Kofax TotalAgility
Installation Guide

Version: 8.0.0

Date: 2024-02-08

TUNGSTEN AUTOMATION
FORMERLY KOFAX

Table of Contents

Preface

This guide includes instructions for installing Kofax TotalAgility 8.0.0, including:

- Preparations, decisions, precautions, settings, and tips to help you install Kofax TotalAgility.
- Instructions for installing Kofax TotalAgility in silent mode or using the wizard in a client/server or standalone configuration.
- Information about installing other Kofax products used with Kofax TotalAgility.
- Information about updating various TotalAgility configuration files post installation.

The guide also includes instructions for upgrading to Kofax TotalAgility 8.0.0 from earlier versions. Read this guide completely before installing Kofax TotalAgility 8.0.0.

TotalAgility documentation

To access the full documentation set online, see the Kofax TotalAgility 8.0.0 Product Documentation page.

To launch the online help for the installed version of the product, click the Help icon in the application.

When upgrading to TotalAgility 8.0.0 from an earlier version, ensure that the check box for "Import system Workspace package" is selected to view the Workspace help online; otherwise, you must import the WorkspaceHeader form from the TotalAgility Workspace package.

You can access the Kofax TotalAgility documentation online as well as offline mode.

Full documentation set

A complete set of TotalAgility documentation includes the following items.

Guide/Help	Description
Administrator's Guide	Provides information for administrators who are responsible for configuring and maintaining a TotalAgility installation.
API Documentation	Includes the details of the supported APIs (excludes deprecated methods), supported methods for each service, and all input and output including the required fields, field types, and enumerations, any special information about each method, coding examples, and related details.

Guide/Help	Description
Architecture Guide	Provides an overview of the TotalAgility architecture, covering various deployments for on-premise, on-premise multi-tenancy, and Azure environments.
Best Practices Guide	Describes the best practices to follow when using TotalAgility to improve performance, cost, maintenance, availability, and security.
Configuration Utility Guide	Provides instructions for using the Configuration Utility to update settings across various configuration files for different installation and deployment types.
Designer Help	Provides details about using TotalAgility Designer to design business jobs and cases, assign resources, create forms, integrate with external applications, and more.
Features Guide	Provides an overview of the TotalAgility features.
Installation Guide	Provides instructions on installing TotalAgility and integrating it with other products.
Integration Server Installation Guide	Provides instructions on installing TotalAgility Integration Server and integrating it with other products.
On-Premise Multi-Tenant Installation Guide	Provides instructions on installing and configuring a TotalAgility On-Premise Multi-Tenant system.
Prerequisites Guide	Provides system requirements for installing TotalAgility, instructions for running the Pre-requisite Utility, and a software checklist for various installation types.
Reporting Tables	Describes the Dimension and Fact tables of the Reporting data warehouse that store information related to Capture client activities of TotalAgility.
Reporting Views	Describes the sample views provided with Reporting.
Tables for Analytics	Describes the TotalAgility tables and fields used by Analytics for TotalAgility.
Tenant Management System Help	Describes how to create and manage tenants using the TotalAgility On-Premise Multi-Tenant system.
Tenant Management System Installation Guide	Provides instructions for installing the TotalAgility Tenant Management System.

Guide/Help	Description
TotalAgility Apps Help	Provides details about using the TotalAgility Apps application that allows citizen developers to configure the workflow and capture items with little to no training. The *TotalAgility Apps Help* encapsulates the help for the following applications. • Business Data • Import • Kofax Copilot • Quick Capture • Quick Classification • Quick RPA • Quick Rules • Quick Skins • Quick Workflow
Web Capture Control Help	Provides details for using a Web Capture control in creating multi-page documents, creating a new document in a new folder, deleting pages that have been incorrectly scanned, and more; also, describes the buttons available in a Web Capture control toolbar.
Workspace Help	Provides details for using TotalAgility to design business jobs and cases, assign resources, create forms, integrate with external applications, and more.
Other documentation	
Capture Client help for Capture activities	Provides help for using Capture activities in TotalAgility. It includes the following help systems: • Document Review Activity Help • Scan Activity Help • Scan Create New Job Form Help • Validation Activity Help • Verification Activity Help
Devices Help	Provides details for managing devices connected to TotalAgility.
Document Converter Help	Provides instructions on how to configure the parameters that determine the tools to use for document conversion, connection to the Adobe Experience Manager output server that is used to convert XFA forms to PDF format, and log files and traces.
Export Connector Help	Provides instructions on managing an Export Connector and setting up an Export Connector for a document type.
KC/KTM Converter Help	Provides instructions on how to convert Kofax Capture and Kofax Transformation Modules projects into the correct format so that they can be used in TotalAgility.
Kofax .NET Restful Web Service API for the Device Client	Provides documentation for the Kofax .NET Restful Web Service API for the Device Client.

Guide/Help	Description
Kofax .NET Legacy API for the Device Client	Provides documentation for the Kofax .NET Legacy API for the Device Client.
Message Connector Help	Provides instructions on how to configure and use Kofax Message Connector.
MFP Starter Pack Getting Started Guide	Provides instructions on how to use TotalAgility to import and process the MFP Starter Pack.
MFP Administrator's Guides for Devices	Describe how to prepare MFP devices to work with TotalAgility. The administrator's guides for the following devices are available: • Canon MEAP • Canon ScanFront • Emulator • Fujitsu • HP • Konica Minolta • Kyocera • Lexmark • Ricoh • Xerox
MFP Web Services Connector SDK Developer's Guide	Provides an overview and instructions for developing inputs with the MFP Web Services Connector Software Developer Kit (SDK). Along with this guide, the SDK provides documentation for the Web services.
Repository Browser Help	Provides instructions on how to use the Repository Browser to view the extraction results for a set of folders and documents.
Search and Matching Server documentation	Provides documentation of the Kofax Search and Matching Server, which handles search requests from various Kofax applications for large volumes of data located at a remote site.
Transformation Designer Help	Provides instructions on how to use Transformation Designer to set up, store, and test projects that contain all the necessary information for processing documents.
Transformation Designer Scripting Help	Provides an introduction to the WinWrap Basic Editor and an overview of the available scripting events.
XDoc Browser Help	Provides help on using the XDoc Browser, a program that provides direct access to the document representation that is used by TotalAgility. With XDoc Browser, you can open and display an XDoc along with any referenced images for testing, demonstration, and debugging purposes.
Documentation only available on the Product Documentation page (and not in the Offline documentation package)	
Federated Security in TotalAgility	Provides information about claims-based identity in TotalAgility.
Release Notes	Include key details about the new and enhanced features and any changes in behavior in TotalAgility 8.0.0. It also lists any known and resolved issues in this version of TotalAgility.

Guide/Help	Description
Technical Specifications	Provides technical specifications for TotalAgility.
Tutorial for Capture Starter Pack	Lets you test drive a predefined TotalAgility solution that requires minimal configuration to create and process TotalAgility jobs right away.
Tutorial for Data Objects	Provides information about how to create a solution using Data objects and create and update data using Data objects and RESTful service.
Tutorial for Online Learning	Explains how to create a Machine Learning project that uses Online Learning for classification and extraction of documents.
Tutorial for Quick Workflow	Provides information about how to create a workflow quickly so you can start working with a fully functional TotalAgility solution.

Offline documentation

If you require offline documentation, you can download it from the Kofax Fulfillment Site. For each language, a separate documentation package is available to download as a compressed file, such as TotalAgilityDocumentation_8.0.0_EN.zip for English or TotalAgilityDocumentation_8.0.0_FR.zip for French.

The English and Japanese .zip files include both help and print folders. The print folder contains PDF guides, such as the installation guide and administrator's guide. The .zip files for other languages contain a limited set of localized files.

The following procedure describes accessing TotalAgility documentation offline for English.

1. From the Kofax Fulfillment Site, download the documentation.zip file for the applicable language, such as English.
2. Extract the contents of the compressed documentation file to your local computer.
3. In the TotalAgility product installation files, inside the `Agility.Server.Web\Help` folder, create a folder for the desired language. For example, for accessing TotalAgility documentation offline for English, create the EN folder as follows:

   In a distributed environment, copy files on the Web server, and apply the Web.config changes on the Application and Web servers.

Copy the contents from the folder	Paste the contents to the folder
Designer	`\\TotalAgilityInstall\Agility.Server.Web\Help\TotalAgility_designer\EN` The TotalAgility installer creates the TotalAgility_designer and API folders inside the Help folder. You must manually create other folders such as Workspace and TotalAgilityApps and then copy the contents into the respective folders.
Devices	`\\TotalAgilityInstall\Agility.Server.Web\bin\Administrative\Help\Devices\EN`

Copy the contents from the folder	Paste the contents to the folder
DocumentConverter	\\Kofax\Document Converter\web\en\WebHelp
ExportConnector	\\TotalAgilityInstall\Agility.Server.Web\Help \ExportConnector_help\EN
KCKTM_Converter	<%ProgramData%>\Kofax\Transformation\en_US\help \KCKTM_Converter
MessageConnector	\\Kofax\KIC-ED\MC\web\en\WebHelp
RepositoryBrowser	\\TotalAgilityInstall\Agility.Server.Web\Help \RepositoryBrowser\EN
SDK_Documentation	\\TotalAgilityInstall\Agility.Server.Web\Help\API \EN
TenantManagementSystem	\\TotalAgilityInstall \Agility.Server.Web.TenantManagement \TenantManagement\Help\TenantManagementSystem\EN
TotalAgilityApps	\\TotalAgilityInstall\Agility.Server.Web\Help \TotalAgilityApps\EN
TransformationDesigner	<%ProgramData%>\Kofax\Transformation\en_US\help \TransformationDesigner
WebCaptureControl	\\TotalAgilityInstall\Agility.Server.Web\Help \WebCaptureControl\EN
Workspace	\\TotalAgilityInstall\Agility.Server.Web\Help \Workspace\EN
XDocBrowser	<%ProgramData%>\Kofax\Transformation\en_US\help \XDocBrowser
Activity folder within CaptureClient Example: DocumentReviewActivity	\\TotalAgilityInstall\Agility.Server.Web\Forms \Controls\Capture\Help\DocumentReviewActivity\EN

4. Navigate to the installation folder.

For the help	Perform the following steps
• TotalAgility Designer • Devices • Transformation Designer • XDoc Browser • KC_KTM Converter	**a.** Open TotalAgility Web.config in a text editor from the following location: `\\TotalAgilityInstall\Agility.Server.Web` **b.** Locate the `<appSettings>` section and remove `http://docshield.kofax.com/KTA` from the key value: `<add key="OnlineHelpURL" value="http://docshield.kofax.com/KTA"/>`.
TotalAgility Export Connector	**a.** Open Agility.Server.ExportConnector.exe.config in a text editor from the following location: `\\TotalAgilityInstall\Agility.Server.Web\bin` **b.** Locate the `<appSettings>` section and remove `http://docshield.Kofax.com/KTA` from the key value: `<add key="OnlineHelpURL" value="http://docshield.kofax.com/KTA"/>`. Alternatively, run the Configuration Utility (available from the TotalAgility Product installation files at `\\TotalAgilityInstall\Utilities\ConfigurationUtility)` and remove the URL for online help from the OnlinehelpURL setting. For the Transformation Designer, XDoc Browser, and KC_KTM Converter Help to work offline and make sure that TotalAgility is actively connected to Transformation Designer. To connect TotalAgility to Transformation Designer, log in to Transformation Designer and click **File > Connections** and provide the connection path.
TotalAgility Message Connector	**a.** Open configuration.xml in a text editor from the following location: `\\Kofax\KIC-ED\MC\web` **b.** Locate the `<OnlineHelp>1</OnlineHelp>` section and replace 1 with 0.
TotalAgility Document Converter	**a.** Open configuration.xml in a text editor from the following location: `\\Kofax\Document Converter\web` **b.** Locate the `<OnlineHelp>1</OnlineHelp>` section and replace 1 with 0.

5. Save and close the configuration file.
   Clicking the Help icon ❓ launches the help for the installed product.

Training

Kofax offers both classroom and online training to help you make the most of your product. To learn more about training courses and schedules, visit the Kofax Education Portal on the Kofax website.

Getting help with Kofax products

The Kofax Knowledge Portal repository contains articles that are updated on a regular basis to keep you informed about Kofax products. We encourage you to use the Knowledge Portal to obtain answers to your product questions.

To access the Kofax Knowledge Portal, go to https://knowledge.kofax.com.

The Kofax Knowledge Portal is optimized for use with Google Chrome, Mozilla Firefox, or Microsoft Edge.

The Kofax Knowledge Portal provides:

- Powerful search capabilities to help you quickly locate the information you need.
  Type your search terms or phrase into the **Search** box, and then click the search icon.
- Product information, configuration details and documentation, including release news.
  To locate articles, go to the Knowledge Portal home page and select the applicable Solution Family for your product, or click the View All Products button.

From the Knowledge Portal home page, you can:

- Access the Kofax Community (for all customers).
  On the Resources menu, click the **Community** link.
- Access the Kofax Customer Portal (for eligible customers).
  Go to the Support Portal Information page and click **Log in to the Customer Portal**.
- Access the Kofax Partner Portal (for eligible partners).
  Go to the Support Portal Information page and click **Log in to the Partner Portal**.
- Access Kofax support commitments, lifecycle policies, electronic fulfillment details, and self-service tools.
  Go to the Support Details page and select the appropriate article.

Chapter 1

Installation planning

This chapter describes the system requirements, prerequisites, licensing details, and various third-party and Kofax products that you can integrate to use with TotalAgility.

System requirements

See the Kofax TotalAgility Technical Specifications document on the Product Documentation page site.

- For supported operating systems and other system requirements.
- If your solution includes multiple Kofax products.

The document is updated regularly, and we recommend that you review it carefully to ensure success with your TotalAgility product.

Prerequisites

- Before extracting the TotalAgility installation ZIP file, unblock the file from the File Properties window.
- Run the Prerequisites Utility to ensure all the required software is installed on your computer before installing TotalAgility. For more information on prerequisites and the software checklist for various installation types, refer to the *Kofax TotalAgility Prerequisites Guide*.
- You must have an administrator account to install TotalAgility.
- The user who will run TotalAgility must have "Log on as Service" rights.
- The user who will run TotalAgility with the IIS service account must have "Log on as a Batch Job" permission.

SQL

The SQL and TotalAgility servers must run in the same time zone; otherwise, unexpected issues such as activities resetting incorrectly may occur.

Transformation Server

You can install the Transformation Server when you install TotalAgility or install the Transformation Server separately.

Transformation Designer

The Transformation Designer is typically installed as part of a full Kofax TotalAgility installation. Transformation Designer is installed only when the TransformationDesignerInstaller.exe is available in the TotalAgility build folder.

If you did not install the Transformation Designer when installing the TotalAgility Designer or want to install Transformation Designer separately, you can use the standalone Transformation Designer installer that is available from the Kofax TotalAgility installation files. Before installation, make sure the supported version of the .NET Framework is already installed on that machine.

Document converter

The Document Converter is automatically installed when installing the Transformation Server.

Reporting

Kofax Reporting provides centralized storage of historical operational metrics and audit data. Kofax Reporting includes components such as the reporting service and databases.

Due to high process utilization by Transformation Server (99%), Reporting Server is known to produce SQL Timeout errors when installed on the same machine as Transformation Server. Therefore, you must install Reporting Server separately from Transformation Server.

You cannot have two reporting services on the same server. However, you can install the reporting service on two servers and run them at the same time.

Micro Focus Content Manager

You can integrate Micro Focus Content Manager with TotalAgility.

Dynamics AX

You can integrate Microsoft Dynamics AX with TotalAgility.

Dynamics CRM

You can integrate Microsoft Dynamics CRM with TotalAgility.

Dynamics 365 CRM

You can integrate Microsoft Dynamics 365 CRM with TotalAgility.

Kofax Message Connector

Kofax Message Connector is a Windows service responsible for importing messages and files in many electronic formats. It can retrieve documents using one of the following connection modes:

- **Storage mode:** Retrieves documents from various sources and saves them in internal storage, and they are available for retrieval using a web service interface. TotalAgility connects to the Message Connector web service interface and retrieves the documents for import.
- **Direct mode:** Retrieves documents from various sources and directly imports them to TotalAgility.

Kofax Message Connector can import messages and files from many sources:

- Email messages including attachments using various email protocols (SMTP, POP3, IMAP, and EWS).
- Fax messages (via internal fax over IP server or external fax servers: Kofax Communication Server, RightFax, and Biscom).
- Files from a local or network folder.

When you install Kofax TotalAgility from a network share, make sure the user has the Write permissions to the share; otherwise, the Message Connector will not be installed successfully.

If you want to install a Message Connector, then before installing TotalAgility, you must set the value of the `ImportService` parameter to true in SilentInstallConfig.xml available at the following location in your installation files:

```
\\Program Files (x86)\Kofax\KIC-ED\MC
```

You can install multiple instances of Message Connectors. See Silent installation of multiple instances of Message Connectors.

Kofax SignDoc

You can integrate Kofax SignDoc with TotalAgility to allow a callback to occur when the signing is completed. See Integrate SignDoc with TotalAgility.

Kofax VRS Elite

We highly recommend Kofax VRS Elite, patented image perfection software that dramatically improves scanning productivity and document capture efficiency when used with a VRS-certified scanner. If your scanner is not VRS-certified, you can use the Kofax image processing technology included with TotalAgility. For information about licensing options, see**Kofax VRS Elite licenses**.

KCM Proxy

KCM Proxy is required when you want to use the Kofax Communications Manager (KCM) control on a TotalAgility form for interactive requests with Communications Manager. The proxy allows secure cross domain communication between the TotalAgility Web Server and Kofax Communications Manager.

To use KCM functionality, you must run the KCM Proxy installer on every Web Server in use.

Repository Browser

The Kofax TotalAgility Repository Browser is a utility intended to aid in developing and testing TotalAgility projects and uses direct SQL access to the database. As such, you should not use the utility in a production environment, or against large datasets.

Web Capture Service

Install the Kofax Web Capture Service to enable web scanning. You can install the Kofax Web Capture Service either at default or custom location.

You must install the Web Capture Service only once, and web scanning is enabled across all the supported browsers. You must have administrative rights to complete the installation when installing through the browser.

Once you install the Web Capture Service, temporary files are created under the folder, "Interprocess". The user must have read/write access to this folder.

You can use the Web Capture Service in multiuser environments.

Scan Agent Service

The Scan Agent Service is an asynchronous upload capability that allows a scan operator to continue to the next batch without needing to wait for the previous scan job to finish uploading.

This service is useful in remote scanning scenarios, where the scan station has limited network bandwidth to the main TotalAgility site. It allows a scan operator to keep up with physical scanning throughput, while the image upload is done in the background, thus enhancing the scan operator's efficiency.

This feature is only available for Scan create new job forms.

A Scan create new job form automatically uses the asynchronous image upload mode if it detects the Scan Agent Service installed on the scan station. Otherwise, it uses the synchronous image upload mode if the Scan Agent Service is not detected.

For the Device create new job form, a pre-condition of [SCANNED] > 0 must be added to the first activity in a process, to allow the process to wait for all images to be uploaded before moving on to the first activity.

Licensing

Obtain a license key for TotalAgility from your Account Manager or Kofax Support.

Concurrent user licenses

In the Concurrent User model, many users can simultaneously log into the system. Each user session consumes a license. For example, if a single user logs into the TotalAgility Designer and the TotalAgility Workspace simultaneously or the user logs into the Designer in two browsers such as Firefox and Chrome, the user consumes two concurrent licenses. The license server automatically releases the applicable license when a user logs off from a session.

Reserved licenses

When the number of concurrent users reaches the maximum, the system automatically checks for available reserved licenses. If any reserved license is available, a new user can log on and the count of available reserve licenses is reduced by 1. Keep the following policies in mind when managing reserved licenses:

- A reserved license expires seven days after you begin using the license.
- You can use each reserved license only twice within 12 months.

If the user tries to log on after the number of concurrent logins reaches the limit and there are no reserved licenses, the system displays an error message and additional users cannot log on.

If a reserved license expires, an error message appears in the TotalAgility Designer and TotalAgility Workspace.

Activate a license in TotalAgility

The license period starts once the license is activated. So, you can skip activation during installation and activate the license when you are ready to use TotalAgility. If you log on to TotalAgility for the first time and the license is not activated, the License Activation window opens.

1. In the License Activation window, click **Next** to accept the default values for the **License Server** and **Port Number** or enter the new values.
2. Click **Set license server** to save the information.
3. For further instructions, see the Activate the License Server step in Standard installation of the Web and Application on the same server.

   If you have issues activating your license, contact Kofax support at: `http://www.Kofax.com/support/tools/`

Automatic recovery

On installing TotalAgility, it is possible to manually configure the Kofax License Server Service to automatically restart in the event of a service error.

1. Go to **Service Control Manager**.
2. Edit the properties for the Kofax License Server Service.
3. Go to the **Recovery** tab.
4. Configure options for how the service should respond after the first, second, and subsequent failures.

   You do not need to restart the service for the changes to take effect.

You can also configure the license at the command line. Example: `sc.exe failure KSALicenseService actions= restart/660000/ restart/660000/""/660000 reset= 86400`

Set up a non-administrator service account for Kofax TotalAgility License Service

You can set up a non-administrator service account for Kofax TotalAgility License Service using either of the following ways:

- Manually
- By uninstalling and re-installing SAL

Manually

Use the following procedure to setup the non-admin user account manually.

1. Create the non-admin User account.

2. Add the user to the local policy of the machine to allow logon as a service.
3. At the netsh http prompt, run the `delete urlacl=<URL>` command to remove the registered URLs.

   The existing URL reservations are removed.
4. At the netsh http prompt, run the `Add urlacl=<URL>` command to add the registered URLs.
5. Run the Add command for each URL.
6. Stop the Kofax License Service.
7. Add the non-admin user to the SQL Logins.
8. Give the following permissions to the non-admin user: datareader, datawriter and execute rights to the Main Kofax TotalAgility database.
9. Change the account running the Kofax License Service (Windows service) to the non-admin user account.

   This will re-configure SAL to use the new user.
10. Start the Kofax License Service.
11. Launch TotalAgility Designer or TotalAgility Workspace to logon.

    If the login fails, the errors are logged in the Event log. License related errors may be, for example, due to the following reasons:
    - The non-admin user does not have the datawriter rights.
    - HTTP could not register the URL.
    - The process does not access rights to the namespace, as the URL is not registered for the non-admin user.

    Resolve the errors and restart the Licensing Service.

By uninstalling and re-installing SAL

Use the following procedure to setup the non-admin user account by uninstalling and re-installing SAL.

1. Create the non-admin User account.
2. Add the user to the local policy of the machine to allow logon as a service.
3. Back up the service.exe configuration file.

   This will backup the Kofax TotalAgility database configuration used by the service.
4. Uninstall SAL.

   The existing URL reservations are removed.
5. Add the non-admin user to the SQL Logins.
6. Give the following permissions to the non-admin user: datareader, datawriter and execute rights to the Main Kofax TotalAgility database.
7. Open the Command Prompt window and run the following command to re-install SAL.

   ```
   Msiexec /i "path to the SAL MSI" SALSVCUSER="<non-admin user name>"
   SALSVCPWD="<non admin password>" /qn
   ```

8. Stop the SAL Service.
9. Restore the exe configuration backup from Step 3.
   The database configuration to Kofax TotalAgility is restored.
10. Start the SAL Service.
11. Launch TotalAgility Designer or TotalAgility Workspace to logon.
    If the login fails, the errors are logged in the Event log. License related errors may be, for example, due to the following reasons:
    - The non-admin user does not have the datawriter rights.
    - HTTP could not register the URL.
    - The process does not access rights to the namespace, as the URL is not registered for the non-admin user.

    Resolve the errors and restart the Licensing Service.

Kofax VRS Elite licenses

We highly recommend Kofax VRS Elite, patented image perfection software that dramatically improves scanning productivity and document capture efficiency when used with a VRS-certified scanner. If your scanner is not VRS-certified, you can use the Kofax image processing technology included with TotalAgility.

TotalAgility includes a limited number of Kofax VRS Elite licenses. You may need to purchase additional licenses, depending on the number of scanners you plan to use with VRS. See Kofax Scanner Configurator to verify VRS certification and licensing requirements for your scanner.

Several Kofax VRS licensing options are available:

- **Kofax VRS Basic or Professional OEM:** Automatically activate a Kofax VRS Basic or Professional OEM license that is included with many industry-standard scanners. License activation for these scanners is required only when upgrading to Kofax VRS Elite.
- **Standalone workstation:** Manually activate a standalone license, which stays on the workstation until it is deactivated. The standalone license can only be activated on one scan station at a time.
- **TotalAgility license server:** Centrally manage concurrent VRS Elite licenses from the TotalAgility license server. To centrally manage VRS licenses through the TotalAgility license server, each VRS station needs to communicate with the license server directly or through a license proxy. This configuration may be convenient if you have many scanners. For this configuration, make sure VRS Elite 5.1.2 or later is installed.

License Proxy

TotalAgility License Proxy enables unconnected Scan Workstations and/or other TotalAgility components to get licensing from the TotalAgility License server.

Use TotalAgility License Proxy when the license server is not directly accessible from VRS stations or the linked TotalAgility server. For example, the server may not be directly accessible if you use Azure or because of security restrictions. Using the License Proxy, you can use a TotalAgility license configuration through TotalAgility web services rather than by directly addressing the license server.

A License Proxy is also useful for network topologies where multiple networks are logically separate, such as Microsoft Azure Cloud. A License Proxy allows computers in Network A to use a TotalAgility license server in Network B. A License Proxy uses TotalAgility web services (over HTTP/HTTPS) to communicate with the license server. The License Proxy computer needs a working Internet connection to facilitate the HTTP/HTTPS traffic to the License server.

See TotalAgility License Proxy installation.

Utilities

The following utilities are available from your TotalAgility product installation files.

- **Prerequisite utility:** Run this utility to ensure all the required software is installed on your computer before installing TotalAgility. For more information, see the *Kofax TotalAgility Prerequisites Guide*.
- **Configuration utility:** Run this utility after installing TotalAgility to modify or update the settings across multiple configuration files at the same time instead of editing each file separately. See the *Kofax TotalAgility Configuration Utility Guide*.
- **Docker:** A Docker is an open platform for developing, shipping, and running applications. Docker enables you to separate an application from its infrastructure. Using Docker, you can manage your infrastructure in the same way you manage your applications. See Docker installation.
- **EvrsCheck utility:** Run this utility to test how an image will look once the eVRS setting is applied to it. For more information, see EVRSCheck utility.
- **Kofax.CEBPM.EncryptConfig.exe:** Use this utility to encrypt and decrypt the configuration files of executables. See Encrypt and decrypt the TotalAgility configuration files.

Installation types

You can perform either standard or silent installation of TotalAgility. Install TotalAgility as one of the following types under standard or silent installation.

Database only

Installs only the database component of Kofax TotalAgility; no other components are installed.

TotalAgility includes the following databases.

Database	Default Database Name	Purpose
Main	TotalAgility	Stores workflow data required for the core aspects of TotalAgility, that is Jobs, Activities, Licensing and Resources.
Audit	TotalAgility	Stores the audit log data.
Finished Jobs	TotalAgility	Stores the archived job workflow data.
Data Layer	TotalAgility_Documents	Stores the Capture folder and document data.

Database	Default Database Name	Purpose
Reporting	TotalAgility_Reporting	Stores the Capture data aggregated statistics for sessions, documents, events, and fields. Also contains several utility tables used by the ETL algorithm and Kofax Analytics for TotalAgility to load data.
Staging	TotalAgility_Reporting_Staging	Stores the raw unprocessed Capture reporting data recorded from TotalAgility. This data is moved to Reporting database after processing.

Upgrade databases

Upgrades all the databases to the latest version of TotalAgility when TotalAgility is not installed locally.

Web Server

Installs a server to point to any Application server. In case you install TotalAgility on a computer other than the default port, you must enter the Application server machine name and port number. For example, <appserver_name:82>. A Web server installs the SDK Services and user interfaces for the TotalAgility Designer and TotalAgility Workspace.

TotalAgility does not support a Web server pointing to a combined Web/App server. A Web server must point to an App only server. While a Web server pointing to a combined Web/App server may still work, there are some areas that do not work. For example, the Streaming service on a Web tier does not work when pointing to a Streaming service on a combined Web/ App.

Application Server

Installs a server to which remote clients will connect and sets up their Web servers. An Application server only installs Core services and does not install user interfaces and any shortcuts for the TotalAgility Designer and Workspace.

Web and Application Server

Installs the Web and Application servers on a single computer.

Real Time Transformation Service

Installs the Real Time Transformation Service.

Manual installation of databases

The databases can either be created automatically at the time of installation or manually before the installation. You can either create a single database for Main, Audit, and Finished databases or create separate Main, Audit, and Finished databases.

By default, the Document Repository is installed into its database. However, you can create tables for the document repository within the main TotalAgility database by running the scripts. See Manually install databases.

Manually install databases

Perform the following steps to install databases manually.

1. Ensure that you create the following databases:
   - TotalAgility
   - Finished Jobs
   - Audit
   - TotalAgility_Reporting
   - TotalAgility_Reporting_Staging
   - TotalAgility_Documents
2. Edit the Initialise_Main.sql script by using the comments in the script. For example, update the details of the user who will log on to TotalAgility initially by editing the following:
   a. `@NTNAME = 'INSTALL_NTUSERID'`, where the User Domain and User ID replace INSTALL_NTUSERID. For example, 'DomainName\USERA'
   b. `@FULLNAME = 'INSTALL_FULLNAME'`, where the Username replaces INSTALL_FULLNAME. For example, 'USER A'
3. Run the scripts in the following order across databases and follow the instructions inside each script.
   a. Main(Create, Initialise)

      Run the following scripts on the Main database:
      - Create_Main.sql
      - Initialise_Main.sql
      - Create_Forms.sql
      - Initialise_Forms.sql
      - Create_KFS.sql
      - Initialise_KFS.sql
      - LicenseScripts\Create_KLS_OnPremise.sql

   b. Finished Jobs(Create)

      Run the following script on the Finished Jobs database (which can exist on the Main database):
      - Create_Archive.sql

   c. Audit(Create, Initialise)

      Run the following scripts on the Audit database (which can exist on the Main database):
      - Create_Audit.sql
      - Initialise_Audit.sql

4. The following scripts are used for installing reporting databases manually.
   - Scripts for creating the Staging database.
     - Kofax.Reporting.Analytics.Staging.SQL_TablesCreate.sql
     - Kofax.Reporting.Analytics.Staging.SQL_Initialize.sql
   - Scripts for creating the Reporting database.
     - Kofax.Reporting.Analytics.SQL_TablesCreate.sql
     - Kofax.Reporting.Analytics.SQL_Initialize.sql

   Before running these scripts, verify that a compatible database server is already installed. The Reporting tables must be in the default schema.

5. The following scripts are used to install the Documents database manually:
   - Script for creating the Documents database.
     - Repository2012_TablesCreate.sql

   In the Server_Data table, in the CEBPM_Settings column, update the RepositoryConnectionSring setting with the TotalAgility Documents database connection string.
   You can update the connection string in Configuration utility once you have installed TotalAgility.

6. In the Installation wizard, in the **Databases** window, do the following:
   a. Clear the check boxes for **Install Databases** and **Overwrite databases if they exist?**.
   b. Rename the databases under Database Name to match with the name given while creating databases manually.
      Change the name of the Data Layer database to either Repository2012 or the name given while creating the databases.
   c. Click **Next**. Ensure the installation completes before updating the configuration files.
7. You can edit the value of the database connections in the Web.config manually or run the Configuration Utility from your TotalAgility installation files.
   - Open **Web.config** available at `\\TotalAgilityInstall\Agility.Server.Web`. In the **appSettings** section, update the value of the following database connections:
     - MainDBConnectionString
     - ArchiveDBConnectionString
     - AuditDBConnectionString
     - ReportingMainDBConnectionString
     - ReportingStagingDBConnectionString

     The database should point to the machine where Kofax TotalAgility is installed.

   - Run the Configuration Utility and modify the values of the preceding database connections available on the Common settings tab.

8. To modify the value of database connections in Agility.Server.Core.WorkerService.exe.config, do either of the following:
   - Open **Agility.Server.Core.WorkerService.exe.config** available at `\\TotalAgilityInstall\CoreWorkerService` and modify the values of the following connection strings:
     - MainDBConnectionString
     - ArchiveDBConnectionString
     - AuditDBConnectionString
     - ReportingMainDBConnectionString
     - ReportingStagingDBConnectionString

     The database should point to the machine where the Kofax TotalAgility is installed.
   - Run the Configuration Utility and modify the values of the preceding connection strings available on the Common settings tab.
9. To modify the values of database connections in the Agility.Server.StreamingService.exe.config, do either of the following:
   - Open **Agility.Server.StreamingService.exe.config** available at `\\TotalAgiltyInstall\CoreWorkerService` and update the following connection strings:
     - MainDBConnectionString
     - ArchiveDBConnectionString
     - AuditDBConnectionString
     - ReportingMainDBConnectionString
     - ReportingStagingDBConnectionString

     The database should point to the machine where Kofax TotalAgility is installed.
   - Run the Configuration Utility and modify the values of the preceding connection strings available on the Common settings tab.
10. To connect Kofax TotalAgility to the desired documents database:
    a. Go to the TotalAgility Main database > SERVER_DATA table > CEBPM_SETTINGS column.
    b. Open the CEBPM_SETTINGS XML file.
    c. In the <Common Settings> section, update the Data Source value to your computer name, Integrated Security to True, and the value of the Initial Catalog to the Data Layer Database name.

```
<Common_Settings>
<ReportingSettings />
<DataLayerConfiguration RepositoryDBConnectionString=";Data
 Source={DATA_LAYER_DATASOURCE};Initial Catalog=TotalAgility_Documents;User
 ID={DATA_LAYER_USERID};Password={DATA_LAYER_PASSWORD];Integrated
 Security={DATA_LAYER_WINDOWS_AUTH};Connect
 Timeout=30;Encrypt=False;TrustServerCertificate=False"/>
</Common_Settings>
```

    To use Windows authentication, set the connection string as follows:

```
<Common_Settings>
<ReportingSettings />
```

```
<DataLayerConfiguration RepositoryDBConnectionString=";Data
 Source=localhost;Initial Catalog=TotalAgility_Documents;User
 ID=;Password=;Integrated Security=True;Connect
 Timeout=30;Encrypt=False;TrustServerCertificate=False" />
</Common_Settings>
```

11. Restart the TotalAgilityCoreWorker service for the change to take affect.
12. Generate the security key. To generate the key, navigate to **System** > **Settings** > **System** > **General**> in the TotalAgility Designer.

Import Artifacts

You must import the standard forms, style sheets, and custom assets after installing TotalAgility databases.

On upgrading TotalAgility, you must manually import the System maps and standard forms.

You can import all the artifacts from WorkspacePackage.zip available at the following location:

`\\TotalAgilityInstall\Agility.Server.Web\Packages`

Post-installation configurations

After installation, you can modify the configuration settings by editing each configuration file separately or running the Configuration Utility. The Configuration Utility is available from your TotalAgility installation files. You must manually copy the utility onto each server where the configuration settings are to be modified. See the *Kofax TotalAgility Configuration Utility Guide*.

Logon modes (authentication settings)

You can configure a Kofax TotalAgility Web or combined Web/Application installation to use one of the following logon modes:

- **Windows Authentication:** Use Windows authentication if the Windows credentials are required to authenticate the login user.
- **Manual:** Use manual authentication if the users need to provide the username and password each time they log in.
- **Mixed authentication (Windows Authentication + Manual):** Use mixed authentication, for example, if organizations require "manual logon" for external users and "Windows authentication" for internal users.
- **Federated Security:** Use Federated security if authentication needs to be done by a trusted third-party identity provider and TotalAgility only needs to deal with the claims returned for the authenticated user.

When you install TotalAgility, you can select the logon mode as manual or Windows authentication. However, post-installation, you can select Manual logon as well as Windows Authentication together using the Configuration utility. If for some reason the Windows authentication fails, you are

redirected to the manual login page. Refer to the *Kofax TotalAgility Configuration Utility Guide* for more information.

You cannot select Federated security with Windows authentication mode. For more information on Federated Security in TotalAgility, refer to *Kofax TotalAgility Designer Help*.

Chapter 2

TotalAgility installation

This chapter describes two methods for installing TotalAgility:

- Silent installation using a command line or a batch file.
- Standard installation using the installation wizard.

Silent installation of TotalAgility

Use the TotalAgility silent installation to install TotalAgility on multiple servers that use the same configuration automatically from a command line or a batch file. After you edit the silent installation file, the installation proceeds without any user interaction.

This section describes the silent installation for the following installation types:

- Silent installation for Database Only
- Silent installation for upgrading databases
- Silent installation of Web and Application on the same server
- Silent installation of Web or Application on different servers
- Silent installation for Real Time Transformation Server

- The Transformation Server is installed if the TransformationService parameter is set to true and the WindowsServiceAccount and WindowsServicePassword parameters are set for the Transformation Server. See Silent installation of Transformation Server.
- The Reporting Client is installed automatically on the Transformation Server and during the TotalAgility server installation.

Silent installation for Database Only

1. From your TotalAgility installation files, navigate to `\\TotalAgilityInstall` and open `SilentInstallConfig.xml` using a text editor.
2. In SilentInstallConfig.xml, update the following parameters.

Parameter	Default Value	Description
DatabaseInformation		
UpdateDatabases	true	Installs the databases. Set to false to bypass installation of databases.

Parameter	Default Value	Description
OverwriteIfExisting	false	If set to true, overwrites the existing databases. If the existing database details are not valid, or if the databases do not exist, an error occurs and the installation fails.
Main Database		
DatabaseName	TotalAgility	Specify the name of the Main database.
Server	server name	Enter the Fully Qualified Domain Name (FQDN) of the server. When installing TotalAgility with a remote database, update `SilentInstallConfig.xml` with the server name (<Server>servername</Server>) of the machine on which the database resides. The account used to connect to the database during the installation requires DB_CREATOR rights.
Security		
WindowsAuthentication	true	Uses Windows credentials for logging in. If set to false, provide the username and password. Otherwise, leave the username and password blank.
UserName	empty	
Password	empty	
NewDatabase	false	Set to true to create a new database.
AzureActiveDirectoryAuthentication	Off	To enable Microsoft Entra ID authentication, set the value to "AzureActiveDirectoryPassword" and then specify the username and password.
Audit Database		
DatabaseName	TotalAgility	Specify the name of the Audit database.

Parameter	Default Value	Description
Server	server name	Enter the Fully Qualified Domain Name (FQDN) of the server.
Security		
WindowsAuthentication	true	Uses Windows credentials for logging in. If set to false, provide the username and password. Otherwise, leave the username and password blank.
UserName	empty	
Password	empty	
NewDatabase	false	Set to true to create a new database.
AzureActiveDirectoryAuthentication	Off	To enable Microsoft Entra ID authentication, set the value to "AzureActiveDirectoryPassword" and then specify the username and password.
Finished Jobs Database		
DatabaseName	TotalAgility	Specify the name of the Finished Jobs database.
Server	server name	Enter the Fully Qualified Domain Name (FQDN) of the server.
Security		
WindowsAuthentication	true	Uses Windows credentials for logging in. If set to false, provide the username and password. Otherwise, leave the username and password blank.
UserName	empty	
Password	empty	
NewDatabase	false	Set to true to create a new database.
AzureActiveDirectoryAuthentication	Off	To enable Microsoft Entra ID authentication, set the value to "AzureActiveDirectoryPassword" and then specify the username and password.
DataLayer - TotalAgility_Documents Database		
DatabaseName	TotalAgility_Documents	Specify the name of the TotalAgility_Documents database.

