NewgenONE OmniDocs

EasySearch

Installation Guide

Version: 12.0

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Preface

This guide explains installing NewgenONE OmniDocs EasySearch 12.0 on the Windows and Linux operating systems. It also describes the post-installation activities, verification of successful installation, and the uninstallation procedure of the product. Apart from this, it also contains frequently asked questions (FAQs).

To ensure you are referring to the latest and most recent revision of this guide, download it from one of the following locations:

- Newgen Internal Doc Portal – For Newgen employees.
- Newgen Partner Portal – For Newgen partners.

Revision history

Revision date	Description
November 2024	Initial publication

Intended audience

This installation guide is intended for IT system administrators responsible for installing NewgenONE OmniDocs EasySearch. The reader must be familiar with Microsoft Windows Server or Linux operating systems, as required. The reader must also know about databases and running the different application servers on Windows or Linux. The reader must have administrator rights to install, perform post-installation activities, and uninstall the product.

Documentation feedback

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- Version
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Best practices

This section describes the best practices you must follow before installing NewgenONE OmniDocs EasySearch 12.0. Refer to the following best practices:

- The application server must be in stop mode.
- NewgenONE OmniDocs Services must be in stop mode.
- Java Development Kit (JDK) version 17 must be installed on the server computer.
- Elasticsearch 8.15.2 must be installed on the server computer.

  It applies only when installing EasySearch using the "with Elasticsearch" option.

- ApacheManifoldCF 2.27 must be installed on the server computer.
- Elasticsearch and Apache ManifoldCF services must be in stop mode.
- The signed-in user must have administrative rights on the server computer.

Installing NewgenONE OmniDocs EasySearch

This section covers the prerequisites and steps for installing NewgenONE OmniDocs EasySearch 12.0 on Windows and Linux operating systems.

Prerequisites

The following prerequisites are required before installing NewgenONE OmniDocs EasySearch 12.0:

System requirement	Description
Compatible NewgenONE OmniDocs versions	NewgenONE OmniDocs 12.0 must be installed on the application server machine.
Supported operating systems	Same as required for the installed NewgenONE OmniDocs version.
Supported application servers	Same as required for the installed NewgenONE OmniDocs version.
Supported database servers	Same as required for the installed NewgenONE OmniDocs version.
Supported Java Development Kit (JDK) versions	Same as required for the installed NewgenONE OmniDocs version.
Compatible Apache ManifoldCF versions	Apache ManifoldCF 2.27 must be on the application server machine.
Compatible Elasticsearch versions	Elasticsearch is necessary only when installing EasySearch using the "with Elasticsearch" option in the installer. The compatible version is Elasticsearch 8.15.2.

System requirement	Description
NewgenONE OmniDocs Text Extraction Manager (TEM)	TEM must be installed and applied on the cabinet on which you want to install the EasySearch. Else, the document's content searches as well as the content highlighting remain non-functional. NewgenONE OmniDocs TEM 12.0 is necessary while using EasySearch without elastic.
Administrative rights	Make sure the installer is run as administrator.
Others	• The Elasticsearch service must be in stop mode. It applies only when installing EasySearch using the "with Elasticsearch" option. • The Apache ManifoldCF service must be in stop mode. • The application server must be in stop mode. • OmniDocs services must be in stopped mode.

Installing NewgenONE OmniDocs EasySearch

This section provides instructions for installing NewgenONE OmniDocs EasySearch 12.0 on the following application servers:

- Red Hat JBoss EAP 8
- IBM WebSphere Liberty

To install NewgenONE OmniDocs EasySearch 12.0, perform the following steps:

1. Launch the NewgenONE OmniDocs EasySearch 12.0 installer.
   For windows, right-click the *NewgenONEOmniDocsEasySearch12.0.exe* and select **Run as Administrator**. The Introduction screen appears. Proceed to step 2.
   For Linux, perform the following steps:
   a. Open a Linux terminal and change the working directory to the one where the NewgenONE OmniDocs EasySearch 12.0 installer is present.

b. Execute the following command to give full rights to the NewgenONE OmniDocs EasySearch 12.0 installer:

```
chmod 777 NewgenONEOmniDocsEasySearch12.0.bin
```

c. Execute the following command to launch the installer's Graphical User Interface (GUI):

```
export LD_BIND_NOW=1
```

d. Execute the following command to launch the EasySearch 12.0 installer:

```
./NewgenONEOmniDocsEasySearch12.0.bin
```

The Introduction screen appears. Proceed to step 2.

2. Click **Next**. The License Agreement screen appears.
3. Select **I accept the terms of the License Agreement**.
4. Click **Next**. The ElasticSearch Selection screen appears.
5. Select the required search type from the following options:
   - **With ElasticSearch** — Upon installing EasySearch with Elasticsearch, OmniDocs utilizes the Elasticsearch engine for conducting searches. Elasticsearch offers advanced search capabilities including full-text search (FTS), fuzzy search, proximity search, Boolean search, and phrase search.
   - **Without ElasticSearch** — Upon installing EasySearch without Elasticsearch, OmniDocs conducts searches on its database tables.

   In case of RDBMS (without Elastic search), FTS must be installed.
6. Click **Next**. The Prerequisites screen appears.
7. Select the following prerequisites to proceed with the installation:
   - When installing EasySearch with Elasticsearch:
     - App server should be in Stop Mode.
     - NewgenONE OmniDocs Services should be in Stop Mode.
     - NewgenONE OmniDocs 12.0 is installed on the Server Machine.
     - JDK 17 or higher version should be installed on the user machine.
     - Elasticsearch 8.15.2 is installed on the machine.
     - ApacheManifoldCF 2.27 is installed on the machine.
     - Elasticsearch and ApacheManifoldCF services should be in Stop Mode.
     - Admin Rights should be on the Machine.
   - When installing EasySearch without Elasticsearch:
     - App Server should be in Stop Mode.

- NewgenONE OmniDocs Services should be in Stop Mode.
- NewgenONE OmniDocs 12.0 is Installed on the Server Machine.
- JDK 17 or higher version should be installed on the user machine.
- ApacheManifoldCF 2.27 is installed on the machine.
- ApacheManifoldCF service sould be in Stop Mode.
- Admin rights should be on the machine.
- NewgenONE OmniDocs TEM 12.0 must be installed.

