapter 2

Installing, Configuring, and Using xPlore for AppEnhancer

OpenText Documentum xPlore for Windows is a full-text engine for AppEnhancer. This chapter describes the following:

- "Installing xPlore and Configuring the Primary Server Instance" on page 13
- "Configure Indexserverconfig.xml for AppEnhancer Full-Text" on page 15
- "Creating xPlore Domains and Collections" on page 16
- "Configuring Applications to use xPlore Full-text Engine in AppEnhancer Administrator" on page 17

2.1 Installing xPlore and Configuring the Primary Server Instance

This section describes how to install xPlore and configure the primary server instance.

2.1.1 Installing xPlore 20.2

1. Download OpenText Documentum xPlore for Windows x64.
2. Unzip the `xPlore_20.2_windows-x64.zip` file to a temporary directory.
3. Run `setup.exe` to launch Installer and follow the instructions to complete the installation process.

   a. *Where would you like to install*: Install xPlore and its components to a root directory and choose a path that does not contain spaces. The default installation directory is `C:\xPlore` on Windows.

   On Windows, use a local path during installation. For a multi-instance configuration, this drive must be accessible to other xPlore instances by UNC path. For example, you install to local path `F:\xPlore`. When you configure the primary instance, you specify the xPlore data and config paths as \\<*hostname*>\F$\xPlore\data and \\<*hostname*>\F$\xPlore\config respectively.

   b. *Watchdog Administrator Information*: Enter an SMTP server and email address. The SMTP server cannot be a Microsoft Exchange server.

   This step is optional. You can click Next to proceed and safely ignore the error prompt. You can set the SMTP server and email address at a later time by setting the properties of the <*SendMailTask*> task in the file `dsearch-watchdog-config.xml` located in <*xplore_home*>\watchdog\config.

The xPlore watchdog service is a Windows service or daemon process (a standalone Java process) that is installed on each xPlore host. The watchdog service monitors and checks the status of various xPlore processes and sends an email notification to the administrator

4. Create the primary xPlore instance.

   Run <*xplore_home*>\setup\dsearch\configDsearch.bat and follow the instructions to complete the installation process.

   a. *Select Configuration Mode*: Choose **Create Primary Server Instance**.

   b. **Installation Owner Password**: Installation owner password is required for setting up this instance. **Installation Owner Domain** is the domain for the repository with which you want to associate this xPlore instance. Default: The current host name.

   c. Enter the fully qualified domain name of the xPlore primary instance host.

   d. **Server Instance Information**: **Server Name** must be unique in your xPlore federation of instances (default PrimaryDsearch). **Base Port**default is 9300. The next 100 consecutive ports must be available. **Password for Admin** User is also the xDB Administrator password.

      Note: The administrator password can be up to 127 characters long and must follow these rules:

      - Cannot begin with # (Sharp)
      - Cannot contain the following special characters: `> < % | ^ & ( ) ' "`

   e. **Dsearch Data and Config Directories**. For a single-instance environment, specify a local directory on this host for better performance. For multiple instances, these directories must be accessible and writeable by all xPlore instances. For NAS-based storage, you can map the same storage to the same path for all hosts.

      If you want to deploy multiple xPlore instances or there might be a future need to do so, you must specify UNC paths accessible to other xPlore instances; for example, \\<*hostname*>\D$\xPlore\data and \\<*hostname*>\D$\xPlore\config (when <*xplore_home*> is D:\xPlore).

      Note: It is highly recommended that you use UNC paths for these directories even if you are not deploying multiple xPlore instances at the moment.

      Data directory stores the xDB transaction log of the primary instance and the default collection storage area. (The storage area is different from the index agent temporary storage location.) Default: <*xplore_home*>/data.

      Configuration Directory stores configuration information. Default: xplore_home/config.

5. Start the primary xPlore instance:

- In *<In xplore_home/<wildfly9.0.1>/server/>*, run the script *<startPrimaryDsearch>*.cmd .
- On Windows, you can also start the service **Documentum xPlore PrimaryDsearch**.

Note: On Windows, if you start an xPlore instance using the command, the status of the xPlore service may not be accurately reflected in the Windows Management Console.

6. Test whether the primary instance is running. Open your web browser and enter the following URL. *<host>* is the DNS name of the primary instance host and *<port>* is the xPlore port (default: 9300).

   For example:

   ```
   http://server.opentext.com:9300/dsearch
   ```

   If the instance is running, you see a message like the following:

   ```
   The xPlore instance PrimaryDsearch [version=20.2.0000.0015] normal
   ```

   After installing the primary instance, you can optionally proceed to install secondary and spare instances.

