Kofax Search and Matching Server
Installation Guide
Version: 6.8.0

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KOFAX

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Preface

This guide contains information about installing Kofax Search and Matching Server and assumes that you have a thorough understanding of Windows standards, applications, and interfaces, as well as Kofax Capture.

This guide is for solution integrators who are installing Kofax Search and Matching Server or who need a description of the installation procedures and requirements.

If you downloaded Kofax Search and Matching Server from the Kofax Electronic Delivery site, you can extract the files from ISO file. Refer to the instruction on the Site. Or, you may have received Kofax Search and Matching Server as a package that includes electronic media. In this guide, we refer to both the extracted files and the electronic media as the product files.

Related documentation

In addition to this *Kofax Search and Matching Server Installation Guide*, the following documentation is available.

Help for Kofax Search and Matching Server

The Help provides detailed information about the concept and principles of this remote fuzzy database server and how to use Kofax Search and Matching Server Administration for setting up and maintaining fuzzy indexes.

Kofax Search and Matching Server Installation Guide

The *Kofax Search and Matching Server Installation Guide* provides instructions for installing the Kofax Search and Matching Server and the Kofax Search and Matching Server Administration. In addition, it contains information about installation requirements, important installation notes, modifying the installation and uninstalling the product.

Training

Kofax offers both classroom and computer-based training that help you make the most of your Kofax solution. Visit the Kofax Web site at www.kofax.com for complete details about the available training options and schedules.

Getting help for Kofax products

Kofax regularly updates the Kofax Support site with the latest information about Kofax products.

To access some resources, you must have a valid Support Agreement with an authorized Kofax Reseller/ Partner or with Kofax directly.

Go to http://www.kofax.com/support/ for:

- Access to product knowledge bases.

  Click **KNOWLEDGE Base**.
- Access to the Kofax Customer Portal (for eligible customers).

  Click **Kofax Customer Portal** and log in.

  To optimize your use of the portal, go to the Kofax Customer Portal login page and click the link to open the *Guide to the Kofax Support Portal*. The guide describes how to access the portal, what to do before contacting the support team, how to open a new case or view an open case, and what information to collect before opening a case.
- Product information and release news

  Click **Transformation > Kofax Search and Matching Server**.
- Downloadable product documentation

  Click **Transformation > Kofax Search and Matching Server > Documentation** and select a document.
- Access to support tools

  Click **Tools** and select the tool to use.
- Information about the support commitment for Kofax products.

  For more information on the support commitment, click **Learn More**.

System requirements

This chapter lists the certified and supported operating systems and the recommended hardware requirements.

Supported operating systems

Kofax Search and Matching Server supports 64-bit operating systems only.

Information about supported operating systems and other requirements is available on the Kofax Support website at www.kofax.com.

Recommended hardware requirements

The recommended hardware requirements for Kofax Search and Matching Server are outlined in the following sections.

Recommended hardware requirements for the Kofax Search and Matching Server

Processor:	8 - 32 cores
	Tip The number of cores vary depending on the number of clients that access the Kofax Search and Matching Server remotely.
System memory:	1 GB per core
Operating system:	64-bit server operating system
Hard disk space:	You require 1 GB of free hard disk space for the Kofax Search and Matching Server installation and for each configured database six times the size of the source data. For example, a 1 GB csv text file requires 6 GB of disk space.

Certified CPUs

The Kofax Search and Matching Server supports multi-processor systems and parallel processing of computation tasks by using multi-core processor technology. Kofax Search and Matching Server is certified for use with up to thirty-two CPUs.

Software prerequisites

Kofax Search and Matching Server requires the following software to be installed:

- Runtime libraries for Visual C++ VS2017 SP1 32-bit
- Runtime libraries for Visual C++ VS2017 SP1 64-bit
- Windows Installer 3.1
- Microsoft .NET Framework 4.7.2

All of the above programs are included as part of the Kofax Search and Matching Server installer.

In addition, if you plan on using an Oracle database connection, you need to install the Oracle driver.

Chapter 2

Installation

This chapter describes how to install Kofax Search and Matching Server and the Kofax Search and Matching Server Administration tool.