8. Click **Next**. The Application Server screen appears.
9. Depending on your application server, see the relevant section to proceed with the installation:
   - Red Hat JBoss EAP 8
   - IBM WebSphere Liberty

Installing NewgenONE OmniDocs EasySearch on Red Hat JBoss EAP 8

To proceed with the NewgenONE OmniDocs EasySearch installation on JBoss EAP, perform the below steps:

1. On the Application Server screen, select the **Red Hat JBoss EAP 8** option.
2. Click **Next**. The Choose a Java_Home path screen appears.
3. Click **Choose** and select the Java home folder. The Java home folder refers to the file location where Java is installed.
4. Click **Next**. The Choose JBoss_HOME Location screen appears.
5. Click **Choose** and select the home folder where JBoss EAP is installed.
6. Click **Next**. The Choose OmniDocs Location screen appears.
7. Click **Choose** to browse for and select the OmniDocs installation folder.
8. Click **Next**. The Select Elasticsearch Type screen appears.



The Select Elasticsearch Type screen doesn't appear with the "without Elasticsearch" option; instead, the Choose Apache ManifoldCF Location screen appears directly. In that case, proceed to the Choose Apache ManifoldCF Location screen.

9. Based on your requirements, select either the **On-Premise Elasticsearch** or **Amazon Web Services (AWS) Elasticsearch** option.
   - **On-Premise Elasticsearch** — To proceed with the on-premise Elasticsearch, perform these substeps before proceeding to the main steps:
     a. On the Select Elasticsearch Type screen, select the **On-Premise Elasticsearch** option.
     b. Click **Next**. The Choose Elasticsearch screen appears.
     c. Click **Choose** to browse for and select the Elasticsearch installation folder.
     d. Click **Next**. The Choose Apache ManifoldCF Location screen appears. Proceed to the Choose Apache ManifoldCF Location screen.
   - **AWS Elasticsearch** — To proceed with the AWS Elasticsearch, perform these substeps before proceeding to the main steps:
     a. On the Select Elasticsearch Type screen, select the **AWS Elasticsearch** option.
     b. Click **Next**. The AWS Elasticsearch screen appears.
     c. Specify the following AWS credentials to connect with the Amazon service endpoints:

Field	Description
AWSESDomain URL	The URL for accessing your Amazon Elasticsearch Service (ES) domain.
AWSAccessKey	Your AWS Access Key to access AWS resources.
AWSSecretKey	Your AWS Secret Key to access AWS resources.
AWSRegion	The AWS region such as Asia Pacific where your domain is deployed.

     d. Click **Next**. The Choose Apache ManifoldCF Location screen appears. Proceed to the Choose Apache ManifoldCF Location screen.
10. On the Choose Apache ManifoldCF Location screen, click **Choose** to browse for and select the Apache ManifoldCF installation folder.
11. Click **Next**. The App Server Details screen appears.
12. Specify the following details:
    - **Enter full computer name of Application Server** — The full computer name where the application server is running. For example, *LPTXXX@abcsoft.com*
    - **Application Server IP** — The IP of the application server computer. For example *192.168.111.123*.

- **Enter Application Web Port** — The JBoss EAP port number. The default port number is 8080.

13. Click **Next**. The Database Server screen appears.
14. Select the required database server from the following options:
    - Microsoft SQL Server

      When using the Microsoft SQL Server, choose between **Server Authentication** or **Windows Authentication** to access the database.

    - Microsoft Azure
    - Oracle
    - PostgreSQL

15. Click **Next**. The Secret Manager Status screen appears.
16. Based on your requirements, select either the **Yes** or **No** option.
    - **Yes** — If you have already configured the AWS Secrets Manager or Azure Key Vault and want to use it for storing user credentials, then perform the below steps:
      a. On the Secret Manager Status screen, select the **Secret Manager Y** option and click **Next**. The Secret Manager Type screen appears.
      b. Based on your requirements, select any of the following options:
         - **AWS Secret Manager** — To store user credentials on AWS, select the **Cloud Server Region Name** and the local **Region Name**. Then, click **Next** and on the ARN Details screen, specify **Amazon Resource Name (ARN)** to allow the installer to access the configured AWS Secrets Manager.
         - **Azure Key Vault** — To store user credentials on Azure, specify **Key Vault Name** and **Secret Name**.
    - **No** — If you have not configured the AWS Secrets Manager or Azure Key Vault, then on the Secret Manager Status screen, select the **Secret Manager N** option.
17. Click **Next**. The Database Information screen appears.
18. Specify the database server details as described in the following table:

    This screen varies as per the selected database server. For example, the MSSQL Database Information screen appears for Microsoft SQL Server.

Field	Description
Database Server IP	Enter the IP address or the name of the computer where the database server for OmniDocs is installed. Example: 127.0.0.1 or newgenonesql

Field	Description
Database Server User Name	Enter the database username to access the above database server. Ensure that the user has administrative rights on the database. The Database username field does not appear for the Secret Manager Y option.
Database Server Password	Enter the password associated with the database username. The Database password field does not appear for the Secret Manager Y option.
Database Server Port	Enter the database server port number. The default is 1433 for MS SQL, 5432 for PostgreSQL, and 1521 for Oracle.
Database Service Name	Enter the Oracle database service name. It appears only for the Oracle database.
OmniDocs Cabinet Name	Enter the OmniDocs cabinet name.

19. Click **Next**. The Database Connection Success dialog appears on the successful connection to the database.

    An alert message appears if the specified database information is incorrect. In that case, click **OK** to close the dialog, enter the correct database information, and then click **Next**.

20. Click **OK** to close the dialog. The OmniDocs Credentials screen appears.
21. Enter the OmniDocs username in the **UserName** box and the corresponding password in the **Password** box.
22. Click **Next**. The Choose Install Folder screen appears.
23. Choose a folder to save the NewgenONE OmniDocs EasySearch 12.0 installation. You can keep the default installation folder for the product or click **Choose** to browse for and select a different folder.

    Ensure there is no space between the characters of the selected path.

24. Click **Next**. The Pre-Installation Summary screen appears. Review the Pre-installation summary before you proceed to the next step.
25. Click **Install**. The Installing EasySearch 12.0 screen appears and shows the installation progress.

The Start JBoss/WildFly, Elasticsearch, and Apache ManifoldCF Server dialog appears.

> The Elasticsearch server applies only when installing EasySearch using the "with Elasticsearch" option.

26. Start JBoss, Elasticsearch, and Apache ManifoldCF servers, and then click **OK**.

> The Elasticsearch server applies only when installing EasySearch using the "with Elasticsearch" option.

The product deployment continues.
The locations of Easysearch and Apache ManifoldCF files are as follows:

- Elasticsearch — *<Elastic_server_Home>\bin\eleasticsearch.bat*
- Apache ManifoldCF — *<Apache_Manifold_Home>\example\start.bat*

The JBoss/WildFly, Elasticsearch, and Apache ManifoldCF Server Status dialog appears.