Parameter	Default Value	Description
Server	server name	Enter the Fully Qualified Domain Name (FQDN) of the server.
Security		
WindowsAuthentication	true	Set to true to use Windows credentials for logging in. If set to false, provide the username and password. Otherwise, leave the username and password blank.
UserName	empty	
Password	empty	
NewDatabase	false	Set to true to create a new database.
AzureActiveDirectoryAuthentication	Off	To enable Microsoft Entra ID authentication, set the value to "AzureActiveDirectoryPassword" and then specify the username and password.
Reporting_Analytics Database		
DatabaseName	TotalAgility_Reporting	Specify the name of the TotalAgility_Reporting database.
Server	server name	Enter the Fully Qualified Domain Name (FQDN) of the server.
Security		
WindowsAuthentication	true	Set to true to use Windows credentials for logging in. If set to false, provide the username and password. Otherwise, leave the username and password blank.
UserName	empty	
Password	empty	
NewDatabase	false	Set to true to create a new database.
AzureActiveDirectoryAuthentication	Off	To enable Microsoft Entra ID authentication, set the value to "AzureActiveDirectoryPassword" and then specify the username and password.
Reporting_Staging Database		
DatabaseName	TotalAgility_Reporting_Staging	Specify the name of the TotalAgility_Reporting_Staging database.

Parameter	Default Value	Description
Server	server name	Enter the Fully Qualified Domain Name (FQDN) of the server.
Security		
WindowsAuthentication	true	Uses Windows credentials for logging in. If set to false, provide the username and password. Otherwise, leave the username and password blank.
UserName	empty	
Password	empty	
NewDatabase	false	Set to true to create a new database.
AzureActiveDirectoryAuthentication	Off	To enable Microsoft Entra ID authentication, set the value to "AzureActiveDirectoryPassword" and then specify the username and password.
Install Info		
InstallType	Both	Change the value to DatabaseOnly. When you install only databases, the system ignores the services and does not install services such as CoreworkerService, ImportService, and ExportService.
KTAResourceName	empty	Specify a username for the TotalAgility user to be created on installation.
KTAResourcePassword	empty	Specify a password (minimum 6 alphanumeric characters) for the TotalAgility user to be created on installation.
RunAsSystemAccount	false	If set to true, the IIS Application Pool and Kofax TotalAgility services run as the LocalSystem account. If you set this parameter to true, the user can still log on using the credentials specified in the TotalAgility Resource Credentials window when installing TotalAgility.

3. Save and close the file.
4. On the Command Prompt, change the current directory to the root directory of the Setup.exe file.
5. Run `Setup.exe /Silent`.
   - The databases are installed automatically.
   - The system generates a summary of log, KofaxTotalAgilitySilentInstallLog.txt, on the desktop.
   - If any errors occur, by default, TotalAgility creates a log file, KofaxTotalAgilityInstallErrorLog.txt, on the desktop. Fix those errors and repeat the above steps.
   - The success or failure of installation is indicated in the event log.
   - When automating the installation, if you run setup.exe from Command line, or as a silent installation, one of the codes returns to indicate the following:
     - 0=Success
     - 1-Success with warnings
     - 2=Failure

Silent installation for upgrading databases

1. From your TotalAgility installation files, navigate to `\\TotalAgilityInstall` and open SilentInstallConfig.xml using a text editor.
2. In SilentInstallConfig.xml, update the following parameters.

Parameter	Default value	Description
<ServicesInstallOptions>		
	true for all services	Set to false for all the services. When you upgrade TotalAgility databases, the services, such as Core Worker Service, Reporting Service, License Service, and Transformation Server are ignored and not installed.
DatabaseInformation		
UpdateDatabases	true	Set to false to ignore installing databases. If set to true, installs the databases.

Parameter	Default value	Description
OverwriteIfExisting	true	If set to true, overwrites the existing databases. If the existing database details are not valid, or if the databases do not exist, an error occurs, and the installation fails.
Main Database		
DatabaseName	TotalAgility	Specify the name of the Main database.
Server	server name	Enter the Fully Qualified Domain Name (FQDN) of the server. When installing TotalAgility with a remote database, update SilentInstallConfig.xml with the server name (<Server>servername</Server>) of the machine on which the database resides. The account used to connect to the database during the installation requires DB_CREATOR rights.
Security		
WindowsAuthentication	true	Uses Windows credentials for logging in. If set to false, provide the username and password. Otherwise, leave the username and password blank.
UserName	empty	
Password	empty	
NewDatabase	false	Accept the default. If set to true, creates a new database.
Audit Database		
DatabaseName	TotalAgility	Specify the name of the Audit database.
Server	server name	Enter the Fully Qualified Domain Name (FQDN) of the server.
Security		

Parameter	Default value	Description
WindowsAuthentication	true	Uses Windows credentials for logging in. If set to false, provide the username and password. Otherwise, leave the username and password blank.
UserName	empty	
Password	empty	
NewDatabase	false	Set to true to create a new database.
Finished Jobs Database		
DatabaseName	TotalAgility	Specify the name of the Finished Jobs database.
Server	server name	Enter the Fully Qualified Domain Name (FQDN) of the server.
Security		
WindowsAuthentication	true	Uses Windows credentials for logging in. If set to false, provide the username and password. Otherwise, leave the username and password blank.
UserName	empty	
Password	empty	
NewDatabase	false	Set to true to create a new database.
DataLayer - TotalAgility_Documents Database		
DatabaseName	TotalAgility_Documents	Specify the name of the TotalAgility_Documents database.
Server	server name	Enter the Fully Qualified Domain Name (FQDN) of the server.
Security		
WindowsAuthentication	true	Set to true to use Windows credentials for logging in. If set to false, provide the username and password. Otherwise, leave the username and password blank.
UserName	empty	
Password	empty	

Parameter	Default value	Description
NewDatabase	false	Set to true to create a new database.
Reporting_Analytics Database		
DatabaseName	TotalAgility_Reporting	Specify the name of the TotalAgility_Reporting database.
Server	server name	Enter the Fully Qualified Domain Name (FQDN) of the server.
Security		
WindowsAuthentication	true	Set to true to use Windows credentials for logging in. If set to false, provide the username and password. Otherwise, leave the username and password blank.
UserName	empty	
Password	empty	
NewDatabase	false	Set to true to create a new database.
Reporting_Staging Database		
DatabaseName	TotalAgility_Reporting_Staging	Specify the name of the TotalAgility_Reporting_Staging database.
Server	server name	Enter the Fully Qualified Domain Name (FQDN) of the server.
Security		
WindowsAuthentication	true	Uses Windows credentials for logging in. If set to false, provide the username and password. Otherwise, leave the username and password blank.
UserName	empty	
Password	empty	
NewDatabase	false	Set to true to create a new database.
Install Info		
InstallType	Both	Change the value to UpgradeDatabasesOnly. All the databases are upgraded to the latest version of TotalAgility.

Parameter	Default value	Description
KTAResourceName	empty	Specify a username for the TotalAgility user to be created on installation.
KTAResourcePassword	empty	Specify a password (minimum 6 alphanumeric characters) for the TotalAgility user to be created on installation.
RunAsSystemAccount	false	If set to true, the IIS Application Pool and Kofax TotalAgility services run as the LocalSystem account. If you set this parameter to true, the user can still log on using the credentials specified in the Kofax TotalAgility Resource Credentials window when installing TotalAgility.

3. Save and close the file.
4. On the Command Prompt, change the current directory to the root directory of the Setup.exe file.
5. Run `Setup.exe /Silent`.
   - The databases are installed automatically.
   - The system generates a summary of log, KofaxTotalAgilitySilentInstallLog.txt, on the desktop.
   - If any errors occur, by default, TotalAgility creates a log file, KofaxTotalAgilityInstallErrorLog.txt, on the desktop. Fix those errors and repeat the above steps.
   - The success or failure of installation is indicated in the event log.
   - When automating the installation, if you run setup.exe from Command line, or as a silent installation, one of the codes returns to indicate the following:
     - 0=Success
     - 1-Success with warnings
     - 2=Failure

Silent installation of Web and Application on the same server

Update the following parameters for a Web-Application server installation.

1. From your TotalAgility installation files, navigate to `\\TotalAgilityInstall` and open `SilentInstallConfig.xml` using a text editor.
2. In SilentInstallConfig.xml, update the following parameters.

Fix the line breaks if you copy and paste the code from this guide.

Parameter	Default value	Description
ServicesInstallOptions		
CoreWorkerService	true	Installs the Core Worker Service. You can set it to false if needed.
ImportService	true	Installs the Import Service. You can set it to false if needed.
ExportService	true	Installs the Export Service. You can set it to false if needed.
ReportingService	true	Installs the Reporting Service. You can set it to false if needed. The reporting client is installed automatically on the Transformation Server and during the TotalAgility server installation.
LicenseService	true	Installs the License Service. You can set it to false if needed.
TransformationService	true	Installs the Transformation Service. You can set it to false if needed.
CoreServices	true	Installs the Core services. You can set it to false if needed. Set to false to install only Transformation Server on the Application server so that the IIS prerequisite is not needed. IIS is not required for the standalone installation of the Transformation Server.
LicenseServer		
LicenseServerName	localhost	Enter the name of the license server.
PortNumber	3581	Do not change this value.
SerialNumber	empty	Enter your TotalAgility serial number.
ProductCode	empty	Enter your TotalAgility product code.
SkipLicense	true	Skips activating the license. Set to false to activate the license. You must enter the serial number and product code to install TotalAgility.
EnableSSL	false	You can set to true to enable https.

Parameter	Default value	Description
Certificate	Empty	If SSL is enabled, you must provide the certificate thumbprint of a correctly configured certificate on the computer on which you install TotalAgility. If you enable SSL and provide the certificate thumbprint, the port number for Licensing is automatically set to 3582.
InstallDirectory	`C:\Program Files\Kofax\TotalAgility`	Specify the TotalAgility destination directory.
DatabaseInformation		
InstallDatabases	true	Installs the databases. Set to false to ignore installing databases.
OverwriteIfExisting	true	If set to true, overwrites the existing databases. If the existing database details are not valid, or if the databases do not exist, an error occurs, and the installation fails.
ScriptsLocation	`C:\Program Files\Kofax\TotalAgility\ DatabaseScripts\SQL Server\`	Specify the directory for installing scripts.
Main Database		
DatabaseName	TotalAgility	Specify the name of the Main database.
Server	server name	Specify the fully qualified domain name (FQDN) of the server. When installing TotalAgility with a remote database, update SilentInstallConfig.xml with the server name (<Server>servername</Server>) of the machine on which the database resides. The account used to connect to the database during the installation requires DB_CREATOR rights.
Security		

Parameter	Default value	Description
WindowsAuthentication	true	Uses Windows credentials for logging in. If set to false, provide the user name and password. Otherwise, leave the user name and password blank.
UserName	empty	
Password	empty	
NewDatabase	false	Set to true to create a new database.
MicrosoftEntraIDAuthentication	Off	To enable Microsoft Entra ID authentication, set the value to "AzureActiveDirectoryPassword" and then specify the username and password.
Audit Database		
DatabaseName	TotalAgility	Specify the name of the Audit database.
Server	server name	Specify the fully qualified domain name (FQDN) of the server.
Security		
WindowsAuthentication	true	Uses Windows credentials for logging in. If set to false, provide the username and password. Otherwise, leave the username and password blank.
UserName	empty	
Password	empty	
NewDatabase	false	Set to true to create a new database.
MicrosoftEntraIDAuthentication	Off	To enable Microsoft Entra ID authentication, set the value to "AzureActiveDirectoryPassword" and then specify the username and password.
Finished Jobs Database		
DatabaseName	TotalAgility	Specify the name of the Finished Jobs database.
Server	server name	Specify the fully qualified domain name (FQDN) of the server.
Security		

Parameter	Default value	Description
WindowsAuthentication	true	Uses Windows credentials for logging in. If set to false, provide the username and password. Otherwise, leave the username and password blank.
UserName	empty	
Password	empty	
NewDatabase	false	Set to true to create a new database.
MicrosoftEntraIDAuthentication	Off	To enable Microsoft Entra ID authentication, set the value to "AzureActiveDirectoryPassword" and then specify the username and password.
Forms	empty	
DataLayer - TotalAgility_Documents Database		
DatabaseName	TotalAgility_Documents	Specify the name of the TotalAgility_Documents database.
Server	server name	Specify the fully qualified domain name (FQDN) of the server.
Security		
WindowsAuthentication	true	Uses Windows credentials for logging in. If set to false, provide the username and password. Otherwise, leave the username and password blank.
UserName	empty	
Password	empty	
NewDatabase	false	Set to true to create a new database.
MicrosoftEntraIDAuthentication	Off	To enable Microsoft Entra ID authentication, set the value to "AzureActiveDirectoryPassword" and then specify the username and password.
Reporting_Analytics Database		
DatabaseName	TotalAgility_Reporting	
Server	server name	Specify the fully qualified domain name (FQDN) of the server.
Security		

Parameter	Default value	Description
WindowsAuthentication	true	Uses Windows credentials for logging in. If set to false, provide the username and password. Otherwise, leave the username and password blank.
UserName	empty	
Password	empty	
MicrosoftEntraIDAuthentication	Off	To enable Microsoft Entra ID authentication, set the value to "AzureActiveDirectoryPassword" and then specify the username and password.
NewDatabase	false	Set to true to create a new database.
Reporting_Staging Database		
DatabaseName	TotalAgility_Reporting_Staging	Specify the name of the TotalAgility_Reporting_Staging database.
Server	server name	Specify the fully qualified domain name (FQDN) of the server.
Security		
WindowsAuthentication	true	Uses Windows credentials for logging in. If set to false, provide the username and password. Otherwise, leave the username and password blank.
UserName	empty	
Password	empty	
NewDatabase	false	Set to true to create a new database.
MicrosoftEntraIDAuthentication	Off	To enable Microsoft Entra ID authentication, set the value to "AzureActiveDirectoryPassword" and then specify the username and password.
Identity Information		
UserName	username	Enter the username of the Windows service account for the TotalAgility services.

Parameter	Default value	Description
Password	password	Enter the password of the windows service account for the TotalAgility services. If the service account name ends with a $ (dollar), do not specify the password.
RunAsSystemAccount	false	If you set this parameter to true: • The Application Pool and Kofax TotalAgility services are created with the LocalSystem account. • The user can still log in using the credentials specified in the Kofax TotalAgility Resource Credentials window when installing TotalAgility. • The databases should be created using SQL authentication.
RunAsNetworkServiceAccount	false	If set to true, the IIS Application Pool and Kofax TotalAgility services run as the NT Authority\Network Service username. Set RunAsNetworkServiceAccount to true only for Docker installations that want to make use of a Group Managed Service Account (gMSA).
Prerequisite Info		
ValidOS	true	Checks if the Operating System is valid.
SQLServerInstalled	true	Set to true to check if the SQL Server is installed.
SQLClientInstalled	false	Set to true to check if the SQL Client is installed.
IISInstalled	true	Checks if IIS is installed.
SslEnabled	false	Set to true to enable https. See Configure for HTTPS communication.
Install Info		
InstallAction	Install	Accept the default.
InstallMode	Silent	Accept the default.
InstallType	Both	Accept the default.
AuthenticationMode	Windows	Set the authentication mode to Windows.

Parameter	Default value	Description
Transformation Server Info Configure these settings if TransformationService is **true**.		
TSConfigFile	empty	Specify the path to the .ini file along with the name for Transformation Server to configure. If you provide the .ini file, the TransformationServerInfo settings are taken from the .ini file; the parameters mentioned in the SilentInstallConfig are ignored. See the .INI file Sample for the parameters.
LogFile	`C:\Program Files\Kofax\TotalAgility\Transformation Server\Tslog.txt`	Set the location where the Transformation Server log file will be created. Make sure to include the filename (such as TSLog.txt) in the filepath. For example, `C:\Program Files\Kofax\TotalAgility\TransformationServer\TSLog.txt` If the log filepath is not valid, the Transformation Server installation fails.
InstallLocation	`C:\Program Files\Kofax\TotalAgility\TransformationServer`	To install to a different location, specify the Transformation Server destination directory.
WindowsServiceAccount	username	Enter the name of the user who will run the Transformation Server. To specify a domain user, enter the username in the format Domain\User. Ensure that the account details are correct, as under this account Transformation Server authenticates all places where Windows authentication is used. For example, TotalAgility database. All communication and resource access will be run under this account. Therefore, the account under which Transformation Server is running must not be a dummy account.
WindowsServicePassword	password	Enter the password for the user.

Parameter	Default value	Description
UseSpecificPool	false	Set this parameter to true to add this Transformation Server to a pool. Any other value, including no value, is treated as false and the Transformation Server will process all activities regardless of the pool.
PoolName	empty	If you set UseSpecificPool=true, enter the Transformation Server pool name. If you leave the pool name empty, all activities are processed regardless of their pools.
OLEnabled	true	Enables online learning tasks on this Transformation Server instance. Set to false or any other value to disable online learning tasks. If multiple instances of Transformation Server are installed for improving the throughput of the capture activities, online learning should be enabled only on a single Transformation Server instance in the cluster.
WcfPort	9001	Enter the port that is used by TotalAgility to communicate with the Transformation Server during synchronous calls, such as fuzzy searches and pushed activities.
ReservedSlots	0	Enter the number of slots on this Transformation Server that are reserved for pushed activities and high-priority activities.
OverrideDefSlots	Empty	By default, the Transformation Server determines the number of simultaneously working Transformation Server controlled processes that do actual processing based on the machine's CPU cores. To specify your values, enter the value here.
MaxSlots	0	If you set CPUSERVER_OVERRIDE_DEF_ SLOTS to true, enter the number of processing slots for this Transformation Server.

Parameter	Default value	Description
InstallOCRAddons	1	Installs Additional A2iA recognition engine [unsupported].
EnableSyncCalls	true	Enables synchronous calls. Set to false to disable synchronous calls.
TS_INSTALL_NLP_WESTERN	false	If set to true, installs the Natural Language Processing language bundle for English, Spanish, Portuguese, French, and German.
TS_INSTALL_NLP_ADDITIONALLANGUAGES1	false	If set to true, installs the Natural Language Processing language bundle for Italian, Romanian, and Dutch.
TS_INSTALL_NLP_ADDITIONALLANGUAGES2	false	If set to true, installs the Natural Language Processing language bundle for Japanese, Chinese, and Korean.
TS_INSTALL_NLP_ADDITIONALLANGUAGES3	false	If set to true, installs the Natural Language Processing language bundle for Swedish, Finnish, Danish, Norwegian, and Arabic.
IsIntegration Server	false	Set to true to install the TotalAgility Integration Server.
InstallLicenseProxy	false	Set to true to install the License Proxy. If set to true, provide the username and password. Otherwise, leave the username and password blank.
KTAResourceName	empty	Specify a username for the TotalAgility user to be created on installation.
KTAResourcePassword	empty	Specify a password (minimum 6 alphanumeric characters) for the TotalAgility user to be created on installation.
StartServices	true	Starts the services.
ImportWorkspacePackage	false	Set to true to import the Workspace package.
<SiteRoot>	Default Web Site	Install TotalAgility under a custom site that uses a non-standard port other than the standard ports (80 and 443). For example, create a custom site called "testsite" under IIS using port number 85.
CaptureConfiguration		

Parameter	Default value	Description
CloudStorageType	SQLServer	By default, the Capture data is stored in the SQL Server. Change the Cloud Storage Type to "Azure" for Windows Azure Blob Storage, "AWS" for Amazon S3 storage and "SqlFileStream" for SQL Server and File System.
AzureBlobStorageConnectionString	empty	The Account Connection String to connect to the Blob storage service.
AzureBlobStorageContainerName	empty	The Container Name of the storage service.
AmazonS3AccessKey	empty	The access key to connect to the Amazon S3 storage service.
AmazonS3SecretKey	empty	The secret key to the Amazon S3 storage service.
AmazonS3BucketName	empty	The bucket name of the storage service. The bucket is a fundamental container in Amazon S3 for data storage.
AmazonS3RegionName	empty	The S3 region name.
FileStreamFileGroup	empty	The FILESTREAM file group name.

3. Save and close the file.
4. On the Command Prompt, change the command line to the root directory of the Setup.exe file.
5. Run `Setup.exe /Silent`.
   - Based on the parameters set to **True** in the silent configuration file, the following items are installed:
     - Kofax TotalAgility
     - Kofax Import Connector (KIC) (When you install Kofax TotalAgility from a network share, make sure the user has the Write permissions to the share; otherwise, the Import Connector will not be installed successfully.)
     - Utility for Kofax Export Connector
     - Licensing Service
     - Transformation Server, if the **TransformationService** parameter is set to true and the WindowsServiceAccount and WindowsServicePassword parameters are set for Transformation Server.
   - The system generates a summary of log, KofaxTotalAgilitySilentInstallLog.txt, on the desktop.
   - If any errors occur, by default, TotalAgility creates a log file, KofaxTotalAgilityInstallErrorLog.txt, on the desktop. Fix those errors and repeat the above steps.
   - The success or failure of installation is indicated in the event log.
   - When automating the installation, if you run setup.exe from Command line, or as a silent installation, one of the codes returns to indicate the following:
     - 0=Success

- 1-Success with warnings
- 2=Failure

.INI file sample

```
TS_INSTALLLOCATION="E:\Kofax\TotalAgility\TransformationServer"
TS_SERVICE_ACCOUNT=username
TS_SERVICE_PASSWORD=password
TS_USE_SPECIFIC_POOL=FALSE
TS_POOL_NAME=
TS_OL_ENABLED=TRUE
TS_WCF_PORT=9001
TS_RESERVED_SLOTS=0
TS_OVERRIDE_DEF_SLOTS=
TS_MAX_SLOTS=0
TS_ENABLE_SYNC_CALLS=TRUE
TS_MAIN_DB_CONNECTION_STRING=Server=servername;Trusted_Connection=Yes;Database=
 TotalAgility;
TS_SYNCHRONOUS_ONLY=false
```

Silent installation of Web and Application on different servers

Install TotalAgility on a separate Web or Application server.

Silent installation on an Application Server

Update the following parameters for an Application Server.

1. From your TotalAgility installation files, navigate to `\\TotalAgilityInstall` and open SilentInstallConfig.xml using a text editor.
2. In SilentInstallConfig.xml, update the following parameters.
   - InstallType = ApplicationServer.
   - For other parameters, see Silent installation of Web and Application on the same server.

     You can choose to install or not to install certain components by setting the values to True/False in the **ServicesInstallOptions** section of the Silent Configuration file.
3. Save and close the file.
4. On the Command Prompt, change the command line to the root directory of the Setup.exe file.
5. Run `Setup.exe /Silent`.
   - Based on the parameters set to **True** in the silent configuration file, the following items are installed:
     - Kofax TotalAgility
     - Kofax Import Connector (KIC) (When you install Kofax TotalAgility from a network share, make sure the user has the Write permissions to the share; otherwise, the Import Connector will not be installed successfully.)
     - Utility for Kofax Export Connector
     - Licensing Service

- Transformation Server, if the **TransformationService** parameter is set to true and the WindowsServiceAccount and WindowsServicePassword parameters are set for Transformation Server.

  When you choose to install only Transformation service on the Application server, set Transformation Service to true and Core Worker Service to false. If you do not exclude Core Services, TotalAgility will prompt for IIS requirement, and IIS is not required for installing the Transformation service on an Application Server.

- The system generates a summary of log, KofaxTotalAgilitySilentInstallLog.txt, on the desktop.
- If any errors occur, by default, TotalAgility creates a log file, KofaxTotalAgilityInstallErrorLog.txt, on the desktop. Fix those errors and repeat the above steps.
- The success or failure of installation is indicated in the event log.
- When automating the installation, if you run setup.exe from Command line, or as a silent installation, one of the codes returns to indicate the following:
  - 0=Success
  - 1-Success with warnings
  - 2=Failure

Silent installation on a Web Server

1. From your TotalAgility installation files, navigate to `\\TotalAgilityInstall` and open SilentInstallConfig.xml using a text editor.
2. In SilentInstallConfig.xml, update the following parameters.

Parameter	Default	Description
InstallDirectory	`C:\Program Files\TotalAgility\TotalAgility`	Specify the TotalAgility destination directory.
ApplicationServerName	no default	Enter the Fully Qualified Domain Name (FQDN) of the application server. If the Application server is installed on a non-standard port, you must modify the <ApplicationServerName> parameter in the SilentInstallConfig.xml on the Web server as follows: `<ApplicationServerName>FQDN:portnumber<ApplicationServerName>"`
Identity Information		
UserName	username	Enter the name of the user who will run TotalAgility if RunAsSystemAccount is false.

Parameter	Default	Description
Password	password	Enter the password for the user who will run TotalAgility if RunAsSystemAccount is false. If the service account name ends with a $ (dollar sign), do not specify the password.
RunAsSystemAccount	false	If set to true, the IIS Application Pool and Kofax TotalAgility services run as the LocalSystem account. If you set this parameter to true, databases should be created using SQL authentication.
RunAsNetworkServiceAccount	false	If set to true, the IIS Application Pool and Kofax TotalAgility services run as the NT Authority\Network Service username. • Set RunAsNetworkServiceAccount to true only for Docker installations that need to make use of a Group Managed Service Account (gMSA). • If you set this parameter to true, databases should be created using SQL authentication.
Prerequisite Info		
ValidOS	true	Set to true to check if the Operating System is valid.
SQLServerInstalled	true	Set to true to check if the SQL Server is installed.
SQLClientInstalled	false	Set to true to check if the SQL Client is installed.
IISInstalled	true	Set to true to check if IIS is installed.
SslEnabled	false	Set to true to enable https. See Configure for HTTPS Communication.
Install Info		
InstallAction	Install	Accept the default.
InstallMode	Silent	Accept the default.
InstallType	Both	Enter WebServer.
<SiteRoot>	Default Web Site	Install TotalAgility under a custom site that uses a non-standard port other than the standard ports (80 and 443). For example, create a custom site called "testsite" under IIS using port number 85.

3. Save and close the file.
4. On the Command Prompt, change the current directory to the root directory of the Setup.exe file.

5. Run `Setup.exe /Silent`.
   - Kofax TotalAgility is installed automatically.
   - The system generates a summary of log, KofaxTotalAgilitySilentInstallLog.txt, on the desktop.
   - If any errors occur, by default, TotalAgility creates a log file, KofaxTotalAgilityInstallErrorLog.txt, on the desktop. Fix those errors and repeat the above steps.
   - The success or failure of installation is indicated in the event log.
   - When automating the installation, if you run setup.exe from Command line, or as a silent installation, one of the codes returns to indicate the following:
     - 0=Success
     - 1-Success with warnings
     - 2=Failure

Silent installation for Real Time Transformation Server

1. From your TotalAgility installation files, navigate to `\\TotalAgilityInstall` and open SilentInstallConfig.xml using a text editor.
2. In SilentInstallConfig.xml, update the following parameters.

Parameter	Default Value	Description
InstallDirectory	`C:\Program Files\ Kofax\ TotalAgility`	Specify the TotalAgility destination directory.
DatabaseInformation		
UpdateDatabases	false	Set to false to ignore installing databases.
OverwriteIfExisting	false	If set to true, overwrites the existing databases. If the existing database details are not valid, or if the databases do not exist, an error occurs, and the installation fails.
Main Database		
DatabaseName	TotalAgility	Specify the name of the Main database.

Parameter	Default Value	Description
Server	Server name	Specify the fully qualified domain name (FQDN) of the server. When installing TotalAgility with a remote database, update SilentInstallConfig.xml with the server name (<Server>servername</Server>) of the machine on which the database resides. The account used to connect to the database during the installation requires DB_CREATOR rights.
Security		
WindowsAuthentication	true	Set to true to use Windows credentials for logging in. If set to false, provide the username and password. Otherwise, leave the username and password blank.
UserName	empty	
Password	empty	
NewDatabase	false	Set to true to create a new database.
MicrosoftEntraIDAuthentication	Off	To enable Microsoft Entra ID authentication, set the value to "AzureActiveDirectoryPassword" and then specify the username and password.
Audit Database		
DatabaseName	TotalAgility	Specify the name of the Audit database.
Server	server name	Specify the fully qualified domain name (FQDN) of the server.
Security		
WindowsAuthentication	true	Set to true to use Windows credentials for logging in. If set to false, provide the username and password. Otherwise, leave the username and password blank.
UserName	empty	
Password	empty	
NewDatabase	false	Set to true to create a new database.

Parameter	Default Value	Description
MicrosoftEntraIDAuthentication	Off	To enable Microsoft Entra ID authentication, set the value to "AzureActiveDirectoryPassword" and then specify the username and password.
Finished Jobs Database		
DatabaseName	TotalAgility	Specify the name of the Finished Jobs database.
Server	server name	Specify the fully qualified domain name (FQDN) of the server.
Security		
WindowsAuthentication	true	Set to true to use Windows credentials for logging in. If set to false, provide the username and password. Otherwise, leave the username and password blank.
UserName	empty	
Password	empty	
NewDatabase	false	Set to true to create a new database.
MicrosoftEntraIDAuthentication	Off	To enable Microsoft Entra ID authentication, set the value to "AzureActiveDirectoryPassword" and then specify the username and password.
DataLayer - TotalAgility_Documents Database		
DatabaseName	TotalAgility_Documents	Specify the name of the TotalAgility_Documents database.
Server	server name	Specify the fully qualified domain name (FQDN) of the server.
Security		
WindowsAuthentication	true	Set to true to use Windows credentials for logging in. If set to false, provide the username and password. Otherwise, leave the username and password blank.
UserName	empty	
Password	empty	
NewDatabase	false	Set to true to create a new database.
MicrosoftEntraIDAuthentication	Off	To enable Microsoft Entra ID authentication, set the value to "AzureActiveDirectoryPassword" and then specify the username and password.

Parameter	Default Value	Description
Reporting_Analytics Database		
DatabaseName	TotalAgility_Reporting	Specify the name of the TotalAgility_Reporting database.
Server	server name	Specify the fully qualified domain name (FQDN) of the server.
Security		
WindowsAuthentication	true	Set to true to use Windows credentials for logging in. If set to false, provide the username and password. Otherwise, leave the username and password blank.
UserName	empty	
Password	empty	
NewDatabase	false	Set to true to create a new database.
MicrosoftEntraIDAuthentication	Off	To enable Microsoft Entra ID authentication, set the value to "AzureActiveDirectoryPassword" and then specify the username and password.
Reporting_Staging Database		
DatabaseName	TotalAgility_Reporting_Staging	Specify the name of the TotalAgility_Reporting_Staging database.
Server	server name	Specify the fully qualified domain name (FQDN) of the server.
Security		
WindowsAuthentication	true	Set to true to use Windows credentials for logging in. If set to false, provide the username and password. Otherwise, leave the username and password blank.
UserName	empty	
Password	empty	
NewDatabase	false	Set to true to create a new database.
MicrosoftEntraIDAuthentication	Off	To enable Microsoft Entra ID authentication, set the value to "AzureActiveDirectoryPassword" and then specify the username and password.
Identity Information		

Parameter	Default Value	Description
UserName	username	Enter the user name of the Windows service account for the TotalAgility services. If the service account name ends with a $ (dollar sign), do not specify the password.
Password	password	Enter the password of the windows service account for the TotalAgility services. If the service account name ends with a $ (dollar sign), do not specify the password.
RunAsSystemAccount	false	If set to true, the IIS Application Pool and Kofax TotalAgility services run as the LocalSystem account. When you set this parameter to true, databases should be created using SQL authentication.
RunAsNetworkServiceAccount	false	If set to true, the Application Pool and Kofax TotalAgility services are created with the NT Authority\Network Service username. • Set RunAsNetworkServiceAccount to true only for Docker installations that need to make use of a Group Managed Service Account (gMSA). • When you set this parameter to true, databases should be created using SQL authentication.
Install Info		

Parameter	Default Value	Description
InstallType	RTTS	Accept the default. When you install RTTS, it ignores the services. Services such as CoreworkerService, ImportService, and ExportService are not installed.
SslEnabled	false	You can set to true to enable https. See Configure for HTTPS Communication.
Transformation Server Info		
TransformationService	true	Accept the default.
TSConfigFile	no default	Specify the path to the .ini file along with the name for Transformation Server to configure. If you provide the .ini file, the TransformationServerInfo settings are taken from the .ini file; the parameters mentioned in the SilentInstallConfig are ignored. See the .INI file Sample for the parameters.
LogFile	`C:\Program Files \Kofax\TotalAgility \Transformation Server \Tslog.txt`	Set the location where the Transformation Server log file will be created. Make sure to include the filename (such as TSLog.txt) in the filepath. For example, `C:\Program Files\Kofax\TotalAgility \TransformationServer \Tslog.txt` If the log filepath is not valid, the Transformation Server installation fails.
InstallLocation	For example, `C:\Program Files (x86)\Kofax\ TotalAgility\ TransformationServer`	Specify the Transformation Server destination directory.
WindowsServiceAccount	username	Enter the name of the user who will run the Transformation Server.
WindowsServicePassword	password	Enter the password for the user.
UseSpecificPool	false	Set to true to add this Transformation Server to a pool. Set to false (or leave blank or assign any other value) to have Transformation Server process all activities regardless of the pool.

Parameter	Default Value	Description
PoolName	empty	If you set UseSpecificPool=true, enter the Transformation Server pool name. If you leave the pool name empty, all activities are processed regardless of their pools.
OLEnabled	true	Set to true to enable online learning tasks on this Transformation Server instance. Set to false or any other value to disable online learning tasks. If multiple instances of Transformation Server are installed for improving the throughput of the capture activities, online learning should be enabled only on a single Transformation Server instance in the cluster.
WcfPort	9001	Enter the port that is used by TotalAgility to communicate with the Transformation Server during synchronous calls (such as fuzzy searches and pushed activities).
ReservedSlots	0	Enter the number of slots on this Transformation Server that are reserved for pushed activities and high-priority activities.
OverrideDefSlots	empty (false)	To override the default number of processing slots for this Transformation Server, set this parameter to true. Any other value, including empty, is treated as false and the system automatically sets the default number of processing slots based on the system configuration.
MaxSlots	0	If you set CPUSERVER_OVERRIDE_DEF _ SLOTS to true, enter the number of processing slots for this Transformation Server.
EnableSyncCalls	true	Set to true to enable synchronous calls or false to disable these calls.
TS_INSTALL_NLP_WESTERN	false	If set to true, installs the Natural Language Processing language bundle for English, Spanish, Portuguese, French, and German.

Parameter	Default Value	Description
TS_INSTALL_NLP_ADDITIONALLANGUAGES1	false	If set to true, installs the Natural Language Processing language bundle for Italian, Romanian, and Dutch.
TS_INSTALL_NLP_ADDITIONALLANGUAGES2	false	If set to true, installs the Natural Language Processing language bundle for Japanese, Chinese, and Korean.
TS_INSTALL_NLP_ADDITIONALLANGUAGES3	false	If set to true, installs the Natural Language Processing language bundle for Swedish, Finnish, Danish, Norwegian, and Arabic.
<InstallSynchronous>	false	Set to true to install the Transformation Server in synchronous mode. Specify the port number (default: 9001) for the Transformation Server service. The port number is stored in the TotalAgility Web.config file as an application setting: `<add key= "TSExternalServicePortFor SyncProcessing" value="9001" />` If you wish to change the default port number, you must update the Web.config file and restart the Kofax TotalAgility IIS Application Pool.
StartServices	true	
<SiteRoot>	Default Web Site	Install TotalAgility under a custom site that uses a non-standard port other than the standard ports (80 and 443). For example, create a custom site called "testsite" under IIS using port number 85.

3. Save and close the file.
4. On the Command Prompt, change the current directory to the root directory of Setup.exe.
5. Run `Setup.exe /Silent`.
   - The Real Time Transformation Server is installed. The Real Time Transformation Service sets up the Transformation Server in synchronous mode and configures the core and SDK APIs of TotalAgility which clients can invoke.
   - The system generates a summary of log, KofaxTotalAgilitySilentInstallLog.txt, on the desktop.

- If any errors occur, by default, TotalAgility creates a log file, KofaxTotalAgilityInstallErrorLog.txt, on the desktop. Fix those errors and repeat the above steps.
- The success or failure of installation is indicated in the event log.
- When automating the installation, if you run setup.exe from Command line, or as a silent installation, one of the codes returns to indicate the following:
  - 0=Success
  - 1-Success with warnings
  - 2=Failure

6. To ensure that the installation works as expected, perform the following steps:
   a. Navigate to `<Program Files>/Kofax/ TotalAgility/Agility.Server.Web` and open the Web.config in a text editor.
   b. Locate the `TransformationServerExternalService_Binding` binding parameter and ensure that the `<transport ClientCredentialType>` value is set to Windows.
   c. Save and close the web configuration file.

Standard installation of TotalAgility

You can install TotalAgility using the standard installer wizard.

When you run the installation wizard for the Application Server or the Web/Application Server, based on the installation type selected, the following items are installed:

- TotalAgility
- Kofax Import Connector
- Transformation Designer
- Utility for Kofax Export Connector
- Licensing Service
- Reporting Service

> The reporting client is installed automatically on the Transformation Server and during the TotalAgility server installation.

When installing TotalAgility using the standard installer wizard, you can select Express or Standard as the installation option type:

- **Express installation:** TotalAgility is installed with all default settings with minimal user interaction. The express mode installs the Combined Web Application server, SQL Express, and Transformation Designer. You can configure the license server while installing TotalAgility or post-installation.
- **Standard installation:** TotalAgility is installed depending on the installation type (Database Only, Web Server, Application Server and more) and the settings you specify.

When using the installation wizard, you can use hotkeys to navigate to the next screen.

This section describes the following installation types:

- Express installation
- Standard installation for Database Only
- Standard installation for upgrading databases
- Standard installation of Web or Application on different servers
- Standard installation on a Web and Application on the same server
- Standard installation for Real Time Transformation Server

Express installation

Use the Express installation to install TotalAgility with minimal user interaction.

1. Navigate to `\\TotalAgilityInstall` from your installation files and run one of the following commands:
   - If UAC (User Account Control) is enabled, right-click Setup.exe and select **Run as administrator**.
   - If UAC is not enabled, run **Setup.exe**.

   The system starts the installation.
2. In the Kofax TotalAgility Installation Program window, click **Next** or press Enter to move to the next window.

   To exit the setup, click **Cancel** or press Esc.
3. In the **Kofax Inc. Software License Agreement** window, accept the terms in the License Agreement and click **Next**.
   The **Install Option Type** window opens.
4. Select **Express**.
5. Leave the **Skip License** check box clear to provide licensing details while installing TotalAgility.
   If you select this option and confirm to skip providing the licensing details, the Licensing window does not appear. You must configure the license server post installation.
6. Click **Next**.
   The **Licensing** window opens if you have not selected the **Skip License** check box.
7. Enter the License Server details and click **Next**.
   The **Credentials** window opens.
8. Enter the username and password of the Windows account to run Kofax TotalAgility.
   The **Installation Progress** window displays the progress of the installation. The setup installs the required files, databases, and other integrated products.
   If any errors occur, by default, TotalAgility creates a log file KofaxTotalAgilityInstallErrorLog.txt on the desktop. Fix those errors and repeat the above steps.
9. Click **Finish**.
   Your installation is now complete. Review the Summary Panel for the installation report.

Standard installation of Database Only

1. Navigate to `\\TotalAgilityInstall` from your installation files and run one of the following commands:
   - If UAC (User Account Control) is enabled, right-click Setup.exe and select **Run as administrator**.
   - If UAC is not enabled, run **Setup.exe**.

   The system starts the installation.
2. In the **Kofax TotalAgility Installation Program** window, click **Next** or press Enter to move to the next window.