> **Important** Do not install Kofax Search and Matching Server on a server alongside any other Kofax products that are in production. This is because Kofax Search and Matching Server consumes all CPU cores during its search queries, to maximize performance.
>
> For example, Kofax Search and Matching Server and Kofax Search and Matching Server are both installed on the same server. When Kofax Search and Matching Server is busy with OCR for a large set of documents, a search by Kofax Search and Matching Server is unable to access enough the CPU power. This results in a slow-down in the overall processing time because the two products are competing for processing power.

There are three components to the Kofax Search and Matching Server.

1. The Kofax Search and Matching Server performs fuzzy searches.

2. The Load Balancer distributes search queries between the available search servers.

3. Administration is the tool used to configure the Kofax Search and Matching Server and the Load Balancer. This can be installed on a separate machine.

Important installation notes

This section lists important notes for installing Kofax Search and Matching Server.

Administrator Rights

To install the product, the logged-in user must have Administrator rights on the local computer.

Change, Repair and Remove the Installed Version

If you need to change, repair or remove the current Kofax Search and Matching Server version start the setup from your installation media once again and select the corresponding button.

Microsoft Windows Firewall Exception

If the Microsoft Windows Firewall service is not running the Kofax Search and Matching Server installer fails to add the firewall exceptions. The following message is displayed:

Cannot connect to Windows Firewall. (-2147023143)

Click Ignore to continue the installation without adding the firewall exceptions, or start the Microsoft Windows Firewall service manually and then click Retry to correctly configure the firewall settings.

Restart After Updating the Operating System

If you have just installed updates for your operating systems and there is a requested restart still pending, you must restart prior to running the installation. Otherwise the installation may fail.

Services User Account

If the user account used to run the Kofax Search and Matching Server service is different to the default user account, ensure that the alternate user account is configured with the necessary rights to " Log on as a service."

If the user account does not have the necessary permissions, an error message is displayed.

Web Help Settings

In order to display the Kofax Web Help correctly you need to ensure that your browser has scripting enabled. Otherwise, the table of contents and the search and index tabs may not be displayed correctly and context-sensitivity does not work.

Install the Kofax Search and Matching Server

This section provides instructions for installing the Kofax Search and Matching Server.

You can install the Kofax Search and Matching Server and its components by following these steps:

1. Shut down any applications that may be running on the workstation where you want to install the Kofax Search and Matching Server Administration. This includes the Control Panel, virus detection software, and toolbars.

    > **Important** Be sure that you have full Windows administrative privileges.

2. Start the installation by running **Autorun.exe** that is part of the Kofax Search and Matching Server ISO file.
    The Kofax Search and Matching Server installation menu is displayed.
3. Select **Install Kofax Search and Matching Server Full Install (64-bit)** from the menu.
    An installation Setup Wizard window is displayed.
4. When prompted to start the Setup Wizard, click **Next**.
5. Accept the license agreement and click **Next**.
6. The first Custom Setup step in the Setup Wizard allows to select which features to install:
    Click the icon of the feature you want to change, and choose the method from the list.
7. Optionally, select **Browse** to change the destination folder for the installation, select a folder and click **OK** to save the settings.
8. Click **Next** to continue the installation.
9. Optionally, change the data location folders.

    a. For the Kofax Search and Matching Server data that includes fuzzy databases, log files, and uploaded files, click **Browse**, select a folder, and then click **OK** to save the settings.

    b. For the Load Balancer data, click **Browse**, select a folder, and then click **OK** to save the settings. Click **Next**.

    If you do not wish to change the default paths, simply click **Next**.

10. In order to manage and maintain the Kofax Search and Matching Server or the Load Balancer, the user must be a member of the "KSMS Administrators" user group. By default, this value is set to `KSMSAdministrators`. Optionally, change this user group name.

11. Select one of the following access types for the Kofax Search and Matching Server.

   Domain group

   If this option is selected, the "KSMS Administrators" user group must be a domain group.

   In order to run the Kofax Search and Matching Server in a domain you need to contact your domain administrator to create the "KSMS Administrators" group and assign users to it before installing Kofax Search and Matching Server or one of its components.

   Local group

   The "KSMS Administrators" group must be a local group that can be created automatically by the installer if the following option is selected.

   Optionally, select **Create a local KSMS Administrators group and add the current user to it**, to create the group add the current user to the group automatically by the installer.