2.2 Configure Indexserverconfig.xml for AppEnhancer Full-Text

1. Verify that the xPlore server is stopped before modifying the configuration. To stop the xPlore server, either go to Windows Service and right-click **Stop** or run `stopPrimaryDsearch.cmd` from *<C:|xPlore|wildfly9.0.1|server>*.

2. Next, you must specify an AppEnhancer highlighter. Navigate to `C:\xPlore\config`, open `indexserverconfig.xml` and replace `DefaultSummary` with `AXSummaryEntryPoint` in the following line:

   ```
   <property name="query-summary-default-highlighter" value=
   "com.emc.documentum.core.fulltext.indexserver.services.summary.DefaultSummary"/>
   ```

3. Add the following sub paths to `indexserverconfig.xml`:

   ```
   <sub-path sortable="true" leading-wildcard="false" compress="false"
   boost-value="1.0" description="Used to support AE FullText Search"
   include-descendants="false" returning-contents="true" value-comparison="true"
   full-text-search="false" enumerate-repeating-elements="false" type="integer"
   path="dmftmetadata/dm_document/ax_page_num"/>
   ```

   ```
   <sub-path sortable="true" leading-wildcard="false" compress="false"
   boost-value="1.0" description="Used to support AE FullText Search"
   include-descendants="false" returning-contents="true" value-comparison=
   "true" full-text-search="false" enumerate-repeating-elements="false"
   type="integer" path="dmftmetadata/dm_document/ax_doc_id"/>
   ```

4. Run `startPrimaryDsearch.cmd` located in *<C:|xPlore|wildfly9.0.1|server>* to start the primary xPlore instance, or start it from Windows Services.

5. Enter `http://<host:port>/dsearch` in your web browser to test whether the primary instance is running.

Notes

- You may get an `HTTP 500 Page unavailable` error message if you load the dsearch page right after starting the xPlore PrimaryDsearch service. Wait for a couple of minutes before reloading the page.
- *`<xPlore instance PrimaryDsearch[version=20.2] normal >`* appears if the primary instance is running.

2.3 Creating xPlore Domains and Collections

xPlore domains are separate, independent, logical, or structural grouping of collections that are managed through Data Management in the xPlore Administrator. Collections are a logical groups of XML documents that are physically stored in an xDB detachable library. All documents submitted for indexing are assigned to a collection. A collection generally contains one category of documents.

When you configure xPlore full text engine in AppEnhancer Administrator, you must specify xPlore Domains and Collections.

1. From the xPlore Administrator site (`http://<host>:<port>/dsearchadmin/`), select **Data Management** in the left panel and click **New Domain** in the right panel.
2. Enter the domain name in the **Name** field.
3. Set the **Default Document Category** and **Storage Location**.
4. Click **Save**.

   A new domain is created in the **Data Management** tree list on the left-pane.
5. Click on the newly created domain to assign the collection(s) for AppEnhancer applications.
6. Click **New Collection** and enter the collection name in**Name**field. Click **Save**.
7. Click **Save**.

2.4 Configuring Applications to use xPlore Full-text Engine in AppEnhancer Administrator

1. Sign in to AppEnhancer Administrator.
2. Open the AppEnhancer application that you want to setup the xPlore full-text configuration.

   Note: Make sure you have created and configured the Indexing Service impersonation account before proceeding with the AppEnhancer Administrator configuration. For more information about creating the impersonation account, see "Creating the Impersonation Account" on page 10.

3. Enter the **xPlore Server URL**, **xPlore Domain Name**, and the **Collection Name** for this application.

   Note: Include the port number (default is 9300) at the end of the URL. You are recommended to use a static IP for your xPlore Server URL.

4. Click **Apply** to close out of AppEnhancer Administrator.

Chapter 3

Registering Indexing Service via Component Registration Wizard (CRW) and Configuration Indexing Service

3.1 Registration Overview

Note: Before registering Indexing Service, make sure all **Service credentials** and **xPlore Temporary Folders** are properly introduced in Administrator.

- Open CRW from Start menu under the `Open Text` folder
- Select register indexing Service component in CRW and follow the prompts
- After `Finish` registration, service starts automatically

3.2 Configuring Indexing Service Overview

The following configurations are required before you use the Indexing Service.

Note: After configuration has been completed in Indexing Service located in Server Management of Administrator, you must click **Save** and restart the Indexing service in Windows Services. The service continues running while you configure the Indexing Service.

To configure the Indexing Service, you can choose from:

- Configuration through Administrator
- Configuration through Configuration file (`XtenderSolutions.IndexingService.exe.config`)

Note: All configurations can be overwritten from the Configuration file, with the exception of Service Credentials.