   To exit the setup, click **Cancel** or press Esc.
3. In the **Kofax Inc. Software License Agreement** window, accept the terms in the License Agreement and click **Next**.
   The **Install Option Type** window opens.
4. Select your installation option as **Standard** and click **Next**.
5. In the **Type of Install** window, select **Database Only** (default: Web/Application Server) and click **Next**.
   The **Databases** window opens.
6. Do one of the following:
   - By default **Install Databases** is selected. Click **Next** to install the databases.
   - If the database server already contains the same databases and you want to overwrite the existing databases, select the **Overwrite databases if they exist?** check box. The **Test connections** option becomes available. Click **Test connections** to test the database connections. Once the databases are successfully connected, click **OK**.

     If the database details are not valid, or if the database does not exist, the connection to the database fails.
   - If you want to provide the database server for each database do the following: Enter a database name; click ellipsis for **Server** and choose the mode of database server as SQL Server NonSSL or SQL Azure; select the SQL server database server to install from the list of available servers; in the **Security** group, on the **Authentication** list, either use **Windows Authentication** or **SQL Server Authentication** if the database server mode is SQL Server NonSSL, or use **SQL Server Authentication/Azure Active Directory - Password** if the database server mode is SQL Azure. Provide the user name and password for the SQL Server authentication and Azure Active Directory - Password options and then click **OK**.

     If all the databases reside on the same server, select the **Apply these settings to all other Databases** check box.
7. Click **Next**.
   The **DB Connection Results** window opens and displays the results of the connection to the databases. If the connection to databases fails, the installation cannot continue. Click **Back** and make changes as needed.

The **DB Connection Results** window opens only if the check box for "Install Databases" or "Overwrite databases if they exist?" is selected in the previous step.

8. Once the databases are successfully connected, click **Next**.
   The **Capture Binary Data Storage** window opens.
9. By default, the binary data such as capture documents, .NET Store DLLs and CCM Packs are stored in the TotalAgility database. You can use the preconfigured external cloud data storage services such as Amazon S3 or Windows Azure Blob Storage for saving and processing binary data. The cloud services help to reduce the SQL Server maintenance costs, delegate maintenance to external services and provide encryption.

   If you change the storage type to Azure/Amazon blob storage or SQL Server and File System, the binary data is saved in the selected storage type. Once the storage type is changed, you cannot turn it off later.

   Select one of the following capture data storage types:

Storage type	Description
SQL Server (default)	Stores capture data in the SQL Server.
SQL Server and File System	Stores the FILESTREAM file groups. The Capture documents are stored in the file system, and the database has a particular file group called 'FILESTREAM'. You can perform actions on the documents using the SQL Server database. The Administrator creates these file groups. For these file groups to appear under the File storage settings, you must enable the FILESTREAM feature in the SQL Server Configuration Manager from Start > Programs > SQL Server Configuration Manager > SQL Server properties > 'FILESTREAM'. Under the **File storage settings**, the file groups configured in the SQL Server configuration manager are listed. Select a file group to store the capture binaries. The FILESTREAM is not supported with SQL Server authentication or when the databases do not exist.
Windows Azure Blob Storage	Stores capture data in Azure Blob Storage service. Configure the following Cloud Account Settings: **a.** Enter the **Account Connection String** to connect to the Blob storage service. **b.** Enter the **Container Name** of the storage service.

Storage type	Description
Amazon S3	Configure the following Cloud Account Settings: **a.** Enter the **Access Key** to connect to the Amazon S3 storage service. **b.** Enter the **Secret Key**. **c.** On the **Region** list, select a predefined S3 region, such as Asia Pacific (Sydney). (Default: US East (Ohio)) **d.** Enter the **Bucket Name**. The bucket is a fundamental container in Amazon S3 for data storage.

10. Click **Next**.
    The **Kofax TotalAgility Resource Credentials** window opens.
11. Enter the credentials (**Username**, **Password** (minimum 6 alphanumeric characters) and **Confirm** password) for the user to be created on installation.
    By default, the username field displays the name of the logged-on user. You can specify a different username, as required.
12. Click **Next**.
    The **Installation Review** window opens and displays the settings.
13. Review the settings and click **Next** to start the installation.
    The **Installation Progress** window displays the progress of the installation. The setup installs the required files, databases, and other integrated products.
    The **Licensing** window opens.
14. To connect to the license server, do the following:
    a. In the **License Server** field, enter the location of the License Server.

    To connect to a shared License Server, enter the name or the IP address of a shared License Server.

    b. In the **Port Number** field, enter the port number on which the License Server listens. Alternatively, click **Skip** if you want to skip connecting to the License Server now but connect when launching TotalAgility.
15. Click **Next**.
    The Kofax TotalAgility Installation Complete window displays the installation summary.
    If any errors occur, by default, TotalAgility creates a log file KofaxTotalAgilityInstallErrorLog.txt on the desktop. Fix those errors and repeat the above steps.
16. Click **Finish**.
    Your installation is now complete.

Standard installation for upgrading databases

You can upgrade all the databases to the latest version of TotalAgility when TotalAgility is not installed locally.

1. From your TotalAgility installation files, navigate to `\\TotalAgilityInstall` and run one of the following commands:
   - If UAC (User Account Control) is enabled, right-click Setup.exe and select **Run as administrator**.
   - If UAC is not enabled, run **Setup.exe**.

   The system starts the installation.
2. In the **Kofax TotalAgility Installation Program** window, click **Next** or press Enter to move to the next window.

   To exit the setup, click **Cancel** or press Esc.
3. In the **Kofax Inc. Software License Agreement** window, accept the terms in the License Agreement and click **Next**.
4. Select your installation option as **Standard** and click **Next**.
5. In the **Type of Install** window, select **Upgrade Databases** (default: Web/Application Server).

   To import the Workspace package, select the check box for **Import system Workspace package** (default: Clear).
6. Click **Next**.

   The **Databases** window opens.
7. To specify the lower version databases to upgrade, do the following for the databases as needed: enter the database name to upgrade; click ellipsis for **Server** and choose the mode of database server; in the **Security** group, either use **Windows Authentication**, or select the **SQL Server Authentication** by providing the user name and password and then click **OK**. If all the databases reside on the same server, select the **Apply these settings to all other Databases** check box.
8. Click **Next**.

   The **Installation Review** window opens.
9. Review the settings and click **Next** to start the installation.

   The **Installation Progress** window displays the progress of the installation. The setup upgrades TotalAgility databases.

   Ensure that no error log is created. If any errors occur, by default, TotalAgility creates a log file KofaxTotalAgilityInstallErrorLog.txt on the desktop if the path in the System diagnostics section of the `Setup.exe.config` is not defined. You can define the path for the log file by specifying the path in the <add name="KTALog" type="System.Diagnostics.TextWriterTraceListener" initializeData="<logfile path> <log file name>". Fix those errors and repeat the above steps.
10. The Kofax TotalAgility Installation Complete window displays the summary for the installation. Click **Finish**.
    Your installation is now complete.

Standard installation of Web and Application on different servers

Install TotalAgility on a separate Web or Application server.

This section describes the standard installation for the following installation types:

- Standard installation of the Web Server
- Standard installation of the Application Server

Standard installation of the Web Server

1. From your TotalAgility installation files, navigate to \\TotalAgilityInstall and run one of the following commands:
   - If UAC (User Account Control) is enabled, right-click Setup.exe and select **Run as administrator**.
   - If UAC is not enabled, run **Setup.exe**.

   The system starts the installation.
2. In the **Kofax TotalAgility Installation Program** window, click **Next** or press Enter to move to the next window.

   To exit the setup, click **Cancel** or press Esc.
3. In the **Kofax Inc. Software License Agreement** window, accept the terms in the License Agreement and click **Next**.
4. Select your installation option as **Standard** and click **Next**.
5. In the **Type of Install** window, select **Web Server** (default: Web/Application Server) and click **Next**.
   The **Software Checks** window displays the list of detected software. TotalAgility requires certain software to be installed on your system before installing TotalAgility.
6. Review the **Detected Software** list and proceed as follows:
   - If your system does not have all the required software, click **Cancel** to close the installer and install the software.
   - If your system has all the required software, click **Next**.

     The **Destination** window opens.
7. Use the default installation folder or click **Browse** to select a different path, and click **Next**. The **Choose Server Location with Options** window opens.
8. In the **Server Name** field enter the name of your existing TotalAgility application server. The name must be fully qualified, such as `<machinename>.<fullyqualifieddomainname>:<portnumber>`.

   The port number is only required if it is other than port 80.
9. To support SSL, select the **Support SSL** check box.

The SSL option is only available if you have configured the https binding in IIS. See Configure TotalAgility for HTTPS Communication.

10. Click **Next**.
    The **Credentials** window opens.
11. Enter the credentials (Password and Confirm password) for the user who will run TotalAgility.
12. On the **Root Website to host TotalAgility Application** list, select the website to host the TotalAgility application. By default, the **Default Web Site** is selected.

    The websites added in IIS Manager appear on this list. To add a website in IIS Manager, click `Start > Run > Inetmgr > Sites > Add Web Site`.

13. Do either of the following for **Windows Authentication**:
    - To log on automatically to TotalAgility Designer and Workspace, keep the **Windows Authentication** check box selected (default).
    - To log on manually to TotalAgility Designer and Workspace, clear the **Windows Authentication** check box.
14. Click **Next**.
    The **Installation Review** window opens and displays the settings.
15. Review the settings and click **Next** to start the installation.
    The **Installation Progress** window opens. The setup installs the required files, databases, and other integrated products.
    If any errors occur, by default, TotalAgility creates a log file KofaxTotalAgilityInstallErrorLog.txt on the desktop. Fix those errors and repeat the above steps.
16. Click **Finish**.
    Your installation is now complete.

Standard installation of the Application Server

1. From your TotalAgility installation files, navigate to `\\TotalAgilityInstall` and run one of the following commands:
    - If UAC (User Account Control) is enabled, right-click Setup.exe and select **Run as administrator**.
    - If UAC is not enabled, run **Setup.exe**.

    The system starts the installation.
2. In the **Kofax TotalAgility Installation Program** window, click **Next** or press Enter to move to the next window.

    To exit the setup, click **Cancel** or press Esc.

3. In the **Kofax Inc. Software License Agreement** window, accept the terms in the License Agreement and click **Next**.
4. Select your installation option as **Standard** and click **Next**.
5. In the **Type of Install** window, select **Application Server** (default: Web/Application Server) and click **Next**.

The **Application Server** window opens.

6. By default, the Windows Services and WCF Services are selected and installed. If you do not want to install any service, clear the check box for the service.

   The Windows Services include:

   - Core Services
   - Reporting Service
   - Transformation Service
   - Export Service
   - Import Service

     On installing TotalAgility, one instance of Import Connector is automatically installed by default. To install multiple instances of Import Connector, select the check box for **Instance 2** and **Instance 3** for **Import Service**.

     When you uninstall TotalAgility, all the instances of Message Connector are uninstalled.
   - License Service (Primary license server or Backup license server, and Enable Https)

     By default, the Primary server is selected. If the primary license server fails to connect, you can connect to the backup server by manually updating the license server configuration file. To automatically update the setting post TotalAgility installation, run the Configuration Utility.

     For the License service, enable Https and provide the thumbprint of a correctly configured certificate on the computer on which you install TotalAgility. If you enable Https and provide the certificate, the Port number field in the Licensing window automatically displays the port as 3582.

   The WCF Services include Core Services.

   Clear the check box for Core Services to install only Transformation Server on the Application server so that the IIS prerequisite is not needed. IIS is not required for standalone installation of the Transformation Server.

7. Click **Next**.

   The **Software Checks** window opens. The system displays a list of required software based on services and database selection and whether the required software is installed.

8. Review the **Detected Software** list and proceed as follows:

   - If your system does not have all the required software, click **Cancel** to close the installer and install the software.
   - If your system has all the required software, click **Next**.

     The **Destination** window opens.

9. Use the default installation folder for installing TotalAgility, or click **Browse** to select a different folder, and click **Next**.
   The **Credentials** window opens.

10. Enter the credentials (password and confirm password) for the user who will run TotalAgility.

    When you enter the credentials of a non-admin account, changes need to be made to ensure the Streaming Service will run.

    If the service account name ends with a $ (dollar sign), do not specify the password.

11. Click **Next**.
    The **Databases** window opens.
12. Do one of the following:

Option	Description
Use the default settings.	Keep the **Install Databases** check box selected and follow Step 13.
A database with the same name already exists, and you want to overwrite the existing database.	**a.** Select the **Overwrite databases if they exist?** check box. The **Test connections** option becomes available. **b.** Click **Test connections**. A message displays the database connection results. If the database details are not valid, or if the database does not exist, the connection to the database fails. **c.** Click **Next**. **d.** Click **Yes** to confirm overwriting databases.
Point to an existing database on your local machine.	**a.** Clear the **Install Databases** and **Overwrite databases if they exist?** check boxes. **b.** Enter a name for each database and follow Step 13.
Point to existing databases on a different machine.	**a.** Select the **Install Databases** and **Overwrite databases if they exist?** check boxes. **b.** For each database do the following: **1.** Enter a database name. **2.** Click ellipsis for **Server** and select the mode of the database server as SQL Server NonSSL or SQL Azure. **3.** Select the SQL server database server to install from the list of available servers. **4.** In the **Security** group, on the **Authentication** list, either use **Windows Authentication** or **SQL Server Authentication** if the database server mode is SQL Server NonSSL, or use **SQL Server Authentication**/**Azure Active Directory - Password** if the database server mode is SQL Azure. Provide the user name and password for the SQL Server authentication and Azure Active Directory - Password options and then click **OK**. **5.** If all the databases reside on the same server, select the **Apply these settings to all other Databases** check box.

- If the Application Pool is running under a System account, the System displays an error.
- You must have a trusted account to interact with databases. Provide the SQL credentials and click **OK**.
- If you install TotalAgility without any databases, you can use the Configuration Utility to point to the databases when they are available at a later stage. See the *Kofax TotalAgility Configuration Utility Guide*.

13. Click **Next**.
    The **DB Connection Results** window opens and displays the results of connecting to databases. If the connection to databases fails, the installation cannot be progressed. Click **Back** and make changes as needed.

    The **DB Connection Results** window opens only if the check box for "Install Databases" or "Overwrite databases if they exist?" is selected in the previous step.

14. Once the databases are successfully connected, click **Next**.
    The **Capture Binary Data Storage** window opens.
15. By default, the binary data such as Capture documents, .NET Store DLLs and CCM Packs are stored in the TotalAgility database. You can use the preconfigured external cloud data storage services such as Amazon S3 or Windows Azure Blob Storage for saving and processing binary data. The cloud services help to reduce the SQL Server maintenance costs, delegate maintenance to an external service, and provide encryption.

    If you change the storage type to Azure/Amazon blob storage or SQL Server and File System, the binary data is saved in the selected storage type. Once the storage type is changed, you cannot turn it off later.

    Select one of the following Capture data storage types:

Storage type	Description
SQL Server (default)	Stores Capture data in the SQL Server.

Storage type	Description
SQL Server and File System	Stores the FILESTREAM file groups. The Capture documents are stored in the file system, and the database has a particular file group called 'FILESTREAM'. You can perform actions on the documents using the SQL Server database. The Administrator creates these file groups. For these file groups to appear under the File storage settings, you must enable the FILESTREAM feature in the SQL Server Configuration Manager from Start > Programs > SQL Server Configuration Manager > SQL Server properties > 'FILESTREAM'. Under the **File storage settings**, the file groups configured in the SQL Server configuration manager are listed. Select a file group to store the Capture binaries. FILESTREAM is not supported with SQL Server authentication or when the databases do not exist.
Windows Azure Blob Storage	Stores Capture data in Azure Blob Storage service. Configure the following Cloud Account Settings: **a.** Enter the **Account Connection String** to connect to the Blob storage service. **b.** Enter the **Container Name** of the storage service.
Amazon S3	Configure the following Cloud Account Settings: **a.** Enter the **Access Key** to connect to the Amazon S3 storage service. **b.** Enter the **Secret Key**. **c.** On the **Region** list, select a predefined S3 region, such as Asia Pacific (Sydney). (Default: US East (Ohio)) **d.** Enter the **Bucket Name**. The bucket is a fundamental container in Amazon S3 for data storage.

16. Click **Next**.
    The **Kofax TotalAgility Resource Credentials** window opens.
17. Enter the credentials (**Username**, **Password** (minimum 6 alphanumeric characters) and **Confirm** password) for the user to be created on installation.
    By default, the username field displays the name of the logged-on user. You can specify a different username, as required.
18. Click **Next**.
    The **Install Options** window opens.
19. To automatically start the services, keep the **Automatically Start Services** check box selected, and click **Next**.
    The **Installation Review** window opens and displays the settings.
20. Click **Next** to start the installation.

The **Installation Progress** window opens. The setup installs the required files, databases, and other integrated products.

21. Click **Next**.
    The **Licensing** window opens.
22. Do one of the following:

Option	Description
Skip connecting to the License Server now but connect when launching TotalAgility. OR If you have selected to install databases manually (in Step 12).	**a.** Click **Skip**. **b.** Click **Finish**.
Connect to the License Server	**a.** In the **License Server** field, enter the location of the License Server. To connect to a shared License Server, enter the name or the IP address of a shared License Server. **b.** In the **Port Number** field, enter the port number on which the License Server listens. For the License service, if you enable Https and provide the thumbprint of a correctly configured certificate on the computer on which you install TotalAgility, the Port Number field in the Licensing screen automatically displays the port as 3582. **c.** Click **Next**. The second Licensing window opens. Follow the next step.

23. Enter your TotalAgility **Serial Number** and **Product code**.
    The serial number and product code appear by default if the License Server is a shared license server.
24. The read-only fields, (**Machine ID** and **Server Version**) of the selected License Server appear.
25. To activate the license, select the license activation method:
    - **Automatic**: Use this option when Internet connectivity is available. The license is activated online.
    - **Manual**: Use this option when there is no Internet connectivity, or if automatic activation is not successful from the installer or license utility for your Kofax product. The Activation Code box is displayed where you can specify the activation code.
      a. To obtain the activation code:
         1. Enter the following URL in your browser:
            `http://activatelegacy.Kofax.com/support/Activation/manual.aspx`
            The Kofax Product License Activation page opens.

2. Enter the **Serial Number** issued to you at the time of purchase. If you have a hardware key, the serial number (usually 7 characters) is printed on the key.
3. Enter the email address where Kofax can send the information you need to activate the product license.
4. Click **Next** to proceed with the activation process.

   Ignore the **Version** selection field if you do not have Kofax Capture or Ascent Capture.

5. Copy and paste the **Activation Code** into the field on the **Licensing** window.
6. Click **Activate** to activate the license, or click **Skip**. If you skip activating the license, a warning informs that you need to activate the license later.

b. Once you get the activation code, copy the code.

c. Paste the code in the **Activation Code** field on the **Licensing** window.

d. Click **Activate** to activate the license or click **Skip** to activate the license later. If you skip activating the license, the summary panel displays the warning that you need to activate the license later.

26. Click **Finish**.

Your installation is now complete.

After TotalAgility is installed, the installer prompts you to install the Kofax Transformation Server bundle.

- If you want to install any further services, you should uninstall TotalAgility and reinstall it by selecting the required services in the Application Server window.
- If any errors occur, by default, TotalAgility creates a log file KofaxTotalAgilityInstallErrorLog.txt on the desktop. Fix those errors and repeat the above steps.

After you install TotalAgility, further configure TotalAgility to:

- Launch TotalAgility
- Integrate with Dynamics CRM
- Integrate with Dynamics AX
- Integrate with Micro Focus Content Manager

To view the TotalAgility version you installed, log in to TotalAgility Designer and navigate to System > System settings. The product version information is available at the bottom right corner of the System settings page. The last three digits correspond to the build number.

Standard installation of the Web and Application on the same server

This installation type installs the Web and Application servers on a single machine.

1. From your TotalAgility installation files, navigate to `\\TotalAgilityInstall` and run one of the following commands:
   - If UAC (User Account Control) is enabled, right-click Setup.exe and select **Run as administrator**.
   - If UAC is not enabled, run **Setup.exe**.

   The system starts the installation.
2. In the **Kofax TotalAgility Installation Program** window, click **Next** or press Enter to move to the next window.

   To exit the setup, click **Cancel** or press Esc.
3. In the **Kofax Inc. Software License Agreement** window, accept the terms in the License Agreement and click **Next**.
4. Select your installation option as **Standard** and click **Next**.
5. In the **Type of Install** window, select **Web/Application Server** (default) and click **Next**.
   The **Application Server** window opens.
6. By default, the Windows Services and WCF Services are selected and installed. If you do not want to install any service, clear the check box for the service.
   The Windows Services include:
   - Core Services
   - Reporting Service
   - Transformation Service
   - Export Service
   - Import Service

     On installing TotalAgility, one instance of Import Connector is automatically installed by default. To install multiple instances of Import Connector, select the check box for **Instance 2** and **Instance 3** for **Import Service**.

     When you uninstall TotalAgility, all the instances of Message Connector are uninstalled.
   - License Service (Primary license server or Backup license server, and Enable Https)

     By default, the Primary server is selected. If the primary license server fails to connect, you can connect to the backup server by manually updating the license server configuration file. To automatically update the setting post TotalAgility installation, run the Configuration Utility.

     For the License service, enable Https and provide the thumbprint of a correctly configured certificate on the computer on which you install TotalAgility. If you enable Https and provide the certificate, the Port number field in the Licensing window automatically displays the port as 3582.

   The WCF Services include Core Services.

Clear the check box for Core Services to install only Transformation Server on the Application server so that the IIS prerequisite is not needed. IIS is not required for standalone installation of the Transformation Server.

7. Click **Next**.
   The **Software Checks** window opens. The system displays a list of required software based on services and database selection and whether the required software is installed.
8. Review the **Detected Software** list and proceed as follows:
   - If your system does not have all the required software, click **Cancel** to close the installer and install the software.
   - If your system has all the required software, click **Next**.
     The **Destination** window opens.
9. Use the default installation folder or click **Browse** to select your desired location where TotalAgility will be installed.
10. Click **Next**.
    The **Credentials** window opens.
11. Enter the credentials (**Password** and **Confirm** password) for the user who will run TotalAgility.

    If the service account name ends with a $ (dollar), do not specify the password.

12. On the **Root Website to host TotalAgility Application** list, select the website to host the TotalAgility application. By default, the **Default Web Site** is selected.

    The websites added in IIS Manager appear on this list. To add a website in IIS Manager, click `Start > Run > Inetmgr > Sites > Add Web Site`.

13. To support SSL, select the **Support SSL** check box. (Default: Clear)

    - The SSL option is only available if you have configured the https binding in IIS. See Configure TotalAgility for HTTPS communication.
    - If HTTPS is being used in TotalAgility Designer, when you link TotalAgility servers in some browsers, you are prompted to select a client certificate and authenticate yourself. Ignore the prompt, as TotalAgility will automatically pass any specified client certificates as required.

14. Do either of the following for **Windows Authentication**:
    - To log on automatically to TotalAgility Designer and Workspace, keep the **Windows Authentication** check box selected (default).
    - To log on manually to TotalAgility Designer and Workspace, clear the **Windows Authentication** check box.
15. Click **Next**.
    The **Databases** window opens.
16. Do one of the following:

Option	Description
Use the default settings. This means new databases are installed.	Ensure the following: **a.** The **Install Databases** check box is selected. **b.** The **Overwrite databases if they exist?** check box is clear.
A database with the same name already exists, and you want to overwrite the existing database.	**a.** Select the **Overwrite databases if they exist?** check box. The **Test connections** option becomes available. **b.** Click **Test connections**. A message lists the database connection results. If the database details are not valid, or if the database does not exist, the connection to the database fails. **c.** Click **Next**. **d.** Click **Yes** to confirm overwriting databases. If you choose to overwrite the existing databases, and the database details are not valid, or if the database does not exist, an error occurs.
Point to an existing database on your local machine.	**a.** Clear the check boxes for **Install Databases** and **Overwrite databases if they exist?**. **b.** Enter a name for each database and follow Step 13.
Point to existing databases on a different machine.	**a.** Clear the **Install Databases** and **Overwrite databases if they exist?** check boxes **b.** For each database do the following: **1.** Enter a database name. **2.** Click ellipsis for **Server** and select the mode of the database server as SQL Server NonSSL or SQL Azure. **3.** Select the SQL server database server to install from the list of available servers. **4.** In the **Security** group, on the **Authentication** list, either use **Windows Authentication** or **SQL Server Authentication** if the database server mode is SQL Server NonSSL, or use **SQL Server Authentication/Azure Active Directory - Password** if the database server mode is SQL Azure. Provide the user name and password for the SQL Server authentication and Azure Active Directory - Password options and then click **OK**. **5.** If all the databases reside on the same server, select the **Apply these settings to all other Databases** check box.
Manually install the databases.	**a.** Run the setup.exe wizard to this screen. **b.** Clear the **Install Databases** and **Overwrite databases if they exist?** check boxes. **c.** Install the databases. **d.** After installing the databases, configure appropriate settings on this screen and follow Step 13.

- If the Application Pool is running under a System account, the System displays an error.
- You must have a trusted account to interact with databases. Provide the SQL credentials and click **OK**.
- If you install TotalAgility without any databases, you can use the Configuration Utility to point to the databases when they are available at a later stage. See the *Kofax TotalAgility Configuration Utility Guide*.

17. Click **Next**.
    The **DB Connection Results** window opens and displays the results of connecting to databases. If the connection to databases fails, the installation cannot continue. Click **Back** and make changes as needed.

    The **DB Connection Results** window opens only if the check box for "Install Databases" or "Overwrite databases if they exist?" is selected in the previous step.

18. Once the databases are successfully connected, click **Next**.
    The **Capture Binary Data Storage** window opens.
19. By default, the binary data such as Capture documents, .NET Store DLLs and CCM Packs are stored in the TotalAgility database. You can use the preconfigured external cloud data storage services such as Amazon S3 or Windows Azure Blob Storage for saving and processing binary data. The cloud services help to reduce the SQL Server maintenance costs, delegate maintenance to an external service, and provide encryption.

    If you change the storage type to Azure/Amazon Blob Storage or SQL Server and File System, the binary data is saved in the selected storage type. Once the storage type is changed, you cannot turn it off later.

    Select one of the following Capture data storage types:

Storage type	Description
SQL Server (default)	Stores Capture data in the SQL Server.

Storage type	Description
SQL Server and File System	Stores the FILESTREAM file groups. The Capture documents are stored in the file system, and the database has a particular file group called 'FILESTREAM'. You can perform actions on the documents using the SQL Server database. The Administrator creates these file groups. For these file groups to appear under the File storage settings, you must enable the FILESTREAM feature in the SQL Server Configuration Manager from Start > Programs > SQL Server Configuration Manager > SQL Server properties > 'FILESTREAM'. Under the **File storage settings**, the file groups configured in the SQL Server configuration manager are listed. Select a file group to store the Capture binaries. FILESTREAM is not supported with SQL Server authentication or when the databases do not exist.
Windows Azure Blob Storage	Stores Capture data using the Azure Blob Storage service. Configure the following Cloud Account Settings: **a.** Enter the **Account Connection String** to connect to the Blob storage service. **b.** Enter the **Container Name** of the storage service.
Amazon S3	Configure the following Cloud Account Settings: **a.** Enter the **Access Key** to connect to the Amazon S3 storage service. **b.** Enter the **Secret Key**. **c.** On the **Region** list, select a predefined S3 region, such as Asia Pacific (Sydney). Default: US East (Ohio)) **d.** Enter the **Bucket Name**. The bucket is a fundamental container in Amazon S3 for data storage.

20. Click **Next**.
    The **Kofax TotalAgility Resource Credentials** window opens.
21. Enter the credentials (**Username**, **Password** (minimum 6 alphanumeric characters) and **Confirm** password) for the user to be created on installation.

    By default, the username field displays the name of the logged-in user. You can specify a different username, as required.

22. Click **Next**.
    The **Install Options** window opens.
23. To automatically start the services, keep the **Automatically Start Services** check box selected and click **Next**.
    The **Installation Review** window opens and displays the settings.
24. Review the settings and click **Next** to start the installation.

The **Installation Progress** window displays the progress of the installation. The setup installs the required files, databases, and other integrated products.

The **Licensing** window opens.

25. Do one of the following:

Option	Description
Connect to the License Server	a. In the **License Server** field, enter the location of the License Server. To connect to a shared License Server, enter the name or the IP address of a shared License Server. b. In the **Port Number** field, enter the port number on which the License Server listens. c. Click **Next**. The second Licensing window opens. Follow the next step.
Skip connecting to the License Server now but connect when launching TotalAgility. OR If you have selected to install databases manually (in Step 13).	a. Click **Skip**. b. Click **Finish**.

26. Click **Next**.
The **Installation Progress** window opens. The setup installs the required files, databases, and other integrated products.
27. Click **Next**.
The **Licensing** window opens.
28. To connect to the License Server:
    a. In the **License Server** field, enter the location of the License Server.

    To connect to a shared License Server, enter the name or the IP address of a shared License Server.

    b. In the **Port Number** field, enter the port number on which the License Server listens.
    c. Click **Next**. The second Licensing window opens.
    Alternatively, click **Skip** and proceed to Step 24 in the following cases:
    - If you want to skip connecting to the License Server now but connect when launching TotalAgility.
    - If you had selected to install databases manually (in Step 12).
29. Enter your TotalAgility **Serial Number** and **Product Code**.

    The **Serial Number** and **Product Code** appear by default if the License Server is a shared license server.

30. The ID of the selected License Server appears in the **Machine ID** field.

31. To activate the license, select the license activation method:
    - **Automatic**: Use this option when Internet connectivity is available. The license is activated online.
    - **Manual**: Use this option when there is no Internet connectivity, or if automatic activation is not successful from the installer or license utility for your Kofax product. The Activation Code box is displayed where you can specify the activation code.

      a. To obtain the activation code:

         1. Enter the following URL in your browser:
            `http://activatelegacy.Kofax.com/support/Activation/manual.aspx`
            The Kofax Product License Activation page opens.
         2. Enter the **Serial Number** issued to you at the time of purchase. If you have a hardware key, the serial number (usually 7 characters) is printed on the key.
         3. Enter the email address where Kofax can send the information you need to activate the product license.
         4. Click **Next** to proceed with the activation process.

            Ignore the "Version" selection field if you do not have Kofax Capture or Ascent Capture.

         5. Copy and paste the **Activation Code** into the field on the **Licensing** window.
         6. Click **Activate** to activate the license or click **Skip**. If you skip activating the license, a warning informs that you need to activate the license later.

      b. Once you get the activation code, copy the code.

      c. Paste the code in the **Activation Code** field on the **Licensing** window.

      d. Click **Activate** to activate the license, or click **Skip** to activate the license later. If you skip activating the license, the summary panel displays the warning that you need to activate the license later.

    The license period starts once the license is activated. So, you can skip activation during installation and only activate it when you are ready to use TotalAgility. You are required to activate the license when you log in to TotalAgility for the first time.

32. Click **Finish**.
    Your installation is now complete.
    After TotalAgility is installed, the installer prompts you to install the Transformation Server.

    - To install any further services, you must uninstall TotalAgility and reinstall by selecting the required services in the Application Server window.
    - If any errors occur, by default, TotalAgility creates a log file KofaxTotalAgilityInstallErrorLog.txt on the desktop. Fix those errors and repeat the above steps.

After you install TotalAgility, further configure TotalAgility to:

- Launch TotalAgility
- Integrate with Dynamics CRM
- Integrate with Dynamics AX
- Integrate with Micro Focus Content Manager

To view the TotalAgility version you installed, login to TotalAgility Designer and navigate to System > System settings. The version information is available at the bottom right corner of the System settings page. The last three digits correspond to the build number.

Standard installation of Real Time Transformation Server

1. Navigate to `\\TotalAgilityInstall` from your TotalAgility installation files and run one of the following commands:
   - If UAC (User Account Control) is enabled, right-click Setup.exe and select **Run as administrator**.
   - If UAC is not enabled, run **Setup.exe**.

   The system starts the installation.
2. In the **Kofax TotalAgility Installation Program** window, click **Next** or press Enter to move to the next window.

   To exit the setup, click **Cancel** or press Esc.
3. In the **Kofax Inc. Software License Agreement** window, accept the terms in the License Agreement and click **Next**.
4. Select your installation option as **Standard** and click **Next**.
5. In the **Type of Install** window, select **Real Time Transformation Service** and click **Next**.
   The **Software Checks** window opens. The system displays a list of required software based on services and database selection and whether the required software is installed.
6. Review the **Detected Software** list and proceed as follows:
   - If your system does not have all the required software, click **Cancel** to close the installer and install the software.
   - If your system has all the required software, click **Next**.

     The **Destination** window opens.
7. Use the default installation folder or click **Browse** to select a different path and click **Next**.
   The **Credentials** window opens.
8. Enter the credentials (password and confirm password) for the user who will run TotalAgility.

   If the service account name ends with a $ (dollar sign), do not specify the password.
9. On the **Root Website to host TotalAgility Application** list, select the website to host the TotalAgility and Workspace application. By default, the **Default Web Site** is selected.

The websites added in IIS Manager appear on this list. To add a website in IIS Manager, click `Start > Run > Inetmgr > Sites > Add Web Site`.

10. To support SSL, select the **Support SSL** check box.

    The SSL option is only available if you have configured the https binding in IIS. See Configure TotalAgility for HTTPS communication.

11. Do either of the following to set the **Windows Authentication** option:
    - To log on automatically to TotalAgility and Workspace, keep the **Windows Authentication** check box selected (default).
    - To log on manually to TotalAgility and Workspace, clear the **Windows Authentication** check box.
12. Click **Next**.
    The **Databases** window opens.
13. Use the default settings or do the following:
    - If you want to point to an existing database in your local machine, enter a name for each database and enter the credentials (password and confirm password) for the user to be created on installation.
    - If you want to provide the database server for each database do the following: Enter a database name; click ellipsis for **Server** and choose the mode of database server as SQL Server NonSSL or SQL Azure; select the SQL server database server to install from the list of available servers; in the **Security** group, on the **Authentication** list, either use **Windows Authentication** or **SQL Server Authentication** if the database server mode is SQL Server NonSSL, or use **SQL Server Authentication/Azure Active Directory - Password** if the database server mode is SQL Azure. Provide the user name and password for the SQL Server authentication and Azure Active Directory - Password options and then click **OK**. If all the databases reside on the same server, select the **Apply these settings to all other Databases** check box.
14. Click **Next**.
    The **Installation Review** window opens.
15. Review the settings and click **Next**.
    The **Installation Progress** window opens. The setup installs the required files, databases, and other integrated products.
16. Click **Finish**.
    Your installation is now complete.

    Ensure that no error log is created. If any errors occur, by default, TotalAgility creates a log file KofaxTotalAgilityInstallErrorLog.txt on the desktop. Fix those errors and repeat the above steps.

17. To ensure that the installation works as expected, perform the following steps.
    a. Navigate to `<Program Files>/Kofax/TotalAgility/Agility.Server.Web` and edit the Web.config file.

b. Locate the `TransformationserverExternalService_Binding` binding parameter and ensure that the `<transport clientCredentialType>` value is set to `Windows`.

c. Save and close Web.config.

Install TotalAgility on a non-standard port

To install TotalAgility on a non-standard port, you must first edit bindings to specify the port number and update the base address and restart the Streaming Service.

Edit bindings

1. Click `Start > Run > InetMgr > Sites > Default Web Site`.
   By default, the **Default Web Site** is selected.
2. Right-click on the Default Website and click **Edit Bindings**.
3. Select the default port 80 and click **Edit**.
4. In the **Edit Site Binding** window, change the port number to 81 and click **OK**.
5. Install Kofax TotalAgility. See TotalAgility installation.
6. Enter the following URL in your browser and change the port number to 81 in the URL to log in: `http://ServerName:81/TotalAgility/forms/GeneralWorkQueue.form`.

Update the base address

You can edit the base address setting either manually or using the Configuration Utility.

Manually

1. From your TotalAgility installation files, open the Agility.Server.StreamingService.exe.configuration file available at `\\TotalAgilityInstall\Agility.Server.Web\bin>` and change the base address section.

```
< baseAddresses >
<add baseAddress="http://<ServerName>.<DomainName>:
<non default port>/TotalAgility/Services/Sdk/StreamingService.svc" />
</ baseAddresses >
```

2. Similarly, change the base address section in the Agility.Server.StreamingService.exe.config file available at `\\TotalAgilityInstall\CoreWorkerService>`.

```
      < baseAddresses >
<add baseAddress="http://<ServerName>.<DomainName>:
<non default port>/TotalAgility/Services/Core/StreamingService.svc" />
</ baseAddresses >
```

3. The streaming service hosts an http server. If the Streaming Service, Package Streaming Service and the Capture Streaming Service are running under a non-admin account on a non-standard port, you need to reserve a namespace for them. To do so, on the Command

Prompt, run the following command using an account that has administrator rights on the local machine:

- For StreamingService.svc:
  - For the Web server and Combined Web Application server installations:

    ```
    netsh http add urlacl url=http://+:<non default port>/TotalAgility/
    Services/Sdk/StreamingService.svc user=%domainuser%
    ```

  - For the Application server installation:

    ```
    netsh http add urlacl url=http://+:/TotalAgility/Services/Core/
    StreamingService.svc user=%domainuser%
    ```

- For PackageStreamingService.svc:

  ```
  netsh http add urlacl url=http://+:<non default port>/TotalAgility/
  Services/Sdk/PackageStreamingService.svc user=%domainuser%
  ```

- For CaptureStreamingService.svc:

  ```
  netsh http add urlacl url=https://+:<non default port>/TotalAgility/
  Services/Sdk/CaptureStreamingService.svc user=%domainuser%
  ```

If the URLs are not reserved, the Streaming Service does not start when using a non-admin service account.

Use the Configuration Utility

Run the Configuration Utility and update the base address property for the Streaming Service. The Streaming Service must be restarted for the change to take effect.

Restart the Streaming Service

Once the base address is changed or the command to reserve the namespace is completed, restart the Streaming Service.

Language pack installation

The languages files are available at the following location in the installation directory:

```
\\TotalAgilityInstall\Agility.Server.Web
```

After installing TotalAgility, import <Language>.zip using the "Import Languages" feature of the TotalAgility menu.

When you change your browser to one of the supported languages, the corresponding translation is displayed.

Only the Workspace is localized according to the browser display language after installing the language pack.

Install the .NET Framework language packs

To localize the system error messages from .NET, you must install the .NET Framework language packs on both the Web and Application servers.

You can download the .NET Framework language pack from the Microsoft website.

Exclude folders from the antivirus scan

In your antivirus application, add the following TotalAgility folders or files to the list of items that are excluded from scanning. See the following table for the TotalAgility folders and files that are excluded from antivirus scan.