   > **Note** If you want to specify additional users for the configured user group, you can add those users manually via Groups in the Computer Management window. Right-click on the user group and select **"Add to Group"**.

12. If you are using a Load Balancer, select **Custom Credentials** and enter the details for the user account that will run the Kofax Search and Matching Server and Load Balancer services.

   If you are not using a Load Balancer, you can use both **Predefined Credentials** and **Custom Credentials** if desired.

13. Click **Next** and then **Install** to start the installation of the selected features.

14. When the installation process is successfully completed, click **Finish**.

Command line installation and parameters

It is possible to use the Command Line to install Kofax Search and Matching Server, the Administration tool, and the Load Balancer. This type of installation provides you with more control over configuration settings during installation so that you can remotely deploy the software across the network or onto several machines. You can also use a command line if you want to use a silent installation.

There are two options for installing Kofax Search and Matching Server using the Command Line.

Setup.exe

Use this executable if you are deploying on a small network and do not want to use the .msi installer.

For example, use the following command to install the Load Balancer only. You can also specify the service username, as well as the port number.

```
Setup.exe LOADBALANCER=1 NOSEARCHSERVER=1 NOADMINISTRATION=1
 SERVICEUSERNAME=LoadBalancer\Administrator SERVICEPASSWORD=Password
 LBCOMMUNICATIONPORT=29999
```

You can use any combination of the available parameters.

KSMS.msi

Use the msi installer if you to want to install the software onto multiple machines over the network, and do not want to visit each workstation individually.

> **Important** Unlike the Setup.exe, the KSMS.msi installer does not automatically install the prerequisites. You must install these manually before executing the .msi installer.

For example, you can use the following command to install Kofax Search and Matching Server and the Administration tool, as well as modify the database path, and the `KSMSAdministrator` name.

```
Msiexec.exe /i KSMS.msi TARGET_DATABASESPATH="C:\DATABASES"
 KSMSADMINISTRATORSGROUP=Administrators
```

In the above command, no parameters are specified for Kofax Search and Matching Server or the Administration tool. This is because these are installed by default, and the parameters are not required.

For more information about the msiexec.exe options, see the Microsoft MSDN description of Command Line options.

The following parameters are available for both the Setup.exe and the KSMS.msi.

Command Line Parameters

Parameter	Description and Value Options
`NOSEARCHSERVER=0`	By default, Kofax Search and Matching Server is installed from the command line. If you do **not** want to install Kofax Search and Matching Server, set the value of this parameter to 1.
`LOADBALANCER=0`	By default, the Load Balancer is not installed from the command line. To **install** the Load Balancer, set the value for this parameter to 1.
`NOADMINISTRATION=0`	By default, the Administration tool is installed from the command line. If you do **not** want to the Administration tool, set the value for this parameter to 1.

`SERVICEUSERNAME=<MachineorDomainName>`
`\<ServiceUser>`
`SERVICEUSERPASSWORD=<Password>`
	These are the user credentials for the Kofax Search and Matching Server, the Load Balancer, and the Server Browser.
	
	The default value fo this is `NETWORKSERVICE`, but if you do not want to use this service, provide any accessible username and password combination.
	
	If you want to use the Load Balancer, do not use the `NETWORKSERVICE`. Instead, provide a different username and password.

`USESECURESEARCH=1`	This parameter is available for Kofax Search and Matching Server and the Load Balancer only. By default, secure searches are enabled. If you do not want to use secure searches, add this parameter with a value of 0.
`KSMS_DATAFOLDER="C:\KSMS"`	This parameter is available for the Kofax Search and Matching Server only. Specify any valid folder path for the target databases.