27. Click **Yes** to confirm that JBoss, Elasticsearch, and Apache ManifoldCF servers are started.

> The Elasticsearch server applies only when installing EasySearch using the "with Elasticsearch" option.

The product deployment continues.
Once the deployment activity concludes, the Install Complete screen appears.

28. Click **Done** to complete the installation.

> Review the installation logs to verify the installation status. The log file gives comprehensive information about the installation, including successful actions, warnings, non-fatal errors, and fatal errors that occurred during the installation. The installation log file is located at the following path: *<NewgenONE OmniDocs EasySearch 12.0 installation directory>_NewgenONEOmniDocsEasySearch12.0_installation\Logs*

For the post-installation configurations, see Post-installation activities.

Installing NewgenONE OmniDocs EasySearch on WebSphere Liberty

To proceed with the NewgenONE OmniDocs EasySearch installation on IBM WebSphere Liberty, perform the below steps:

1. On the Application Server screen, select the **IBM WebSphere Liberty** option.
2. Click **Next**. The Choose a Java_Home Path screen appears.

3. Click **Choose** and select the Java home folder. The Java home folder refers to the file location where Java is installed.
4. Click **Next**. The Choose WebSphere Liberty Path screen appears.
5. Click **Choose** and select the WebSphere Liberty Application Server installation folder.
6. Click **Next**. The WebSphere Liberty User Server Details screen appears.
7. Provide the following WebSphere Liberty user server details:

Field	Description
User Server Name	Enter the WebSphere Liberty user server name.
User Server Path	Enter the WebSphere Liberty user server path.

8. Click **Next**. The Choose OmniDocs Location screen appears.
9. Click **Choose** to browse for and select the OmniDocs installation folder.
10. Click **Next**. The Select Elasticsearch Type screen appears.

> The Select Elasticsearch Type screen doesn't appear with the "without Elasticsearch" option; instead, the Choose Apache ManifoldCF Location screen appears directly. In that case, proceed to the Choose Apache ManifoldCF Location screen.

11. Based on your requirements, select either the **On-Premise Elasticsearch** or **Amazon Web Services (AWS) Elasticsearch** option.
    - **On-Premise Elasticsearch** — To proceed with the on-premise Elasticsearch, perform these substeps before proceeding to the main steps:
      a. On the Select Elasticsearch Type screen, select the On-Premise Elasticsearch option.
      b. Click **Next**. The Choose Elasticsearch screen appears.
      c. Click **Choose** to browse for and select the Elasticsearch installation folder.
      d. Click **Next**. The Choose Apache ManifoldCF Location screen appears. Proceed to the Choose Apache ManifoldCF Location screen.
    - **AWS Elasticsearch** — To proceed with the AWS Elasticsearch, perform these substeps before proceeding to the main steps:
      a. On the Select Elasticsearch Type screen, select the AWS Elasticsearch option.
      b. Click **Next**. The AWS Elasticsearch screen appears.
      c. Specify the following AWS credentials to connect with the Amazon service endpoints:

Field	Description
AWSESDomain URL	The URL for accessing your Amazon Elasticsearch Service (ES) domain.
AWSAccessKey	Your AWS Access Key to access AWS resources.
AWSSecretKey	Your AWS Secret Key to access AWS resources.
AWSRegion	The AWS region such as Asia Pacific where your domain is deployed.

d. Click **Next**. The Choose Apache ManifoldCF Location screen appears. Proceed to the Choose Apache ManifoldCF Location screen.

12. On the Choose Apache ManifoldCF Location screen, click **Choose** to browse for and select the Apache ManifoldCF installation folder
13. Click **Next**. The App Server details screen appears.
14. Specify the following details:
    - Enter full computer name of Application Server — The full computer name where the application server is running. For example, *LPTXXX@abcsoft.com*
    - Application Server IP — The IP of the application server computer. For example *192.168.111.123*.
    - Enter Application Web Port — The WebSphere Application Server port number. The default port number is 9080.
15. Click **Next**. The Database Server screen appears.
16. Select the required database server from the following options:
    - Microsoft SQL Server

      When using Microsoft SQL Server, choose between **Server Authentication** or **Windows Authentication** to access the database.

    - Microsoft Azure
    - Oracle
    - PostgreSQL

17. Click **Next**. The Secret Manager Status screen appears.
18. Based on your requirements, select either the **Yes** or **No** option.
    - **Yes** — If you have already configured the AWS Secrets Manager or Azure Key Vault and want to use it for storing user credentials, then perform the below steps:
      a. On the Secret Manager Status screen, select the **Secret Manager Y** option and click **Next**. The Secret Manager Type screen appears.

b. Based on your requirements, select any of the following options:
   - **AWS Secret Manager** — To store user credentials on AWS, select the **Cloud Server Region Name** and the local **Region Name**. Then, click **Next** and on the ARN Details screen, specify **Amazon Resource Name (ARN)** to allow the installer to access the configured AWS Secrets Manager.
   - **Azure Key Vault** — To store user credentials on Azure, specify **Key Vault Name** and **Secret Name**.

- **No** — If you have not configured the AWS Secrets Manager or Azure Key Vault, then on the Secret Manager Status screen, select the **Secret Manager N** option.

19. Click **Next**. The Database Information screen appears.
20. Specify the database server details as described in the following table:

> This screen varies as per the selected database server. For example, the MSSQL Database Information screen appears for Microsoft SQL Server.

Field	Description
Database Server IP	Enter the IP address or the name of the computer where the database server for OmniDocs is installed. Example: 127.0.0.1 or newgenonesql
Database Server User Name	Enter the database username to access the above database server. Ensure that the user has administrative rights on the database. The Database username field does not appear for the Secret Manager Y option.
Database Server Password	Enter the password associated with the database username. The Database password field does not appear for the Secret Manager Y option.
Database Server Port	Enter the database server port number. The default is 1433 for MS SQL, 5432 for PostgreSQL, and 1521 for Oracle.
Database Service Name	Enter the Oracle database service name. It appears only for the Oracle database.
OmniDocs Cabinet Name	Enter the OmniDocs cabinet name.

21. Click **Next**. The Database Connection Success dialog appears on the successful connection to the database.

An alert message appears if the specified database information is incorrect. In that case, click **OK** to close the dialog, enter the correct database information, and then click **Next**.

22. Click **OK** to close the dialog. The OmniDocs Credentials screen appears.
23. Enter the OmniDocs username in the **Username** box and the corresponding password in the **Password** box.
24. Click **Next**. The Choose Install Folder screen appears.
25. Choose a folder to save the NewgenONE OmniDocs EasySearch 12.0 installation. You can keep the default installation folder for the product or click **Choose** to browse for and select a different folder.