Files	Path
KSALicenseService.EXE	`C:\Program Files(x86)\Kofax\TotalAgility\LicenseServer`
Agility.Server.Core.Executor.exe Agility.Server.Core.ExportService.exe Agility.Server.Core.ExportWorker.Host.exe Agility.Server.Core.WorkerService.exe	`C:\Program Files\Kofax\TotalAgility\CoreWorkerService`
Kofax.CEBPM.Reporting.AzureETL.exe Kofax.CEBPM.Reporting.TAService.exe	`C:\Program Files\Kofax\TotalAgility\Reporting`
Agility.Server.Core.Executor.exe Kofax.CEBPM.CPUServer.ServiceHost.exe Kofax.CEBPM.DocumentConversionService.Host.exe Kofax.CEBPM.EncryptConfig.exe Kofax.CEBPM.ProcessingService.Host.exe Kofax.CEBPM.PdfGenerator.exe	`C:\Program Files\Kofax\TotalAgility\TransformationServer`
Agility.Installation.Server.Upgrade.exe Agility.Server.Core.Executor.exe Agility.Server.ExportConnector.exe Agility.Server.StreamingService.exe	`C:\Program Files\Kofax\TotalAgility\Agility.Server.Web\bin`

Files	Path
7z.exe MC_Albin.exe MC_BISCOM.exe MC_Cluster.exe MC_Converter.exe MC_DocConv.exe MC_Email.exe MC_Email2.exe MC_EWS.exe MC_FaxMain.exe MC_File.exe MC_H323.exe MC_Http.exe MC_Http2.exe MC_Http3.exe MC_Master.exe MC_MSGraph.exe MC_RFax.exe MC_Sip.exe MC_Store.exe MC_T30.exe MC_Tcsi.exe MC_Tnef.exe MC_Tsl.exe MC_Tsl3.exe MC_XSLT.exe XmlTransform.exe RunAsAdmin.exe	`C:\Program Files (x86)\Kofax\KIC-ED\MC\bin`
Runtime folders	
AppLogging KIC-ED KSALic KTT Licensing TotalAgility Vrs WebCapture	`C:\ProgramData\Kofax`
Telemetry TotalAgility TotalAgility Tenant Management	`C:\Program Files\Kofax`
Miscellaneous folders	

Files	Path
BWE CheckPlus7.3 CheckPlusInternational CheckRecognition1.0 CheckUltra CheckUsability1.7.4 Components DetectHpMp3.0 FormXtra7.6 NLP OmniPage22 Salience7.0 Server TableExtraction1.0	`C:\Program Files (x86)\Common Files\Kofax`

Run EVRSCheck utility

The EvrsCheck utility helps in testing how an image will look once the eVRS setting is applied to it. The left half of the application window displays the original image and the right half displays the processed image once the setting is applied to it.

1. Run the **EvrsCheck.exe** available at the following location in the Installation folder:
   `\\TotalAgility\Utilities\EvrsCheck`
   The Before and After window opens.
2. Click **Choose** and select an image.
   The selected image with its metadata appears in the left half of the window. If the selected image is a multi-page image, you can use the "<" and ">" buttons to navigate between pages.
3. Copy the desired eVRS setting and paste it into the **EVRS Settings** box.
   The image is processed based on the eVRS settings. The output along with its metadata is displayed in the right half of the window.

   You can edit the eVRS setting; the image starts reprocessing as you type.

Chapter 3

TotalAgility installation in a Docker container

This chapter describes the prerequisites, limitations, procedure for creating and running a Docker container, and silent installation configuration.

Overview

A Docker is an open platform for developing, shipping, and running applications. Docker enables you to separate an application from its infrastructure. Using Docker, you can manage your infrastructure in the same way you manage your applications.

Docker provides the ability to package and run an application such as TotalAgility in a loosely isolated environment called a Container. The isolation and security allow you to run many containers simultaneously on a given host using fewer resources than virtual machines.

You can deploy the TotalAgility application into your production environment, as an independent container or orchestrated set of containers. This works the same whether your production environment is a local data center, a cloud provider, or a hybrid of the two. You do not need to use the TotalAgility installation program when TotalAgility is deployed in a Docker container. Instead, TotalAgility is already installed and only the relevant configuration settings, such as database connection strings, are required when the container runs.

By default, all TotalAgility containers do not have limits for memory or CPU. SQL Server runs either on another Windows container or another machine, but it does not run in the TotalAgility container.

Limitations

The Export Connectors are not supported in a Docker environment.

Prerequisites

We recommend using a standalone server for your database (not a container). Therefore, before running TotalAgility inside a container, make sure the TotalAgility databases are set up and remotely accessible (using either an IP address or a fully qualified domain name).

To use this setup, configure the following on the SQL Server being used:

- Firewall should allow remote access to SQL Server
- Configure SQL Server to allow remote access with Mixed mode since the user is also allowed to access without Windows Authentication.
- Enable TCP/IP protocols for SQL Server.

> The "Named Pipes" protocol does not work.

Install Docker on the Windows server

Set up Docker on your Windows server. This requires Windows Server 2016 or higher to support running a TotalAgility Windows container.

> Image Quality Analysis, Mobile ID, and Mobile Card Capture are not supported when you set up Docker on Windows Server 2016.

1. Open an elevated PowerShell command prompt, and type the following commands:

```
Install-Module DockerMsftProvider -Force
Install-Package Docker -ProviderName DockerMsftProvider -Force
```

> If you use the "Key Value Pairs" extraction feature in Quick Capture or use the Key Value Pairs locator in the Transformation Server, you must run the following command:
>
> ```
> docker pull mcr.microsoft.com/windows
> ```

2. If a reboot is required, restart your instance using the following command:

   `(Install-WindowsFeature Containers).RestartNeeded`

   If the output of this command is Yes, restart the server using the following command: `Restart-Computer`.

3. Test your Docker Engine - Enterprise installation by running the "docker info" command.

```
docker info
Containers: 1
 Running: 0
 Paused: 0
 Stopped: 1
Images: 26
Server Version: 18.09.3
Storage Driver: windowsfilter
 Windows:
Execution Driver: <not supported>
Logging Driver: json-file
Plugins:
 Volume: local
 Network: ics l2bridge l2tunnel nat null overlay transparent
Kernel Version: 10.0 14393 (14393.2828.amd64fre.rs1_release_inmarket.190216-1457)
Operating System: Windows Server 2016 Standard Version 1607 (OS Build 14393.2828)
OSType: windows
Architecture: x86_64
```

```
CPUs: 4
Total Memory: 10.04 GiB
Name: HV-Docker-QA
ID: HI53:GJSY:3BWT:Z3S5:3NWU:DEFN:6D3X:KCXO:2EMJ:ITZR:QAVY:VXFK
Docker Root Dir: C:\ProgramData\docker
Debug Mode (client): false
Debug Mode (server): false
Registry: https://index.docker.io/v1/
Labels:
Insecure Registries:
 127.0.0.0/8
```

4. Optional. NLP support for Transformation Server within Docker is not enabled by default. To make Docker work with NLP within the Transformation Server, and to increase the default maximum size for the Docker container images, perform the following steps:
   a. Open **daemon.json** available at "`C:\ProgramData\docker\config`". If the file does not exist at that location, create the file.
   b. Append the following text to daemon.json:

```
{
"storage-opts": ["size=50GB"]
}
```

   c. Restart the Docker Engine service.

Use Image Quality Analysis, Mobile ID, and Mobile Card Capture on Docker

To use Image Quality Analysis, Mobile ID, and Mobile Card Capture in a container, Windows Server 2019 or higher must be used as a container host with the following Docker base container specified in the Docker file, `mcr.microsoft.com/dotnet/framework/aspnet` for all the TotalAgility container types (including RTTS and Transformation Server), where the "Image Quality Analysis, Mobile ID, and Mobile Card Capture" are required.

Make the following changes in the Docker file:

- Add the following line: `RUN powershell "Set-ExecutionPolicy -ExecutionPolicy RemoteSigned"` before the line, `RUN powershell C:\KTA\PowershellScripts\ConfigureContainer.ps1`

- Additionally, Mobile ID and Mobile Card Capture have a prerequisite for the VC++ 2013 x86 redistributable. This can be automatically downloaded and installed in the Docker file.
- Make sure that the following DLLs are present when you run Image Quality Analysis, Mobile ID, and Mobile Card Capture applications (32-bit DLL dependency) on Windows Server 2016 or 2019. Copy the 32-bit version of DLLs (avicap32.dll, avifil32.dll, msacm32.dll, msvfw32.dll) from the host's `C:\Windows\SysWOW64` and paste the DLLs in the Docker container's `C:\Windows\SysWOW64 folder`. You must copy these DLLs to all containers running the Transformation Service.

Create a TotalAgility Docker container image

A container is defined by its image as well as any configuration options you provide when you create or start it.

To create a Docker image, you need Internet connectivity because Docker uses the Microsoft "microsoft/aspnet" image as a base onto which the prerequisites are installed (from the base operating system or from the Internet when any feature is not available on the image).

For a TotalAgility Docker container to be successfully built, approximately 100 GB of free disk space is needed.

1. Extract the contents of Kofax TotalAgility-8.0.0.ZIP to a `<source directory>`.
2. Create a new folder, `<workingdirectory>`.
   Your Docker commands will be run from this directory.
3. Copy the contents of <source directory>\Utilities\Docker to <working directory>.
4. Move the contents from <source directory> folder to `<working directory>\ContainerFiles`.
   The file structure should be as follows:
   `<working directory>\Dockerfile`
   `<working directory>\ContainerFiles\all contents from <source directory>`
   `<working directory>\ContainerFiles\PowerShellScripts`
5. Update the parameters as needed for each container type. See the Silent installation configuration.
   - For container types that are not dependent on IIS, update the Docker file by doing the following: Comment out the line, `#FROM microsoft/aspnet` by adding # and uncomment the line by removing # from line `#FROM mcr.microsoft.com/dotnet/framework/runtime`.
   - When you create a Docker image for the Transformation Server, and use the "Key Value Pairs" extraction feature, you must update the Docker file as follows for the feature to work:
     Remove the first line `FROM mcr.microsoft.com/dotnet/framework/aspnet` and add `FROM mcr.microsoft.com/windows/server`.
6. To create the image, open a PowerShell window on the container host and run the following command:

```
docker build -t <imagenamegoeshere> "<fullpathtoworkingdirectory>"
```

Container host is the machine where the Docker server is installed. Performance of a build command depends on the number of processors in the container host machine. The command may take approximately one hour to complete with a quad core processor configuration.

Example: The following command generates the image with the name "kofaxop" using the contents inside `C:\Docker\Kofax TotalAgility`:

```
docker build -t kofaxop "C:\Docker\Kofax TotalAgility"
```

Silent installation in Docker

1. From your TotalAgility installation files, navigate to `\\TotalAgilityInstall` and open SilentInstallConfig.xml using a text editor.
2. The following are the available Docker container types for this deployment and the required configuration parameters to be updated in SilentInstallConfig.xml.
   - Demo
   - Application Server (Core Services and Core Worker)
   - Web Server
   - Web Server and Application Server (Core Services and Core Worker)
   - Reporting Server
   - License Server
   - Transformation Server
   - Real Time Transformation Service

   You can create a Docker container with any combination of the Application Server, Web server, Reporting Server, Licensing Server and Transformation Server. Real Time Transformation Server (RTTS) is supported only in a dedicated Docker container.

Demo

Update the following parameters for a Demo server installation.

Fix the line breaks if you copy and paste the code from this guide.

Parameter	Value	Description
ServicesInstallOptions		
ImportService	true	
ExportService	false	The Export Service is not supported inside Docker containers.
LicenseService	true	
CoreWorkerService	true	
ReportingService	true	

Parameter	Value	Description
TransformationService	true	If the TransformationService is set to true, you must copy the fonts by running the PowerShell script from the following path: `<Working directory>/containerfiles/poweshellscripts/copyfonts.ps1`. By running the script, the fonts are copied from `Windir/fonts` to `<Working directory>/containerfiles/poweshellscripts/fonts` on the Docker container for PDF generation.
CoreServices	true	
DatabaseInformation		
UpdateDatabases	false	Skips installing databases as part of the Docker image installation.
Identity Information		
RunAsSystemAccount	true	When set to true, the IIS AppPool and Kofax TotalAgility services run as the LocalSystem account. This can also be used to run the container as a Group Managed Service Account (gMSA).
RunAsNetworkServiceAccount	false	When set to true, the IIS AppPool and Kofax TotalAgility services run as the NT Authority\Network Service account. This can also be used to run the container as a Group Managed Service Account (gMSA). If RunAsSystemAccount or RunAsNetworkServiceAccount is true, this can be used to run the container as a Group Managed Service Account (gMSA).
Install Info		
InstallType	Both	
AuthenticationMode	Anonymous	Set the authentication mode to Windows or Anonymous.
StartServices	false	Services are started only after the container is running.

Application Server (Core Services and Core Worker)

Update the following parameters for the Application Server installation.

Parameter	Value	Description
ServicesInstallOptions		
ImportService	true	
ExportService	false	The Export Service is not supported inside Docker containers.
ReportingService	false	

Parameter	Value	Description
LicenseService	false	
CoreWorkerService	true	
CoreService	true	
TransformationService	false	
DatabaseInformation		
UpdateDatabases	false	Skips installing databases as part of the Docker image installation.
Identity Information		
RunAsSystemAccount	true	When set to true, the IIS AppPool and Kofax TotalAgility services run as the LocalSystem account. This can also be used to run the container as a Group Managed Service Account (gMSA).
RunAsNetworkServiceAccount	false	When set to true, the IIS AppPool and Kofax TotalAgility services run as the NT Authority\Network Service account. This can also be used to run the container as a Group Managed Service Account (gMSA). If RunAsSystemAccount or RunAsNetworkServiceAccount is true, this can be used to run the container as a Group Managed Service Account (gMSA).
Install Info		
InstallType	ApplicationServer	
AuthenticationMode	Anonymous	Set the authentication mode to Windows or Anonymous.
StartServices	false	Services are started only after the container is running.

Application Server (Core Services only)

Update the following parameters for the Application Server installation for Core services only.

Parameter	Value	Description
ServicesInstallOptions		
ImportService	false	
ExportService	false	The Export Service is not supported inside Docker containers.
ReportingService	false	
LicenseService	false	
CoreWorkerService	false	
CoreService	true	

Parameter	Value	Description
TransformationService	false	
DatabaseInformation		
UpdateDatabases	false	Skips installing databases as part of the Docker image installation.
Identity Information		
RunAsSystemAccount	true	When set to true, the IIS AppPool and Kofax TotalAgility services run as the LocalSystem account. This can also be used to run the container as a Group Managed Service Account (gMSA).
RunAsNetworkServiceAccount	false	When set to true, the IIS AppPool and Kofax TotalAgility services run as the NT Authority\Network Service account. This can also be used to run the container as a Group Managed Service Account (gMSA). If RunAsSystemAccount or RunAsNetworkServiceAccount is true, this can be used to run the container as a Group Managed Service Account (gMSA).
Install Info		
InstallType	ApplicationServer	
AuthenticationMode	Anonymous	Set the authentication mode to Windows or Anonymous.
StartServices	false	Services are started only after the container is running.

Web Server

Update the following parameters for the Web server installation.

Parameter	Value	Description
DatabaseInformation		
UpdateDatabases	false	Skips installing databases as part of the Docker image installation.
Identity Information		
RunAsSystemAccount	true	When set to true, the IIS AppPool and Kofax TotalAgility services run as the LocalSystem account. This can also be used to run the container as a Group Managed Service Account (gMSA).

Parameter	Value	Description
RunAsNetworkServiceAccount	false	When set to true, the IIS AppPool and Kofax TotalAgility services run as the NT Authority\Network Service account. This can also be used to run the container as a Group Managed Service Account (gMSA). If RunAsSystemAccount or RunAsNetworkServiceAccount is true, this can be used to run the container as a Group Managed Service Account (gMSA).
Install Info		
InstallType	WebServer	
AuthenticationMode	Anonymous	Set the authentication mode to Windows or Anonymous.
StartServices	false	Services are started only after the container is running.

Web Server and Application Server (Core Services and Core Worker)

Update the following parameters for both the Web and Application server installations.

Parameter	Value	Description
ServicesInstallOptions		
ImportService	true	
ExportService	false	The Export Service is not supported inside Docker containers.
ReportingService	false	
LicenseService	false	
CoreWorkerService	true	
CoreService	true	When set to true, installs TotalAgility on Docker with no services. If you set it to false, folders and files go missing in the agility.server.web directory on the container.
TransformationService	false	
DatabaseInformation		
UpdateDatabases	false	Skips installing databases as part of the Docker image installation.
Identity Information		
RunAsSystemAccount	true	When set to true, the IIS AppPool and Kofax TotalAgility services run as the LocalSystem account. This can also be used to run the container as a Group Managed Service Account (gMSA).

Parameter	Value	Description
RunAsNetworkServiceAccount	false	When set to true, the IIS AppPool and Kofax TotalAgility services run as the NT Authority\Network Service account. This can also be used to run the container as a Group Managed Service Account (gMSA). If RunAsSystemAccount or RunAsNetworkServiceAccount is true, this can be used to run the container as a Group Managed Service Account (gMSA).
Install Info		
InstallType	Both	
AuthenticationMode	Anonymous	Set the authentication mode to Windows or Anonymous.
StartServices	false	Services are started only after the container is running.

Web Server and Application Server (Core Services only)

Update the following parameters for both the Web and Application server installations for Core services only.

Parameter	Value	Description
ServicesInstallOptions		
ImportService	false	
ExportService	false	The Export Service is not supported inside Docker containers.
ReportingService	false	
LicenseService	false	
CoreWorkerService	false	
CoreService	true	When set to true, installs TotalAgility on Docker with no services. If you set it to false, folders and files go missing in the agility.server.web directory on the container.
TransformationService	false	
DatabaseInformation		
UpdateDatabases	false	Skips installing databases as part of the Docker image installation.
Identity Information		
RunAsSystemAccount	true	When set to true, the IIS AppPool and Kofax TotalAgility services run as the LocalSystem account. This can also be used to run the container as a Group Managed Service Account (gMSA).

Parameter	Value	Description
RunAsNetworkServiceAccount	false	When set to true, the IIS AppPool and Kofax TotalAgility services run as the NT Authority\Network Service account. This can also be used to run the container as a Group Managed Service Account (gMSA). If RunAsSystemAccount or RunAsNetworkServiceAccount is true, this can be used to run the container as a Group Managed Service Account (gMSA).
Install Info		
InstallType	Both	
AuthenticationMode	Anonymous	Set the authentication mode to Windows or Anonymous.
StartServices	false	Services are started only after the container is running.

Reporting Server

Update the following parameters for the Reporting Server installation.

Parameter	Value	Description
ServicesInstallOptions		
ImportService	false	
ExportService	false	The Export Service is not supported inside Docker containers.
ReportingService	true	
LicenseService	false	
CoreWorkerService	false	
CoreService	false	
TransformationService	false	
DatabaseInformation		
UpdateDatabases	false	Skips installing databases as part of the Docker image installation.
Identity Information		
RunAsSystemAccount	true	When set to true, the IIS AppPool and Kofax TotalAgility services run as the LocalSystem account. This can also be used to run the container as a Group Managed Service Account (gMSA).

Parameter	Value	Description
RunAsNetworkServiceAccount	false	When set to true, the IIS AppPool and Kofax TotalAgility services run as the NT Authority\Network Service account. This can also be used to run the container as a Group Managed Service Account (gMSA). If RunAsSystemAccount or RunAsNetworkServiceAccount is true, this can be used to run the container as a Group Managed Service Account (gMSA).
Install Info		
Install Type	ApplicationServer	
AuthenticationMode	Anonymous	Set the authentication mode to Windows or Anonymous.
StartServices	false	Services are started only after the container is running.

License Server

Update the following parameters for a License Server installation.

Parameter	Value	Description
ServicesInstallOptions		
LicenseService	true	
CoreWorkerService	false	
ReportingService	false	
TransformationService	false	
CoreServices	false	
DatabaseInformation		
UpdateDatabases	false	Skips installing databases as part of the Docker image installation.
Identity Information		
RunAsSystemAccount	true	When set to true, the IIS AppPool and Kofax TotalAgility services run as the LocalSystem account. This can also be used to run the container as a Group Managed Service Account (gMSA).
RunAsNetworkServiceAccount	false	When set to true, the IIS AppPool and Kofax TotalAgility services run as the NT Authority\Network Service account. This can also be used to run the container as a Group Managed Service Account (gMSA). If RunAsSystemAccount or RunAsNetworkServiceAccount is set to true, this can be used to run the container as a Group Managed Service Account (gMSA).
Install Info		

Parameter	Value	Description
InstallType	ApplicationServer	
StartServices	false	Services are started only after the container is running.

After configuring and starting the container, licensing is not activated. You must activate licensing through the TotalAgility Designer.

Transformation Server

Update the following parameters for the Transformation Server installation.

Parameter	Value	Description
ServicesInstallOptions		
CoreWorkerService	false	
ImportService	false	
ExportService	false	The Export Service is not supported inside Docker containers.
ReportingService	false	
LicenseService	false	
TransformationService	true	If the TransformationService is set to true, you must copy the fonts by running the PowerShell script from the following path: `<Working directory>/containerfiles/poweshellscripts/copyfonts.ps1`. By running the script, the fonts are copied from `Windir/fonts` to `<Working directory>/containerfiles/poweshellscripts/fonts` on the Docker container for PDF generation.
CoreServices	false	
DatabaseInformation		
UpdateDatabases	false	Skips installing databases as part of the Docker image installation.
Identity Information		
RunAsSystemAccount	true	When set to true, the IIS AppPool and Kofax TotalAgility services run as the LocalSystem account. This can also be used to run the container as a Group Managed Service Account (gMSA).

Parameter	Value	Description
RunAsNetworkServiceAccount	false	When set to true, the IIS AppPool and Kofax TotalAgility services run as the NT Authority\Network Service account. This can also be used to run the container as a Group Managed Service Account (gMSA). If RunAsSystemAccount or RunAsNetworkServiceAccount is true, this can be used to run the container as a Group Managed Service Account (gMSA).
Install Info		
InstallType	ApplicationServer	
AuthenticationMode	Anonymous	Set the authentication mode to Windows or Anonymous.
StartServices	false	Services are started only after the container is running.
TS_INSTALL_NLP_WESTERN	false	If set to true, installs the Natural Language Processing language bundle for English, Spanish, Portuguese, French, and German.
TS_INSTALL_NLP_ADDITIONALLANGUAGES1	false	If set to true, installs the Natural Language Processing language bundle for Italian, Romanian, and Dutch.
TS_INSTALL_NLP_ADDITIONALLANGUAGES2	false	If set to true, installs the Natural Language Processing language bundle for Japanese, Chinese, and Korean.
TS_INSTALL_NLP_ADDITIONALLANGUAGES3	false	If set to true, installs the Natural Language Processing language bundle for Swedish, Finnish, Danish, Norwegian, and Arabic.

NLP support for Transformation Server within Docker is not enabled by default. To make Docker work with NLP within the Transformation Server, and to increase the default maximum size for the Docker container images, perform the following steps:

1. Open **daemon.json** available at "`C:\ProgramData\docker\config`". If the file does not exist at that location, create the file.
2. Append the following text to daemon.json:

```
{
"storage-opts": ["size=50GB"]
}
```

3. Restart the Docker Engine service.

Real Time Transformation Service

Update the following parameters for the Real Time Transformation Service installation.

Parameter	Value	Description
ServicesInstallOptions		
CoreServices	true	

Parameter	Value	Description
DatabaseInformation		
UpdateDatabases	false	Skips installing databases as part of the Docker image installation.
Identity Information		
RunAsSystemAccount	true	When set to true, the IIS AppPool and Kofax TotalAgility services run as the LocalSystem account. This can also be used to run the container as a Group Managed Service Account (gMSA).
RunAsNetworkServiceAccount	false	When set to true, the IIS AppPool and Kofax TotalAgility services run as the NT Authority\Network Service account. This can also be used to run the container as a Group Managed Service Account (gMSA). If RunAsSystemAccount or RunAsNetworkServiceAccount is true, this can be used to run the container as a Group Managed Service Account (gMSA).
Install Info		
InstallType	RTTS	
AuthenticationMode	Anonymous	Set the authentication mode to Windows or Anonymous.
StartServices	false	Services are started only after the container is running.

Run a Docker container

A Docker container runs on any machine that supports the container's runtime environment. Applications are not required to be tied to the host operating system, so both the application environment and the underlying operating environment can be kept clean and minimal.

When a container stops running, changes to its state are not lost unless they are saved in persistent storage.

Before running a Docker container, the databases must already be set up (using the Database only installation mode).

To use this setup, you need the following configuration on SQL Server:

- Firewall should allow remote access to SQL Server.
- SQL Server itself should be configured to allow remote access with Mixed mode since the user is also allowed access without Windows Authentication.
- TCP/IP protocols should be enabled for SQL Server.

  Named pipes protocol does not work.

- To use split databases, the Main and Finished Jobs databases must point to the same database and reside on the same database server. Microsoft does not support MSDTC on Docker containers.

Verify that you are able to remotely connect to the database server where the databases were set up using SQL Server Management Studio that uses the IP address. The verification ensures that the Docker containers are connected to the database server without any issues.

1. Generate "dockersettings.env" using the Configuration Utility in Docker mode. The file will be used later for the container initialization. Refer to the *Kofax TotalAgility Configuration Utility Guide* for more information.

   The authentication mode for accessing TotalAgility can be set using the Configuration Utility.

2. Container access can be limited to the container host or can be port forwarded for global access. Enable the required exposed port number in the firewall settings for the host machine.
3. For non-Windows authentication:
   a. The following command brings up a container using the kofaxop image. Kofax TotalAgility settings are applied from dockersettings.env without Windows authentication. Port 80 from the container is forwarded to port 5000 on the container host.

      ```
      docker run -d --hostname "opdemo2" --name "opdemo2" --env-file "C:
      \Docker\TotalAgility\dockersettings.env" -p 5000:80 kofaxop
      ```

   b. The following command brings up a container using the kofaxop image. Kofax TotalAgility settings are applied from dockersettings.env without Windows authentication.

      ```
      docker run -d --hostname "opdemo1" --name "opdemo1" --env-file "C:
      \Docker\TotalAgility\dockersettings.env" kofaxop
      ```

4. To enable licensing in a container, you must add “-p 3581:3581” to the “docker run” command. For example:

   ```
   docker run -d --hostname "opdemo2" --name "opdemo2" --env-file "C:\Docker
   \TotalAgility\dockersettings.env" -p 5000:80 -p 3581:3581 kofaxop
   ```

   If running the License Server in a container, the associated license serial number must be activated before the Kofax TotalAgility Core Worker service can be started.

5. Use "`docker exec -it <container id\name goes here> powershell`" to attach to a powershell session on the created container.
   For example, the docker exec -it opdemo3 powershell will bring up a powershell session inside the container with opdemo3 as the container name.
6. To open a port number required for Message Connector, you must add “ -p 5003:25086” to the “docker run” command. For example:

   ```
   docker run -d --hostname "opdemo2" --name "opdemo2" --env-file "C:\Docker
   \TotalAgility\dockersettings.env" -p 5000:80 -p 5003:25086 kofaxop
   ```

   5003 is an example forwarded port number for Message Connector. Use the port number that you have configured for Message Connector. Similarly, you can configure port numbers for other instances of Message Connector.

If running TotalAgility containers on multiple hosts, it is recommended to use Docker Swarm or Kubernetes orchestrators that have a built-in DNS server to resolve container DNSs across multiple hosts.

If not using a container orchestrator and using Transformation Server synchronous processing, the TRANS_SERVER_INSTANCE database table should be manually updated to contain the IP URL of the host running the Transformation Server container. Transformation Server service runs on port 9001 by default; however, the port can be reconfigured using the Configuration utility. This port needs to be exposed to be used by the App container hosted on a different host machine. Use additional switch `-p TS Port :9001` while running a Transformation Server container.

Access TotalAgility

After you connect to the Docker container and verify that all services are in their expected state, use the following URLs to access TotalAgility outside the container host with the port forwarded setup:

- `http://<ipaddressofthecontainerhost>:<exposedportofthecontainerhost>/TotalAgility/Designer`
- `http://<ipaddressofthecontainerhost>:<exposedportofthecontainerhost>/TotalAgility/Forms`

For containers hosting IIS – TotalAgility website

Due to different default behavior with case-insensitive URL resolution within Docker containers, it is necessary to perform extra configuration to ensure the TotalAgility website can be resolved in a case-insensitive way.

When you configure the container for the Designer / Workspace, we recommend that you use a VirtualHost file to configure the port and URl exposure through the host OS before you access the URL. You may also consider using a rewrite rule to ensure that any URL access is redirected to a lowercase representation.

As per RFC 2616, "...a client SHOULD use a case-sensitive octet-by-octet comparison of the entire URIs...Comparisons of host names MUST be case-insensitive."

The Docker daemon and cache hold case-sensitive resolutions of the URL, which can cause issues if the case of the URL is changed prior to first access. This caching issue occurs because of Docker's use of WSL v1 and should be resolved in WSL v2. Within Docker, you cannot expose the same container port for multiple protocols, and having previously cached a case-sensitive URL, the cache must be cleared to replace it with the lowercase URL.

Access Message Connector

To access the Message Connector within the container host or from outside the host, perform the following steps.

1. Use the following URL: `http:DockerServerIP:5003/en/file/index.html`

   Where DockerServerIP is the IP of the Docker Container host and 5003 is the configured forwarded port number to access the Message Connector. Use the forwarded port number you have configured for the Message Connector.

   The Message Connector Monitor appears.

2. To access Message Connector configuration, click the **Configuration Tool**.
   The Message Connector Configuration tool appears.
3. Make the necessary configuration changes and save.
4. Optionally, to restart the Message Connector service, click the **Restart service** button.

   To stop and restart the Message Connector service from the Docker container, use the following commands: `Start-service KIC-ED-MCStop-service KIC-ED-MC`

Useful Docker commands

This table includes some useful Docker commands.

Docker command	Purpose
docker images	Gets the list of all Docker images currently available on the server.
docker ps -a	Gets a list of all containers available on the server.
docker start <containerID>	Starts the container with the ID <containerID> on the server.
docker stop <containerID>	Stops the container with the ID <containerID> on the server.
docker rm <containerID>	Deletes the container with the ID <containerID> on the server.
docker rmi <imagename>	Deletes the image with the ID <imagename> on the server. Deletion is successful only if no child containers use this image.
docker inspect -f "{{ .NetworkSettings.Networks.nat.IPAddress }}" <containerID>	Gets the IP address of the container with the ID <containerID>.
docker cp "<containerID>:/<fullfilepathoncontainer>" "<pathtofolderonserver>"	Copies a file from the container to the server.
docker cp "<fullfilepathonserver>" "<containerID>:/ <fullfilepathoncontainer>"	Copies a file from the server to the container.
docker logs <containerID>	Displays all logs for a particular container.
docker logs - tail n <containerID>	Displays the last "n" logs for a particular container.
type <FQDN of text file>	Displays the content of the text file within a PowerShell instance.
Get-Process	Gets the list of all processes.
Get-Service	Gets the list of all services (running and stopped).
start-service ServiceNameGoesHere	Starts a particular service.
Stop-service ServiceNameGoesHere	Stops a particular service.
Get-WMIObject Win32_Service | select startname, name, status	Gets a list of all services with some additional columns.
Get-EventLog -LogName Application -newest 10 | format-table -auto -wrap	Gets the last 10 application logs from the event viewer.
import-module webadministration	Runs before the following commands.
get-iisapppool	Gets the name of the Application pool.
get-itemProperty -path IIS:\APPPOOLS\TotalAgilityAppPool -names	Gets the identity information for the Application pool.

Use secrets

You can use one of the following secrets to store sensitive information, such as database connection strings, passwords, and more.

- Kubernetes
- Docker
- AWS

Kubernetes secrets

If you are using Kubernetes secrets, you must make some changes before building the Docker images and deploying them to Kubernetes. For example, consider using the MainDBConnectionString application setting as the secret.

You can use Kubernetes secrets as volumes or environmental variables.

Use Kubernetes secrets as volumes

1. Create a secret `<maindbsecret>` in Kubernetes that contains the MainDBConnectionString details. Refer to the Kubernetes documentation to create a secret.
2. From the Docker container installation files, navigate to `\\Utilities\Docker \ContainerFiles\PowershellScripts\`. Replace the line `"$appSetting.value = $_.Value;"` with the following lines which will check for the 'maindbconnectionstring' setting and update its value in all the Kofax TotalAgility configuration files with the contents of the <maindbsecret> file mounted in a <target path>.

```
if($appSetting.key -eq "<MainDBConnectionString>")
                {
  $dbconnstring = (Get-Content "<target path>\<maindbsecret>") -as [string];
  if($dbconnstring -ne $null)
  {
   $appSetting.value = $dbconnstring;
  }
                }
                else
                {
                    $appSetting.value = $_.Value;
                }
```

> All the corresponding MaindbConnectionString values in the DockerSettings.env no longer need to be provide, as they are pulled from the secrets.

3. Save the changes.
4. Similarly, update the `UpdateConfigAppSettings.ps1` script file for other application settings, as needed.
5. Modify the Pod definition to add a volume <maindbvol> along with the <maindbsecret> to a chosen <target path>, such as `</kta/maindb/>` in the container. Refer to the Kubernetes documentation to add a volume.

6. When the pod is deployed, this should create a secret file <maindbsecret> which contains the connection string value under the path `c:\kta\maindb\` in the container and also updates the corresponding TotalAgility configuration file settings with the secret value.

Use Kubernetes secrets as environmental variables

1. Create a secret <maindbsecret> in Kubernetes that contains the MainDBConnectionString details. Refer to the Kubernetes documentation on secrets to create a secret.
2. Modify the Pod definition to add an environmental variable <env variable name> for the secret <maindbsecret>. The <env variable name> must be same as in dockerSettings.env, such as "KTA_Agility.Server.Web--web.config_MainDBConnectionString". This should set the environment variable "KTA_Agility.Server.Web--web.config_MainDBConnectionString" with the value of the secret <maindbsecret> which contains the connection string value once the pod is deployed. Refer to Kubernetes documentation to add as an environment variable.
3. Similarly, multiple environment variables can be added to the pod definition that needs the value from a secret. No changes are needed to the script files.

Docker secrets

If you are using Docker secrets to store sensitive information, they are only available in the Swarm mode; so the standalone containers cannot use this feature.

The following changes need to be made before building the Docker images and deploying to a swarm.

1. Create a secret <maindbsecret> in the swarm that contains the MainDBConnectionString details. Refer to the Docker documentation to create a secret.
2. From the Docker container installation files, navigate to `\\Utilities\Docker \ContainerFiles\PowershellScripts` and update the *UpdateConfigAppSettings.ps1* Powershell script file. Replace the line "`$appSetting.value = $_.Value;`" with the following lines, which check for the 'maindbconnectionstring' setting and update its value in all the Kofax TotalAgility configuration files with the contents of the <maindbsecret> file located in a default target location (for Windows containers, the default target is under 'C:\ProgramData \Docker\secrets') :

```
if($appSetting.key -eq "<MainDBConnectionString>")
                {
  $dbconnstring = (Get-Content "<target location>\<maindbsecret>") -as [string];
  if($dbconnstring -ne $null)
  {
   $appSetting.value = $dbconnstring;
  }
                }
                else
                {
                    $appSetting.value = $_.Value;
                }
```

All the corresponding MaindbConnectionString values in the DockerSettings.env no longer need to be provided, as they are pulled from the secrets.

3. Save the changes. Similarly, you can update the `UpdateConfigAppSettings.ps1` script file for other application settings as needed.
4. Create/update a Docker service and provide access to the <maindbsecret> secret along with the Docker environment file. This should create a secret file <maindbsecret> in the container and also update the corresponding settings of the Kofax TotalAgility configuration files with the secret value. Refer to the Docker documentation to create a service.

AWS secrets

If you are using AWS Secrets to store sensitive information, such as database connection string, and passwords, you can dynamically retrieve the secrets from the container via AWS Tools for PowerShell or via a custom .Net library. (For example, consider using the MainDBConnectionString application setting as the secret.)

Make the following changes before building the Docker images.

Use AWS Tools for PowerShell

If using AWS secrets via AWS Tools for PowerShell, do the following changes.

1. Create a secret <mainsecret> in AWS Secret Manager that contains the MainDBConnectionString details.

   Refer to AWS documentation to create a secret.
2. Install NuGet provider and AWS.Tools.SecretsManager in the container to retrieve secrets from AWS.
3. From the Docker installation files, navigate to `\\TotalAgility\Utilities\Docker \ContainerFiles\PowershellScripts\` and update the UpdateConfigAppSettings.ps1 PowerShell script file. In the 'Update-ConfigFile' function, add the following script lines before the line "Get-ChildItem env:*| …." which will install the required AWS Tools for PowerShell and update the contents of the <mainsecret> retrieved from the AWS secret:

```
Set-PSRepository -Name 'PSGallery' -InstallationPolicy Trusted
Install-PackageProvider -Name NuGet -MinimumVersion 2.8.5.201 -Force
If(-not(Get-InstalledModule AWS.Tools.SecretsManager -ErrorAction
 silentlycontinue))
{
    Install-Module AWS.Tools.SecretsManager -RequiredVersion 4.1.4.0 -Confirm:
$False -Force
}
$awsAccessKeyId = [Environment]::getEnvironmentVariable('KTA_AWS_ACCESSKEYID');
$awsSecretAccessKey =
 [Environment]::getEnvironmentVariable('KTA_AWS_SECRETACCESSKEY');
$awsRegion = [Environment]::getEnvironmentVariable('KTA_AWS_REGION');
Set-AWSCredential -AccessKey $awsAccessKeyId -SecretKey $awsSecretAccessKey
Initialize-AWSDefaultConfiguration -Region $awsRegion

$awsMainSecretName =
 [Environment]::getEnvironmentVariable('KTA_AWS_MAINSECRETNAME');
$awsMainSecret_response = Get-SECSecretValue -SecretId $awsMainSecretName
$mainSecretJsonobj = ConvertFrom-Json -inputObject
 $awsMainSecret_response.SecretString
```

4. Replace the line "$appSetting.value = $_.Value;" with the following lines which check for the 'maindbconnectionstring' setting and update its value in all the Kofax TotalAgility configuration files with the contents of the <mainsecret> retrieved from AWS secret:

```
                if($appSetting.key -eq "<MainDBConnectionString>")
                {
  $dbconnstring = $mainSecretJsonobj.$awsMainSecretName;
  if($dbconnstring -ne $null)
  {
   $appSetting.value = $dbconnstring;
  }
                }
                else
                {
                    $appSetting.value = $_.Value;
                }
```

5. Add the following script lines before the 'Update-License-Config' function which cleans up the AWS environment variables.

```
$awsAccessKeyId = [Environment]::setEnvironmentVariable('KTA_AWS_ACCESSKEYID',
$null);
$awsSecretAccessKey =
 [Environment]::setEnvironmentVariable('KTA_AWS_SECRETACCESSKEY',$null);
$awsRegion = [Environment]::setEnvironmentVariable('KTA_AWS_REGION',$null);
$awsMainSecretName =
 [Environment]::setEnvironmentVariable('KTA_AWS_MAINSECRETNAME',$null);
```

6. Save the changes.
7. When running the Docker container, pass the KTA_AWS variables mentioned in the script above as environment variables. Docker commands mentioned in the Run a Docker container section must now also pass in these **--env** variables along with the **--env-file**.

```
docker run -d --hostname "<host>" --name "<name>" --env
 KTA_AWS_ACCESSKEYID=<access id> --env KTA_AWS_SECRETACCESSKEY=<key> --env
 KTA_AWS_REGION=<region> --env KTA_AWS_MAINSECRETNAME=<mainsecret> –env-
file “dockersettings.env” -p <port> <image>
```

All the corresponding MaindbConnectionString values in the DockerSettings.env no longer need to be provided, as they are pulled from the secrets.

8. When the container is running, get the secret <mainsecret> which contains the connection string value and also update the corresponding Kofax TotalAgility configuration file settings with the secret value.
9. Similarly, you can update the UpdateConfigAppSettings.ps1 script file and Docker run command to get other application settings from AWSsecret by adding new variables similar to `$ awsMainSecretName` and `KTA_AWS_MAINSECRETNAME`, respectively.

Use Custom Library

If using AWS secrets via custom library, do the following changes.