Parameter	Description and Value Options
LOADBALANCER_DATAFOLDER="<A valid path>"	This defines where the Load Balancer data is stored. Specify any valid folder path.
KSMSCOMMUNICATIONPORT=22000 LBCOMMUNICATIONPORT=22001	These parameters are specific to Kofax Search and Matching Server and the Load Balancer. If you do not want to use the default ports of 22000 or 22001, use this parameter and specify any free port number.
KSMSLOGLEVEL=INFO LBLOGLEVEL=INFO	These parameters are specific to Kofax Search and Matching Server and the Load Balancer. If you do not want to use the default logging level of WARN, use this parameter and specify either DEBUG, INFO, or ERROR.
KSMSSERVERLANGUAGE LBSERVERLANGUAGE	These parameters are specific to Kofax Search and Matching Server and the Load Balancer. If you do not want to use the default languages of English or German, use this parameter and specify an alternative language. **Note** A language pack is needed in order for an alternate language.
ADDUSERGROUP=1	Enables you to specify whether the KSMSAdministrator user group is configured at the time of installation. By default, this is enabled, which means that you specify it in a command only if you do not want to change the default user group.
KSMSADMINISTRATORSGROUP=<Group>	Use this parameter if you do not want to modify the administrators user group name. This parameter is not valid if you set ADDUSERGROUP=0.
USEDOMAINUSER=0	Use this parameter only if the KSMSAdministrator user group is a local group.
HELP_DATAFOLDER="<A valid path>"	This defines where the help is installed. By default, the help is installed in C:\ProgramData\Kofax\SearchMatchingServer\Help. Specify any valid folder path.
INSTALLDIR="<a valid path>"	This defines where the program is installed. By default, the product is installed in C:\ProgramFiles\Kofax\SearchMatchingServer\. Specify any valid folder path.

Note Most options that are available as command line parameters are also available in the configuration files. You can edit these files on each individual machine if necessary.

Use silent install mode

If you do not want to perform an interactive installation of the Kofax Search and Matching Server, you can use a silent installation. This automatic installation does not display configuration, progress, feature information, or warning windows, although error messages are still displayed.

By default, Load Balancer and Administration functionality is installed by running either Setup.exe or KSMS.msi using a silent install parameter at the command prompt. Additional parameters are also available.

The following parameters are available for the silent installation.

Parameters for Silent Installation

Setup.exe Parameters	Msiexec.exe Parameters	Description and Value Options
/?	/? or /h	Shows the Help window.
/quiet	/quiet, /q, or /qn	Runs the installer with no user interaction.
/log [filename]	l*v [filename]	Writes the installer log messages to the specified file.
/uninstall or /u	/x	Uninstalls the product.
	/i	Installs the product.
<property>=<value>	<property>=<value>	Passes additional parameters to the Microsoft Windows installer.

1. From the **Start** menu, select **Run**.
2. Type **cmd** and press Enter.

   The command prompt window is displayed.
3. Change to the folder that contains the Kofax Search and Matching Server Setup.exe file.
4. Run setup from the command line.

   For example, the following command installs the Administration tool and the Load Balancer only. In addition, a log records the installation steps.

   ```
   setup /quiet NOSEARCHSERVER=1 LOADBALANCER=1 /log KSMSInstaller.log
   ```

Install Oracle drivers for Kofax Search and Matching Server

If you are using an Oracle database, it is necessary to install the Oracle driver. You can install the driver by following these steps:

1. Navigate to the Oracle driver website at https://www.oracle.com/technetwork/topics/dotnet/downloads/odacdeploy-4242173.html.
2. From the **ODAC XCopy** category, download the **Managed ODP.NET 12.2.0.1.0** Oracle driver.

   The ODO.NET 12.2.0.1.0 driver is compatible with the following Oracle database versions: 11g, 12c, as well as 18c.
3. Copy your downloaded file to where Kofax Search and Matching Server is installed.

4. Unzip the driver and then run the following command.

   `install_odpm.bat [oracle_home_path] [platform] true`

   For example, `install_odpm.bat C:\oracle x64 true`.

   `Oracle.ManagedDataAccess.dll` is installed into the GAC so that it is available to Kofax Search and Matching Server. There is no need to restart your server.

5. Optionally, uninstall the driver using the following command: `uninstall_odpm.bat [oracle_home_path] [platform] true`.

Configure Kofax Search and Matching Server for Microsoft Azure

This section provides additional instructions for configuring Kofax Search and Matching Server on a Microsoft Azure virtual machine.