    Ensure there is no space between the characters of the selected path.

26. Click **Next**. The Pre-Installation Summary screen appears. Review the Pre-installation summary before you proceed to the next step.
27. Click **Install**. The Installing EasySearch 12.0 screen appears and shows the installation progress.
    The Start WebSphere, Elasticsearch, and Apache ManifoldCF Server dialog appears.
28. Start WebSphere, Elasticsearch, and Apache ManifoldCF servers, and then click **OK**.

    The Elasticsearch server applies only when installing EasySearch using the "with Elasticsearch" option.

    The product deployment continues.
    The locations of Easysearch and Apache ManifoldCF files are as follows:
    - Elasticsearch — *<Elastic_server_Home>\bin\eleasticsearch.bat*
    - Apache ManifoldCF — *<Apache_Manifold_Home>\example\start.bat*

    The WebSphere, Elasticsearch, and Apache ManifoldCF Server Status dialog appears.

29. Click **Yes** to confirm that WebSphere, Elasticsearch, and Apache ManifoldCF servers are started.

    The Elasticsearch server applies only when installing EasySearch using the "with Elasticsearch" option.

    The product deployment continues.
    Once the deployment activity concludes, the Install Complete screen appears.
30. Click **Done** to complete the installation.

Review the installation logs to verify the installation status. The log file gives comprehensive information about the installation, including successful actions, warnings, non-fatal errors, and fatal errors that occurred during the installation. The installation log file is located at the following path: *<NewgenONE OmniDocs EasySearch 12.0 installation directory>_NewgenONEOmniDocsEasySearch12.0_installation\Logs*

For the post-installation configurations, see Post-installation activities.

Verifying successful installation steps

To verify that you have successfully installed NewgenONE OmniDocs EasySearch 12.0, perform the following steps:

1. Make sure that the installer is installed successfully without any errors.
2. Start the application server.
3. Start the Apache ManifoldCF server.
4. Start the Elasticsearch server.

   The Elasticsearch server applies only when installing EasySearch using the "with Elasticsearch" option.

5. Launch the NewgenONE OmniDocs Web Desktop URL and sign in to the application.
6. Open EasySearch and perform search.
   If you can search successfully, it means your installation is successful.

Post-installation activities

This chapter describes the post-installation activities for NewgenONE OmniDocs EasySearch 12.0.

In Windows, use the \ (backslash), and in Linux, use the / (forward slash) as separators in file paths.

Configuring application server

Perform the below steps to configure the application server:

1. Set *EnableEasySearch* to *Y* in the *eworkstyle.ini* file in the *ngdbini\custom\<cabinet_name>* folder.
2. Edit the cluster name in the *EasySearch.xml* file in the *ngdbini* folder.

   By default, the cluster name is elasticsearch.

3. Clear the cache and start the application server.

Configuring Elasticsearch server

Perform the below steps to configure the Elasticsearch server:

1. Uncomment the following in the *elastic.yml* file present in the *<Elastic_Server_Home>\config* directory.

   ```
   cluster.name: elasticsearch
   ```

2. Update the cluster name in the *EasySearch.xml* as mentioned in the Configuring application server section.
3. Uncomment the following in the *elasticsearch.yml* file.

   ```
   bootstrap.memory_lock: true
   ```

4. Add the following in the *elasticsearch.yml* file:
   - xpack.ml.enabled: false
   - http.cors.enabled: true
   - http.cors.allow-origin: "*"
   - network.host: 0.0.0.0
   - discovery.type: single-node
5. Configure the stop words to remove the unwanted words.
   For example, in an organization, the majority of the documents might contain some common word. In case you search the document using these words through EasySearch, it returns a various set of results. Therefore, by configuring stop words you can exclude such words during the search process. Hence, it helps in getting accurate search results.
   - To set up stop words, define those words in the *english.txt* file in the *<Elastic_Server_Home>\config\stopwords* folder.
     For example,
     - Am
     - This
     - Those
6. Configure the synonyms to increase the flexibility of search capabilities. For example, with minimal configuration, you can associate “Travel” with “Journey” without specifically spelling out new search terms for each word, or you can make “organization” and “organisation” synonymous in Elasticsearch.
   - To set up synonyms, define synonyms in the *english.txt* file in the *<Elastic_Server_Home>\config\synonyms* folder. For example,
     - Travel, Journey
     - Organization, Organisation
     - Insurance, bima
7. Start the Elasticsearch server.

Configuring Apache Manifold server

The Apache ManifoldCF server configuration includes stop phrases to eliminate undesired expressions. For example, in an organization majority of the documents might contain some common phrase. If you search the document using these words then EasySearch returns the various set of results. By configuring stop phrases, you have an option to exclude such phrases during the search process. Hence, it helps to get more accurate search results.

Perform the below steps to configure the Apache ManifoldCF server:

1. To configure the stop phrases, change *<StopPhraseFlag>Y</StopPhraseFlag>* and *<StopPhrase>*. Then, mention it in the *CrawlerConfig.xml* file located at *<Apache_Manifold_Home>\example* \.
   For example,

```
<StopPhraseFlag>Y</StopPhraseFlag>
<StopPhrases>
            <StopPhrase>Newgen Software Technologies</StopPhrase>
            <StopPhrase>omnidocs</StopPhrase>
</StopPhrases>
```

2. Save the file after macking changes.
3. Start the Apache ManifoldCF server.
4. Create a crawler job using the below steps:
   a. Launch a web browser using the URL, *http://servername:8345/mcf-crawler-ui/login.jsp*. The login page appears.
   b. Enter the credentials and click **Login**. The Home screen appears with the options list available in the navigation pane.
      Using these options, you can manage and create different types of connections.
      For more information, see the following sections:
      - Configuring PostgreSQL database in ManifoldCF
      - Configuring SQL server database in ManifoldCF
      - Creating output connection
      - Creating repository connection
      - Adding job for document and folder
      - Adding job for file system
      - Job management

Configuring PostgreSQL database in ManifoldCF

This section contains the configuration of the PostgreSQL database server in Apache ManifoldCF 2.27. It requires persistent storage mechanism to improve the performance and avoid bottlenecks. Also, to improve the crawler performance, use PostgreSQL for integration.