1. Create a secret <mainsecret> in AWS Secret Manager that contains the MainDBConnectionString details.

   Refer to the AWS documentation to create a secret.
2. Create a .NET custom library ‘AWSSecretManager.dll’ with a GetAWSSecret() method that will retrieve the AWS secret. This will need `AWSSDK.Core & AWSSDK.SecretsManager SDK` for .NET installed. The method code will be as follows:

```
class AWSSecretManager::
public static string GetAWSSecret(string awsAccessKeyId, string awsSecretAcessKey,
 string region , string awsSecretName)
```

```
        {
            string secret = string.Empty;
            IAmazonSecretsManager client = new
 AmazonSecretsManagerClient(awsAccessKeyId, awsSecretAcessKey,
 RegionEndpoint.GetBySystemName(region));
            GetSecretValueRequest request = new GetSecretValueRequest();
            request.SecretId = awsSecretName;
            request.VersionStage = "AWSCURRENT"; // VersionStage defaults to
 AWSCURRENT if unspecified.
            GetSecretValueResponse response = null;
            // In this sample we only handle the specific exceptions for the
 'GetSecretValue' API.
            // See https://docs.aws.amazon.com/secretsmanager/latest/apireference/
API_GetSecretValue.html
            // We rethrow the exception by default.
            try
            {
                response = client.GetSecretValueAsync(request).Result;
            }
            catch (DecryptionFailureException e)
            {
                // Secrets Manager can't decrypt the protected secret text using
 the provided KMS key.
                // Deal with the exception here, and/or rethrow at your
 discretion.
                throw;
            }
            catch (InternalServiceErrorException e)
            {
                // An error occurred on the server side.
                // Deal with the exception here, and/or rethrow at your
 discretion.
                throw;
            }
            catch (InvalidParameterException e)
            {
                // You provided an invalid value for a parameter.
                // Deal with the exception here, and/or rethrow at your discretion
                throw;
            }
            catch (InvalidRequestException e)
            {
                // You provided a parameter value that is not valid for the
 current state of the resource.
                // Deal with the exception here, and/or rethrow at your
 discretion.
                throw;
            }
            catch (ResourceNotFoundException e)
            {
                // We can't find the resource that you asked for.
                // Deal with the exception here, and/or rethrow at your
 discretion.
                throw;
            }
            catch (System.AggregateException ae)
            {
                // More than one of the above exceptions were triggered.
                // Deal with the exception here, and/or rethrow at your
 discretion.
                throw;
            }

            // Decrypts secret using the associated KMS CMK.
```

```
            // Depending on whether the secret is a string or binary, one of these
 fields will be populated.
            if (response.SecretString != null)
            {
                secret = response.SecretString;
            }
            else
            {
                MemoryStream memoryStream = new MemoryStream();
                memoryStream = response.SecretBinary;
                StreamReader reader = new StreamReader(memoryStream);
                secret =
 System.Text.Encoding.UTF8.GetString(Convert.FromBase64String(reader.ReadToEnd()));
            }

            return secret;
        }
```

3. From the Docker installation files, navigate to `\\TotalAgility\Utilities\Docker\ContainerFiles\PowershellScripts\` and copy the utility DLL files: AWSSecretManager.dll, AWSSDK.Core.dll and AWSSDK.SecretsManager.dll.
4. Update the UpdateConfigAppSettings.ps1 PowerShell script file. In the 'Update-ConfigFile' function, add the following script lines before the line "Get-ChildItem env:*| …." which will load the custom library and update the contents of the <mainsecret> retrieved from AWS secret into:

```
$add = [Reflection.Assembly]::LoadFile("C:\KTA\PowershellScripts
\AWSSecretManager.dll")
$add = [Reflection.Assembly]::LoadFile("C:\KTA\PowershellScripts
 \AWSSDK.SecretsManager.dll")
$add = [Reflection.Assembly]::LoadFile("C:\KTA\PowershellScripts\AWSSDK.Core.dll")

$awsAccessKeyId = [Environment]::getEnvironmentVariable('KTA_AWS_ACCESSKEYID');
$awsSecretAccessKey =
 [Environment]::getEnvironmentVariable('KTA_AWS_SECRETACCESSKEY');
$awsRegion = [Environment]::getEnvironmentVariable('KTA_AWS_REGION');
Set-AWSCredential -AccessKey $awsAccessKeyId -SecretKey $awsSecretAccessKey
Initialize-AWSDefaultConfiguration -Region $awsRegion

$awsMainSecretName =
 [Environment]::getEnvironmentVariable('KTA_AWS_MAINSECRETNAME');
Try {
    $awsMainSecret_response =
 [AWSSecretManager.AWSSecretManager]::GetAWSSecret($awsAccessKeyId,
$awsSecretAccessKey,$awsMainSecretName)
}
Catch {
   Write-Host "Exception::"
    Write-Host $_.Exception
}
$mainSecretJsonobj = ConvertFrom-Json -inputObject
 $awsMainSecret_response.SecretString
```

5. Replace the line " $appSetting.value = $_.Value; " with the following lines which will check for the "maindbconnectionstring" setting and update its value in all the TotalAgility configuration files with the contents of the <mainsecret> retrieved from the AWS secret:

```
                if($appSetting.key -eq "<MainDBConnectionString>")
                {
  $dbconnstring = $mainSecretJsonobj.$awsMainSecretName;
  if($dbconnstring -ne $null)
  {
```

```
  $appSetting.value = $dbconnstring;
 }
                }
                else
                {
                    $appSetting.value = $_.Value;
                }
```

6. Add the following script lines before the 'Update-License-Config' function which will clean up the AWS environment variables.

   ```
   $awsAccessKeyId =
   [Environment]::setEnvironmentVariable('KTA_AWS_ACCESSKEYID',$null);
   $awsSecretAccessKey =
   [Environment]::setEnvironmentVariable('KTA_AWS_SECRETACCESSKEY',$null);
   $awsRegion = [Environment]::setEnvironmentVariable('KTA_AWS_REGION',
   $null); $awsMainSecretName =
   [Environment]::setEnvironmentVariable('KTA_AWS_MAINSECRETNAME',$null);
   ```

7. Save the changes.
8. When running the Docker container, pass the KTA_AWS variables mentioned in the script above as environment variables. The Docker run commands mentioned in the Run a Docker container section must now also pass in these **--env** variables along with the **--env-**file.

   ```
   docker run -d --hostname "<host>" --name "<name>" --env
   KTA_AWS_ACCESSKEYID=<access id> --env KTA_AWS_SECRETACCESSKEY=<key> --env
   KTA_AWS_REGION=<region>--env KTA_AWS_MAINSECRETNAME=<mainsecret> -env-file
   "dockersettings.env" -p <port> <image>
   ```

   All the corresponding MaindbConnectionString values in the DockerSettings.env no longer need to be provided, as they are pulled from the secrets.

9. When the container is running, it should get the secret <mainsecret> which contains the connection string value and also updates the corresponding Kofax TotalAgility configuration file settings with the secret value.
10. Similarly, you can update the `UpdateConfigAppSettings.ps1` script file and the Docker run command to get other application settings from the AWS secret by adding new variables similar to `$ awsMainSecretName` and `KTA_AWS_MAINSECRETNAME`, respectively.

Import SSL certificate on the container

You can import a custom SSL certificate for use by TotalAgility on a Docker container.

You can import password-protected certificates with a private key. See SSL Support Desk for more information on exporting certificates.

1. Create a new folder, such as HostMachineFolder on the host machine.
2. Copy the certificate file, such as CertificateName.pfx to the newly created folder (HostMachineFolder).

3. You can pass the certificate password to the container as text or in a file. The file can be passed to the container as a secret (if using Docker compose, Kubernetes, and so on) or as a mapped volume. To pass the password file using a mapped volume, do the following:
   a. Create a new text file, such as password.txt in HostMachineFolder.
   b. Open the newly created file and enter the certificate's password in the first line of the file.
   c. Save the file and ensure that you change the file attribute to hidden.
4. Create a Docker container using the "docker run" command as documented in previous sections with two additional switches, "-v" and "-e".
   a. -v: Container can access contents of HostMachineFolder via mapped ContainerFolder.
   b. -e: additional environment variables are created to store SSL certificate path "KTA_SSL_CERT_PATH" and password ("KTA_SSL_CERT_PASSWORD" or password "KTA_SSL_CERT_PASSWORD_PATH)".
   c. Following are the examples of the "docker run" command with new -v and -e:
      - `docker run --env-file "C:\Docker\TotalAgility \dockersettings.env" -e KTA_SSL_CERT_PASSWORD="password" -e KTA_SSL_CERT_PATH="HostMachineFolder\CertificateName.pfx" -v "HostMachineFolder:ContainerFolder" -p 5000:443 -d kofax/kta_771`
      - `docker run --env-file "C:\Docker\TotalAgility\dockersettings.env" -e KTA_SSL_CERT_PASSWORD_PATH="C:\folder\password.txt" -e KTA_SSL_CERT_PATH="C:\folder\Cert.pfx" -v "C:\folder:C:\folder2" -p 5000:443 -d kofax/kta_771`
   d. Replace HostMachineFolder with the actual certificate path on the host machine.
   e. Replace CertificateName with the actual certificate name.
   f. Replace ContainerFolder with the actual folder path and name on the container (folder will be created).

      Ensure that folder paths or names do not have spaces.

Use Windows authentication with IIS and SQL server

Use GSMA to configure Windows authentication for Docker containers.

Use Windows authentication with IIS and SQL Server

Docker containers cannot join an Active Directory domain. However, when running a container, you can specify that it should use a specific AD Group Managed Service Account (gMSA) for any local Windows services and IIS Application pool in the container that is configured to run as LocalSystem or NetworkService accounts.

When running as LocalSystem or NetworkService accounts in the container, the services and App pool will automatically get the access rights of the gMSA to allow them to use Windows authentication to access other VMs/machines outside of the container.

When setting up a TotalAgility Docker container to use Windows authentication, you must modify the SilentInstallConfig.xml file to specify LocalSystem as the account to use for all TotalAgility services and IIS App pools. This account will be used when the container is built.

Ensure the following prerequisites are met:

- Add the Docker server, SQL Server machine, and machines that will use gMSA under the required domain controller.
- Add these machines to the Active Directory under the Computer folder.
- Create a Global Security group, such as ContainerHostGroupName in the Active Directory under the Builtin folder.
- Add the Docker server, SQL Server machine, or machines that will use gMSA as members of the new group.

Perform the following steps to use Windows authentication with IIS and SQL Server.

1. Create the KDS root key.

   This key is used by the KDS service on DCs (along with other information) to generate passwords. You can generate this key only once per domain.

   a. Login to the domain controller and execute the following commands:

   ```
   Import-module ActiveDirectory
   Add-KdsRootKey -EffectiveImmediately
   ```

   b. Verify your key using the following command:

   ```
   Get-KdsRootKey
   ```

2. Create a gMSA account.

   a. Log in to the domain controller and execute the following command:

   ```
   GMSA account name : containerhost
   Domain name: TotalAgilityexample.com

   New-ADServiceAccount -Name containerhost -DNSHostName TotalAgilityexample.com
    -PrincipalsAllowedToRetrieveManagedPassword "Domain Controllers",
   "domain admins", "CN= ContainerHostGroupName,CN=Builtin, DC=
    TotalAgilityexample,  DC=COM" -KerberosEncryptionType RC4, AES128, AES256
   ```

   b. Verify the new gMSA account using the following command:

   ```
   Get - ADServiceAccount - Identity containerhost
   ```

   c. A new gMSA object appears in your domain's Managed Service Account.

3. Add a gMSA account to the servers you want to use.

   a. Open the Active Directory Admin Center and go to Managed service accounts.

   b. Select the gMSA account and click **Properties**.

   c. Select security and click **Add**.

   d. Select the computers where you want to use gMSA, such as the Docker server and the SQL Server machine.

   e. Reboot the Domain controller for the changes to take effect.

   f. Reboot the computers that will be using gMSA.

4. Install gMSA Account on servers.
   a. Log in to the machine that will be used as the Docker server.
   b. If Active Directory features are not available, execute the following command:
      ```
      Enable-WindowsOptionalFeature -FeatureName ActiveDirectory-Powershell
      -online -all
      ```
   c. To install and test gMSA, execute the following commands:
      ```
      // check whether you are able to account
      Get-ADServiceAccount -Identity containerhost //Name of GMSA

      // install on machine
      Install-ADServiceAccount -Identity containerhost

      // test
      Test-AdServiceAccount -Identity containerhost
      ```
      If the output does not contain any errors, it will look similar to the following:
      ```
      Path :
      Online : True
      RestartNeeded : False
      DistinguishedName : CN=containerhost,CN=Managed Service Accounts, DC=local
      Enabled : True
      Name: containerhost
      objectClass : msDs-GroupManagedServiceAccount
      ObjectGUID : containerhost$
      SamAccountName : containerhost$
      SID : S-1-5-21-3914853822-719528391-929614657-1606
      UserPrincipalName :

      True
      ```
5. Associate Service Principal Name with the gMSA:
   a. This step is required for kerberos authentication to work and for automatic login in the Chrome browser. If you skip this step, authentication still works but will always prompt for username/password since it will fall back to NTLM.

      GMSA account: containerhost

      Domain name: TotalAgilityexample .com

      Container host machine: machine1
   b. Login to the domain controller and execute the following command:
      ```
      setspn -c -s HTTP/ machine1 TotalAgilityexample \ containerhost
      setspn -c -s HTTP/ machine1. TotalAgilityexample.com  TotalAgilityexample \
       containerhost
      ```
6. To test Active Directory access on the container host, run the following command on the host machine: `nltest /parentdomain`
   At this point, if no errors occurs, the LocalSystem account on the container will be a proxy for the configured gMSA account. Any process run as the LocalSystem principal on the container will appear to be the GMSA principal to all assets on the Active Directory domain.
7. Generate a credential specifications file that must be passed to Docker during container creation to use this service account. Run the following commands to download the module which creates this file from a Microsoft GitHub account and creates a JSON file containing the required data.
   ```
   GMSA account: containerhost
   ```

```
Domain name: TotalAgilityexample.com

Invoke-WebRequest "https://raw.githubusercontent.com/Microsoft/Virtualization-
Documentation/live/windows-server-container-tools/ServiceAccounts/
CredentialSpec.psm1" -UseBasicParsing -OutFile $env:TEMP\cred.psm1

import-module $env:temp\cred.psm1

New-CredentialSpec -Name win -AccountName containerhost
#This will return location and name of JSON file
Get-CredentialSpec


Name Path
---- ----
win  C:\ProgramData\docker\CredentialSpecs\win.json
```

8. For SQL Server configuration to allow gMSA, enter the gMSA account as "containerhost" and the domain name as "TotalAgilityexample.com" and run the following SQL commands on your SQL database:

```
CREATE LOGIN " TotalAgilityexample \containerhost$"
 FROM WINDOWS
 GO
```

   To create a user for all the TotalAgility databases:

```
CREATE USER containerhost FOR LOGIN " TotalAgilityexample \ containerhost$"
GO

EXEC sp_addrolemember 'db_datareader', containerhost
EXEC sp_addrolemember 'db_datawriter', containerhost
```

9. If there are no errors, the LocalSystem account on the container will be a proxy for the configured gMSA account. Any process run as the LocalSystem principal on the container will appear to be the gMSA principal to all assets on the Active Directory domain. To test Active Directory access on the container, run the following command on the container: `nltest /parentdomain`

Chapter 4

Transformation Server bundle installation

The Transformation Server bundle includes:

- Transformation Server
- Transformation Core modules

You can install the Transformation Server bundle when you install TotalAgility or install the Transformation Server bundle separately.

To install any component, you must install the entire Transformation Server Bundle.

After installing the Transformation Server, you can modify the configuration settings by editing the Transformation Server configuration file or by running the Configuration utility. See the *Kofax TotalAgility Configuration Utility Guide*.

Prerequisites

Before installing the Transformation Server Bundle, make sure to do the following:

- Install the USERTrust Certificate and the DigiCert Assured ID Root CA Certificate in your environment. The installation may fail if these certificates are missing.
- For additional environments, install the Transformation Server Bundle where you installed TotalAgility. For production environments, install the Transformation Server Bundle on a separate computer.
- If you are using Oracle, install the Oracle Data Provider on every server where the Transformation Server is installed. You can get the Oracle Data Provider from the Oracle website.
- If you install the Transformation Server independent of TotalAgility, make sure the supported version of .NET Framework is already installed on that machine.
- The user who will run the Transformation Server must have administrative privileges and "Log on as Service" rights. This user will be used for all communication channels where Windows authentication is used. For example, if Windows authentication is being used for SQL Server, this user must have rights on this server; otherwise, Transformation Server does not work.
- A user can run Transformation Server as a non-admin if the user account is part of Windows Group: Users, and has the following privileges:
  - Local Security Policy rights: Log on as Service.
  - Full access to the log file folder configured for logging: By default, this folder is the installation folder.
  - Full access to the following folders:
    - `C:\ProgramData\Kofax`

- `C:\Program Files (x86)\Common Files\Kofax\Transformation Server`

  This folder contains "Kofax.CEBPM.CPUServer.ServiceHost.exe.config."

- The following rights to the database:
  - db_reader
  - db_writer
  - Execute permission

User Accounts for Transformation Server

For security, Transformation Server uses a single user group per computer and a single user account per tenant. The first time the Transformation Server receives activity for a tenant, the user group and account are created:

- User account: TU<GUID> (truncated to 20 characters)
- Local group: TenantUsers

The user account has all permissions except to execute files, and it uses the same database authentication mechanism as all TotalAgility components. These user account permissions prevent malicious scripts from running on the server. Other permissions, including bypassing traverse checking and the ability to use Web services, are necessary for operation.

Silent installation of Transformation Server

This section describes installing the Transformation Server bundle silently, independent of TotalAgility.

The silent installation for the Transformation Server bundle does not use the same xml-based silent installer configuration file (`SilentInstall.config`) that is used to install the rest of TotalAgility.

1. From your TotalAgility installation files, navigate to \\Transformation Server.
2. On the Command prompt window, run the following command:

```
TransformationServerSetup.exe /quiet /log %LogFile% TS_INSTALLLOCATION=
%InstallLocation% TS_SERVICE_ACCOUNT=%WindowsServiceAccount%
TS_SERVICE_PASSWORD=%WindowsServicePassword% TS_USE_SPECIFIC_POOL=
%UseSpecificPool% TS_POOL_NAME=%PoolName% TS_OL_ENABLED=%OLEnabled
% TS_WCF_PORT=%WcfPort% TS_RESERVED_SLOTS=%ReservedSlots%
TS_OVERRIDE_DEF_SLOTS=%OverrideDefSlots% TS_MAX_SLOTS=%MaxSlots%
TS_ENABLE_SYNC_CALLS=%EnableSyncCalls% TS_SYNCHRONOUS_ONLY=FALSE
TS_STARTSERVICE=TRUE TS_MAIN_DB_CONNECTION_STRING=
%MainDBConnectionString% TS_AUDIT_DB_CONNECTION_STRING=
%AuditDBConnectionString% TS_REPORTING_STAGING_DB_CONNECTION_STRING=
%ReportingStagingDBConnectionString% TS_ARCHIVE_DB_CONNECTION_STRING=
```

```
%ArchiveDBConnectionString% %TS_INSTALL_OCR_ADDONS=%
%TS_INSTALL_NLP_WESTERN=1% %TS_INSTALL_NLP_ADDITIONALLANGUAGES1=1%
%TS_INSTALL_NLP_ADDITIONALLANGUAGES2=1%
%TS_INSTALL_NLP_ADDITIONALLANGUAGES3=1%
```

Optionally, call `TS_SETUP_CONFIG_FILE` in the installation command. This property requires an absolute path to a configuration file for the installer. The configuration file can have one parameter per line only. Using such a configuration file will prevent the setup.exe from logging sensitive data.

TS_SETUP_CONFIG_FILE example:

```
TS_INSTALLLOCATION= "<Installation path>\Kofax\TotalAgility\Transformation Server
\"
TS_SERVICE_ACCOUNT=**account name**
TS_SERVICE_PASSWORD=**Password**
TS_SERVER_SERVICE_URL= https://**Name/IP**/TotalAgility/Services/Core/
ServerService.svc
TS_USE_SPECIFIC_POOL=FALSE
TS_POOL_NAME=
TS_OL_ENABLED=TRUE
TS_WCF_PORT=9001
TS_RESERVED_SLOTS=0
TS_OVERRIDE_DEF_SLOTS=
TS_MAX_SLOTS=0
TS_ENABLE_SYNC_CALLS=TRUE
TS_MAIN_DB_CONNECTION_STRING=Server=**Name/
IP**;Trusted_Connection=Yes;Database=**DB Name**;
TS_AUDIT_DB_CONNECTION_STRING=Server=localhost;Trusted_Connection=Yes;
 Database=TotalAgility;
TS_ARCHIVE_DB_CONNECTION_STRING=Server=localhost;Trusted_Connection=Yes;
 Database=TotalAgility;
TS_REPORTING_STAGING_DB_CONNECTION_STRING=Server=localhost;
 Trusted_Connection=Yes;Database=TotalAgility_Reporting_Staging;
TS_STARTSERVICE=TRUE
TS_SYNCHRONOUS_ONLY=false
TS_INSTALL_OCR_ADDONS=1
TS_INSTALL_NLP_WESTERN=1
TS_INSTALL_NLP_ADDITIONALLANGUAGES1=1
TS_INSTALL_NLP_ADDITIONALLANGUAGES2=1
TS_INSTALL_NLP_ADDITIONALLANGUAGES3=1
```

See the Transformation Server Info section in Silent installation of Web and Application on the same server for more information on the Transformation Server parameters.

The parameter names are case-sensitive. If the value of a parameter has spaces, enclose the value in quotation marks.

3. To ensure that the installation works as expected, perform the following steps:
   a. Navigate to `<Program Files>/Kofax/TotalAgility/Agility.Server.Web` and open the Web.config in a text editor.
   b. Locate the `TransformationServerExternalService_Binding` binding parameter and ensure that the `<transport ClientCredentialType>` value is set to Windows.
   c. Save and close the web configuration file.

Standard installation of Transformation Server

You must have administrator privileges and **Log on as Service** rights to run the Transformation Server in an on-Premise environment.

You can run Transformation Server as a non-admin by setting up the user account using the following privileges:

- TS_User must be part of Windows Group: Users.
- TS_User must have the Local Security Policy rights: Log on as Service.
- TS_User must have full access to the log file folder configured for logging. (By default, it is the installation folder)
- TS_User must have full access to the following folders:
  - `C:\ProgramData\Kofax`
  - `C:\Program Files (x86)\Common Files\Kofax\Transformation Server`

    This folder contains "Kofax.CEBPM.CPUServer.ServiceHost.exe.config."

- TS_User must have the following rights to the database:
  - db_reader
  - db_writer
  - Execute permission

1. Access the Transformation Server bundle installer using one of the following ways:
   - **Production systems**: Install the Transformation Server bundle separately from TotalAgility. Navigate to `\\Transformation Server\Transformation Server` from the installation files and run one of the following commands:
     - To install without creating a log file, run **Transformation ServerSetup.exe**.

       The **Kofax Transformation Server 8.0** window opens.
     - To install and create a log file, run **setup.exe/log <path\install_log.txt>** where `<path \install_log.txt>` is the path and name of the log file.
   - **Development systems**: If you are installing the Transformation Server as part of the TotalAgility installation, the Transformation Server bundle installer opens automatically.
2. In the **Kofax Transformation Server 8.0** window, click **Options** and do the following:

Setup Options	
Multitenant installation	If selected, installs the Transformation Server on an on-premise multi-tenant environment. (Default: Clear)
Additional A2iA engines [unsupported]	If selected, installs the A2iA recognition engine. (Default: Clear)
Natural Language Processing language bundles	
Western (en, es, pt, fr, de) (default: selected)	If selected, installs the natural language processing language bundles.
Additional Languages 1 (it, ro, nl)	

Additional Languages 2 (ja, zh, ko)
Additional Languages 3 (ar, da, fi, no, sv)

3. Click **Install**.
   The system installs any necessary prerequisites.
4. Click **Next**.
   The **Kofax Transformation Server Setup Wizard** window opens.
5. Click **Next**.
6. In the license agreement window, accept the terms in the License Agreement.
   This window does not display if the Transformation Server is installed automatically as part of TotalAgility installation.
7. Click **Next**.
   The system prompts you for a destination folder for the Transformation Server.
8. Enter the destination and click **Next**.
9. In the **Service account setup** window, enter the credentials for the user who will run the Transformation Server. These credentials are also used to encrypt sensitive data.
   a. In the **Username** field, enter the username. To specify a domain user, enter the username in the format Domain\User.
   b. Enter and confirm the **Password**.
   c. Click **Next**.

   The **Setting up connection data** window opens.
10. Enter the connection string for the Main, Audit, Archive, and Reporting_Staging databases to connect to and authenticate with the databases.
    Use the following syntax:

    ```
    Server=<server address>;Database=TotalAgility;User ID=<user_name>;
     Password=<password>;
    ```

    If installing on a split web/app, use the following syntax:

    ```
    Server=<server name>; Trusted_Connection=yes; Database=<database name>;
    ```

    Specify the address of the database server and the user name and password to authenticate with database where indicated. Example:

    ```
    Server=dbserver\dbinstance;Database=TotalAgility;User
     ID=dbo_id;Password=dbopassword;
    ```
11. Click **Next**.
12. Specify the connection options to the TotalAgility server:
    a. To enable the Transformation Server to process online learning tasks, select **Enable Online Learning processing by this Transformation Server instance**.
    b. Optionally, select **Process activities from specific Transformation Server pool** and enter a **Pool name**.

    > To select the default pool, select **Default Transformation Server Thread Pool**.

13. Click **Next**.

The **Advanced execution options** window opens. These options control the slots reserved for incoming high-priority activities.

14. Select the advanced execution options:
    - **Enable support for Quick Capture**: Select this option to provide the back-end service necessary to support the Quick Capture Solution service.
    - **Enable synchronous calls processing**: Select this option to configure the TCP/IP port and the number of reserved processing slots. The default TCP/IP port is 9001, and the number of reserved processing slots is 0.

      If you are upgrading from version 7.0.0, "Enable synchronous calls processing" is not enabled if the number of reserved processing slots is zero and it is enabled if there are one or more reserved processing slots.

    - **Override default* number of processing slots**: Select this option to specify number of slots other than the default.
15. Click **Next**.

    The Kofax Transformation Server is now ready to install.
16. Click **Install** to install the Transformation Server.

    The system displays the installation status and a message when the Transformation Server setup is complete.
17. Click **Finish** to continue.

    The system displays the Transformation Server bundle setup status and a message when the Transformation Server bundle setup is successful.
18. Click **Close** to close the success message window.
19. To ensure that the installation works as expected, perform the following steps:
    a. Navigate to `<Program Files>/Kofax/TotalAgility/Agility.Server.Web` and open the Web.config in a text editor.
    b. Locate the `TransformationServerExternalService_Binding` binding parameter and ensure that the `<transport ClientCredentialType>` value is set to Windows.
    c. Save and close the web configuration file.
20. From the Service console, start the Kofax service.
21. If applicable, restart the antivirus or firewall applications.

Encrypt and decrypt the configuration file

The configuration file includes the Transformation Server settings, including sensitive information. Therefore, we recommend that you encrypt this file. The Transformation Server supports two encryption methods depending on command line parameters:

- **DPAPI encryption**: Because you must decrypt the file on the same machine where it was encrypted, use this utility to encrypt one server at a time. See Use Kofax.CEBPM.EncryptConfig.exe.
- **RSA encryption**: An algorithm for public key encryption and digital signatures that uses two separate keys. Create a key and encrypt the configuration file on one Transformation Server

and export the key to all the other Transformation Servers. All the Transformation Servers with the exported key installed can access the configuration file. Use this method if you have several Transformation Servers with the same configuration (TAService ID, pool name, and so on). See Use RSA Encryption.

To decrypt the configuration file, see Decrypt the configuration file.

Use Kofax.CEBPM.EncryptConfig.exe

The Kofax.CEBPM.EncryptConfig.exe utility encrypts (-enc) or decrypts (-dec) the CPUServer and appSettings sections of the configuration file. The CPUServer section includes the TotalAgility Session ID. The AppSettings section includes the user ID and password as well as other information. Use the optional -h flag to display help for the command.

Encrypt a File with Kofax.CEBPM.EncryptConfig.exe

Run the utility on each Transformation Server individually.

1. Stop the Transformation Server service.
2. Navigate to the Transformation Server installation directory and open a command Prompt window.
3. Run the following command:

   Kofax.CEBPM.EncryptConfig.exe -f Kofax.CEBPM.CPUServer.ServiceHost.exe.config -s "appSettings" -p DPAPIProtection -enc

Use RSA encryption

Use RSA encryption to encrypt the configuration file, export the encryption key, and install the encryption key file on multiple Transformation Servers. Use this method if you have several Transformation Servers with the same configuration (TAService ID, pool name, and so on).

The following instructions differentiate between the source Transformation Server where you create the key and the target Transformation Servers onto which you import the key.

Prepare the key

Perform these steps on one source Transformation Server.

1. Create the custom RSA key container:
   a. Log on to the Transformation Server with administrator rights.
   b. Open a Command Prompt window.
   c. Navigate to the .NET Framework version 4.5 directory. For example, enter the following command:

      ```
      cd \WINDOWS\Microsoft.Net\Framework\v4.5.*
      ```

   d. Run the following command:

      aspnet_regiis -pc "<KeysFile>" -exp

      where:

      - **<KeysFile>** is the name of the key file.

- The -exp option makes the key exportable.

2. Run the following command to grant the Transformation Server service user permission to read the <KeysFile> RSA container file.

   aspnet_regiis -pa "<KeysFile>" "<TSserviceuser>"

   where:

   - **<KeysFile>** is the name of the key file you created in Step 1d.
   - **<TSserviceuser>** is the Transformation Server service user.

3. Encrypt the file:

   a. Log on to the Transformation Server as the Transformation Server service user.

   b. Navigate to the installation directory for the Transformation Server and open a Command Prompt window.

   c. Run the following command:

   ```
   Kofax.CEBPM.EncryptConfig.exe -f
   Kofax.CEBPM.CPUServer.ServiceHost.exe.config -s "appSettings" -p
   RSAProvider -enc
   ```

   This command encrypts the CPUServer and AppSettings sections of the configuration file. The CPUServer section includes the TotalAgility Session ID. The AppSettings section includes the user ID, password, and other information.

4. Export the key by running the following command:

   ```
   aspnet_regiis -px "<KeysFile>" "<c:\keys.xml>" -pri
   ```

   where:

   - **<KeysFile>** is the default keystore keyContainerName.
   - `<c:\keys.xml>` is the path and file name of the exported key file.

Import the key

Perform these steps on every target Transformation Server.

1. Import the key:

   a. Log on to the Transformation Server with administrator rights.

   b. Copy the keys.xml file from the source Transformation Server to the root directory of the target Transformation Server.

   c. Open a Command Prompt window.

   d. Run the following command:

   ```
   aspnet_regiis -pi "<KeysFile>" "c:\keys.xml"
   ```

   where:

   - **<KeysFile>** is the default name of the key file.
   - **<c:\keys.xml>** is the path and file name to the imported key file.

   e. Delete the keys.xml because it contains the unprotected private key.

2. Run the following command to grant the Transformation Server service user permissions to use the <KeysFile> RSA container file:

   ```
   aspnet_regiis -pa "<KeysFile>" "TSserviceuser"
   ```

where:

- **<KeysFile>** is the name of the key file you imported in step 1.
- **<TSserviceuser>** is the Transformation Server service user.

3. Repeat these steps on all remaining Transformation Servers.

Decrypt the configuration file

1. Stop the Transformation Server service.
2. Navigate to the Transformation Server installation directory and open a command-line window.
3. Run the following command:

```
Kofax.CEBPM.EncryptConfig.exe -f
Kofax.CEBPM.CPUServer.ServiceHost.exe.config -s "appSettings" -p
DPAPIProtection -dec
```

Edit the configuration file

Modify the Transformation Server configuration file, **Kofax.CEBPM.CPUServer.ServiceHost.exe.config** if the system configuration has changed, or when you need to resolve a technical or performance issue.

1. If you encrypted the configuration file after you installed the Transformation Server, decrypt the file. See Decrypt the configuration file.

   If RSA encryption is used, decrypt the configuration file only on the source Transformation Server where you initially encrypted the file.

2. Navigate to the installation directory for the Transformation Server and locate **Kofax.CEBPM.CPUServer.ServiceHost.exe.config**.
3. Back up the file and save it in a secure location.
4. Open the configuration file in a text editor.
5. To change the system configuration options, modify the keys in the `<appSettings>` section.

   The section contains a list of keys for setting configuration options. The ones that can be modified have comments that describe the setting and supported values, as in this example.

```
<!-- Maximum number of instances allowed for Executor Process -->
      <add key="MaxNumberOfTenantProcesses" value="1"/>
```

6. Change the value within the quotation marks to a supported value, as indicated in the comments.
7. To change how errors are reported in the application event log, which can be viewed in the Event Viewer, modify the **<system.diagnostics>** section as follows:

   a. Under **<switches>**, locate the following element:

```
<add name="TraceLevelSwitch" value="Warning"/>
```

   By default, the value is set to Warning, which reports error and warning messages. Change the value to any of the options listed in the comment to change the type of messages reported.

b. Under <sharedListeners>, locate the following line:

```
<add name="CPUServerLogTxt"
 type="Kofax.CEBPM.CPUServer.Common.Diagnostics.DateTimeTaggedTraceListener,
 Kofax.CEBPM.CPUServer.Common" initializeData="KofaxCPUServerLog.log" >
```

To specify a different log file or change the format for **timestamps**, change the value of **initializeData** as shown in the comments in the file.

8. Save and close the configuration file.
9. To re-encrypt the configuration file, run the encryption utility. See Encrypt and Decrypt the configuration file.

If you used RSA encryption, export the key, and install the encryption key file on any target Transformation Servers imported the original encrypted configuration file.

10. Restart the Kofax Transformation Server service.

Install the NLP language packs manually

If the Transformation Designer is installed on a separate server than the Transformation Server bundle in your solution, then you need to install the Kofax NLP engine language packs on the machine where Transformation Designer is installed. This is because the Kofax NLP engine language packs are installed by the Transformation Server bundle only, and these languages are required to use the Kofax NLP functionality in Transformation Designer and production.

To install the Kofax NLP engine language packs, you need access to the original Kofax TotalAgility installation zip file.

You can install the Kofax NLP engine language packs by following these steps:

1. From your Kofax TotalAgility installation files, navigate to `TotalAgility \TransformationServer\KofaxTransformation_Salience7.0`.
2. Double-click on one of the following `.MSI` files depending on what languages you are supporting.
   - **KofaxTransformation_Salience7.0_LanguageBundle_western-default.**
     Run to install English, German, French, Spanish, and Portuguese language support.
   - **KofaxTransformation_Salience7.0_LanguageBundle_additionalLanguages1.**
     Run to install Italian, Dutch, and Romanian language support.
   - **KofaxTransformation_Salience7.0_LanguageBundle_additionalLanguages2.**
     Run this to install Japanese, Korean, and Mandarin language support.
   - **KofaxTransformation_Salience7.0_LanguageBundle_additionalLanguages3**
     Run this to install Swedish, Finnish, Danish, Norwegian, and Arabic language support.

   A Windows Installer window appears and then installs the selected Kofax NLP languages automatically.

   The installer window closes when the installation is complete.
3. Optionally, double-click on another language installer if you want to support additional languages.

Upgrade Transformation Server using silent installation

To upgrade the Transformation Server in silent mode, use the following command, replacing the example content with your environment.

```
setup.exe /quiet /Upgrade /log installation.log TS_SERVER_SERVICE_URL=http://<Server>/
TotalAgility/Services/Core/ServerService.svc TS_INSTALLLOCATION="<Program Files>\Kofax
\TotalAgility\Transformation Server"
 TS_MAIN_DB_CONNECTION_STRING="Server=servername;Database=databasename;User
 Id=sa;Password=password" TS_SERVICE_ACCOUNT=serviceAccountName
 TS_SERVICE_PASSWORD=password TS_STARTSERVICE=TRUE
```

Uninstall the Transformation Server

Uninstall the Transformation Server depending on how you have installed it.

- When you install Transformation Server as part of Kofax TotalAgility standard installation, uninstalling TotalAgility will automatically uninstall Transformation Server.
- When you install Transformation Server on a separate system, uninstall the Transformation Server bundle from the Control Panel.
- To uninstall in silent mode, do the following:
  - Navigate to the root directory of TransformationServerSetup.exe.
  - Run `TransformationServerSetup.exe / uninstall / quiet`.

    The system uninstalls the Transformation Server and automatically creates a log file in the temporary files folder. This log file contains information on errors if any.

Chapter 5

Transformation Designer installation

The Transformation Designer is typically installed as part of a full Kofax TotalAgility installation. However, if you did not use the full installer or want to install Transformation Designer separately, you can use the standalone Transformation Designer installer that is available from the Kofax TotalAgility installation files.

Prerequisites

If you install the Transformation Designer independent of TotalAgility, make sure the supported version of .NET Framework is already installed on that machine.

Silent installation of the Transformation Designer

The Transformation Designer is typically installed as part of a full Kofax TotalAgility installation. However, if you did not use the full installer or want to install Transformation Designer separately, you can use the standalone Transformation Designer installer in silent mode. The installer is available as part of the Kofax TotalAgility installation files.

1. From your installation files, navigate to `\\TransformationDesigner` and run one of the following commands:
   - If UAC (User Account Control) is enabled, right-click on the Command Prompt and select **Run as administrator**.
   - If UAC is not enabled, run the **Command Prompt**.

   The Command Prompt is displayed.
2. Run `"TransformationDesigner Installer.exe" /quiet`

   The installer runs in the background.

You can use the same command to apply a fix pack over top of a compatible Transformation Designer installation. Update the command name for the fix pack installer as needed.

Standard installation of the Transformation Designer

1. From your installation files, navigate to `\\TotalAgilityInstall\TransformationDesigner` folder and run one of the following commands:
   - If UAC (User Access Control) is enabled, right-click TransformationDesigner Installer.exe and select **Run as administrator**.
   - If UAC is not enabled, run **TransformationDesigner Installer.exe**.

   The system starts the installation.

   To exit the setup, click **Cancel** or Esc.
2. In the Transformation Designer Installation window, select the terms of the license agreement and click **Next**.
   The **Install Options** window is displayed.
3. On the Install Options page, select any additional settings and click **Next**.
   The **Installation Review** window is displayed.
4. Click **Install**.
   The **Installation Progress** window is displayed. The setup installs the required files.
5. Click **Finish**.
   Your installation is now complete.

Install Oracle drivers for the Transformation Designer

If you want to use an Oracle database for extraction or database lookups, it is necessary to install the Oracle driver.

You can install the driver by following these steps:

1. Navigate to the Oracle .NET downloads site, download, and unzip the "ODAC 21c - Latest 64-bit version" driver zip file.
2. From the extracted files, copy *<extractedfiles>*`\odpm\odp.net\managed\common\Oracle.ManagedDataAccess.dll` and copy it to the following locations on the server where the Transformation Designer is installed.
   - `C:\Program Files (x86)\Kofax\TotalAgility\Transformation`
   - `C:\Program Files (x86)\Common Files\Kofax\Components`
   - `C:\Program Files (x86)\Common Files\Kofax\Server`

   If the installation path has been configured to use a different location than the default path, then please adjust accordingly.
3. Restart the TotalAgility - Scheduler service.
   The service restarts and it is now possible to configure an oracle database connection.

Upgrade Transformation Designer Help

The Transformation Designer help is not automatically upgraded when you install Kofax TotalAgility 8.0.0. You must perform the following manual steps to upgrade the documentation.