> **Note** On Microsoft Azure, the following virtual machine operating systems are supported only:
> - Windows Server 2008 R2 (x64)
> - Windows Server 2012

1. Install Kofax Search and Matching Server.
2. Go to the Windows Azure Management website and sign in with your Azure account.
   A list of Azure components is displayed in the left pane.
3. Click on **Virtual Machines** from the left pane.
   A list of virtual machines is shown on the right.
4. From the list of virtual machines, select the one where you installed Kofax Search and Matching Server.
   The overview page for that virtual machine is displayed.
5. Click **ENDPOINTS** from the menu across the top of the overview page.
   A list of default endpoints is displayed.
6. Add a new endpoint by clicking **+** at the bottom of the screen.
   The ADD ENDPOINT window is displayed.
7. Select **ADD A STAND-ALONE ENDPOINT** and click the right arrow at the bottom of the screen.
   The ADD ENDPOINT window displayed a list of details that need configured for your endpoint.
8. Configure your endpoint as follows:

   a. In the **NAME** field, type a descriptive name of your Kofax Search and Matching Server endpoint.

   b. For the **PROTOCOL**, select "TCP".

   c. In the **PUBLIC PORT** field, type a port number.
      The default port value is "22000".

      > **Note** If you specified a port number when you installed Kofax Search and Matching Server, type that value.

   d. In the **PRIVATE PORT** field, type a port number.

> **Note** The value of the PRIVATE PORT must be the same as the PUBLIC PORT.

    e. Clear **CREATE A LOAD-BALANCED SET**.

    f. Clear **ENABLE DIRECT SERVER RETURN**.

    g. Click on the checkmark in the bottom right-hand corner to save your endpoint settings.

    The endpoint settings are closed and the virtual machine overview page is displayed.

9. To connect to your virtual machine, click **Connect** from the menu across the bottom of the window.
   Your virtual machine is loaded so you can configure its settings.

10. Create a user account that is used by Kofax Search and Matching Server.

    a. Open **User Accounts** from the Control Panel.

    b. Click **Manage another account**.

    c. Click **Create a new account**.

    d. Type `KSMSService` into the name field.

    e. Keep all other default settings and click **Create Account**.
   The `KSMSService` account is listed on the Manage Accounts screen.

    The `KSMSService` User account is created.

11. Configure the `KSMSService` user account to run as a Service.

    a. Open the **Local Security Policy** from Windows Administrative Tools.

    b. In the console tree, expand **Local Policies**.

    c. Select **User Rights Assignment**.

    d. In the details pane, double-click **Log on as service**.

    e. Click **Add User or Group**.
   The Select Users or Groups window is displayed.

    f. In the **Enter the object names to select (examples):** field, type **KSMSService**.

    g. Click **Check Names**.
   The `KSMSService` user account is listed.

    h. Click **OK**.
   The Select Users or Groups window closes.

    i. Click **OK** again.
   The Log on as a service Properties window closes.

    The `KSMSService` user account is now configured to run as a service.

12. Optionally, if your virtual machine is not part of a domain, create another user account called `KSMSUser` that has the necessary rights to use the databases hosted by Kofax Search and Matching Server.
   Kofax Search and Matching Server is configured to run on Microsoft Azure.

Connection timeout configuration for Microsoft Azure

When Kofax Search and Matching Server is installed on-premise and one or more of its clients are running in an Azure environment, the connection timeout configuration is needed. This is because Microsoft Azure uses a mechanism to limit the number of TCP connections so that any connection that is idle for at least four minutes is dropped automatically. This behavior conflicts with a fully on-premise Kofax Search and Matching Server environment because the connection between the client and sever is kept open until the client closes that connection.

This causes problems if a connection with Kofax Search and Matching Server is dropped by Azure, Kofax Search and Matching Server is unaware of the break so the connection remains open on the server-side. Since there are a limited number of connections available, this inactive connection can cause performance issues over time. The broken connection can also cause TCP conflicts the next time a connection to a client, such as Kofax Transformation Modules or Transformation Server, in Azure is made.

Since the connection drop time of four minutes cannot be changed in Azure, it is necessary to close the connection between Kofax Search and Matching Server and Azure before it is dropped.

To close the connection before the timeout period, add the following code to the `<Configuration>` section in the `Kofax.KSMS.Service.exe.config` file.

```
<system.serviceModel>
 <bindings>
  <netTcpBinding>
   <binding name="netTcpBindingClientInterface"
    openTimeout="00:10:00"
    closeTimeout="00:01:00"
    sendTimeout="24:00:00"
    receiveTimeout="00:03:30"
    maxReceivedMessageSize="2147483647">
    <security mode="Transport">
     <transport clientCredentialType="Windows"
     protectionLevel="EncryptAndSign"/>
    </security>
   </binding>
  </netTcpBinding>
 </bindings>
</system.serviceModel>
```

Note If you are using the Load Balancer, add the above content to the `<Configuration>` section of the `Kofax.KSMS.LoadBalancerService.exe.config` file instead of the `Kofax.KSMS.Service.exe.config`.