3.2.1 Configuration through Administrator

To configure the Indexing Service, you must complete tasks on four separate pages:

- **Storage Management** in the Environment node
- **Service Credentials** and **Settings** tabs under the Indexing Service options in the Server Management node
- **Queues** menu for each data source in the Application Management node

3.2.1.1 Storage Management

On the **Environment** > **Storage Management** page, you must set a valid path to use as an **xPlore Temporary Folder** for your indexing service. This temporary folder is used to process jobs.

3.2.1.2 Service Credentials tab

Navigate to **Server Management** > **Indexing Service** and on the **Service Credentials** tab, specify the user name and password for the **AppEnhancer** and **Impersonation** accounts.

3.2.1.3 Settings tab

On the **Server Management** > **Indexing Service** page, switch to the **Settings** tab and configure the following fields for your indexing service:

Configuration Option	Note
Indexing Service Role	You can choose the appropriate role from the list: • **Full-text & OCR Both** • **Full-text Only** • **OCR Only**
OCR Processor number	User can add a value between 0-8. The default value is 0, which indicates that the indexing service can set this setting automatically.
Remove job from queue when finished	Users can indicate whether to remove the job from the queue when it is finished running using a True or False setting. By default, this is set to False.
xPlore	
xPlore Temporary Folder	xPlore requires a temporary folder to process jobs. The Indexing Service will extract and store content from this folder. It is important that this folder should be validated by AppEnhancer Storage Management.

Concurrent Jobs number	User can add a value between 30-300 to indicate the number of jobs that the xPlore server can process at the same time. The default value is 100.
Batch request checking interval	User can add a value between 0-60 to indicate the number of minutes between batch request checks. The default value is 0.
Connection Timeout	User can add a value between 0-10 minutes to specify the amount of time before the connection times out. The default value is 1.
Max Retry time	User can add a value between 5-15 to indicate the maximum time between retries. The default value is 5.
Retry Interval	User can add a value between 5-300 minutes to indicate the retry interval. The default value is 10.

3.2.1.4 Queues

As part of configuring the Indexing Service, you must set up queues. To access the **Queues** menu, you must select a data source under **Application Management**.

Note: A queue setting is unique for each data source and a queue can have the same name in different data sources.

For more information about queues, see "Managing Queues" on page 24.

3.2.2 Configuration through Configuration file (XtenderSolutions.IndexingService.exe.config)

To configure the Indexing Service from the configuration file, go to your Indexing Service application folder and open `XtenderSolutions.IndexingService.exe.config` for editing.

Making changes to the values set in the `<indexingserviceappconfig>` tag will overwrite settings for your current Indexing Service. The only settings needed to be modified reside in the `<settingSection>` and `<dataSourceSection>` tags, either of which can be hidden.

The following is a sample `XtenderSolutions.IndexingService.exe.config` file snippet:

```
<!-- <indexingserviceappconfig>
     <settingSection>
          <settings>
               <setting name="ServiceRole" value="both" />
               <setting name="OCRProcessor" value="3" />
               <setting name="RemoveJobs" value="false" />
               <setting name="XploreFolder" value="\\10.9.76.170\temp" />
               <setting name="XploreConcurrentJobs" value="100" />
               <setting name="XploreBatchRequestInterval" value="0" />
               <setting name="XploreConnectionTimeout" value="2" />
```

```
                <setting name="XploreMaxRetryTime" value="5" />
                <setting name="XploreRetryInterval" value="10" />
            </settings>
      </settingSection>
    <dataSourceSection>
     <dataSources>
      <datasource name="AppEnhancerDEMO" processingFTQueue="Full text"
processingOCRQueue="OCR" />
      <datasource name="KJDEMO" processingFTQueue="Full text" processingOCRQueue="OCR" />
      <datasource name="KOracle" processingFTQueue="Full text" processingOCRQueue="OCR" />
     </dataSources>
    </dataSourceSection>
</indexingserviceappconfig>
```

<settingSection> properties

Field	Description
ServiceRole	Indicates the Indexing Service role. You can select from: • `0` or `both` (Full-text and OCR) • `1` or `fulltext` • `2` or `ocr` When setting this option, you can use either the numerical or text value.
OCRProcessor	Indicates the OCR processor number. Valid values can be between 0 and 16, with 0 indicating that the Indexing Service can set this automatically.
RemoveJobs	Designates whether to remove jobs from queues when finished with xPlore settings. You must indicate either true or false.
XploreFolder	Denotes the Indexing Service job temporary folder.
XploreConcurrentJobs	Indicates the maximum number of concurrent Xplore jobs. Valid values can be between 1 and 300. By default, this is set to 100.
XploreBatchRequestInterval (minute(s))	Specifies the interval between xPlore batch requests. Valid values can be between 0 and 60 minutes. By default, this is set to 0.
XploreConnectionTimeout (minute(s))	Specifies the time before the Xplore connection times out. Valid values are between 1 and 10 minutes. By default, this is set to 2.
XploreMaxRetryTime	Indicates the maximum number of Xplore retries following a failure. Valid values are between 5 and 300. By default, this is set to 10.