In the *properties.xml* file under the *apache-manifoldcf-2.27\example\properties.xml*, replace the two entries of Snippet A with Snippet B under the configuration tag in the XML file:

```
<property name="org.apache.manifoldcf.databaseimplementationclass"
value="org.apache.manifoldcf.core.database.DBInterfaceHSQLDB"/>
<property name="org.apache.manifoldcf.hsqldbdatabasepath" value="."/>
```

Snippet A

```
<property name="org.apache.manifoldcf.databaseimplementationclass"
value="org.apache.manifoldcf.core.database.DBInterfacePostgreSQL"/>
<property name="org.apache.manifoldcf.database.name" value="manifolddbname"/>
<property name="org.apache.manifoldcf.dbsuperusername" value="database_username"/>
<property name="org.apache.manifoldcf.dbsuperuserpassword"
value="database_password"/>
<property name="org.apache.manifoldcf.postgresql.hostname" value="127.0.0.1"/>
<property name="org.apache.manifoldcf.postgresql.port" value="5432"/>
<property name="org.apache.manifoldcf.postgresql.ssl" value="false"/>
```

Snippet B

Change the above values for **dbsuperusername**, **dbsuperuserpassword**, **hostname**, and **port** based on your PostgresSQL database server.

Configuring SQL database server in ManifoldCF

This section contains the configuration of the MS SQL database server in Apache ManifoldCF. It requires persistent storage mechanism to improve the performance and avoid bottlenecks. Also, to improve the crawler performance, use MS SQL for integration.

To integrate MS SQL, use the shared additional integration of SQL server database.

To configure SQL server database in ManifoldCF 2.27, replace two entries of Snippet A with Snippet B in the *properties.xml* file under the *apache-manifoldcf-2.27\example\properties.xml*.

```
<property name="org.apache.manifoldcf.databaseimplementationclass"
value="org.apache.manifoldcf.core.database.DBInterfaceHSQLDB"/>
<property name="org.apache.manifoldcf.hsqldbdatabasepath" value="."/>
```

Snippet A

```
<property name="org.apache.manifoldcf.databaseimplementationclass"
value="org.apache.manifoldcf.core.database.DBInterfaceSQLServer"/>
<property name="org.apache.manifoldcf.database.name" value="manifolddatabase"/>
<property name="org.apache.manifoldcf.database.username" value="database_username
"/>
<property name="org.apache.manifoldcf.database.password"
value="database_password"/>
<property name="org.apache.manifoldcf.dbsuperusername" value="database_username "/
>
<property name="org.apache.manifoldcf.dbsuperuserpassword"
value="database_password"/>
<property name="org.apache.manifoldcf.sqlserver.server" value="Database IP"/>
<property name="org.apache.manifoldcf.sqlserver.port" value="Database Port"/>
<property name="org.apache.manifoldcf.sqlserver.ssl" value="false"/>
<property name="org.apache.manifoldcf.sqlserver.windowsAuthenticationEnabled"
value="false"/>
```

Snippet B

Change the above values for *username*, *password*, *dbsuperusername*, *dbsuperuserpassword*, *server*, and *port* based on your SQL server database. Also, set the above property *windowsAuthenticationEnabled* to *true* if Windows Authentication is in use.

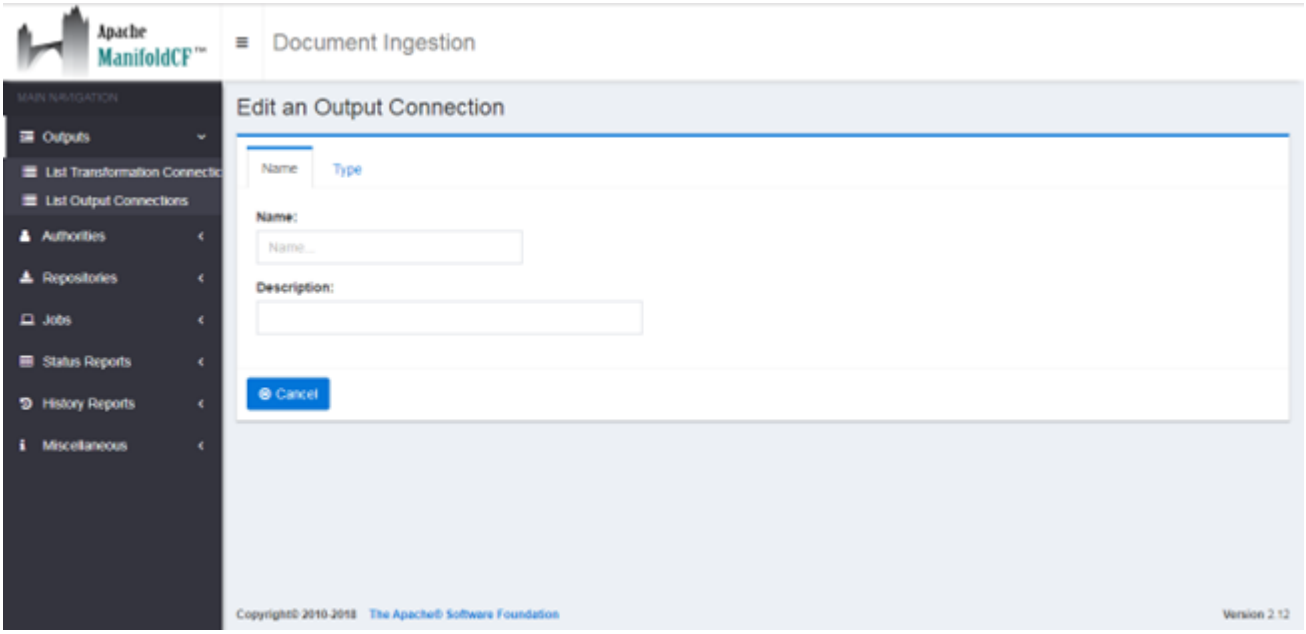
Creating output connection

This section explains how to create the output connection.