Configure Kofax Search and Matching Server for Kofax TotalAgility

If Kofax Search and Matching Server is installed on a different domain from Kofax TotalAgility, such as when Kofax TotalAgility is run from Kofax-hosted Azure and Kofax Search and Matching Server is run on-premises, do the following:

1. Make sure you have created the following local user accounts on the computer where Kofax Search and Matching Server is installed:

   - An administrative user in the `KSMSAdministrator` group. This account is used for managing and maintaining the server and load balancer.
   - The `KSMSUser` to perform the search requests. For security reasons, this user account should not be in the `KSMSAdministrator` group.

2. Configure the firewall to open the ports used for communicating between Kofax TotalAgility and Kofax Search and Matching Server.

   Specify the IP addresses that Azure uses for access. Using internal IP addresses that are not recognized by Azure will cause the communication to fail.

3. In Transformation Designer, add a Remote Fuzzy Database for Kofax Search and Matching Server and set the credentials to log on as `KSMSUser`.

   The credentials are required to authenticate the client user and establish a connection to Kofax Search and Matching Server to perform a search.

Kofax Search and Matching Server nodes via the command line

It is possible to call the Administration tool via the Command Line to dynamically add or remove Kofax Search and Matching Server nodes.

To add a node, use the following syntax.

```
Kofax.KSMS.Administration.exe /a LoadBalancerAddress=localhost LoadBalancerPort=22001
 NodeAddress=localhost NodePort=22000
```

To remove a node, use the following syntax.

```
Kofax.KSMS.Administration.exe /r LoadBalancerAddress=localhost LoadBalancerPort=22001
 NodeAddress=localhost NodePort=22000
```

Optionally, use the `/q` parameter to suppress pup-up messages in the case of error or success.

Configuration files

There are two configuration files that can be modified to customize your Kofax Search and Matching Server installation. By upgrading to Kofax Search and Matching Server 6.8, these configuration files replace previous registry settings. These settings are now available in the configuration files to aid in configuration.

> **Important** Any change made to these configuration files take effect only once the service is restarted.

1. `Kofax.KSMS.LoadBalancerService.exe.config`
2. `Kofax.KSMS.Service.exe.config`

These configuration files are installed alongside their corresponding executables. By default, the installation path is `<Program Files>\Kofax\SearchMatchingServer`.

Both configuration files have the same options, but they are independent of each other. The options are as follows:

`RunningMode`
Defines if the server is running in "Normal" mode or "Restricted" mode. The value for this option is set to "Normal" by default. Only use the "Restricted" mode when you want two load balancers to work together without sending contradictory information.

`Port`
Select the network port that is used to establish communication during search and configuration operations with the server. By default, either 22000 or 22001 are assigned. You can assign any valid port.

`Language`
The language used for log messages posted by the service. The value for this option is set to "en" by default.

> **Note** For support of additional languages, a language pack for that language is needed.

`DataRootDirectory`
The path where Kofax Search and Matching Server stores its data. The value for this option is set to `C:\ProgramData\Kofax\KSMS` by default.

`KsmsAdministratorsGroupName`
The name of the group that a user must be a member of, in order to configure the services. The value for this option is set to `KSMSAdministrators` by default.

> **Important** You must change this value in both configuration files.

`SecureSearchEnabled`
Determines whether the network data that is transmitted for a search request is encrypted or not. The value for this option is set to "true" by default.

> **Important** You must change this value in both configuration files.

`LogLevel`
There are different levels that determine what kind of messages are written to the log file. The value for this option is set to "WARN" by default. This means that only warnings and errors are logged, and no information messages.

`LogfilePath`
This setting defines the path where the log file is stored. The value for this option is set to `C:\ProgramData\Kofax\KSMS\Logs\KSMS.log` by default.

Edit the path as necessary.