1. Navigate to the location where the Transformation Designer documentation is installed. By default, this is `%ProgramData%/Kofax/Transformation`.
   A directory called "Help" is displayed.
2. Rename the folder to "Help_8.0.0" or something similar.
   Leave the window open as you will need it again later.
3. In the Kofax TotalAgility 8.0.0 ISO file, navigate to `\\Transformation Designer`.
   A ZIP file called "Help.zip" is displayed.
4. Extract "Help.zip" to `%ProgramData%/Kofax/Transformation` and ensure that the resulting directory is called "Help."
5. Open Transformation Designer and press F1 to open the help.
   The upgraded help is displayed.
   If the help does not display, ensure that the structure of the Help directory matches that of the "Help_8.0.0" directory and try again.

Configure the Transformation Designer for HTTPS communication

Update the Kofax Transformation Designer to use SDK SVC accessed via SSL by updating the connection within the Kofax Transformation Designer options. For Kofax Transformation Designer, you need to do the following for HTTPS communication:

- Make sure you have installed a certificate that is trusted by the client on the server.
- If the Transformation Designer server is installed on-premise but is not part of a domain, disable Windows Authentication for BasicHttpBinding_Service and WebHttpBinding_Service.
- Specify the URL for Transformation Designer for HTTPS as follows:
  - For Azure: `https://<Azure host name>/Services/SDK`
  - For other configurations: `https://<host name>/TotalAgility/Services/SDK`

Uninstall Transformation Designer

If Kofax TotalAgility is installed on the same server as the Transformation Designer, it is removed when Kofax TotalAgility is uninstalled. However, if you have a standalone installation of the Transformation Designer you can remove the application with one of the following procedures.

Use the silent mode

1. Navigate to `\\TransformationDesigner` from your TotalAgility installation files and run one of the following commands:
   - If UAC (User Account Control) is enabled, right-click on the Command Prompt and select **Run as administrator**.
   - If UAC is not enabled, run the **Command Prompt**.

   The Command Prompt is displayed.
2. Run `"TransformationDesigner Installer.exe" /quiet /uninstall`.
   An alternative command is `"TransformationDesigner Installer.exe" /quiet /x`.
   The installer runs in the background to uninstall the Transformation Designer application.

Use the installation wizard

1. Click **Start > All Programs** and right-click on the Transformation Designer.
   A context menu is displayed.
2. Select **Uninstall**.
   The Programs and Features window is displayed.
3. Click Kofax TotalAgility Transformation Designer 8.0.0 and select **Uninstall**.
   The Installer window is displayed and the Uninstall option is selected.
4. In the Kofax TotalAgility Transformation Designer (8.0.0) Setup window, click **Next**.
5. Review the message and when ready, click **Uninstall**.
   A progress message is displayed showing the status of the application removal.
6. When the uninstallation is complete, click **Finish**.
   The Transformation Designer application is removed.

Chapter 6

Message Connector installation

This chapter provides the instructions for installing the Message Connector.

Prerequisites

The Kofax Message Connector requires the following system limits for 64-bit installations. These limits may vary for 32-bit installations.

- Maximum size of a message in Message Connector storage: 8 GB
- Message Connector instances allowed on a single computer: Three
- Maximum system memory usage limit for KfxConverter: 4 GB

For more information on prerequisites for the Kofax Message Connector, see the *Kofax TotalAgility Prerequisites Guide*.

For information on deployment scenarios and advanced configurations for the Message Connector, see the *Kofax TotalAgility Administrator's Guide*.

System limits

These system limits apply to 64-bit installations. For 32-bit installations, the limits might be lower.

Maximum size of a message in Message Connector storage	120 GB
Maximum number of Message Connector instances on a single computer	3
Maximum usage limit for Kofax Converter system memory. However, while processing an input file, the memory usage may vary depending upon the following factors: • Number of pages in the document • Document type • Conversion type	4 GB

Silent installation of multiple instances of Message Connectors

You can install up to three instances of Message Connector on a computer.

1. To install the first instance of Message Connector, before installing TotalAgility, set the value of the `ImportService` parameter to true in SilentInstallConfig.xml. See Silent installation of Web and Application on the same server or Silent installation on a separate Web and Application server.
2. To install the second instance of Message Connector, run the following command on the Command Prompt:

   ```
   msiexec /i <\\TotalAgility\KIC\Export\MC\MC.msi> TRANSFORMS=:I02
   MSINEWINSTANCE=1 Kofax="<path>" <options>
   ```

   Where `<\\TotalAgility\KIC\Export\MC\MC.msi>` is the path of the TotalAgility setup folder.

   In <path>, specify the installation path for the second instance of Message Connector. `\KIC-ED\MC02` is appended to this path at the time of installation.
3. To install the third instance of Message Connector, run the following command on the Command Prompt:

   ```
   msiexec /i <\\TotalAgility\KIC\Export\MC\MC.msi> TRANSFORMS=:I03
   MSINEWINSTANCE=1 Kofax="<path>" <options>
   ```

   Where `<\\TotalAgility\KIC\Export\MC\MC.msi>` is the path of the TotalAgility setup folder.

   In <path>, specify the installation path for the third instance of Message Connector. `\KIC-ED\MC03` is appended to this path at the time of installation.

   For the second and third instances of Message Connector, optionally, in <options> use the following commands:

   - /qn - silent installation
   - /qb - silent installation with elementary user interface (progress bar)
   - ALLUSERS=1 - install for all users

The following command assumes that the TotalAgility setup folder is in the `C:` drive and the Message Connector's second instance will be installed at `C:\Program Files (x86)\Kofax`.

```
msiexec /i C:\TotalAgility\KIC\Export\MC\MC.msi TRANSFORMS=:I02
MSINEWINSTANCE=1 Kofax="C:\Program Files (x86)\Kofax" /qn /norestart
ALLUSERS=1
```

Upgrade Message Connector instances

If you have installed more than one instance of Message Connector, you must upgrade all the instances of Message Connector at the time of upgrading TotalAgility.

1. To upgrade the first instance of Message Connector, before upgrading TotalAgility, set the value of the `ImportService` parameter to true in SilentInstallConfig.xml. See Silent upgrade process.
2. To upgrade the second instance of Message Connector, run the following command on the Command Prompt:

   ```
   <\\TotalAgility\KIC\Export\MC\MC.msi> TRANSFORMS=:I02 MSINEWINSTANCE=1
   Kofax="<path>" <options>
   ```

   Where, `<\\TotalAgility\KIC\Export\MC\MC.msi>` is the path of TotalAgility setup folder.

   In <path>, specify the upgrade path for the second instance of Message Connector. `\KIC-ED\MC02` is appended to this path at the time of upgrade.
3. To upgrade the third instance of Message Connector, run the following command on the Command Prompt:

   ```
   <\\TotalAgility\KIC\Export\MC\MC.msi> TRANSFORMS=:I03 MSINEWINSTANCE=1
   Kofax="<path>" <options>
   ```

   Where, `<\\TotalAgility\KIC\Export\MC\MC.msi>` is the path of TotalAgility setup folder.

   In <path>, specify the upgrade path for the third instance of Message Connector. `\KIC-ED\MC03` is appended to this path at the time of upgrade.

   For the second and third instances of Message Connector, you can use the following command in <options>:
   - /qn - silent installation
   - /qb - silent installation with elementary user interface (progress bar)
   - ALLUSERS=1 - install for all users

On upgrading to Kofax Import Connector 2.11, by default, the '[Deny]' attribute is added to the**Folder input base directory** setting under **Security options** in Message Connector Configuration. This attribute disables access to the local watch folder.

To enable access, remove the '[Deny]' attribute from the **Folder input base directory** text box and save the Message Connector Configuration.

Chapter 7

Reporting Server installation

This chapter describes the Kofax Reporting Server installation procedure.

- Silent installation of Reporting Server independent of TotalAgility
- Standard installation using the installation wizard.

Prerequisites

For the additional environments, install the Reporting Server where you installed TotalAgility.

If you choose to install the Reporting Server on a separate system in the same domain where you installed TotalAgility, then you must assign the following roles to service account:

- For the Staging database: kfx_staging
- For the data warehouse: kfx_etl, kfx_reader, kfx_advanced_reader

The service account must be able to perform bulk operations in database. To do so, run the following command:

```
USE master GRANT ADMINISTER BULK OPERATIONS TO
[<service_account_running_reporting_server>];
```

Silent installation of the Reporting Server

The section describes the silent installation of the Reporting Server, independent of TotalAgility.

See the following table for the silent installation parameters required to install the Reporting Server.

Parameter names are case-sensitive.

Parameter	Default Value	Description
INSTALLLOCATION	C:\Program Files\Kofax \TotalAgility\ Reporting Server\	Specify the Reporting Server destination directory.

Parameter	Default Value	Description
WINSERV_ACCOUNT	no default	Enter the name of the user who will run the Reporting Server. To specify a domain user, enter the user name in the format Domain \User. Ensure that the account details are correct, as under this account Reporting Server authenticates in all places where Windows authentication is used. Example, TotalAgility database. All communication and resource access is run under this account. Therefore, the account under which Reporting Server is running must not be a dummy account.
WINSERV_PASSWORD	no default	Enter the Password for the user.
MAIN_DB_CONNECTION _STRING	no default	Enter the connection string for the Main database. Example: "Server=<hostname>;Trusted_Connection=Yes;" "Database=TotalAgility;"
AUDIT_DB_CONNECTION_ STRING	no default	Enter the connection string for the Audit database.
REPORTING_STAGING_ DB_CONNECTION_STRING	no default	Enter the connection string for the Reporting Staging database.
REPORTING_WORKHOUSE_ DB_CONNECTION_STRING	no default	Enter the connection string for the Reporting Workhouse database.

1. From your TotalAgility installation files, navigate to **\\TotalAgilityInstall\Reporting\ TAReportingService**.
2. Run the following command:

```
msiexec.exe /i KofaxKofax.Reporting.TAService.msi /q WINSERV_ACCOUNT=
%WindowsServiceAccount% WINSERV_PASSWORD=%WindowsServicePassword
% MAIN_DB_CONNECTION_STRING="%MainDBConnectionString%"
INSTALLLOCATION="%InstallLocation%"
AUDIT_DB_CONNECTION_STRING="%AuditDBConnectionString
%" REPORTING_STAGING_DB_CONNECTION_STRING=
"%ReportingStagingDBConnectionString%"
REPORTING_WAREHOUSE_DB_CONNECTION_STRING="%ReportingConnection%"
```

Standard installation of the Reporting Server

1. From your TotalAgility installation files, navigate to `TotalAgility > Reporting > TAReportingService > Kofax.Reporting.TAService.msi`.
   The TotalAgility Reporting Server Setup window opens.
2. Click **Next**.

3. In the End-User License Agreement window, accept the terms in the License Agreement and click **Next**.
4. In the Destination Folder window, select the default folder (`C:\Program Files (x86)\Kofax \TotalAgility\Reporting Server\`) for the Reporting server or click **Change** to choose another folder.
5. Click **Next**.
6. In the Service Account Setup window, enter the credentials for the user who will run the Kofax TotalAgility Reporting Server service:
   a. In the **Username** field, enter the username.

      To specify a domain user, enter the username in the format Domain\User.

   b. Enter and confirm the **Password**.
   c. Click **Next**.
7. In the Obtaining TotalAgility Configuration window:
   a. Specify TotalAgility Server service URL in the following format: `http://<server_name>/ TotalAgility/Services/Core/ServerService.svc`
      Here `<server_name>` is the TotalAgility server name.

      To install Web Service over SSL, use 'https://' instead of 'http://' in the URL.

   b. In the Main DB connection string box, enter the connection string for the TotalAgility database.
   c. Click **Next**.
      The system downloads the configuration settings.
8. Click **Install** to begin the installation.
9. Click **Finish**.

Uninstall the Reporting Server

Uninstall the Reporting Server depending on how you have installed it.

- If the Reporting Server is installed as part of the Kofax TotalAgility standard installation, uninstalling TotalAgility automatically uninstalls the Reporting Server.
- If the Reporting Server is installed on a separate system using Wizard, uninstall the Reporting Server from the Control Panel.
- If the Reporting Server is installed in silent mode, you must do the following to uninstall the Reporting Server in silent mode:
  1. On the Command Prompt, change the command line to the root directory of the `Kofax.Reporting.TAService.msi` file.
  2. Run `msiexec.exe/quiet/x Kofax.Reporting.TAService.msi/L*V"%LogFileName%"`.

The system uninstalls the Reporting Server and automatically creates a log file in the temporary files folder. This log file contains information on errors if any. You can use "`msiexec/help`" (Windows installer help) to check options for installation and logging.

Chapter 8

KCM Proxy installation

This chapter describes how to install the KCM Proxy on a Web Server. KCM Proxy is required when you want to use the Kofax Communications Manager (KCM) control on a TotalAgility form for interactive requests with Communications Manager. The proxy allows secure cross domain communication between the TotalAgility Web Server and Kofax Communications Manager.

Prerequisites

Ensure that the Microsoft plugin, Web Platform Installer is installed before installing the KCM Proxy Web server. You can install the Microsoft Web Platform from the Microsoft website.

Silent installation of KCM Proxy

1. From your TotalAgility installation files, navigate to `\\KCMProxyInstallation`.
2. Launch a Command Prompt window and run **Setup.exe** and enter the KCM Server URL in the following format: `http(s)://<CCMServer>:<Portnumber>`.

   Provide the IP address and port number of the KCM server. The installer updates the Web.config with KCM server details and enables the proxy rewrite rules on the web server (IIS).
3. Press **Enter**.

   The KCM Proxy is installed in silent mode.

   The system generates a log file at the same location where **Setup.exe** exists.

Standard installation of KCM Proxy

1. From your TotalAgility installation files, navigate to `\\KCMProxyInstallation` and double-click **Setup.exe**.

   The **KCM Proxy Configuration** window appears.
2. Enter the **KCM Server URL** in the following format: `http(s)://<CCMServer>:<Portnumber>`.

   The Web.config file is automatically updated with the KCM Server IP and the Port number.
3. Click **Configure**.
4. Click **OK**.

Docker installation of KCM Proxy

While generating the "dockersetting.env" file, if the URL is specified in the "KCM Server URL" setting in the Configuration Utility tool, the same URL is used to install KCM Proxy and configure the deployment in the container.

Update the KCM Server URL in TotalAgility Web.config

You can manually update the KCM Server URL in TotalAgility Web.config or run the Configuration Utility and update the settings before setting up the integration to KCM.

Manually update the KCM Server URL

1. Navigate to the installation directory for the TotalAgility server.
2. In a text editor, open **TotalAgility Web.config** from the following directory:
   `\\TotalAgilityInstall\Agility.Server.Web`
3. Locate the following section.

```
<rewrite>
      <rules>
        <rule name="CCMInteractiveProxy" stopProcessing="true">
          <match url="CCM/Proxy/Interactive/(.*)" />
          <action type="Rewrite" url="{http://ccmserver:port}/ccm/Interactive/
{R:1}" />
        </rule>
        <rule name="CCMDesignerProxy" stopProcessing="true">
          <match url="CCM/Proxy/Repository/(.*)" />
          <action type="Rewrite" url="{http://ccmserver:port}/ccm/Repository/
{R:1}" />
        </rule>
        <rule name="ComposerUIJavascriptProxyRule" stopProcessing="true">
          <match url="CCM/Proxy/ccmcomposerui.js" />
          <action type="Rewrite" url="{http://ccmserver:port}/proxy/
ccmcomposerui.js" />
        </rule>
        <rule name="ComposerUICssProxyRule" stopProcessing="true">
          <match url="CCM/Proxy/ccmcomposerui.css" />
          <action type="Rewrite" url="{http://ccmserver:port}/proxy/
ccmcomposerui.css" />
        </rule>
        <rule name="ComposerUIImgProxyRule" stopProcessing="true">
          <match url="CCM/Proxy/img/(.*)" />
          <action type="Rewrite" url="{http://ccmserver:port}/proxy/img/{R:1}" />
        </rule>
        <rule name="CCMDesignerStaticProxyRule" stopProcessing="true">
          <match url="CCM/Proxy/static/(.*)" />
          <action type="Rewrite" url="{http://ccmserver:port}/ccm/static/
{R:1}" />
        </rule>
        <rule name="ComposerUIFontProxyRule" stopProcessing="true">
          <match url="CCM/Proxy/fonts/(.*)" />
          <action type="Rewrite" url="http://{ccmserver:port}/proxy/fonts/
{R:1}" />
        </rule>
```

```
        </rules>
```

4. Replace the `http://<kcmserver>:<port>` with the kcmserver URL.
5. Save and close the configuration file.

Use the Configuration Utility

Run the Configuration Utility and on the Configuration Editor Tool, select the App tab and update the configuration settings. See the *Kofax TotalAgility Configuration Utility Guide*.

Install KCM Proxy manually

You can install the KCM proxy without using the Web platform installer and KCM proxy installer.

1. Install IIS URL Rewrite 2.0.
2. Install Microsoft Application Request Routing 2.5 or higher for IIS.
3. In the IIS Manager, do the following:
   a. On a server level, double-click the **Application** request routing cache.
   b. Click **Server Proxy Settings**.
   c. Select **Enable Proxy**.
   d. Click **Apply**.
4. In TotalAgility Web.config, find `{http://ccmserver:port}` and replace it with `http://servername:port`, where **servername** is the host name of the KCM machine and **port** is the port KCM listed as (default 8081). See the previous section for manually updating the KCM Server URL in TotalAgility Web.config.
5. Uncomment the `<rewrite>` section.
6. Save and close the configuration file.

Chapter 9

TotalAgility License Proxy installation

You can install the License Proxy manually or when installing TotalAgility.

This chapter describes the License Proxy installation procedure.

- Standard installation of License Proxy
- Silent installation of License Proxy

For information on installing the License Proxy when installing TotalAgility, see the Step for License Proxy installation in Standard installation of TotalAgility.

Prerequisites

Make sure the system meets the following prerequisites:

1. Install TotalAgility License Proxy on the machine where the VRS Elite server is installed (recommended). Otherwise, you will need to run the license utility on each workstation and configure the server to point to the proxy machine.
2. Install the License Proxy on a different computer from the License server (a computer running the 'Kofax License Server' service) because the License Proxy needs to route traffic to the License server. As part of the License Proxy setup, the installer checks the local computer for the TotalAgility License Server, stops the service, and sets the startup type to "Disabled".

Silent installation of License Proxy

Use the TotalAgility License Proxy silent installation to install the License Proxy automatically from a command line or a batch file. After you edit the silent installation file, the installation proceeds without any user interaction.

1. From your TotalAgility License Proxy silent installation files, navigate to `C:\Program Files\Kofax\Kofax TotalAgility License Proxy` and open `SilentInstallConfig.xml` using a text editor.
2. In `SilentInstallConfig.xml`, update the following parameters.

Parameter	Default value	Description
InstallLocation	`C:\Program Files\Kofax\Kofax TotalAgility License Proxy`	Installs TotalAgility License Proxy.
WINSERV_ACCOUNT	"<username>"	The name of the user running the service.

Parameter	Default value	Description
WINSERV_PASSWORD	"<password>"	The password of the user running the service. Make sure the user running the service has log on as service rights and other requirements appropriate to the environment.
TOTAL_AGILITY_URL	`http://<TotalAgility SERVER>/TotalAgility/Services/SDK/LicenseServerService.svc`	The Kofax TotalAgility server to connect (replace '<TotalAgility SERVER>' with your server).
SYSTEM_SESSION_ID	"<SYSTEM_SESSION_ID>" /qn	The system session ID from Kofax TotalAgility (replace '<SYSTEM_SESSION_ID>' with your system session ID).

Standard installation of License proxy

You can install TotalAgility License Proxy using the standard installer wizard

1. To install manually from your TotalAgility installation files, navigate to `\\Kofax TotalAgility-7.11.0\Licensing\Installs` and run `KofaxLicenseServer.TotalAgility.Proxy-6.5.0.msi`.
   The Kofax TotalAgility License Proxy Setup wizard opens.
2. Click **Next**.
3. In the **End-User License Agreement** window, accept the terms in the License Agreement and click **Next**.
4. In the **Destination Folder** window, select the default path (`C:\Program Files (x86)\Kofax\TotalAgility License Proxy\`) where the Kofax TotalAgility License Proxy will be installed or click **Change** to choose another folder.
5. Click **Next**.
6. In the **Service account setup** window, enter the credentials for the user who will run the TotalAgility License Server service:
   a. In the **Username** field, enter the username.
      To specify a domain user, enter the username in the format Domain\User.
   b. Enter and confirm the password.
      This account must have access to the specified TotalAgility URL. These credentials are used for Kofax License Proxy service.
   c. Click **Next**.
7. In the TotalAgility connection setup window:
   a. Enter the URL of the License Server where the configuration settings reside.

Use the following format: `http://<server_name>/TotalAgility/Services/Core/LicenseServerService.svc` where `<server_name>` is the TotalAgility server name.

If using SSL, you must have a trusted, valid certificate.

b. Enter the System session ID.
   Obtain the System session ID value from the TotalAgility Designer (System>Settings>Settings).

c. Click **Next**.
   The system downloads the settings.

8. Click **Install** to begin the installation.
9. Click **Finish**.
   The Kofax TotalAgility License Proxy for VRS Server is installed. To can verify if the proxy is working properly, navigate to `C:\Program Files\Kofax\Imgctls\bin\Application` and run `KSALicenseUtility`. If the proxy is configured properly, the license information appears in the Kofax License Utility user interface; otherwise, an error appears. You may need to reconfigure the System session ID to match with the TotalAgility Server.

Modify the TotalAgility license proxy information

You can modify the TotalAgility license proxy information after the installation, in one of the following ways.

- Run the `Kofax.Licensing.TotalAgility.ProxyConfig.exe` typically located at `C:\Program Files (x86)\Kofax\TotalAgility License Proxy\`. Example: If you regenerate the system session ID in TotalAgility Designer the same session ID must be reflected in the License Proxy configuration.
- Use command line parameters. Replace the parameters with the following values, if needed.

Parameter	Value
/URL	TotalAgility URL
/sessionID	System Session ID for the specified user.
/retrySpan	Length of time to retry connections to TotalAgility. The time format is the one accepted by TimeSpan.Parse. For example, "00:00:30" represents the default of 30 seconds.
/silent	Enables silent mode for Configuration Utility. The User Interface does not appear.

For example, `Kofax.Licensing.TotalAgility.TenantProxyConfig /url https://tenantSpecific /sessionId {66FFD7D5-F618-4BEE-903A-54C151671BC8} /retrySpan:00:05:00`.

When you run the command with any invalid parameters an error message is sent to the standard error file.

Chapter 10

Kofax Web Capture Service installation

This chapter describes how to Install the Kofax Web Capture Service at the default location or a custom location.

Install Web Capture Service at the default location

1. When opening a scan-enabled form for the first time, a prompt appears asking you to install the new Web Capture Service. See "Build a Scan create new job form" in *TotalAgility Designer Help*.
2. Click **Run**.
3. Select **Save As** if you want to keep a copy of the MSI installer. The MSI installer can be used for Enterprise central deployment scenarios.
4. Refresh the page once the installation is complete.
5. The View and Change Settings icon on the Scan Create New Job form becomes available after the page refresh.
6. The Kofax Web Capture Service icon in the System Tray icons indicates if the service is running.

Install Web Capture Service at a custom location

For enterprise deployment scenarios where a custom Web Capture service installation location is required, install the Web Capture service as follows.

On the Command Prompt, type the following command:

```
msiexec /i Kofax.WebCapture.Installer.msi INSTALLFOLDER=<Installation Folder>
```

Install the Web Capture Service as Windows Service

To deploy and upgrade the Web Capture Service installed as Windows Service, you must have Administrator rights.

To install the Web Capture Service as a Windows Service, enable the multiuser support features by using the INSTALLASSERVICE command line option as follows:

```
msiexec /I Kofax.WebCapture.Installer.msi INSTALLASSERVICE=1
```

The MSI installation package is available in the TotalAgility installation folder at:

```
\\TotalAgilityInstall\Agility.Server.Web\Forms\Controls\Capture\external
\webcapture
```

Use the Web Capture Service in a multiuser environment

You can use the Web Capture Service in multiuser environments, such as MS Terminal Server and Citrix. Multiple users can work with Web Capture Service at the same time from different Windows logon sessions.

Use the Web Capture Service on MS Terminal Server

When using a Terminal Server, users can connect to the scan server simultaneously and perform scanning tasks or import files in parallel. The Web Capture Service Host determines who exactly has made the request and forwards the request to the appropriate Web Capture Service Worker. The Web Capture Service Worker then works with devices and files that are available to the specific user.

The Web Capture Service can only work with scanners attached to a remote Terminal Server; it cannot work with locally connected scanners.

Similarly, for file import, the Web Capture Service provides access to files on a Terminal Server.

Use the Web Capture Service on Citrix

When both the Browser app and Web Capture Service are installed on the Citrix Server, the Web Capture Service physically runs on a remote Citrix server, while a scanner is connected to the client user's computer. This works transparently for Web Capture Service when Citrix TWAIN Redirection is enabled.

The number of simultaneously active user sessions for one Citrix Server is limited to 50 sessions.

Upgrade the Web Capture Service

To upgrade the Web Capture Service installed as Windows Service, use the same command line parameter that you used for installing the Web Capture Service.

You cannot upgrade the Web Capture Service installed as a Windows Service to the standalone version. If you try to do so, the following message appears: This application cannot be installed because you already have Web Capture Service installed as Windows service.

However, you can upgrade from the standalone installation to Windows.

Chapter 11

Kofax Scan Agent Service installation

The Scan Agent Service is offered through lightweight local agents that can be deployed through an MSI file included in the TotalAgility installation media.

You must have sufficient privileges to install system services, otherwise, the Scan Agent Service (ScanAgentService) cannot be installed.

Service account to use for Scan Agent Service:

If TotalAgility is configured to use Windows authentication, then the Active Directory account must be specified that can authenticate within TotalAgility. Otherwise, the LocalSystem account can be used.

As Scan Agent Service needs access to user profile-specific folders (to access scanned images) then the service account that is used for Scan Agent Service must have access to different user profiles. This means that this account must have administrative privileges. For example, when Scan Agent Service is installed on the terminal server and/or different users (scan operators) use the same computer.

If Scan Agent Service is going to be deployed to the end-user computer, then you may not require administrator privileges. For example, if Scan Agent Service is going to upload images only for a particular user, then you can install Scan Agent Service under this user account.

Prerequisites

You must have sufficient privileges to install system services, otherwise, the Scan Agent Service (ScanAgentService) cannot be installed.

Service account to use for Scan Agent Service

- If TotalAgility is configured to use Windows authentication, then specify the Active Directory account that can authenticate within TotalAgility. Otherwise, use the LocalSystem account.
- As Scan Agent Service needs access to user profile-specific folders (to access scanned images), the service account used for Scan Agent Service must have administrative privileges to access different user profiles. For example, when Scan Agent Service is installed on the terminal server and/or different users (scan operators) use the same computer.
- If Scan Agent Service is going to be deployed to the end-user computer, for example, to upload images only for a particular user, then you may not require administrator privileges. You can install Scan Agent Service under the end user's account.

Standard installation of Scan Agent Service

1. From your TotalAgility installation files, navigate to `\\ScanAgentService`.
2. Double-click **Kofax.TotalAgility.ScanAgentService.Installer.msi**.
   The Kofax TotalAgility Scan Agent Service Setup wizard starts.
3. Click **Next**.
4. In the **End-user License Agreement** window, select **I accept the terms in the License Agreement**.
5. Click **Next**.
6. In the **Destination Folder** window, either accept the default location where the Scan Agent Service must be installed or click **Change** to choose another folder.
7. Click **Next**.
8. In the **Service account setup** window, specify the logon account (Windows account) for the Kofax TotalAgility Scan Agent service.
9. Click **Next**.
10. Click **Install** to begin the installation.
    Once installed, a local service, "Kofax TotalAgility Scan Agent Service", is created on the workstation. A companion "Scan Agent Monitor" is available, which can be used to monitor job upload status.

Scanning with Scan Agent Service

The status bar of the Scan create new job form indicates if the session is connected to Scan Agent Service.

The Scan create new job form offloads the actual upload of images to Scan Agent Service. However, if image enhancement is enabled, the Scan create new job form performs image processing in a regular way.

Once the image processing operation (if any) is done, the "Create Job" button becomes available, even if images have not been completely uploaded to the server. When you click "Create Job", the job appears in the Scan Agent Monitor.

The Scan Agent Monitor can be used to monitor job upload status. The job upload statuses include:

- **Pending**: The job is being prepared for upload.
- **In Progress**: The job is currently being uploaded.
- **Finished**: The job has successfully been uploaded.
- **Error**: The job encountered an error and has been stopped.
- **Paused**: The job has been paused.

Depending on the job status, the following actions are available.

- **Abort**: Aborts and cancels the corresponding job and prompts you for a TotalAgility user account to cancel the job with.

This action uses a separate TotalAgility user session; if “Allow Multiple Logon” is not enabled, the abort action ends any other session using the same user account.

- **Pause**: Pauses the upload session for the job. You must explicitly resume a paused job.
- **Retry**: Queues uploading job again if the job encounters an error. This action helps in recovering from an upload error.
- **Resume**: Resumes a paused job.
- **Clear Completed**: Removes all uploaded complete jobs from the list.

Chapter 12

Kofax VRS Elite installation

This chapter describes how to install and configure Kofax VRS Elite for TotalAgility. For detailed information on Kofax VRS Elite installation, refer to the Kofax VRS Elite Installation Guide from the Kofax Support site.

Install VRS Elite

Install VRS Elite depending on the licensing options:

1. If your scanner includes an OEM version of VRS Basic or Professional, run setup.exe on the scan station. The VRS software is automatically activated based on the attached scanner model.
2. If you purchased a standalone VRS license, run setup.exe and select Standalone as the setup type. When prompted, specify the part number (such as VP-P005-0001), product code, and serial number to activate the software.
3. If you want to manage VRS licenses through the TotalAgility License Server while also enabling VRS Elite shared profiles and auto-profile training data, do the following:
   a. Run setup.exe from the VRS Elite installation media.
   b. When prompted, select Server as the setup type.
   c. Confirm the TotalAgility license server information.

      If the VRS Server does not have a direct connection to the TotalAgility license server, you need to **install a license proxy**.

   d. Complete the steps in the installation wizard.
   e. Use the generated deployment Kofax VRS.msi to install VRS on the scan stations. Refer to the *Kofax VRS Elite Installation Guide* for details.

Use Kofax VRS Elite with the TotalAgility Scan Client

After you install VRS Elite, Kofax Software VRS - TWAIN appears in the list of scanners when you scan a document in TotalAgility. See the *TotalAgility Scan Client help* for more information.

Chapter 13

TotalAgility configuration

This chapter provides the instructions for configuring TotalAgility such as changing or updating any installation parameters post TotalAgility installation, encrypting and decrypting the TotalAgility configuration files, and more.

Configure TotalAgility for HTTPS communication

To configure TotalAgility for HTTPS communication, you must do the following:

- Configure SSL for the TotalAgility application in IIS.
- Update the TotalAgility configuration files

Enable SSL for the TotalAgility application in IIS

Enable SSL (Secure Sockets Layer) communication for the TotalAgility web layer and Kofax TotalAgility Core Worker to communicate with core services and the Transformation Server.

You can enable SSL for TotalAgility at the time of installation. However, if you have not enabled SSL at the time of installation, you can do so post installation by running the Configuration Utility available in your product installation folder. See the *Kofax TotalAgility Configuration Utility Guide*.

Before changing the bindings in the TotalAgility configuration files, ensure that SSL is enabled for TotalAgility in the IIS.

1. Open **Internet Information Services (IIS) Manager**.
2. Right-click the **Default Web Site** and click **Edit Bindings**.
3. Click **Add**.
   a. On the **Type** list, select **HTTPS**.
   b. On the **SSL certificate** list, select the certificate.
   c. If installing a separate web server, additionally specify the **IP address** of the web server, and **Port** number.
   d. Click **Ok**.
4. Click TotalAgility and click **SSL settings** on the **Features** tab.
   a. Select the check box for **Require SSL**.
   b. **Accept** the Client certificates.
   c. Click **Apply**.

Update the TotalAgility configuration files

Update the following configuration files:

- Web.config
- Agility.Server.Core.WorkerService.exe.config
- Agility.Server.StreamingService.exe.config

Update Web.config

1. Open **Web.config** located at your installed location. The default location is:

   `C:\Program Files\Kofax\TotalAgility\Agility.Server.Web`

2. In `<servicebehaviors>`, update the `httpsGetEnabled` setting as follows:

```
<serviceBehaviors>
 <behavior name="Agility.Server.Web.Services.Behavior">
 <serviceMetadata httpGetEnabled="false" httpsGetEnabled="true" />
</serviceBehaviors>
```

3. By default `<security mode="TransportCredentialOnly">`. If using HTTPS mode, update the `<security>` settings as follows:

   - If using Windows authentication with HTTPS, update the `<security>` setting as follows:

```
<!-- HTTPS SSL with Windows logon-->
<security mode="Transport">
<transport clientCredentialType="Windows"/>
</security>
```

   - If using anonymous authentication or manual login with HTTPS, update the `<security>` setting as follows:

```
<!-- HTTPS SSL with application authentication-->
<security mode="Transport">
<transport clientCredentialType="None" />
</security>
```

   - If using anonymous authentication or manual login with HTTP, update the `<security>` setting as follows:

```
<security mode="TransportCredentialOnly">
<transport clientCredentialType="None" />
</security>
```

   The BasicHttpStreamingBinding_Service binding should be set to None in both web.config and StreamingService for Transformation Designer to work correctly.

4. Perform the above HTTPS transport authentication for all the bindings:

   - `BasicHttpBinding_TrimCommunicatorService`
   - `BasicHttpBinding_ExchangeNotificationService`
   - `BasicHttpBinding_DynamicsAxCommunicatorService`
   - `BasicHttpBinding_DynamicsAxIntegrationService`
   - `BasicHttpBinding_Service`
   - `CustomBinding_CoreService`
   - `BasicHttpBinding_RemoteLinkedService`

- `BasicHttpBinding_LicenseServerService`
- `BasicHttpStreamingBinding_Service`
- `BasicHttpBinding_DeviceManagerService`
- `BasicHttpBinding_InsightDataService`
- `BasicHttpBinding_SigningIntegrationService`
- `WebHttpBinding_Service`
- `WebHttpBinding_DeviceManagerService`
- `WebHttpBinding_SigningIntegrationService`
- `BasicHttpBinding_SharepointReceiverService`
  - If using HTTPS authentication, comment out the below HTTP section:

    ```
    <!-- HTTPS SSL with application authentication-->
    <security mode="TransportCredentialOnly">
    <transport clientCredentialType="None"/>
    </security>
    ```

  - If using HTTP authentication, comment out the above HTTPS section:

    ```
    <!-- HTTP with application authentication-->
    <security mode="TransportCredentialOnly">
    <transport clientCredentialType="None" />
    </security>
    ```

  For Windows or Manual authentication, the SharePoint Receiver Service must use anonymous binding for both HTTP and HTTPS authentication.

5. The Secure attribute for sensitive cookies in HTTPS sessions is not set by default. This allows a browser to send these cookies in plain text over an HTTP session. To secure the cookies, uncomment the httpCookies tag.

   `<httpCookies requireSSL="true"/>`

6. To connect TotalAgility to a specific SQL server, ensure that `"encrypt=true"` for the TotalAgility database connection string.

   If SSL encryption has been turned on globally at the SQL server level using force encryption, you do not need to update the TotalAgility connection strings.
   If SSL encryption has been turned on globally at the SQL server level using force encryption, you do not need to update the TotalAgility connection strings.

7. Save the file.

Update Agility.Server.Core.WorkerService.exe.config

1. Open **Core Worker Agility.Server.Core.WorkerService.exe.config** located at your installed location. The default location is:

   `C:\Program Files\Kofax\TotalAgility\CoreWorkerService`

2. Perform the HTTPS transport authentication for all the bindings:
   - `BasicHttpBinding_Service`
   - `CustomBinding_CoreService`
   - `BasicHttpBinding_TrimCommunicatorService`

3. Save the file.
4. Restart the TotalAgility CoreWorker service.

Update Agility.Server.StreamingService.exe.config

1. Open the **Agility.Server.StreamingService.exe.config** located at your installed location. The default location is:
   - **Web server**:

     `C:\ProgramFiles\Kofax\TotalAgility\Agility.Server.Web\bin\Agility.Server.StreamingService.exe.config`
   - **Application server and combined Web/Application server**:

     `C:\ProgramFiles\Kofax\TotalAgility\CoreWorkerService\Agility.Server.StreamingService.exe.config`

   Edit the Agility.Server.StreamingService.exe.config for both the Application and Web servers.

2. In `<servicebehaviors>`, update the `httpsGetEnabled` setting as follows:

```
<serviceBehaviors>
 <behavior name="Agility.Server.Web.Services.Behavior">
 <serviceMetadata httpGetEnabled="false" httpsGetEnabled="true" />
</serviceBehaviors>
```

3. By default, `<security mode="TransportCredentialOnly">`. If using HTTPS mode, update the `<security>` settings (for Windows authentication or logging on manually) as follows:
   -
```
<!-- HTTPS SSL with Windows logon-->
<security mode="Transport">
<transport clientCredentialType="None"/>
</security>
```

   ClientCredentialType needs to be None for streaming services, as other types of authentication are not supported by the WCF streamed transfer mode. This is not an issue as the calling session ID will always be validated and the HTTPS certificate needs to be valid.

4. Perform the HTTPS transport authentication for all the bindings as follows:
   - **`WebHttpExportBinding_Service`**

```
<binding name="WebHttpExportBinding_Service"> transferMode="StreamedResponse">
<security mode="Transport">
 <transport clientCredentialType="None">
</transport>
</security>
</binding>
```

   - **`WebHttpImportBinding_Service`**

```
<binding name="WebHttpImportBinding_Service"> transferMode="StreamedRequest">
<security mode="Transport">
 <transport clientCredentialType="None">
</transport>
</security>
</binding>
```

   - **`BasicHttpStreamingBinding_Service`**

```
<binding name="BasicHttpStreamingBinding_Service" transferMode="Streamed"
```

```
<security mode="Transport">
 <transport clientCredentialType="None">
</transport>
</security>
</binding>
```

- **BasicHttpBinding_Service**

```
<binding name="BasicHttpBinding_Service">
<security mode="Transport">
 <transport clientCredentialType="Windows" />
 </security>
</binding>
```

- **BasicHttpStreamingBinding_CoreService**

```
<binding name="BasicHttpStreamingBinding_CoreService" transferMode="Streamed"
<binding name="BasicHttpStreamingBinding_CoreService" transferMode="Streamed"
<security mode="Transport">
 <transport clientCredentialType="Windows" />
 </security>
</binding>
```

> The streamed transfer mode causes the Microsoft WCF runtime to enforce some restrictions on security. The Windows authentication is not possible with streamed transfer mode. Therefore, we recommend that you use anonymous authentication. However, TotalAgility always validates the session ID before serving a request.

- **CustomBinding_CoreService**

```
<binding name="CustomBinding_CoreService">
<!--
    <httpTransport authenticationScheme="Negotiate" for http with windows
 authentication
    <httpsTransport authenticationScheme="Anonymous" for https with None
 authentication
 -->
     <httpsTransport authenticationScheme="Anonymous" allowCookies="true"
 maxBufferSize="2147483647" maxReceivedMessageSize="2147483647"
 maxBufferPoolSize="524288" />
     </binding>
```

5. Change the `<baseAddresses>` from http to https.
6. Save the file.
7. Restart the TotalAgility Streaming Service to apply the new settings.

Configure TotalAgility for high availability

You can install a second License Server on a different computer and use it as a backup server for Kofax TotalAgility.

1. From your TotalAgility installation files, navigate to **TotalAgilityInstall** > **Licensing** >**Installs**.
2. Click **KSALicServerSetup**.
   The **License Server Setup** window opens.
3. Click **Next**.
4. In the Destination Folder window, select the default folder (`C:\Program Files (x86)\Kofax \License Server\`) for the License Server or click **Change** to select a different folder.