XploreRetryInterval (minute(s))	Indicates the interval between Xplore retries. Valid values are between 5 and 15 minutes. By default, this is set to 5 minutes.

<dataSourceSection> properties

If you want to add multiple queues, you can use a comma (,) to separate the queues. For example, `<datasource name="ae" processingFTQueue="AEFT,AEFT2" processingOCRQueue="AEOCR,AEOCR2" />` is acceptable.

<appSettings> properties

Field	Description
BulkJobCount	Specifies the number of jobs that can be taken from a queue simultaneously. By default, the value is 50. This number should be determined based on your system resources as a larger value will require more resources.
ServiceInterval (second(s))	Specifies the interval between service runs. By default, the value is 15 seconds. The smaller this value is set to, the more system resources required.
MaxThread	Specifies the maximum number of threads used for job processing. By default, the value is 10. The larger this value is set to, the more system resources required.

3.3 xPlore Temporary Folder

xPlore requires a temporary folder for searches and processing of jobs. Indexing Service uses this temporary folder to extract and store content. You must ensure the xPlore temporary folder has been validated by Storage Management. For more information about setting this folder, see "Storage Management" on page 20.

Notes

- For your xPlore instance account, if an xPlore instance is launched from Windows Service, you must use the account used to log in to the Windows server. If an xPlore instance is launched from `xplore_home/jboss_version/server/startPrimaryDsearch.cmd`, you must use the account that ran the command.
- The Indexing Service impersonation account must have write-access permissions and the xPlore instance account must have read access to the xPlore temporary folder. For more information about Indexing Service impersonation accounts, see "Creating the Impersonation Account" on page 10.

3.4 Managing Queues

Queues are used by Indexing Service to collect full-text and OCR jobs. A full-text job is created in a full-text processing queue when a document is submitted to the Indexing Service for full-text indexing. An OCR job is created in an OCR processing queue when a document is submitted for OCR processing.

Initially, there are no queues for the Indexing Service. Therefore, to add documents to the full-text database, you must create full-text queues. To submit OCR jobs to the Indexing Service, you must create OCR queues. The Queues tab allows you to add to the Available Queues list by creating new queues.

To initiate processing of an available queue, you must move it to the Processing Queues list. When you add a document to the full-text database, you select an Available Queue for the document. The document is not processed, however, until that queue is added to the Processing Queues list. Once a queue has been added to the Processing Queues list, the documents in the queue are either processed and added to the full-text database or processed with OCR.

You can add new, modify, and delete queues in Available Queues and move the queues from the Available Queues list to the Processing Queues list or move queues from the Processing Queues list to the Available Queues.

Note: Following any changes with moving queues between the lists, you must restart Indexing Service to apply the changes.

3.4.1 Adding a New Queue

Adding a new queue adds a new entry for the queue in the **AE_QUEUE** table in the database for storing full-text database information for documents. You can choose whether a queue will be a full-text queue (for documents that are already in text format or for images that have been processed using OCR) or an OCR queue (for documents that must be processed to extract text from an image). These options are only available for Available Queues.

To add a new queue:

1. In AppEnhancer Administrator, click **Application Management** > **<***your data source***>** > **Queues**.
2. Click **New**.
3. In the **Create New Queue** dialog box, type a name in the **Name** box.
4. In the **Type** list, select a queue type. You can choose from **OCR** or **FULLTEXT**. OCR queues can be used by users submitting documents for OCR and FULLTEXT queues can be selected when a user submits a document for full-text indexing.
5. In the **Description** box, you can enter an optional description that will appear in the Available Queues list with the queue name.

6. Click **OK**.

   The new queue is listed in the **Available Queues** list.

7. For each additional queue you want to create, repeat Step 3 to Step 6.

8. When you are finished, click **CANCEL** to close the **Create New Queue** dialog box.

3.4.2 Modifying a Queue

Users can only modify a queue's description in Available queues.

To modify a queue description:

1. Select a queue from the **Available Queues** list.

2. Click **Modify**.

3. In the **Modify Queue Description** dialog box that appears, update the description.

4. When you are finished, click **OK**.

   The updated description appears in the Available Queues list.