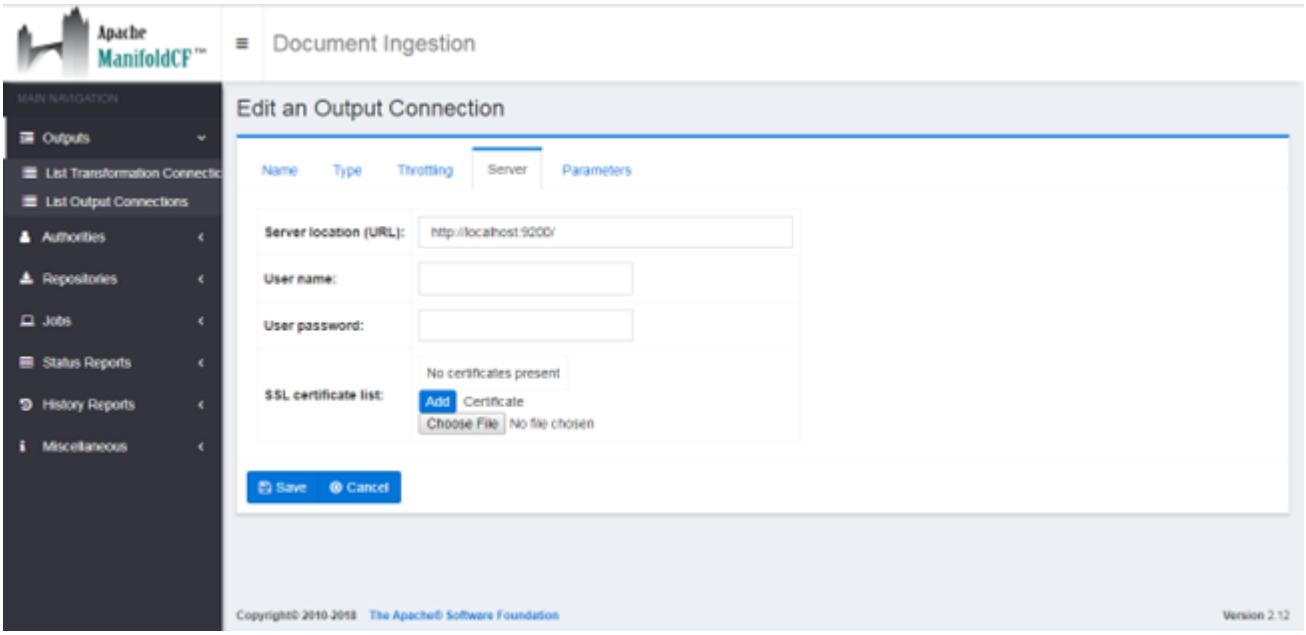
For each database, you must create a different output connection.

To create output connection, perform the below steps:

1. Select **List Output Connections** under Outputs in the navigation pane. The List Output connection screen appears.
2. Click **Add a New Output Connection**. The Edit an Output Connection screen appears.
3. Enter the **Name** and **Description**.



4. Go to **Type** and select **OmniDocsElasticSearch** in Connection type.
5. Click **Continue** and go to the **Throttling** tab.
6. Enter the **Max connections** number and go to the **Server** tab.
7. Enter the **Elastic Search Server Location** (URL) and go to the **Parameters** tab.



8. Enter the cabinet name that you want to associate in the **Index Name**.
9. Enter **_doc** in Index Type.
10. Click **Save**. The Output Connection gets created successfully.

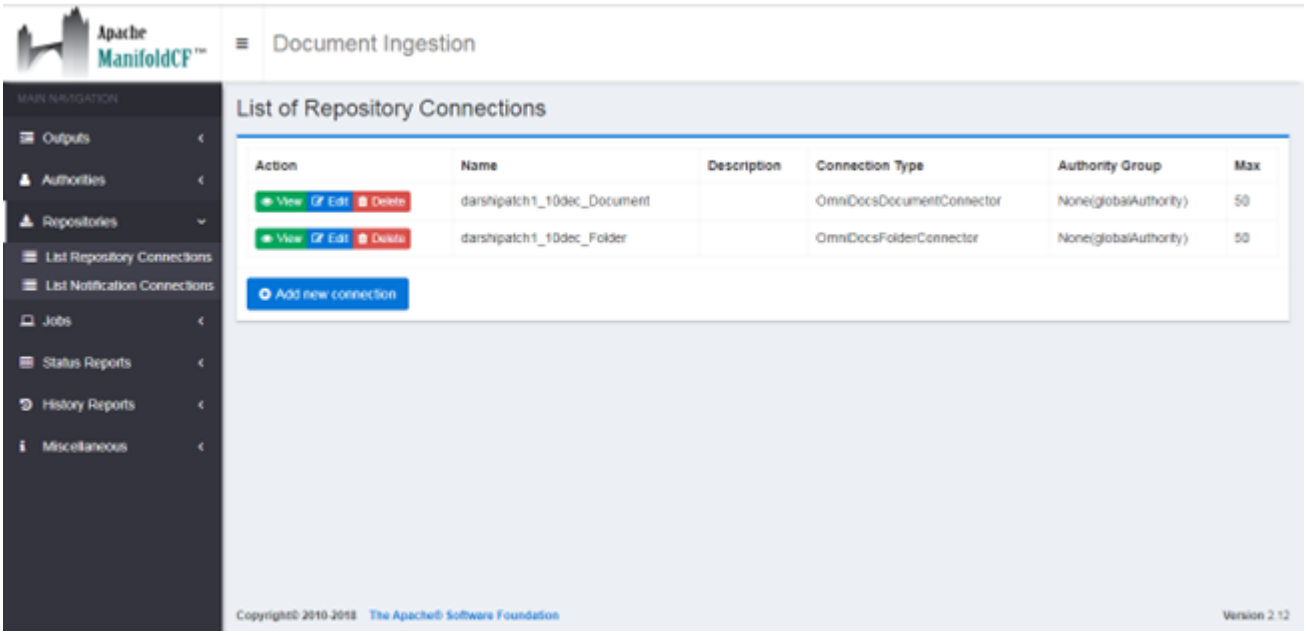
Creating repository connection

This section explains the procedural details about creating a repository connection.

For each database, create a different repository connection.

To create a new repository connection, perform the below steps:

1. Go to the **List Repository Connections** under **Repositories** in the left pane. The List of Repository screen appears.



2. Click **Add New Connection**.
3. Create the following repository connections:
   - Document
   - Folder
   - File System

Document

To create a repository connection for a document, perform the below steps:

1. Enter the **New Connection Name** in the **Name** tab.
2. Enter the **Connection Description**.
3. Go to the **Type** tab and select **OmniDocsDocumentConnector** in the Connection Type.
4. Select **None (Global Authority)** in the Authority Group.
5. Click **Continue** and go to the **Throttling** tab.
6. Set **Max Connections** to **100** and go to the **Database Type** tab.
7. Select the **database type** whose repository you want to create.
8. Select the **by name** in the Access Method.
9. Go to the **Server** tab then enter the **Database Host** and **Port**.
10. Enter the **Database Service Name** or **Instance/database**.
11. Enter the **Raw database Connect String**.

12. Go to the **Credentials** tab then enter the **Username** and **Password** of the database whose repository connection you want to create.
13. Click **Save**. The connection starts and the View Repository Connection Status screen appears.