`RollingLogfileSizeInMB`

Defines the size of the log file when it is archived. The value for this option is set to "10" by default. This means that when the log file has reached a size of 10 MB it is stored as an archive file in the same folder and a new log file is created.

`RollingLogfileCount`

Defines the number of archive files that are stored on the computer. The value for this option is set to "10" by default. This means that the last 10 archive files are available.

`LogThreaIDInfo`

An optional setting that is used only for bug tracking. It writes the ID from the tread posting a message in the log file. The value for this option is set to "false" by default.

`LogMutexInfo`

An optional setting used only for dead lock bug tracking. When set to true, an entry is added to the log each time internal mutexes are accessed. The value for this option is set to "false" by default.

`WcfThrottlingMaxConcurrentCalls`

Indicates the maximum number of parallel connections allowed. The value for this setting must match the value for the `WcfThrottlingMaxConcurrentSessions` setting below. The value for this option is set to "128" by default.

> **Note** A large value for this setting when the service is already busy can decrease the server performance. Increase this number carefully so that the server does not use all of the machine resources.

`WcfThrottlingMaxConcurrentSessions`
Indicates the number of queries that are processed in parallel on the server. The value for this setting must match the value for the `WcfThrottlingMaxConcurrentCalls` setting above. The value for this option is set to "128" by default.

`McfThrottlingMaxConcurrentInstances`
Analyzes the WCF communications. The value for this option is set to "2147483647" by default. Do not modify the value for this option.

Service account configuration via command line

When you run the Kofax Search and Matching Server installation the installed services are started as Network service users, by default. If wanted, you can set the service user during installation already by running the installation from the command line. Additional properties are provided that allow setting the user name and password in the following format: *<domain or computer name\user name>*.

For example, type the following command:

```
setup.exe SERVICEUSERNAME=MyMachineName\ServiceUser1
SERVICEUSERPASSWORD=MyPassword2011
```

> **Important** This service account user must already have the permission to "Log on as a service" as otherwise the service cannot be started. You then have to change the permission for that user and start the corresponding service manually. For more information, see Microsoft documentation.

Upgrading Kofax Search and Matching Server

If you upgrade from Kofax Search and Matching Server 5.5 or 6.0, you can install Kofax Search and Matching Server 6.8 over top of the existing installation by following the installation instructions.

Increase the number of parallel connections

By default, Kofax Search and Matching Server supports a maximum of 128 parallel connections (with a minimum of 2). You can increase the number of parallel connections by editing the WCF connection settings in the `Kofax.KSMS.Service.exe.config` file.

You can increase the number of parallel connections by following these steps:

1. Open the `Kofax.KSMS.Service.exe.config` file.

   This file is located in the path selected during installation. By default, this path is `<Program Files>\Kofax\SearchMatchingServer`.

2. Locate the `ThrottlingMaxConcurrentCalls` setting and set its value to the required number of parallel connections.

3. Edit the `ThrottlingMaxConcurrentSessions` value using the same number as the `ThrottlingMaxConcurrentCalls`.

4. **Save** your changes and close the configuration file.

5. Open the `Kofax.KSMS.LoadBalancerService.exe.config` file.

6. Edit the same two settings as able with the same values.

7. **Save** your changes and close the configuration file.

8. Restart the Kofax Search and Matching Server and Load Balancer services.

Maintain the Kofax Search and Matching Server installation

The Kofax Search and Matching Server Setup Maintenance routine enables you to modify your existing installation and its security settings. For example, you can select additional components to install, repair the installation, or uninstall Kofax Search and Matching Server components.

1. Shut down any applications that may be running on the workstation where you want to modify the Kofax Search and Matching Server installation. This includes the Control Panel, virus detection software, and toolbars.

2. Start the installation from the installation media by running **setup.exe**.

3. Click **Next** to start the installation and select one of the following options.

   - Click **Change** and select the feature to modify the installation. Then click **Next**, and follow the instructions that are displayed.

- Click **Repair** to repair Kofax Search and Matching Server installation and then click **Next**.
- Click **Remove** to uninstall all installed Kofax Search and Matching Server components, click **Remove** once again.

4. Click **Finish** to close the installation.

Uninstall the Kofax Search and Matching Server

You can uninstall the Kofax Search and Matching Server using the installation media or the Add or Remove Programs utility.