5. Click **Next** and follow the instructions to complete the installation.

Access TotalAgility through iPad or iPhone

To access TotalAgility through iPad or iPhone, update the **Web.config** file. You can use Windows authentication between the Web and Application servers and still use TotalAgility authentication from the client device to the Web server.

1. Access TotalAgility **Web.config** file from the following directory on the Web server: `C:\Program Files\Kofax\TotalAgility\Agility.Server.Web\Web.config`.
2. Search the **.config** file for the following: `<binding name="BasicHttpBinding_Service"`.
3. Copy the entire block of code, from `<binding>` to `</binding>`.
4. Paste the block under the copied block and rename it to `<binding name=`**`BasicHttpBindingCore_Service`**.
5. In the copied binding, ensure HTTP with Windows authentication is enabled. This enables the authentication from the Web server to the Application server.
6. Navigate to the start of the core endpoints and search for `<!--START CORE END POINTS -->`.
7. For each core endpoint replace `BasicHttpBinding_Service` with `BasicHttpBindingCore_Service`.
8. To use the authentication from the client device to the web server, update the original `BasicHttpBinding_Service` binding to use Anonymous authentication and SSL (if required).
9. Save the **Web.config** file.
10. Log on to TotalAgility ensuring you have been previously added as a TotalAgility user.

Generate a common machine key if using Federated Security

When using Federated Security with TotalAgility in a load-balance environment, TotalAgility cannot consistently decrypt the encrypted token passed from an Identity Provider using WsFed tokens. This is because, by default, each load-balanced server has a unique machine key identifier used for token encryption/decryption.

We recommend that you generate a common machine key and propagate it to all servers in the load-balanced environment. For example, if you generate a machine key for the TotalAgility application, the Web.config file gets automatically updated with the machine key element. The configuration of a machine key can be done at the web server, site, or application level.

To generate a machine key, perform the following steps:

1. Open Internet Information Services (IIS) manager.
2. Select the TotalAgility application, website, or web server from the left panel to generate a machine key.
3. In **Features View**, right-click **Machine Key**, and then click **Open Feature**.
4. On the **Machine Key** page, select an encryption method from the **Encryption method** drop-down list.

5. Select a decryption method from the **Decryption method** drop-down list.
6. Optionally, configure settings for **Validation** and **Decryption** keys.
7. In the **Actions** panel, click **Generate Keys**, and then click **Apply**.
   When you click apply, the changes are automatically saved in the Web.config file.
   To encrypt and decrypt the machine key, see Encrypt and decrypt the TotalAgility configuration files.

Encrypt and decrypt the TotalAgility configuration files

The TotalAgility configuration files include the DB Connection settings, including sensitive information. Therefore, we recommend that you encrypt the following TotalAgility files.

- Web.config (Use Microsoft ASP.NET IIS Registration Tool)
- Configuration files of executables (Use the Kofax.CEBPM.EncryptConfig.exe utility)

> Kofax.CEBPM.EncryptConfig.exe cannot work with Web.config; it can only work with configurations of executables.

You can encrypt or decrypt all configuration files.

List of configuration files

List of configuration files of executables

Configuration filename	Location
• Agility.Server.ExportConnector.exe.config	<Installation location>\TotalAgility \Agility.Server.Web
• Agility.Installation.Server.Upgrade.exe.config • Agility.Server.Core.Executor.exe.config • Agility.Server.ExportConnector.exe.config • Agility.Server.StreamingService.exe.config	<Installation location>\TotalAgility \Agility.Server.Web\bin\
• Agility.Server.Core.Executor.exe.config • Agility Server.Core.ExportService.exe.config • Agility.Server.Core.ExportWorker.Host.exe.config • Agility.Server.Core.WorkerService.exe.config • Agility.Server.StreamingService.exe.config	<Installation location>\TotalAgility \CoreWorkerService
• Kofax.CEBPM.Reporting.AzureETL.exe.config • Kofax.CEBPM.Reporting.TAService.exe.config	<Installation location>\TotalAgility\Reporting
• KSALicenseService.exe.config	<Installation location>\TotalAgility \LicenseServer
• ExtractionProcess.exe.config	C:ProgramFiles (x86)\Common Files\Kofax\Server\
• RegAscSc.exe.config	<Installation location>\TotalAgility \ExportConnectors\bin\
• Setup.exe.config	<Installation location>\TotalAgility \KCMProxyInstallation
• Agility.Server.Core.Executor.exe.config • Kofax.CEBPM.CPUServer.ServiceHost.exe.config • Kofax.CEBPM.DocumentConversionServic e.Host.exe.config • Kofax.CEBPM.ProcessingService.Host.exe.config	<Installation location>\TotalAgility \Transformation Server
• csc.exe.config	<Installation location>\TotalAgility \Transformation Server\roslyn

List of Web configuration files

Configuration filename	Location
• Web.config • App.config	<Installation location>\TotalAgility \Agility.Server.Web\
• Web.config	<Installation location>\TotalAgility \Agility.Server.Web\DeviceManager
• Web.config	<Installation location>\TotalAgility \Agility.Server.Web\KFS
• Web.config	<Installation location>\TotalAgility \Agility.Server.Web\Kofax\BrowserDevice
• Web.config	<Installation location>\TotalAgility \Agility.Server.Web\Kofax\BrowserDevice\Static
• Web.config	<Installation location>\TotalAgility \Agility.Server.Web\MobileServices
• Web.config	<Installation location>\TotalAgility \Agility.Server.Web\Services\Core
• Web.config	<Installation location>\TotalAgility \Agility.Server.Web\Services\Core\Integration
• Web.config	<Installation location>\TotalAgility \Agility.Server.Web\Services\Sdk
• Web.config	<Installation location>\TotalAgility\OpenAPI

Encrypt and decrypt Web.config

Use the Microsoft ASP.NET IIS Registration Tool (aspnet_regiis) to encrypt or decrypt any section of the Web.config file. Refer to the Encrypting and Decrypting Configuration sections on the Microsoft website.

1. Navigate to TotalAgility Web.config located at <Kofax Install location>\TotalAgility \Agility.Server.Web.
2. Run the Microsoft ASP.NET IIS Registration Tool (aspnet_regiis).

   At a minimum, encrypt the appSettings section that includes the Database connection information.

   For encryption, use the following command:

   ```
   aspnet_regiis -pef "Section of file" "Path exluding web.config without trailing slash"
   ```

   For decryption, use the following command:

   ```
   aspnet_regiis -pdf "Section of file" "Path exluding web.config without trailing slash"
   ```

Encrypt and decrypt the configuration files of executables

Use the Kofax.CEBPM.EncryptConfig.exe utility (located in the TotalAgility installation_folder) to encrypt (-enc) or decrypt (-dec) the configuration files of executables.

Before encrypting the configuration files of executables, you must add a security provider.

Add a security provider

Before encrypting the configuration file, add the following <configProtectedData> section in the file:

The <configSections> element must be the first child element of the configuration in the configuration file. This is enforced by .NET configuration manager.

```
<configProtectedData>
    <providers>
      <add useMachineProtection="true"
           name="DPAPIProtection"
           type="System.Configuration.DpapiProtectedConfigurationProvider,
           System.Configuration, Version=2.0.0.0, Culture=neutral,
 PublicKeyToken=b03f5f7f11d50a3a" />
      <add name="RSAProvider"
           type="System.Configuration.RsaProtectedConfigurationProvider,
 System.Configuration,
           Version=2.0.0.0, Culture=neutral, PublicKeyToken=b03f5f7f11d50a3a,
 processorArchitecture=MSIL"
           keyContainerName="CPUServerKeys" useMachineContainer="true" />
    </providers>
</configProtectedData>
```

Encrypt the configuration files of executables

The Kofax.CEBPM.EncryptConfig.exe utility encrypts (-enc) or decrypts (-dec) any section of the configuration file.

At a minimum, encrypt the `appSettings` section as it includes the user ID and password as well as other information. Use the optional -h flag to display help for the command.

The TotalAgility Server supports two encryption methods depending on command line parameters using the Kofax.CEBPM.EncryptConfig.exe utility:

- DPAPI encryption
- RSA encryption

Use the DPAPI encryption method

Use this utility to encrypt one server at a time because you must decrypt the file on the same machine where it was encrypted.

Run the utility on each TotalAgility Server individually.

1. Stop the TotalAgility Core Worker Server service.
2. Navigate to the TotalAgility Core Worker installation directory.
3. Copy the **Kofax.CEBPM.EncryptConfig.exe** to the same folder where **Agility.Server.Core.WorkerService.exe.config** resides.
4. Open a Command Prompt window and run the following command:

   Kofax.CEBPM.EncryptConfig.exe -f Agility.Server.Core.WorkerService.exe.config -s "appSettings" -p DPAPIProtection -enc

Use the RSA encryption method

An algorithm for public key encryption and digital signatures that uses two separate keys. Create a key and encrypt the configuration file on one Server and export the key to all the other Servers. All the TotalAgility Servers with the exported key installed can access the configuration file. Use this method if you have several Servers with the same configuration.

The following instructions differentiate between the source TotalAgility Server where you create the key and the target TotalAgility Servers onto which you import the key.

Prepare the key

Perform these steps on one source TotalAgility Server.

1. Create the custom RSA key container:
   a. Log on to the TotalAgility Server with administrator rights.
   b. Open a command-line window.
   c. Navigate to the .NET Framework version 4.0 directory. For example, enter the following command:
      cd \WINDOWS\Microsoft.Net\Framework\v4.0.*
   d. Run the following command:
      aspnet_regiis -pc "<KeysFile>" -exp
      where:
      - <KeysFile> is the name of the key file.
      - The -exp option makes the key exportable.
2. Run the following command to grant the TotalAgility Core Worker Server service user permission to read the <KeysFile> RSA container file.
   aspnet_regiis -pa **<KeysFile> <TotalAgilityserviceuser>**
   where:
   - <KeysFile> is the name of the key file you created in Step 1d.
   - <TAserviceuser> is the TotalAgility Core Worker Server service user.
3. Encrypt the file:
   a. Log on to the TotalAgility Server as the TotalAgility Core Worker Server service user.
   b. Navigate to the installation directory for the TotalAgility Server and open a command-line window.
   c. Run the following command:
      Kofax `Kofax.CEBPM.EncryptConfig.exe -f Agility.Server.Core.WorkerService.exe.config -s "appSettings" -p RSAProvider -enc`
      This command encrypts the appSettings section of the configuration file. The appSettings section includes the user ID, password, and other information.
4. Export the key by running the following command:
   `aspnet_regiis -px "<KeysFile>" "<c:\keys.xml>" -pri`

where:

- <KeysFile> is the default keystore keyContainerName.
- `<c:\keys.xml>` is the path and file name of the exported key file.

Import the key

Perform these steps on every target TotalAgility Server.

1. Import the key:
   a. Log on to the TotalAgility Server with administrator rights.
   b. Copy the keys.xml file from the source TotalAgility Server to the root C:\ directory of the target TotalAgility Server.
   c. Open a command-line window.
   d. Run the following command:
      `aspnet_regiis -pi "<KeysFile>" "c:\keys.xml"`
      where:
      - <KeysFile> is the default name of the key file.
      - `<c:\keys.xml>` is the path and file name to the imported key file.
   e. Delete the keys.xml because it contains the unprotected private key.
2. Run the following command to grant the TotalAgility Core Worker Server service user permissions to use the <KeysFile> RSA container file:
   aspnet_regiis -pa "<KeysFile>" "TotalAgilityserviceuser"
   where:
   - <KeysFile> is the name of the key file you imported in step 1.
   - <TotalAgilityserviceuser> is the TotalAgility Core Worker Server service user.
3. Repeat these steps on all remaining TotalAgility Servers.

Decrypt the configuration file

1. Stop the **TotalAgility Core Worker Server** service.
2. Navigate to the TotalAgility Server installation directory and open a command-line window.
3. Run the following command:
   Kofax`Kofax.CEBPM.EncryptConfig.exe -f Agility.Server.Core.WorkerService.exe.config -s "appSettings" -p DPAPIProtection -dec`

   Also repeat the encrypt and decrypt procedures for the Export configuration file.

Encrypt the configuration files in a Docker container

You can encrypt the Web.config files and all executable configuration files using the "DPAPI" or "RSA" methods.

Encrypting the configuration files using "DPAPI"

Add the following to your Docker run command.

```
-e KTA_CONFIG_ENCRYPTION_PROVIDER_TYPE="DPAPI"
```

For example, `"docker run -d --hostname "opdemo2" --name "opdemo2" --env-file "C: \Docker\TotalAgility\dockersettings.env" -p 5000:80 -e KTA_CONFIG_ENCRYPTION_PROVIDER_TYPE="DPAPI" kofaxop"`

Encrypting the configuration files using "RSA"

Add the following to your docker run command.

```
-e KTA_CONFIG_ENCRYPTION_PROVIDER_TYPE="RSA"
```

For example, `"docker run -d --hostname "opdemo2" --name "opdemo2" --env-file "C: \Docker\TotalAgility\dockersettings.env" -p 5000:80 -e KTA_CONFIG_ENCRYPTION_PROVIDER_TYPE="RSA" kofaxop"`

Edit the TotalAgility configuration settings

After installing TotalAgility, to change or update any parameters, edit the following configuration files available in the installation directory.

- Agility.Server.Core.WorkerService.exe.config
- Agility.Server.Core.ExportService.exe.config
- Web.config
- KSALicenseService.exe.config

You can either edit each of these files separately or run the TotalAgility Configuration Utility to modify all the settings in one go. The Configuration Utility is available from the TotalAgility installation files and must be manually copied to your TotalAgility server. See the *Kofax TotalAgility Configuration Utility Guide*.

Update the parameter values

When you initially install the TotalAgility Server, the system stores the configuration settings in a .NET file, Agility.Server.Core.WorkerService.exe.config. To change the value of any parameters, do the following.

1. If you encrypted the configuration file after you installed the TotalAgility server, decrypt the file. See Encrypt and decrypt the TotalAgility configuration files.

   If you use RSA encryption, decrypt the configuration file only on the source TotalAgility server where you initially encrypted the file.

2. Navigate to the installation directory for the TotalAgility server.
3. Open Agility.Server.Core.WorkerService.exe.config in a text editor.

4. Locate the following section:

```
<appSettings>
     <add key="KeyNameString" value="which may contain passwords;"/>
</appSettings>
```

5. Edit the parameter values as needed.
6. Save and close the configuration file.
7. To re-encrypt the configuration file, run the encryption utility.

   If you use RSA encryption, export the key, and install the encryption key file on any target TotalAgility servers imported the original encrypted configuration file.

8. Restart the Kofax TotalAgility Core Worker Server service.

Update the settings for a license server

Manually

When installing TotalAgility, by default, the primary license server is used. If the primary license server fails, you can connect to the backup server post installation manually or run the Configuration utility.

After installing TotalAgility, you can update the license server parameters in the KSALicenseService.exe available in the installation directory.

1. Stop the Kofax Licenser Server service.
2. Navigate to the installation directory for the TotalAgility server.
3. In a text editor, open KSALicenseService.exe.config from the following directory: `\\Kofax\TotalAgility\LicenseServer`.
4. Locate the following section and update the serverId and connectionStrings parameters. By default, the serverId value is "1", which means the primary license server is connected.

```
<appSettings>
  <!-- Specify "1" for a primary license server or "2" for a backup license
 server. -->
  <add key="serverId" value="1"/>
 </appSettings>
 <connectionStrings>
  <add name="LicensingDatabase"
 connectionString="Server=<machinename>;Trusted_Connection=Yes;Database='TotalAgility';"/
>
 </connectionStrings>
```

   a. To connect to the backup license server, modify the serverId value as "2".

   b. Update the LicensingDatabase connection string to point to Main DB for on premise environment.

5. Save and close the configuration file.

Use the Configuration Utility

Run the Configuration utility and select the **Backup** license server setting on the **Licensing** tab. See the *Kofax TotalAgility Configuration Utility Guide*.

Support export vertical scaling

By default, there is no export instance. An export instance is only spawned if there is an export activity that is ready for export. More export instances are spawned if more export activities are ready for export. You can configure TotalAgility to support multiple export instances on an export server.

1. Navigate to the installation directory for the TotalAgility Server.
2. Open Agility.Server.Core.ExportService.exe.config in a text editor.
3. Locate the `<appSettings>` section and change the value of MaxExportProcessesNumber as needed. (Default: 0)

```
<appSettings>
     <add key="MaxExportProcessesNumber" value="0"/>
</appSettings>
```

Maximum number = Round of ((The number of machine processor count) * 1.25)

```
Maximum number = Round of ((The number of machine processor count) * 1.25)
```

The formula is only used if MaxExportProcessesNumber is less than or equal to 0. If the number is >= 1, the export processes count is equal to the defined value (MaxExportProcessesNumber).

Anti-Cross Site Request Forgery (CSRF) measures

Use the following anti-CSRF measures to protect the site against Cross-site Request Forgery attacks.

- Configure the Anti-CSRF tokens
- Specify the Samesite attribute with value as Strict or Lax in the <hostCookies> tag of Web.config to prevent CSRF attacks. See the Microsoft website for more information.
- Enable Host prefix for cookies

Anti-Cross Site Request Forgery (CSRF) tokens

A CSRF attack relies on a user being authenticated on a website. The attack usually comes as an email or website hyperlink on which the user clicks while still authenticated. This URL then points back to the user's website and attempts to perform a privileged action (such as adding an administrator account) without the user's knowledge. In TotalAgility, the TargetHostName and TargetPortNo settings are added as Anti-CSRF tokens in the Web.config file. TargetHostName is the fully qualified domain name of the web server and TargetPortNo is the website port number. When you provide these settings, the Anti-CSRF origin and referrer validations are performed on the request URL. If the validation fails, the request will be terminated considering it a potentially dangerous request.

You can configure the Anti-CSRF tokens in the Web.config manually or using the Configuration Utility.

Manually

1. Navigate to the installation directory for the TotalAgility server.

2. In a text editor, open Web.config from the following directory:
   `\\TotalAgilityInstall\Agility.Server.Web`
3. Locate the following section and specify the target host name and target port number.

```
<appSettings>
             <add key= “TargetHostName" value="<hostnamegoeshere"/>
 <add key= “TargetPortNo” value=”443”
              </appSettings>
```

4. Save and close the configuration file.

Use the Configuration Utility

Run the Configuration Utility and specify the TargetHostName and TargetPortNo settings. See the *Kofax TotalAgility Configuration Utility Guide*.

Enable Host prefix for cookies

Use "Host Prefix for Cookies", a browser functionality that makes the cookies more secure by prefixing the TotalAgility cookie names with "__HOST-". When a cookie name starts with this flag, it triggers an additional browser policy on the cookie in supporting browsers. A Host--prefixed cookie is only accessible by the same domain it is set on, which means a subdomain can no longer overwrite the cookie value. It also makes a cookie accessible from HTTPS sites only. This protects the cookie even if an attacker uses a forged insecure site to overwrite a secure cookie.

Edit the setting manually or use the Configuration Utility for enabling or disabling the cookies' security.

Perform the following steps on the Web or combined Web/Application server.

1. From the Kofax TotalAgility installation files, navigate to `\\TotalAgilityInstall \Agility.Server.Web`.
2. Open Web.config in a text editor.
3. Locate the **<appSettings>** section and make sure the value of "UseHostPrefixForCookies" value="true".

```
<appSettings>
     <add key="UseHostPrefixForCookies" value="true"/>
</appSettings>
```

Use the Configuration Utility

Run the Configuration Utility and change the Host Prefix for Cookies setting on the **Web** tab as needed.

Update settings to prevent stored Cross-Site Scripting vulnerabilities

You can provide enhanced security to prevent stored Cross-Site Scripting vulnerabilities in TotalAgility.

If TotalAgility is on HTTPS protocol and needs to prevent stored Cross-Site Scripting vulnerabilities and enable an additional security layer so that data remains secure.

Make sure the URL redirect module is installed on your computer where TotalAgility is installed.

1. Navigate to the installation directory for the TotalAgility server.
2. In a text editor, open Web.config from the following directory:
   `\\TotalAgilityInstall\Agility.Server.Web`
3. Do one of the following:
   - If KCM is not installed, locate the rule: **"HTTP to HTTPS redirect"** and uncomment the `rewrite` section where this rule is available.
   - If KCM is installed and if you need an additional layer of security, do the following:
     a. Locate the **"HTTP to HTTPS redirect"** rule (shown in bold) and copy it.

```
<rewrite>
      <rules>
        <rule name="HTTP to HTTPS redirect" stopProcessing="true">
          <match url="(.*)" />
          <conditions>
            <add input="{HTTPS}" pattern="off" ignoreCase="true" />
          </conditions>
          <action type="Redirect" url="https://{HTTP_HOST}/{R:1}"
 redirectType="Permanent" />
        </rule>
      </rules>
      <outboundRules>
        <rule name="Add Strict-Transport-Security when HTTPS"
 enabled="true">
          <match serverVariable="RESPONSE_Strict_Transport_Security"
 pattern=".*" />
          <conditions>
            <add input="{HTTPS}" pattern="on" ignoreCase="true" />
          </conditions>
          <action type="Rewrite" value="max-age=31536000;
 includeSubDomains" />
        </rule>
      </outboundRules>
    </rewrite>
```

     b. Locate the following section and paste the copied rule (as displayed in bold).

```
<rewrite>
      <rules>
        <rule name="CCMInteractiveProxy" stopProcessing="true">
          <match url="CCM/Proxy/Interactive/(.*)" />
          <action type="Rewrite" url="{http://ccmserver:port}/ccm/
Interactive/{R:1}" />
        </rule>
        <rule name="CCMDesignerProxy" stopProcessing="true">
          <match url="CCM/Proxy/Repository/(.*)" />
          <action type="Rewrite" url="{http://ccmserver:port}/ccm/
Repository/{R:1}" />
        </rule>
        <rule name="ComposerUIJavascriptProxyRule" stopProcessing="true">
          <match url="CCM/Proxy/ccmcomposerui.js" />
          <action type="Rewrite" url="{http://ccmserver:port}/proxy/
ccmcomposerui.js" />
        </rule>
        <rule name="ComposerUICssProxyRule" stopProcessing="true">
          <match url="CCM/Proxy/ccmcomposerui.css" />
          <action type="Rewrite" url="{http://ccmserver:port}/proxy/
ccmcomposerui.css" />
        </rule>
```

```
        <rule name="ComposerTinyMCEProxyRule" stopProcessing="true">
          <match url="CCM/Proxy/tinymce/(.*)" />
          <action type="Rewrite" url="{http://ccmserver:port}/proxy/tinymce/
{R:1}" />
        </rule>
        <rule name="ComposerUIImgProxyRule" stopProcessing="true">
          <match url="CCM/Proxy/img/(.*)" />
          <action type="Rewrite" url="{http://ccmserver:port}/proxy/img/
{R:1}" />
        </rule>
        <rule name="CCMDesignerStaticProxyRule" stopProcessing="true">
          <match url="CCM/Proxy/static/(.*)" />
          <action type="Rewrite" url="{http://ccmserver:port}/ccm/static/
{R:1}" />
        </rule>
        <rule name="ComposerUIFontProxyRule" stopProcessing="true">
          <match url="CCM/Proxy/fonts/(.*)" />
          <action type="Rewrite" url="{http://ccmserver:port}/proxy/fonts/
{R:1}" />
        </rule>
        <rule name="HTTP to HTTPS redirect" stopProcessing="true">
          <match url="(.*)" />
          <conditions>
            <add input="{HTTPS}" pattern="off" ignoreCase="true" />
          </conditions>
          <action type="Redirect" url="https://{HTTP_HOST}/{R:1}"
 redirectType="Permanent" />
        </rule>
      </rules>
```

c. Locate the following outbound rule: **"Add Strict-Transport-Security when HTTPS"** (shown in bold) and copy it.

```
<rule name="Add Strict-Transport-Security when HTTPS" enabled="true">
          <match serverVariable="RESPONSE_Strict_Transport_Security"
 pattern=".*" />
          <conditions>
            <add input="{HTTPS}" pattern="on" ignoreCase="true" />
          </conditions>
          <action type="Rewrite" value="max-age=31536000;
 includeSubDomains" />
        </rule>
<rewrite>
      <rules>
        <rule name="HTTP to HTTPS redirect" stopProcessing="true">
          <match url="(.*)" />
          <conditions>
            <add input="{HTTPS}" pattern="off" ignoreCase="true" />
          </conditions>
          <action type="Redirect" url="https://{HTTP_HOST}/{R:1}"
 redirectType="Permanent" />
        </rule>
      </rules>
      <outboundRules>
        <rule name="Add Strict-Transport-Security when HTTPS"
 enabled="true">
          <match serverVariable="RESPONSE_Strict_Transport_Security"
 pattern=".*" />
          <conditions>
            <add input="{HTTPS}" pattern="on" ignoreCase="true" />
          </conditions>
          <action type="Rewrite" value="max-age=31536000;
 includeSubDomains" />
```

```
        </rule>
      </outboundRules>
    </rewrite>
```

d. Paste it before the closing bracket of outbound rules of CCM (as displayed in bold).

```
<outboundRules>
          <rule name="HTTPCookie" preCondition="IncomingNoSSLSecureCookie">
            <match serverVariable="RESPONSE_Set_Cookie" pattern="(.*);
 Secure(.*)" />
            <action type="Rewrite" value="{R:1}{R:2}" />
          </rule>
          <rule name="HTTPSCookie" preCondition="IncomingSSLNoSecureCookie">
            <match serverVariable="RESPONSE_Set_Cookie" pattern="(.*);
 HttpOnly" />
            <action type="Rewrite" value="{R:1}; Secure; HttpOnly" />
          </rule>
          <preConditions>
            <preCondition name="IncomingNoSSLSecureCookie">
              <add input="{CACHE_URL}" pattern="^http://" />
              <add input="{RESPONSE_Set_Cookie}" pattern=".*; Secure.*" />
          </preCondition>
          <preCondition name="IncomingSSLNoSecureCookie">
            <add input="{CACHE_URL}" pattern="^https://" /><add
 input="{RESPONSE_Set_Cookie}" pattern=".*; Secure.*" negate="true"/>
          </preCondition>
        </preConditions>
<rule name="Add Strict-Transport-Security when HTTPS" enabled="true">
          <match serverVariable="RESPONSE_Strict_Transport_Security"
 pattern=".*" />
          <conditions>
            <add input="{HTTPS}" pattern="on" ignoreCase="true" />
          </conditions>
          <action type="Rewrite" value="max-age=31536000;
 includeSubDomains" />
        </rule>
      </outboundRules>
```

4. Save and close the configuration file.

Update the wait time for export activities

You can configure the wait time for export activities in seconds so that the Export Service will wait for the configured seconds for new export activities to progress based on the availability of the child export processes.

If all the child export processes are in inactive mode (that is, there are no export activities available), TotalAgility Export Service will wait for the configured seconds for new export activities to process. If any child export process is in an active mode (that is, any child process is executing the Export activity), TotalAgility Export Service will instantaneously take new export activities to export without waiting for the configured seconds.

1. From your TotalAgility installation files, navigate to `\\TotalAgilityInstall\CoreWorkerService`.
2. Open Agility.Server.Core.ExportService.exe.config in a text editor.
3. Locate the **<appSettings>** section and change the value of "WaitForAvailableExportActivitiesTimeoutInSeconds" as needed. (Default: 30)

```
<appSettings>
```

```
    <add key="WaitForAvailableExportActivitiesTimeoutInSeconds" value="30"/>
</appSettings>
```

The minimum value for WaitForAvailableExportActivitiesTimeoutInSeconds is 1 and maximum value is 600.

You must restart the TotalAgility Export Service for the change to take effect.

Update the settings for manual authentication

Perform the following steps on the Web or combined Web/Application server and Application Server.

Edit the setting manually or use Configuration Utility for manual authentication.

Web server or combined Web/Application server

Perform the following steps on the Web or combined Web/Application server and Application Server.

Manually

1. Open the TotalAgility **Web.config** file from the following directory: `C:\Program Files\Kofax\TotalAgility\Agility.Server.Web`.
2. Locate the following bindings: "CustomBinding_CoreService", "BasicHttpBinding_Service" and "WebHttpBinding_Service" and comment out all the three security mode configurations for manual logon over HTTP.

```
<!-- The following are the different options for securing the services -->
         <!-- All commented out is application manual logon over HTTP -->
         <!-- Only one option should be uncommented at a time -->
         <!-- Azure should use HTTPS SSL with application logon-->
         <!-- On premise default: HTTP with Windows authentication-->
         <!-- HTTPS SSL with application logon-->
         <!--<security mode="Transport">
           <transport clientCredentialType="None"/>
         </security>-->
         <!-- HTTP with Windows authentication-->
         <security mode="TransportCredentialOnly">
           <transport clientCredentialType="Windows" />
         </security>
         <!-- HTTPS SSL with Windows authentication-->
         <!--<security mode="Transport">
           <transport clientCredentialType="Windows" />
         </security>-->
```

In the TotalAgility Web.config file, under the section, `TransformationServerExternalService_Binding`, the **security mode** and **transport clientCredentialType** should be same as specified in the Transformation Server Web.config file.

Use the Configuration Utility

Run the Configuration Utility and change the mode of authentication on the Web settings tab as needed.

Application server

Manually

1. Open the TotalAgility **Web.config** file from the following directory: `C:\Program Files\Kofax\TotalAgility\Agility.Server.Web`.
2. Locate the following bindings, "CustomBinding_CoreService", "BasicHttpBinding_Service" and "WebHttpBinding_Service" and comment out all the three security mode configurations for manual logon over HTTP.

```
<!-- The following are the different options for securing the services -->
          <!-- All commented out is application manual logon over HTTP -->
          <!-- Only one option should be uncommented at a time -->
          <!-- Azure should use HTTPS SSL with application logon-->
          <!-- On premise default: HTTP with Windows authentication-->
          <!-- HTTPS SSL with application logon-->
          <!--<security mode="Transport">
            <transport clientCredentialType="None"/>
          </security>-->
          <!-- HTTP with Windows authentication-->
          <security mode="TransportCredentialOnly">
            <transport clientCredentialType="Windows" />
          </security>
          <!-- HTTPS SSL with Windows authentication-->
          <!--<security mode="Transport">
            <transport clientCredentialType="Windows" />
          </security>-->
```

Use the Configuration Utility

Run the Configuration Utility and change the mode of authentication on the Web settings tab as needed.

Update the settings for mixed authentication

When you install TotalAgility, you can choose the logon mode as manual or Windows authentication. However, post-installation, you can switch the logon mode to use both Windows and manual (mixed) authentication by running the Configuration Utility. If the Windows authentication fails, you will be redirected to the manual logon page.

Use mixed authentication on the Web server or combined Web/Application server

Perform the following steps on the Web server or combined Web/Application server to set up mixed authentication (Windows and manual).

1. Open the TotalAgility **Web.config** file from the following directory: `C:\Program Files\Kofax\TotalAgility\Agility.Server.Web`.

2. Locate the following Bindings: BasicHttpBinding_Service and WebHttpBinding_Service and comment out the security mode configurations for manual logon over HTTP.
3. Locate the following ClientWindowsService Bindings: `BasicHttpWindowsUserBinding_Service` and `WebHttpWindowsUserBinding_Service` and comment out the security mode configurations for Windows Authentication logon over HTTP.

```
<!-- The following are the different options for securing the services -->
          <!-- All commented out is application manual logon over HTTP -->
          <!-- Only one option should be uncommented at a time -->
          <!-- Azure should use HTTPS SSL with application logon-->
          <!-- On premise default: HTTP with Windows authentication-->
          <!-- HTTPS SSL with application logon-->
          <!--<security mode="Transport">
            <transport clientCredentialType="None"/>
          </security>-->
          <!-- HTTP with Windows authentication-->
          <security mode="TransportCredentialOnly">
            <transport clientCredentialType="Windows" />
          </security>
          <!-- HTTPS SSL with Windows authentication-->
          <!--<security mode="Transport">
            <transport clientCredentialType="Windows" />
          </security>-->
```

Use the Configuration Utility

After installing TotalAgility, to use the mixed authentication, run the Configuration Utility and switch the mode of authentication (`HTTP with manual and Windows authentication` or `HTTPS with manual and Windows authentication`) on the Web settings tab, as needed.

To use mixed authentication, you must enable both the Anonymous and Windows Authentication options in the IIS.

Update the settings for the TotalAgilitylinked servers

Edit the setting manually or use the Configuration Utility for manual authentication.

Manually

On installing TotalAgility, the Web.config is updated automatically with machine name / TotalAgility for linked servers. If you want to connect from a public IP Address, you must update the Web.config file.

1. Open the TotalAgility **Web.config** file from the following directory: `\\TotalAgilityInstall\Agility.Server.Web`
2. Locate the following section and replace the IP Address with your machine name.

```
<add key="TotalAgilityHostNameLive" value = "<ip_address>/TotalAgility" />
<add key="TotalAgilityHostNameDev" value = "<ip_address>/TotalAgility"/>
```

See the *Kofax TotalAgilityHelp* for more information.

Use the Configuration Utility

Run the Configuration Utility and update the TotalAgilityHostNameLive key.

Alter the virtual root for the Kofax TotalAgility website

1. Open the TotalAgility **Web.config** file from the following directory: `\\TotalAgilityInstall\Agility.Server.Web`
2. Modify the following configuration keys to alter the virtual root for the Kofax TotalAgility website:

```
<add key="WebsiteBaseName" value="TotalAgility"/>
<add key="ProcessDocumentsRootFolder" value="/TotalAgility/documents/process"/
```

The value for the "WebsiteBaseName" should be the name of the virtual directory used within the IIS.

Update the settings to enable consolidated logging

Every component has its own logging ecosystem, and the log files can be output to various locations. In TotalAgility, there are multiple diagnostics logs for different components.

Following are the examples of logging across Kofax TotalAgility components:

- BPM trace log
- BPM unity log
- Transformation Server trace log
- Transformation Configuration trace log
- Capture Data Layer trace log
- Capture Document Services trace log
- Reporting trace log

By default, logging is not enabled (except for Reporting). When issues occur in any of the TotalAgility components, to get the log data you must manually enable each of these logs separately by updating the relevant configuration file for that component. These logs can be configured to output to log files or other destinations. It is cumbersome to find each log file that is scattered across drives and folders. With consolidated logging, you can get the log data from various TotalAgility components to a central location and single file. Consolidated logging makes log management and analysis easier in identifying, troubleshooting, and resolving the issues as the output for all logs are visible in a central location.

For consolidated logging, TotalAgility supports the trace sources and trace levels. You can use a combination of trace sources and trace filter levels to perform the search and get the log data.

See the following for a list of supported trace sources and their description.

Trace source name	Description
BPM	BPM log (includes Licensing and Kofax Front Office Server (KFS) log)
BPM_Unity	BPM Unity log (outputs BPM Core Services API calls)
TransServer	Transformation Server default log
TransServer_Perf	Transformation Server performance log
TransConfig	Transformation Configuration log
CaptureDL	Capture Data Layer default log
CaptureDL_Imaging	Capture Data Layer Imaging log
CaptureDL_Ext	Capture Data Layer Extensions log
CaptureDL_LogExt	Capture Data Layer Logical Extensions log
CaptureDL_LogExt	Capture Data Layer Logical Extensions log
CaptureDS	Capture Document Services log
Reporting	Reporting log

See the following table for supported trace filter levels and their description.

Trace filter level	Description
All	Records all the critical errors, errors, warnings, information, and verbose.
Critical	Records only critical errors.
Error	Records critical errors and errors.
Warning	Records critical errors, errors, and warnings.
Information	Records critical errors, errors, warnings, and information.
Verbose	Records critical errors, errors, warnings, information, and verbose.

TRACE_LOGGING setting

The "TRACE_LOGGING" setting is available in Web.config, Agility.Server.Core.WorkerService.exe.config, and all other configuration files, and the value is empty by default. The TRACE_LOGGING setting contains a JSON string that includes:

- Log output type ("file")
- Log output filename (if using "file" output type)
- Log file type ("text" or "xml")
- Multiple output files ('use-multiple-files')
- Maximum file size ('max-file-size-kb')
- Maximum number of files 'max-number-of-files)
- Trace source [ComponentTraceSourceName]:[TraceFilter]

To enable consolidated logging and output to a file, you can provide the following JSON string in the value attribute in the <appsettings> section of the configuration file:

```
{
       "log-type": "file",
       "file-location": "Trace_Logging.log",
       "file-type": “text”,
       "use-multiple-files": false,
       "max-file-size-kb": 5120,
       "'max-number-of-files": 10,
       "sources": ["<TraceSourceName>:<TraceLevelFilter>", "<[TraceSourceName]:
[TraceLevelFilter]>]"
}
```

- The "text" and "xml" are supported values for "file-type". By default, the log file types are created as text files with log data written as plain text. To get the log file as an XML, specify the "log-type" as "xml" and "file-location" as "Trace_Logging.xml".
- For both the file-types ("text" or "xml"), the log file is appended with the process name as <filename.processname.extension> because multiple processes cannot be written to the same log file. See the following examples:
  - If the process name is "Agility.Server.Core.WorkerService", file name is "Trace.txt", and the file type is text, the log file name is created as "Trace.Agility.Server.Core.WorkerService.txt".
  - If the process name is "Coreworker", file name is "Trace.xml", and the file type is xml, the log file name is created as "Trace.Coreworker.xml".
- You can optionally set the following attributes:
  - **use-multiple-files:** (Default: false). If set to true, multiple log files are created.
  - **max-file-size-kb:** (Default: 5120). If the original log file reaches this threshold, the log file copies itself and creates a new log file with a sequence number appended to it. The sub log files are numbered sequentially as Trace1.txt, Trace2.txt, Trace3.txt, and so on.
  - **max-number-of-files:** (Default: 10). The maximum number of files to create. If the file reaches the threshold, the log files gets deleted sequentially from 1, 2, 3, and so on.

The following is a sample from the configuration file with JSON string to create a log file with name, "Trace_Logging.log" in the current folder and write the log entries for the trace source as Transformation Server with trace filter level as All, and also for the trace source as BPM and trace level as Warning.

```
{
       "log-type": "file",
       "file-location": "Trace_Logging.log",
       "file-type": “text”,
       "sources": ["TransServer:All", "BPM:Error"]
}
```

Enable consolidated logging

Use the following procedure to enable consolidated logging, for example, for Transformation Server:

1. Stop the Kofax Transformation Service.

2. Navigate to the installation directory for the TotalAgility server.
3. In a text editor, open **Kofax.CEBPM.CPUServer.ServiceHost.exe.config** from the following directory:

   `C:\Program Files\Kofax\TotalAgility\Transformation Server`
4. Locate the **<appsettings>** section and update the value of "TRACE_LOGGING" setting accordingly. For example, if you want to trace the logging of **TransServer** and BPM sources with trace level as **Warning**, provide the key value as follows:

   ```
   <add key="TRACE_LOGGING" value=" { 'log-type': 'file', 'file-location': 'd:\\logs\\mylog.log', 'file-type': “text”, 'sources': ["TransServer:All", "BPM:Error"] }" />
   ```

   If a supported component trace source is not specified, then logging is disabled for it. Additionally, if an invalid trace source or level is specified, an error is written to the event log.
5. Start the Kofax Transformation Service.

   All the critical errors, errors, information, warnings, information, and verbose are logged for the Transformation Server, and all the critical errors and errors are logged for BPM.

Add custom job thread pools

A job thread performs multiple operations at a time, such as job evaluation, raising an exception job, or ingestion through Kofax Import Connector. Multiple operations can lead to bottlenecks in the production systems. For example, when there are thousands of jobs to be archived, ingestion and job evaluation takes a longer time because the job threads are busy archiving jobs. Adding custom job thread pools helps in achieving better throughput and prioritizing the background tasks.