Folder

To create a repository connection for a folder, perform the below steps:

1. Enter the **New Connection Name** in the **Name** tab.
2. Enter the **Connection Description**.
3. Under the **Type** tab, select **OmniDocsFolderConnector** in Connection Type.
4. Select **None (Global Authority)** in the Authority Group.
5. Click **Continue** and go to the **Throttling** tab.
6. Set **Max Connections** to **100**.
7. Go to the **Database Type** tab and select the **Database type** whose repository connection you want to create.
8. Select **by name** in the Access Method.
9. Go to the **Server** tab then enter the **Database Host** and **Port**.
10. Enter the **Database Service Name** or **Instance/database**.
11. Enter the **Raw database connect string**.
12. Go to the **Credentials** tab then enter the **Username** and **Password** of the database whose repository connection you want to create.
13. Click **Save**. The connection starts and the View Repository Connection Status screen appears.

File system

To create a repository connection for a file system, perform the below steps:

1. Enter the **New Connection Name** in the **Name** tab.
2. Enter the **Connection Description**.
3. Under the **Type** tab, select **File System** in Connection Type.
4. Select **None (Global Authority)** in the Authority Group.
5. Click **Continue** and go to the **Throttling** tab.

6. Set **Max Connections** to **100**.
7. Click **Save**. The connection starts and the View Repository Connection Status screen appears.

Adding job for document and folder

This section contains the procedural details about adding a job for a document and folder.

For each database, create a different job connection where the related output and repository connection are associated with each other.

To create a new job for the document and folder, perform the below steps:

1. Go to **Jobs** and click **List all Jobs** in the left pane. The Job List appears.
2. Click **Add a new Job**.
3. Enter the **Job Name** in the **Name** tab.
4. Set the **Repository Connection** using the Connection Name dropdown list. You can connect one or more repository connections.
5. Set the **Output Connection** in the Output Connection Name list.
6. Click **Add Output** and go to the **Scheduling** tab.
7. Select **Scan every document once** to set the Schedule Type (Crawling Mode) as Manual or select **Rescan documents dynamically** to set the Continuous schedule type.
8. Upon selecting the Crawling Mode as **Continuous**, set the following fields:
   - Maximum recrawl interval
   - Expiration interval
   - Reseed interval
   - Scheduled time
   - Maximum run time
9. Go to the **Queries** tab. The Queries get generated automatically.
10. Go to the **Security** tab and set **Disabled** in Security.
11. Click **Save**.

Adding job for file system

This section contains the procedural details about adding a job for file system.

For each database, create a different job connection where the related output and repository connection are associated with each other.

To create a new job for Document and Folder, perform the below steps:

1. Go to **Jobs** and click **List all Jobs** in the left pane. The Job List appears.
2. Click **Add a new Job**.
3. Enter the **Job Name** in the **Name** tab.
4. Set the **Repository Connection** using the Connection Name dropdown list. You can connect one or more repository connections.
5. Set the **Output Connection** in the Output Connection Name list.
6. Click **Add Output** and go to the **Scheduling** tab.
7. Select **Scan every document once** to set the Schedule Type (Crawling Mode) as Manual or select **Rescan documents dynamically** to set the Continuous schedule type.
8. Upon selecting the Crawling Mode as **Continuous**, set the following fields:
   - Maximum recrawl interval
   - Expiration interval
   - Reseed interval
   - Scheduled time
   - Maximum run time
9. Go to the **Hop Filters** tab and select **Delete Unreachable Documents**.
10. Go to the **Repository Paths** tab and enter the **Repository Path** (full canonical directory path) through which you can crawl the documents.
11. Click **Add**.
12. Upon successfully adding the Repository Path, click **Save**. The View a Job screen appears.

Job management

To manage the created jobs, go to the **Jobs**, click **Status and Job Management** in the left pane. The Status of Jobs screen appears allowing you to start, abort, or restart the job.

Configuring EasySearch

For the configuration of EasySearch, change the below entries in the *ESconfig.ini* file present in the *<NewgenONE OmniDocs EasySearch 12.0 installation directory>\NewgenONEOmniDocsEasySearch12.0\ESConfigurator\conf* folder*:*

Entries	Values
ESServerIPAddress	Enter the ElasticSearch server IP address (*192.168.x.x*).
ESServerHttpPort	Enter the Port number that is, 9200.
ESClusterName	Enter the <cabinetname>_cluster.
ESServerTCPPort	Enter the ESServerTCPPort that is, 9300.
ESProtocol	Enter the http in ESProtocol.
OdDBIPAddress	Enter the database server IP.
OdDBPort	Enter the database server port.
OdCabinetName	Enter the cabinet name.
OdDBUserName	Enter the database username.
OdDBPassword	Enter the database password in the encrypted form by copying it from the *server.xml*. For example, X-D;Y-D;L-C;N-C;VSJ-C;4T-C;r
OdDBType	Give any of the following server: • sqlserver • oracle • postgre
MCFIPAddress	Enter the server IP on which the manifold is running (127.0.0.1).
MCFHttpPort	Enter the MCFHttp Port that is, 8345.
MCFProtocol	Enter the MCFProtocol that is, http.

Entries	Values
MaxRepositoryConnection	Enter the MaxRepositoryConnection that is, http.
MaxOutputConnection	Enter the MaxOutputConnection that is, 50.
IsScheduled	Enter the IsScheduled to true.
IsContinousJob	Enter the IsScheduled to true.
reseedTime	Enter the reseedTime to 15.
odDBServiceName	Provide this entry if the OdDBType is Oracle. Else, keep this empty.
EnableWindows Authentication	Set the value of this entry to true if you want to use Windows Authentication.
UseAWSElasticSearch	Set the value of this entry to true if you want to use AWS Elasticsearch. By default, the value of this entry is set to false.
AWSESDomain URL	Enter the URL for accessing your AWS Elasticsearch Service (ES) domain.
AWSAccessKey	Enter your access key to access the AWS resources.
AWSSecretKey	Enter your secret key to access the AWS resources.
AWSRegion	Enter the AWS region where your domain is deployed. For example: Asia Pacific.
ElasticSearchUserName	Enter the username of Elasticsearch if security is enabled.
ElasticSearchSecret	Enter the password of Elasticsearch if security is enabled.
TrustStorePath	Enter the trust store path of Elasticsearch if security is enabled.
TrustStoreSecret	Enter the trust store password of Elasticsearch if security is enabled.
AppToBeConfigured	Enables you to configure the Manifold jobs and Elasticsearch mapping. The following configurations are available: • All — For Manifold jobs and Elasticsearch mapping • ApacheManifold — For Manifold jobs • Elasticsearch — For Elasticsearch mappings By default, the All configuration is set for this entry.
UpdateESMapping	Set the value of this entry to Y to update only the Elasticsearch mapping. By default, the value of this entry is set to N.