> **Important** Removing Kofax Search and Matching Server does not delete the database files. By default, those files are stored in the `<ProgramData>\Kofax\KSMS\Databases` folder.

1. Start the installation from the installation media by running **setup.exe** in the `Kofax Search and Matching Server/Full Installer (64-bit)` folder.
2. Click **Next** to start the installation.
3. Click **Remove** to uninstall Kofax Search and Matching Server.
4. Click **Remove** once again.
5. Click **Finish** to close the installation.

Uninstall Kofax Search and Matching Server Administration

You can uninstall the Kofax Search and Matching Server Administration tool using the installation media or the Add or Remove Programs utility.

1. Start the installation from the installation media by running **setup.exe** in the `Kofax Search and Matching Server/Administration` folder.
2. Click **Next** to start the installation.
3. Click **Remove** to uninstall Kofax Search and Matching Server Administration.
4. Click **Remove** once again.
5. Click **Finish** to close the installation.

Kofax Search and Matching Server permissions

The Kofax Search and Matching Server service user needs to have access permissions to all database servers used as data sources. The Service user also needs to have permissions to read and write to the configured database directory. For more information about the Kofax Search and Matching Server service, please see the *Kofax Search and Matching Server Installation Guide*.

In addition, the Service user requires read access to the following Registry location and its sub-keys:

- `HKEY_LOCAL_MACHINE\SOFTWARE\Kofax\SearchMatchingServer`
- `SOFTWARE\Kofax\SearchMatchingServer\5.5\RecentServersNode`

- `SOFTWARE\Kofax\SearchMatchingServer\5.5\RecentServers`

The Search and Matching Server Load Balancer requires full network access and the Load Balancer Service user needs to be a member of the KSMS Administrators group. The Search and Matching Server Administration user also needs to be a member of the KSMS Administrators group.

The Search and Matching Server Server Browser Service requires full network access.

For more information about the Kofax Search and Matching Server Service, please see the *Kofax Search and Matching Server Installation Guide*.

Access Kofax Search and Matching Server documentation

By default, the Kofax Search and Matching Server documentation is available online. However, if necessary, you can also configure Kofax Search and Matching Server to use help offline.

Default online documentation

The full documentation set for Kofax Search and Matching Server is available from https://docshield.kofax.com/Portal/Products/KSMS/6.8.0-vr4sqfcys1/KSMS.htm.

To launch the online help for the installed version of the product, click F1 or select Help from the menu.

Configure Offline Documentation

To access the documentation offline, download it from the Kofax Fulfilment Site.

Important Ensure that each client system has a default browser configured on their machine.

You can configure Kofax Search and Matching Server to use offline documentation by following these steps:

1. Extract the contents of the documentation zip file from the Kofax Fulfilment Site.
2. In a location that is shared and accessible to all machines that use Kofax Search and Matching Server, create a directory called **en_US**.

   For example, `N:\Documentation\en_US`.
3. Copy the **help** folder from the extracted zip file to the en_US directory.

   Alternatively, copy the contents of the zip file to the en_US directory in a location visible to IIS.
4. Navigate to the Kofax Search and Matching Server installation path. By default, the path is located at `C:\Program Files\Kofax\SearchMatchingServer`.

   If you modified the default path during installation, use the modified path instead.
5. Open the `Kofax.KSMS.Administration.exe.config` file and add the following content.

```xml
<?xml version="1.0"?>
<configuration>
  <appSettings>
    <add key="HelpPath" value="<Documentation_Path>"/>
  </appSettings>
  <startup>
```

```
     <supportedRuntime version="v4.0" sku=".NETFramework,Version=v4.7"/>
  </startup>
</configuration>
```

The `HelpPath` value must match where you copied the files.

If you copied the files to a shared folder, enter the root of that path, without the en_US part of the path. Using the example from step 2, set the value to `N:\Documentation`.

If you copied the files to a location visible to IIS, set up the corresponding Site or Virtual directory in IIS to serve those files. For example, set the value to `http://localhost/KSMS/en_US"/>`.

6. Open Kofax Search and Matching Server Administration and test the help by pressing **F1**.

   The help should load from the location configured for offline help.

   If an error occurs, double-check the paths to ensure that they are correct, and try again.