5. When you are finished, click **CANCEL** to close the **Modify Queue Description** dialog box.

3.4.3 Deleting a Queue

If a queue is no longer required, you can delete the queue from the Available queues list. When deleting a queue, you must ensure that it is not assigned to any applications.

To delete a queue:

1. Select a queue from the **Available Queues** list.

2. Click **Delete**.

3. In the **Confirmation** dialog box that appears, confirm the deletion by clicking **OK**.

   The selected queue is deleted from the Available queues list.

4. When you are finished, click **CANCEL** to close the Confirmation dialog box.

3.4.4 Moving Queues between Available Queues and Processing Queues lists

The Available Queues list displays the existing queues in your database and the Processing Queues list displays queues you can currently use in a job. Users can move queues between the **Available Queues** to **Processing Queues** lists.

Note: Following any changes with moving queues between the lists, you must restart Indexing Service to apply the changes.

To move a queue from the Available Queues list to the Processing Queues list:

1. In the **Available Queues** list, select a queue.
2. Click the right arrow button.

   The selected queue is moved from the Available Queue list to the Processing Queues list.
3. Click **Save** to save the move.

To move a queue from the Processing Queues list to the Available Queues list:

1. In the **Processing Queues** list, select a queue.
2. Click the left arrow button.

   The selected queue is moved from the Processing Queues list to the Available Queue list.
3. Click **Save** to save the move.

Chapter 4

Managing the Indexing Service

This chapter explains how to manage to Indexing Service with resubmit documents and controlling the Indexing Service.

4.1 Resubmitting Documents to the Indexing Service

If you have changed the full-text engine for an application, keep in mind that full-text searching does not return any documents in this application until you submit them to the Indexing Service, even if they have already been full-text indexed by the previous engine. However, if you submit documents to the Indexing Service from AppEnhancer Web Access Server result set, the number of documents that can be submitted at a time is limited.

Note: All documents can be resubmitted from AppEnhancer Web Access Server. Fulltext indexing should be done before modifying a document, otherwise Indexing Service won't process. When you create or modify a document, it updates modified date, and when you submit a full-text job, it updates timestamp for indexing.

4.2 Controlling the Indexing Service

Indexing Service can be registered as a Windows Service. Once you have completed the configuration through the Administrator or Configuration file, you must restart the service from Windows Service. Windows Service provides starting, pausing, stopping, and restarting abilities, which can also be used for Indexing Service.

4.3 Monitoring the Indexing Service

4.3.1 Viewing Indexing Service Activities

To view detailed information related to the operation of an Indexing Service, navigate to the **Monitoring** > **Indexing Service** node and select the component.

The following table describes the options available on the page:

Field	Description
Indexing Service	Name of the AppEnhancer Indexing Service.
DocsIndexed	Number of documents successfully indexed.
DocsIndexFailed	Number of document indexing attempts that failed.

Field	Description
DocsOCRed	Number of documents successfully OCR processed.
DocsOCRFailed	Number of document OCR attempts that failed.
DocsResumitted	Number of resubmitted documents successfully indexed.
LocalConfig	Whether Indexing Service uses a local configuration

4.3.2 Viewing the Indexing Service Footprint in Registered or Running Components

You can view the Indexing Service footprint in registered or running components within AppEnhancer Administrator.

- To view detailed information about registered components, navigate to the **Monitoring** > **Registered Components** section.
- To view detailed information about running components, navigate to the **Monitoring** > **Running Components** section.

4.4 Logging

The Indexing Service provides four levels of logging in Event Viewer.

- **Verbose**: Useful for debugging purposes.
- **Information**: Issues informational messages only. This is the default value.
- **Warning**: Issues warning and errors that originated from Indexing Service.
- **Error**: Issues only error messages that originated from Indexing Service.

Note: It is recommended to select the Warning log level to avoid consuming large amounts of storage space.

To change logging levels, open the `XtenderSolutions.IndexingService.exe.config` file for editing and modify the value under the <*switches*> option.

```
<sources>
     <!--This trace source logs Indexing Service events
                Write trace events to Windows Event Log at level of log switch only use
                this when switch set to Error or Warning else too much data in Windows
Event log
                if needs to verify root cause of any issues, please switch value to
Information
                instead or warning/Error
           -->
     <source name="AEIndexingServiceTrace" switchName="EngineSwitch"
```

```
switchType="System.Diagnostics.SourceSwitch">
        <listeners>
          <add name="aeEventLogListener" />
          <!--<add name="aeFileListener1" />-->
        </listeners>
     </source>
</sources>
<switches>
     <add name="EngineSwitch" value="Information" />
</switches>
```