Entries	Values
UpdateESSetting	Set the value of this entry to Y to update only the Elasticsearch settings. By default, the value of this entry is set to N.
KeyVault	Enter the key vault if the secret manager is configured.
VaultName	Enter the vault name if the secret manager is configured.

After updating the above entries, run the *<NewgenONE OmniDocs EasySearch 12.0 installation directory>\NewgenONEOmniDocsEasySearch12.0\ESConfigurator\run.bat* file for Windows or *run.sh* file for Linux.

Uninstalling NewgenONE OmniDocs EasySearch

This section describes the procedure to uninstall NewgenONE OmniDocs EasySearch 12.0 from Red Hat JBoss EAP and IBM WebSphere Liberty application servers.

Prerequisites: The following prerequisites are required before uninstalling EasySearch 12.0:

- The application server must be in stop mode.
- OmniDocs services must be in stop mode.
- The installer must be run as an administrator.

To uninstall EasySearch 12.0, perform the following steps:

1. Go to the EasySearch 12.0 install directory.
2. Open the *Uninstall_NewgenONE OmniDocs EasySearch 12.0* folder..
3. Launch the uninstaller.
   For Windows, right-click *Uninstall NewgenONE OmniDocs EasySearch 12.0.exe* and select **Run as administrator**. If prompted for uninstallation confirmation, click **Yes**. The Uninstall NewgenONE OmniDocs EasySearch 12.0 screen appears. Proceed to step 4.

   For Linux, perform the following steps:
   a. Right-click in the empty area and select **Open in Terminal**.
   b. Execute the following command to launch the Uninstaller GUI:

      ```
      export LD_BIND_NOW=1
      ```

   c. Execute the following command to launch the uninstaller:

      ```
      ./Uninstall\NewgenONEOmniDocsEasySearch12.0.bin
      ```

      The Uninstall NewgenONE OmniDocs EasySearch 12.0 screen appears. Proceed to step 4.

4. Click **Next**. The Please Stop Application Server dialog appears.

5. Stop the application server.
6. Click **OK**. The Uninstall Options screen appears.
7. Select the **Complete Uninstall** option.
8. Click **Next**. The uninstallation begins. The uninstaller removes the installed features of EasySearch 12.0. The Uninstall Complete screen appears once all the features of EasySearch 12.0 are removed.
9. Click **Done** to complete the uninstallation and close the screen.

Frequently asked questions

1. What are the requirements for installing Easy Search?
   To install the EasySearch, ensure you have all the required prerequisites. For more information, refer to the Prerequisites section.
2. Is the Apache ManifoldCF setup on Derby or on PostgreSQL required?
   Derby has some issues regarding deadlock when at the same time select and delete operation are performed on a table. It might hang for a minute for such operations. As per the tests performed on Mysql, Hsqldb, Derby and PostgreSQL, best results are obtained for PostgreSQL. Hence, it is recommended to use PostgreSQL as database in ManifoldCF setup.
3. Is it required to install Elasticsearch server and Apache ManifoldCF on different servers?
   Yes, at the time of job creation in ManifoldCF, you must provide the Host Name.
4. How to configure PostgreSQL with ManifoldCF?
   To configure PostgreSQL with ManifoldCF, you must integrate the PostgreSQL. For more information, refer to the Configuring PostgreSQL database in ManifoldCF section.
5. How to configure SQL with ManifoldCF?
   To configure SQL with ManifoldCF, use the shared SQL database integration. For more information, refer to the Configuring SQL server database in ManifoldCF section.
6. How to configure OAuth for EasySearch?
   OAuth, an open standard for secure access delegation, is crucial in web and mobile applications, allowing third-party apps access to user data without exposing credentials. Configuring OAuth with search functionality ensures a secure and user-friendly experience, instilling trust in users that their data is handled safely. This is particularly vital when dealing with sensitive information in product-related search functionalities, as it enables controlled and authorized interactions with user data.
   To configure OAuth for EasySearch, follow the below steps:
   a. Go to the EasySearch installation directory.
   b. Open the *CrawlerConfig.xml* file located at *Apache-Manifold\example*.

c. Specify the *isAuthEnabled* flag value as *Y* to enable the OAuth with EasySearch.

```
<isAuthEnabled >Y</isAuthEnabled >
```

7. How to configure Secret Manager for EasySearch?
   Secret Manager is a tool that securely stores and manages sensitive information, such as API keys and credentials, in a centralized and encrypted manner. Configuring Secret Manager with EasySearch enhances security by safeguarding sensitive information, preventing exposure of credentials while searching documents. This is crucial for protecting user data and ensuring a robust and trustworthy product search functionality.
   To configure Secret Manager for EasySearch, follow the below steps:
   a. Go to the EasySearch installation directory.
   b. Open the *CrawlerConfig.xml* file located at *Apache-Manifold\example*.
   c. Specify the *KeyVault* flag value as *true*.

```
<KeyVault>true</KeyVault>
```

   d. Specify the vault details as follows:

```
CrawlerConfiguration
SP2ORCAPRIL24_user: <Enter the username>
SP2ORCAPRIL24_password: <Enter the password>
```

   Here,
   CrawlerConfiguration is the vault name. You can change the vault name through *CrawlerConfig.xml* file from the **VaultName** tag.
   SP2ORCAPRIL24 is the EasySearch cabinet name and it must be in uppercase. You can specify the cabinet name according to your working environment.
   e. Open the *ESConfig.ini* file located at *ESConfigurator\conf* and specify the following details:

```
ESConfiguration
SP2MARCH03_OdDBUserName: <Enter the username>
SP2MARCH03_OdDBPassword: <Enter the password>
SP2MARCH03_AWSAccessKey: <Enter the AWS access key>
SP2MARCH03_AWSSecretKey: <Enter the AWS secret key>
SP2MARCH03_ElasticSearchUserName: <Enter the ElasticSearch username>
SP2MARCH03_ElasticSearchSecret: <Enter the ElasticSearch secret>
SP2MARCH03_TrustStorePath: <Enter the path to store the user
```

```
credentials>
SP2MARCH03_TrustStoreSecret: <Enter the secret details to store in
vault>
```

Here,
ESConfiguration is the vault name. You can change the vault name through *ESConfig.ini* file from **VaultName** tag.
SP2MARCH03 is the EasySearch cabinet name and it must be in uppercase. You can specify the cabinet name according to your working environment.