You can add custom job thread pools, specify the number of threads in the thread pool and assign the worker task to a thread pool manually or use the Configuration Utility.

Manually

1. Navigate to the installation directory for the TotalAgility server.
2. In a text editor, open **Agility.Server.Core.WorkerService.exe.config** from the following directory:

   `\\TotalAgilityInstall\Agility.Server.Web`
3. Locate the following section:

   ```
   <configSections>
       <section name="CoreWorker" type="Agility.Server.Core.Worker.Configuration, Agility.Server.Core.Worker"/>
    </configSections>
   ```
4. Add one or more job thread pools within the `CoreWorker` section and add worker tasks, as required. The following is a sample from the configuration file.
   Example:

   ```
   <CoreWorker>
   ```

```
    <JobThreadPools>
      <add Id ="1" Size ="16" WorkerTasks ="ArchiveJobTask, DeleteItemTask,
CreateExceptionTask, CreateJobTask, EvaluateJobTask,
      ProcessStateActionTask, IngestSystemTask, CaptureBatchTask "/>
     </JobThreadPools>
  </CoreWorker>
```

You must assign the following worker tasks to some thread pool, otherwise, an error message is displayed and the Core Worker Service stops working. You cannot assign the same worker task to more than one thread pool.

- ArchiveJobTask
- EvaluateJob Task
- CreateException Task
- CreateJob Task
- IngestSystem Task
- CaptureBatch Task
- DeleteItem Task
- ProcessStateAction Task

5. Save and close the configuration file.
6. Restart the TotalAgility Core Worker service.

Use the Configuration Utility

Run the Configuration utility and add or update the custom job thread pools, specify the number of threads in the thread pool and assign the worker task to a thread pool.

Add a thread pool monitoring interval

When long-running automatic activities are processed by the Core Worker, the threads in the automatic activity thread pool are not freed up when the taken activity is reset due to timeout. Configure a thread pool monitoring interval to free up the threads for these long-running taken activities to allow other activities to progress once they time out.

You can configure the thread pool monitoring interval manually or use the Configuration Utility.

Manually

1. Navigate to the installation directory for the TotalAgility server.
2. In a text editor, open **Agility.Server.Core.WorkerService.exe.config** from the following directory:

   `\\TotalAgilityInstall\Agility.Server.Web`
3. Locate the following section and add a thread pool monitoring interval (default:60).

```
<appSettings>
    <add key="CoreWorkerThreadPoolMonitoringIntervalInSeconds" value="60"/>
```

```
</appSettings>
```

The default value is 60.

4. Save and close the configuration file.
5. Restart the TotalAgility Core Worker service.

Use the Configuration Utility

Run the Configuration utility and add the thread pool monitoring interval. See the *TotalAgility Configuration Utility Guide*.

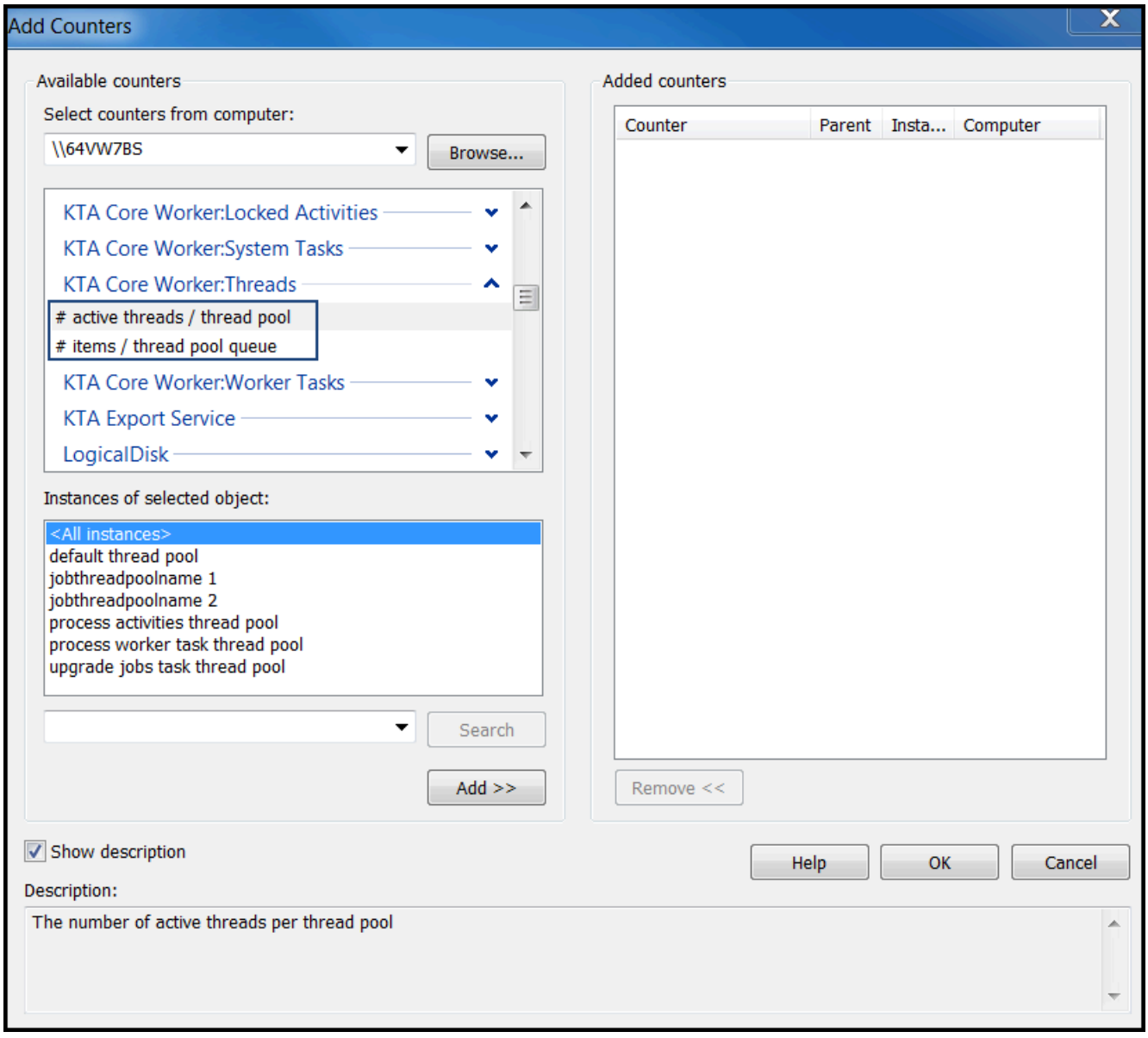
Add performance monitoring counters

Use the performance counters to record application states and activities.

The following categories for TotalAgility performance monitoring counters are automatically installed on the target machine when the Core Worker Service and the Export Service are installed:

- TotalAgility Core Worker: Locked Activities
- TotalAgility Core Worker: System Tasks
- TotalAgility Core Worker: Threads
- TotalAgility Core Worker: Worker Tasks
- TotalAgility Export Service
- TotalAgility Child Export Processes

Each category is associated with the performance counters. When the performance monitor is launched, you can select the installed counters and add them to the current monitoring session. Each instance is recorded for a performance counter. For example, the Active Threads Per Thread pool performance counter records an instance per thread pool as shown in the image below.



You can log each performance counter to the TotalAgility log file by enabling the logging function. For more information on performance monitoring counters, see the *Kofax TotalAgility Administrator's Guide*.

Chapter 14

TotalAgility and Microsoft Dynamics CRM integration

You can integrate Microsoft Dynamics CRM and Microsoft Dynamics 365 CRM with TotalAgility.

Prerequisites

You must have administrator rights to install Microsoft Dynamics CRM and Microsoft Dynamics 365 CRM.

Installation of Dynamics CRM

Follow the same steps to install Dynamics CRM and Dynamic 365 CRM.

1. Navigate to `\\DynamicsCRMInstall` from your TotalAgility installation files, and double-click **Setup.exe**.

   For Dynamics 365 CRM, navigate to `\\Dynamics365CRMInstallation` from your installation files, and double-click `Dynamics365CRM_Setup.exe`.

   The installation wizard appears.
2. Click **Next**.
3. In the **CRM Server** field, enter the IP address or machine name of the CRM server.
4. In the **CRM Port** field, enter the port on which CRM is running.
5. To enable SSL (Secure Sockets Layer), select **Use SSL** (default: Clear).
6. In the **Domain** field, enter the domain name.
7. Enter the **Username** and **Password**.
8. Click **Finish**.
   The installation starts and registers the Event Handler in CRM and places necessary files in Global Assembly Cache (GAC).

Update Web.config for Dynamics CRM

Add the following script for the TotalAgility components to support event handlers in Dynamics CRM and Dynamics 365 CRM:

If you copy and paste the code from this guide, correct any incorrect line breaks.

```
<configSections>
<section name="exceptionHandling"
type="Microsoft.Practices.EnterpriseLibrary.
ExceptionHandling.Configuration.ExceptionHandlingSettings,
Microsoft.Practices.EnterpriseLibrary.ExceptionHandling,
Version=5.0.505.0,
Culture=neutral,
PublicKeyToken=31bf3856ad364e35" requirePermission="true" />
<section name="loggingConfiguration"
type="Microsoft.Practices.EnterpriseLibrary.Logging.Configuration.LoggingSettings,
Microsoft.Practices.EnterpriseLibrary.Logging,
Version=5.0.505.0, Culture=neutral,
PublicKeyToken=31bf3856ad364e35" requirePermission="true" />
</configSections>

<loggingConfiguration
name=""
tracingEnabled="true"
defaultCategory="General">
<listeners>
<add name="Event Log Listener"
type="Microsoft.Practices.EnterpriseLibrary.Logging.TraceListeners.
FormattedEventLogTraceListener,
Microsoft.Practices.EnterpriseLibrary.Logging,
Version=5.0.505.0,
Culture=neutral,
PublicKeyToken=31bf3856ad364e35"
listenerDataType="Microsoft.Practices.EnterpriseLibrary.Logging.
     Configuration.FormattedEventLogTraceListenerData,
Microsoft.Practices.EnterpriseLibrary.Logging,
Version=5.0.505.0,
Culture=neutral,
PublicKeyToken=31bf3856ad364e35"
source="Total Agility" formatter="Text Formatter"
log="" machineName="." traceOutputOptions="None" />
</listeners>
<formatters>
<add type="Microsoft.Practices.EnterpriseLibrary.Logging.Formatters.TextFormatter,
Microsoft.Practices.EnterpriseLibrary.Logging,
Version=5.0.505.0,
Culture=neutral,
PublicKeyToken=31bf3856ad364e35"
template="Timestamp: {timestamp}{newline}&#xA;Message: {message}
    {newline}&#xA;Category: {category}{newline}&#xA;Priority:
    {priority}{newline}&#xA;EventId: {eventid}
    {newline}&#xA;Severity: {severity}{newline}&#xA;Title:
    {title}{newline}&#xA;Machine: {localMachine}
    {newline}&#xA;App Domain: {localAppDomain}
    {newline}&#xA;ProcessId: {localProcessId}
    {newline}&#xA;Process Name: {localProcessName}
    {newline}&#xA;Thread Name: {threadName}
    {newline}&#xA;Win32 ThreadId:{win32ThreadId}
    {newline}&#xA;Extended Properties:
    {dictionary({key} - {value}{newline})}"
name="Text Formatter" />
</formatters>
<categorySources>
<add switchValue="All" name="General">
<listeners> <add name="Event Log Listener" />
```

```
</listeners>
</add>
</categorySources>
<specialSources>
<allEvents switchValue="All" name="All Events" />
<notProcessed switchValue="All" name="Unprocessed Category" />
<errors switchValue="All" name="Logging Errors &amp;amp; Warnings">
<listeners> <add name="Event Log Listener" />
</listeners>
</errors>
</specialSources>
</loggingConfiguration>

<exceptionHandling>
<exceptionPolicies>
<add name="Agility Exception Policy">
<exceptionTypes>
<add name="All Exceptions" type="System.Exception, mscorlib,
Version=4.0.0.0,
Culture=neutral,
PublicKeyToken=b77a5c561934e089"
postHandlingAction="NotifyRethrow">
<exceptionHandlers>
<add name="Logging Exception Handler"
type="Microsoft.Practices.EnterpriseLibrary.ExceptionHandling.
     Logging.LoggingExceptionHandler,
Microsoft.Practices.EnterpriseLibrary.ExceptionHandling.Logging,
Version=5.0.505.0,
Culture=neutral,
PublicKeyToken=31bf3856ad364e35"
logCategory="General" eventId="100" severity="Error"
    title="Total Agility"
formatterType="Microsoft.Practices.EnterpriseLibrary.
               ExceptionHandling.TextExceptionFormatter,
Microsoft.Practices.EnterpriseLibrary.ExceptionHandling,
Version=5.0.505.0,
Culture=neutral,
PublicKeyToken=31bf3856ad364e35"
priority="0" />
</exceptionHandlers>
</add>
</exceptionTypes>
</add>
</exceptionPolicies>
</exceptionHandling>
```

Update Web.config for the CRM virtual directory

```
<system.serviceModel>
<bindings>
      <basicHttpBinding>
        <binding name="BasicHttpBinding_Service" openTimeout="00:10:00"
closeTimeout="00:10:00"
 sendTimeout="00:10:00" receiveTimeout="00:10:00" allowCookies="true"
maxBufferSize="2147483647"
 maxReceivedMessageSize="2147483647" maxBufferPoolSize="524288">
          <readerQuotas maxDepth="2147483647" maxStringContentLength="2147483647"
 maxArrayLength="2147483647" maxBytesPerRead="2147483647"
maxNameTableCharCount="2147483647" />
          <security mode="TransportCredentialOnly">
           <transport clientCredentialType="None" />
```

```
          </security>
        </binding>
      </basicHttpBinding>
    </bindings>
    <client>
      <endpoint name="CoreIntegrationEventServiceEndpoint"
binding="basicHttpBinding" bindingConfiguration="BasicHttpBinding_Service"

 contract="Agility.Server.Core.Model.Interfaces.Services.IIntegrationEventService"
address="http://<TotaAgility server name or IP Address>/TotalAgility/Services/Core/
IntegrationEventService.svc"/>
    </client>
</system.serviceModel>
```

Replace <TotalAgility server name or IP Address> with the IP Address of TotalAgility.

Chapter 15

TotalAgility and Microsoft Dynamics AX integration

You can integrate Microsoft Dynamics AX with TotalAgility.

Prerequisites

Users created in TotalAgility must have Deployment Administrator rights.

If a user does not use the default Deployment Administrator to install the TotalAgility Dynamics AX integration, the user must meet the following conditions:

- Be the system administrator in Microsoft Dynamics AX.
- Have full CAL access.

Failure to meet the preceding criteria generates the following error message during installation: "System unable to process request error."

Standard installation

1. Navigate to `\\DynamicsAXInstall` from your installation files and double-click **Setup.exe**.
   The TotalAgility for Dynamics AX Setup wizard appears.
2. Click **Next**.
   The window displays a list of prerequisite software for Dynamics AX.

   If the required software is not installed, first install the software, and then install Dynamics AX. If using Dynamics AX 2009, install .NETFramework 3.5. If using Dynamics AX 2012, install .NETFramework 4.0.

3. Click **Next**.
   The Destination window appears.
4. Use the information in the following table to specify file paths in the Destination folder:

Destination Folder	Sample Path for Dynamics AX 2009	Sample Path for Dynamics AX 2012
DAX website Physical Location	`C:\inetpub\wwwroot\MicrosoftDynamicsAXAif50\`	`C:\Program Files\Microsoft Dynamics AX\60\AifWebServices`
DAX website URL	`Default Web Site/MicrosoftDynamicsAXAif50/`	`Default Web Site/MicrosoftDynamicsAXAif60/`

Destination Folder	Sample Path for Dynamics AX 2009	Sample Path for Dynamics AX 2012
DAX Client Physical Location	`C:\Program Files\Microsoft Dynamics AX\50\Client\Bin\`	`C:\Program Files (x86)\Microsoft Dynamics AX\60\Client\Bin`
DAX Server Physical Location	`C:\Program Files\Microsoft Dynamics AX\50\Server\DynamicsAx1\Bin`	Not Applicable

5. Click **Next**.
   The Credentials window appears.
6. Enter your **Username** and **Password** to associate with the DAX Application pool.
7. Click **Next**.
   The system displays the installation status and a summary of the installation report when the installation is complete.
8. Click **Finish**.

If you are using 64-bit operating system and Dynamics AX 2009 32-bit application, enable the Application Pool account associated with the DAX Communicator site. In the IIS Manager, click `Application Pools > DAXAppPool > Advanced Settings` and set True for Enable 32-Bit Applications.

Create Dynamics AX service reference to the TotalAgility web service

As AOT (Application Object Tree) is in the Development Workspace, ensure to deploy the Development Workspace to add in references. Otherwise, you cannot integrate TotalAgility with Dynamics AX. See the following URL for instructions: `http://msdn.microsoft.com/library/gg846350.aspx`.

Create Dynamics AX 09 service reference to the TotalAgility web service

1. Start Dynamics AX 09.
2. Click **AOT** (Application Object Tree) and press **Ctrl+D**.
3. In the application object tree, Right-click **References** and select **Add service reference**.
4. Complete the **Add service reference** window with the following information:
   a. WSDL URL: Enter the web URL of the DynamicsAxIntegrationService within the Agility IIS web application, for example, `http://Server/Agility.Server.Web/Services/SDK/DynamicsAxIntegrationService.svc`.
   b. .NET code namespace: **KtaEventsService**.
   c. Reference name: **KtaEventsService**.
   d. Service description: Description of the service reference.
5. Click **OK**.

Create Dynamics AX 12 service reference to the TotalAgility web service

1. Start Dynamics AX 12.
2. Click **AOT** (Application Object Tree) and press **Ctrl+Shift+W**.
3. In the application object tree, right-click **References** and select **Add Reference**.
4. Browse to the TotalAgility assembly, KtaEvents.Services.dll which was installed previously. For example,

   `C:\Program Files (x86)\Microsoft Dynamics AX\60\Client\Bin`
5. Click **OK**.

Add a reference in Dynamics AX

Add a reference to the Agility.Server.Integration.Common.dll assembly in Dynamics AX.

In Dynamics AX 09

1. Right-click **References** and select **Add reference**.
   The assembly browsing form opens.
2. Browse to the `...\client\bin` directory of the Dynamics AX 09 installation. For example,

   `C:\Program Files (x86)\Microsoft Dynamics AX\50\Client\Bin)`
3. Select the **Agility.Server.Integration.Common.dll** assembly and click **OK**.
   The newly added assembly appears under references.

In Dynamics AX 12

1. Right-click **References** and select **Add reference**.
2. Browse to the TotalAgility assembly, Agility.Server.Integration.Common.dll, that was installed previously. For example, `C:\Program Files (x86)\Microsoft Dynamics AX\60\Client\Bin`.
   The newly added assembly appears under references.
3. Click **OK**.

Edit the service configuration file for Dynamics AX 12

1. Browse to the **client\bin** directory of the Dynamics AX where the WCF service configurations file, KtaEvents.Services.dll.config was copied by the installer.
2. Edit the endpoint to point to the valid TotalAgility Service for Dynamics AX notifications (`...Services/SDK/DynamicsAxIntegrationService.svc`).

Add a Dynamics AX 2012 R2 site in TotalAgility

To successfully add a Dynamics AX 2012 R2 site in TotalAgility, you must perform the following steps manually:

1. Open Microsoft Dynamics AX 2012 and navigate to the Dynamics AX server folder.
2. Copy version 6.2.0 of Microsoft.Dynamics.BusinessConnectorNet.dll and paste it to the bin directory of the DAXCommunicatorService that you install on the Dynamics AX server.
3. From your TotalAgility installation files, navigate to `\\TotalAgilityInstall\DAXInstallation\Agility.Server.Integration.DynamicsAx.Web\Dax2012R2`.
4. Copy Web.config and paste it to the following location on your DAX Server:
   `<\\Microsoft Dynamics AX\60\AifWebServices\DAXCommunicatorService>`
   The service uses the 6.2.0 version of the DLL from Web.config.

   For DAX 2012 R3, the Web.config file needs updated to use 6.3.0 version of Microsoft.Dynamics.BusinessConnectorNet.dll.

Import the TotalAgility connector class into Dynamics AX

1. In the AOT, click **Import** or press Ctrl+Shift+I.
2. Click **Browse** and navigate to the Dynamics AX Setup installation folder (in the Program Files(x86) or Program Files directory). For example,
   `C:\Program Files\Dynamics AX Setup`
3. Select the XPO class, such as Class_KtaController.xpo.
4. Click **OK** to initiate the import or compilation process.

   Once the class is imported, the Status tab in the compiler output page displays any errors.

Edit database X++ event methods

You can edit the database X++ event methods in the DAX Development Workspace under the Classes and Application folders.

1. To alter the Application CUD (create, update, and delete) class event methods, call the custom class method EventChangeNotifyKtaWebService when a CUD event has been performed within Dynamics AX.
2. Edit the Application class methods (**InsertLog**, **DeleteLog** & **UpdateLog**) by adding a single line to the appropriate location within each method:
   - Insertlog method: `new ktaController().EventChangeNotifyKtaWebService("Create", recordInserted, null, conNull(), recordInserted.RecId);`

- Deletelog method: `new ktaController().EventChangeNotifyKtaWebService("Delete", recordDeleted, null, conNull(), recordDeleted.RecId);`
- Updatelog method: `new ktaController().EventChangeNotifyKtaWebService("Update", recordOrig, recordUpdated, changedFields, recordUpdated.RecId);`

The onsite AX Administrator registers the Databaselog events for various AX documents. For example, if the *Customer, Sales Order and Purchase Requisition* documents have the Insert, Update and Delete events registered against them, and when one of these events execute for one of these documents, TotalAgility is informed through a WCF call.

Register the database log events

1. Open Microsoft Dynamics AX 2012.
2. In the left-hand panel, expand the configure buttons and select **System Administration**.
3. On the System Administration page, under **Setup**, click **Database log setup**. The Database log window appears.
4. Click **File**> **New**. The Logging Database changes wizard appears where you can add and remove tables and fields from the database log.
5. Click **Next**. Tables and Fields window appears.
6. Select the **Show all tables** radio button.
7. In the **Tables and Fields** window, under **General Ledger**, select **Customers / Vendor Tables** as required and click **Next**.
8. Select the type of change (insert, update, delete, or rename) to register in the database log by selecting the appropriate check box for the table.
9. Click **Next**. Logging Database changes window appears with the details of the selected tables and fields.
10. Click **Finish**.

Verify the Application Pool account

Verify that the Application pool account is using the correct Business Connecter.NET (BC.NET) Windows credentials.

1. On the Start menu, select **All Programs** > **Accessories** and click **Run**.
2. Enter **inetmgr** and click **OK**.
   The IIS Manager appears.
3. Navigate to Application Pool accounts.
4. Select the **DAXKTA** account and verify that the identity is the same as the BC.NET Windows credentials.

5. If the credentials differ, do the following:
   a. On the Actions panel, click **Advanced Settings**.
   b. Select the identity and click **Edit**.
6. Click **OK**.
   The Application Pool Identity window appears.
7. Click **Set**.
   The Set Credentials window appears.
8. Enter the user credentials that are associated with the BC.NET account within Dynamics AX. (The Kofax WCF service uses the BC.NET account to connect to Dynamics AX).
9. Click **OK**.

Chapter 16

TotalAgility and Micro Focus Content Manager integration

This chapter provides the instructions for integrating Micro Focus Content Manager with TotalAgility.

Prerequisites

Before installing the Content Manager server, you must do the following:

- Install the software
- Identify the Content Manager SDK Version

Install the software

Install the following software:

- IIS
- .NET Framework 4.6.1
- TotalAgility (optional)

Identify the Content Manager SDK Version

For TRIM SDK 7.3.0 and later, you require to enter the current Content Manager version in the <assemblyBinding> section of the Web.config (see Set up the Micro Focus Content Manager server).

To get the current Content Manager version, perform the following steps.

1. Navigate to the **C:\Program Files\Kofax\TotalAgility** directory.
2. Right-click **TrimSDKPIA20.dll** and select **Properties**.
   The TrimSDKPIA20.dll properties window appears.
3. On the properties window, select the **Version** tab.
   The File Version displays the current Content Manager version. For example, 7.3.0.

For TRIM SDK 7.3.0 and later, you will require to enter this number in the <assemblyBinding> section of the Web.config (see Set up the Micro Focus Content Manager server).

Set up the Micro Focus Content Manager server

To set up the Content Manager server, do the following:

- Install and configure TotalAgilitytrimCommunicatorService
- Configure the event handler in the Content Manager system

Install and configure TotalAgilityTrimCommunicatorService

To install and work with Micro Focus Content Manager with version 9.4 or higher, do the following.

1. Log on to the Content Manager server with an account with Local Administrator privileges.
2. Navigate to `\\ContentManagerInstallation` from the Content Manager installation files, right-click on the executable **Setup.exe**, and select **Run as administrator**.
   The User Account Control window appears.
3. Click **Yes**.
   The installation wizard appears.
4. Click **Next**.
   The setup is ready to install the TotalAgility integration components.

   - If the Trim SDK already exists in your system, the **Trim SDK Detected** checkbox is by selected by default. Click **Finish**.
     This is applicable only for version Content Manager 9.4 or lower. From version 10, "Trim SDK Detected" checkbox is not available.
   - If the Trim SDK does not exist in your system, the **Trim SDK Detected** checkbox is clear by default and an error message appears. Also, the **Finish** button is not enabled. To resolve this error, click **Cancel** and run Install CM_COMComponents_x64.msi from the Content Manager installation files to get the Trim SDK. Rerun the Micro Focus Content Manager server setup.

5. Configure the Web configuration file as follows:
   a. In `C:\Program Files\Kofax\TotalAgility\TotalAgilityTrimCommunicatorService`, open the **Web.config** file in the text editor.

      For Micro Focus Content Manager with version 10 or higher, configure the Web configuration file as follows: In `C:\Program Files\Kofax\TotalAgility\TotalAgilityCMCommunicatorService`, open the **Web.config** file in the text editor.

b. Locate the configuration > runtime tag and edit the `<assemblyBinding>` section as follows:

```
<assemblyBinding>
<assemblyBinding xmlns="urn:schemas-microsoft-com:asm.v1">
<dependentAssembly>
<assemblyIdentity name="TrimSdkPIA20"
publicKeyToken="533fc65e30e543fa" />
<bindingRedirect oldVersion="6.2.2.8614"
newVersion="<latest version>" />
</dependentAssembly>
</assemblyBinding>
```

Replace the <latest version> with the version of **TRIM SDK**. See Integrate Content Manager with TotalAgility.

c. Edit the <appsettings> as follows:

```
<appSettings>
<add key="TrimDocumentRecordType"
value="DocumentRecordType" />
<add key="TrimFolderRecordType"
value="FolderRecordType" />
<add key="WorkGroupServerName" value="ServerName" />
</appSettings>
```

- Replace the DocumentRecordType with the value taken from the Content Manager server by checking the record type of Document.
- Replace the FolderRecordType with the value taken from the Content Manager server by checking the record type of Folder.
- Replace the ServerName with the computer name of the Server.

  To identify the computer name of the server, open **Windows Explorer**, right-click **Computer**, and click **Properties**. In the Computer name, domain, and workgroup settings group, click **Change Settings**. Copy the computer name.

When you first install the TotalAgility Micro Focus Content Manager, a TrimIntegrationAppPool with a local system identity is created. This causes an error if the Content Manager server is remote. To resolve this error, you must update the TrimIntegrationAppPool identity to account with Administrator permission. The "TrimIntegrationAppPool" is referred as "CMIntegrationAppPool" from Content Manager version 10 and higher.

Before uninstalling Micro Focus Content Manager installation components, make sure you close the Content Manager application.

Configure the event handler in the Content Manager version

Configure TotalAgility events for actions in the Content Manager System.

1. Copy the following DLLs:
   - If using Content Manager version below 8, copy the following DLLs to the TRIM binaries directory (usually C:\Program Files\Hewlett-Packard\HP Records Manager.)
     - **Agility.Server.Integration.Trim.dll**
     - **Agility.Server.Integration.Model.dll**

- **Agility.Server.Integration.Common**
- If using Content Manager version 8 and above, copy **Agility.Server.Integration.Trim.dll** to the TRIM directory.

Skip Step 1 and 2 for Content Manager 10 or higher.

2. For Content Manager to fire events in TotalAgility, register the **Agility.Server.Integration.Trim.dll** file using RegAsm (`regasm /codebase Agility.Server.Integration.Trim.dll`).
3. To create the event handler in Content Manager 9.4 or lower, do the following:
   a. Open **Content Manager**.
   b. Select **Tools** > **Context Administration** > **External Links**.
   The Content Manager Context External Links window appears.
   c. Click **New Record AddIn**.
   The Record AddIn Properties window appears.
   d. Enter a Link Name.
   e. In the **COM Add-In PROGID** field, enter the ProgId, **Agility.Server.Integration.Trim.TrimIntegrationEventHandler**.
   f. Select **Add-In supports a multi-threaded environment**.
   g. Click **OK**.
   The Content Manager Context External Links window displays the new link.
   h. Select the link and click **Properties**.
   The Record AddIn Properties window appears.
   i. Click the **Used By** tab.
   j. Check the Document and File Folder under the Record list and click **OK**.
   This configures the Event handler on Content Manager.
4. To create an event handler in Content Manager 10 or higher, do the following:
   a. Open **Content Manager**.
   b. Select **Context Administration** > **External Links**.
   c. Right-click in the window and select **New External link**.
   The **Select External Link Type** pop-up appears.
   d. Select the external link type as **Generic add-in (.NET)** and click **OK**.
   The **New External Link - Generic add-in (.NET)** dialog box is displayed. By default, the **General** tab is open.
   e. Enter a **Link name**.
   f. Enter the **.NET Class Name** as `ContentManagerIntegrationEventHandler`.
   g. Under **.NET Assembly Path**, leave the defaults for **Within special folder** and **Folder or subfolder fields**. For **.NET Assembly Name**, click 🔍 and

browse to `C:\Program Files\Micro Focus\Content Manager` and select `Agility.Server.Integration.ContentManager.dll`.

h. Select **Add-In supports a multi-threaded environment**.

i. Click the **Usage (Record)** tab.

j. Select the **Document** and **File Folder** options under the **Record Type** list and click **OK**. This configures the Event handler on Content Manager 10 and higher.

5. In Windows Explorer, find the **trim.exe.config** file, open it in a text editor and add or replace the following tags:

If you cut and paste code from this guide, correct any incorrect line breaks.

```
<?xml version="1.0" encoding="utf-8" ?>
<configuration>
<configSections>
<section name="loggingConfiguration"
type="Microsoft.Practices.EnterpriseLibrary.Logging.Configuration.LoggingSettings,

Microsoft.Practices.EnterpriseLibrary.Logging, Version=5.0.505.0,
Culture=neutral, PublicKeyToken=31bf3856ad364e35" requirePermission="true" />
<section name="exceptionHandling"
type="Microsoft.Practices.EnterpriseLibrary.ExceptionHandling.Configuration.
ExceptionHandlingSettings,
 Microsoft.Practices.EnterpriseLibrary.ExceptionHandling,
Version=5.0.505.0, Culture=neutral, PublicKeyToken=31bf3856ad364e35"
 requirePermission="true" />
</configSections>
<exceptionHandling>
<exceptionPolicies>
<add name="Agility Exception Policy">
<exceptionTypes>
<add name="All Exceptions" type="System.Exception, mscorlib, Version=4.0.0.0,
Culture=neutral, PublicKeyToken=b77a5c561934e089"
 postHandlingAction="NotifyRethrow">
<exceptionHandlers>
<add name="Logging Exception Handler" type=
"Microsoft.Practices.EnterpriseLibrary.ExceptionHandling.Logging.
 LoggingExceptionHandler,
Microsoft.Practices.EnterpriseLibrary.ExceptionHandling.Logging,
 Version=5.0.505.0,
Culture=neutral, PublicKeyToken=31bf3856ad364e35" logCategory="General"
eventId="100" severity="Error" title="Total Agility"
formatterType=
"Microsoft.Practices.EnterpriseLibrary.ExceptionHandling.TextExceptionFormatter,
Microsoft.Practices.EnterpriseLibrary.ExceptionHandling, Version=5.0.505.0,
Culture=neutral, PublicKeyToken=31bf3856ad364e35" priority="0" />
</exceptionHandlers>
</add>
</exceptionTypes>
</add>
</exceptionPolicies>
</exceptionHandling>
<system.serviceModel>
<bindings>
<basicHttpBinding>
<binding name="BasicHttpBinding_Service" openTimeout="00:10:00"
 closeTimeout="00:10:00"
sendTimeout="00:10:00" receiveTimeout="00:10:00" allowCookies="true"
 maxBufferSize="2147483647"
```

```
maxReceivedMessageSize="2147483647" maxBufferPoolSize="524288"> <readerQuotas
 maxDepth="2147483647"
maxStringContentLength="2147483647" maxArrayLength="2147483647"
 maxBytesPerRead="2147483647"
maxNameTableCharCount="2147483647" />
<security mode="TransportCredentialOnly">
<transport clientCredentialType="Windows" />
</security>
</binding>
</basicHttpBinding>
</bindings>
<client>
<endpoint name="CoreIntegrationEventServiceEndpoint"
binding="basicHttpBinding" bindingConfiguration="BasicHttpBinding_Service"
contract="Agility.Server.Core.Model.Interfaces.Services.IIntegrationEventService"
address="http://<TotaAgility server name or IP Address>/TotalAgility/Services/
Core/IntegrationEventService.svc"/>
</client>
</system.serviceModel>
</configuration>
```

Replace <TotalAgility server name or IP Address> with the IP Address of the TotalAgility server.

Chapter 17

TotalAgility and Kofax SignDoc integration

This chapter provides the instructions for integrating Kofax SignDoc with TotalAgility.

Set up the Kofax SignDoc server

Configure the Kofax SignDoc server to point to the relevant TotalAgility server to allow a callback to occur when the signing is completed. The SignDoc server can be configured per the SignDoc account to allow the same SignDoc server to call back to multiple TotalAgility servers.

Refer to the section on integration of TotalAgility with KCM in *Kofax TotalAgility Designer Help* to know how to set up the SignDoc server to point to the TotalAgility server.

Chapter 18

Launch TotalAgility

1. Enter the following URL in the browser:
   `http://<TotalAgility server hostname or IP>/TotalAgility/Designer`
2. Enter the login credentials provided during installation.
   TotalAgility Designer is launched in the browser.
3. Alternatively, click **Start** > **All Programs** > **Kofax TotalAgility** > **Designer**.

Launch TotalAgility Workspace

1. Enter the following URL in the browser:
   `http://<TotalAgility server hostname or IP>/TotalAgility/Forms`
2. Enter the login credentials provided during installation.
   TotalAgility Workspace is launched in the browser.
3. Alternatively, click **Start** > **All Programs** > **Kofax TotalAgility** > **Workspace**.

Launch TotalAgility Apps

When you install or upgrade Kofax TotalAgility, TotalAgility Apps is automatically installed and available on the Start menu.

1. Click **Start** > **All Programs** > **Kofax TotalAgility** > **TotalAgility Apps**.
   Alternatively, enter the following URL in the browser.
   `http://<TotalAgility server hostname or IP>/TotalAgility/Designer/#/apps`
2. Enter the login credentials provided during installation.
   The Kofax TotalAgility Apps landing page appears.

Chapter 19

Repair the TotalAgility installation

Repairing TotalAgility will only repair the application and not the database.

To repair any TotalAgility product components that are installed incorrectly:

1. Click **Start > All Programs > Kofax TotalAgility** and select **Uninstall or Repair Kofax TotalAgility**.
   The **Repair / Uninstall** window opens.
2. Click **Repair** and click **Next**.
   The **Components To Repair** window opens and lists all the components you can repair.
3. Select the components to repair.
4. Click **Browse** and select the installation files.
5. Click **Next**.
   The **Credentials** window opens.
6. Enter the **Password** or select the **Run as System Account** check box to choose the system credentials.
7. Click **Next**.
   The **Repair Progress** window opens. When the repair is complete, the **Kofax TotalAgility Repair Complete** window opens. The summary report lists the components, servers, applications, and services repaired.
8. Click **Finish**.

Chapter 20

Uninstall TotalAgility

Uninstalling TotalAgility only removes the application and not the databases.

Use the silent mode

1. On the Command Prompt, change the command line to the root directory of the Setup.exe file.
2. Run `Setup.exe /Silent /U`.
   The system uninstalls TotalAgility.
   - The system generates a summary of log, KofaxTotalAgilitySilentUnInstallLog.txt, on the desktop.
   - If any errors occur, by default, TotalAgility creates a log file KofaxTotalAgilityInstallErrorLog.txt on the desktop. Fix those errors and repeat the above steps.
   - The removal of the product is indicated in the event log.

   Uninstalling TotalAgility in silent mode not only removes the applied fix pack or service pack but also removes the TotalAgility application completely. To reinstall TotalAgility, you must install its base version and then apply any patches.

Use the installation wizard

1. Click **Start > All Programs >TotalAgility** and select **Uninstall or Repair TotalAgility**.
   The **Repair/Uninstall** window opens.
2. Select **Uninstall** and click **Next**.
3. Follow the prompts until you are informed that the product is uninstalled, and then click **Finish**.
   The summary report lists the components, servers, applications, and services uninstalled.
   If any errors occur, by default, TotalAgility creates a log file KofaxTotalAgilityInstallErrorLog.txt on the desktop. Fix those errors and repeat the above steps.

Chapter 21

Upgrade TotalAgility

You can perform a direct upgrade from TotalAgility 7.8.0 (or any interim patches) and higher to TotalAgility 8.0.0.

This chapter describes two methods of upgrading TotalAgility:

- Silent upgrade process
- Interactive upgrade process

Before upgrading TotalAgility, ensure that the TotalAgility App Pool and all the TotalAgility Services are stopped, and the databases are backed up.

Upon upgrading, the TotalAgility installer restores the following configuration settings:

- All existing AppSettings
- All existing Security Bindings
- All HTTP URL Rewrites

Silent upgrade process

For a silent upgrade of TotalAgility to version 8.0.0, do the following.

1. Go to the root directory where Setup.exe resides.
2. Navigate to `\\TotalAgilityInstall` and open SilentInstallConfig.xml using a text editor.
3. In SilentInstallConfig.xml, update the following parameters.

Parameter	Default value	Description
IdentityInformation		
UserName	username	Enter the name of the user who will run TotalAgility.
Password	password	Enter the password for the user who will run TotalAgility.
InstallInfo		
InstallAction	upgrade	Use this setting to upgrade TotalAgility components including databases.

Parameter	Default value	Description
	upgradeTotalAgilitydatabases	Use this setting only if you are upgrading the databases before upgrading TotalAgility components. If you wish to upgrade TotalAgility components before upgrading databases, you must do the following: **a.** Open SilentInstallConfig.xml available at the following location: `\\TotalAgility Installation Information \Kofax TotalAgility` **b.** Update the <InstallAction> section with the following parameter: <InstallAction> =Upgradedatabasesforexisting TotalAgility **c.** Run Setup.exe /Silent /U from the above-mentioned path.
	upgradeTotalAgilitycomponents	Use this setting to upgrade only TotalAgility components.
DatabaseInformation		
IgnoreBrokenFoldersOnUpgrade	false	If invalid data is found during migration, the upgrade fails. If set to true, ignores broken folders and proceeds with Capture data migration when upgrading TotalAgility.
RunCaptureMigrationIgnoringErrors	false	If errors occur during migration, the root folders with invalid data will not be migrated. If set to true, ignores the errors and proceeds with Capture data migration.
StartServices	true	Starts the services automatically after upgrade installation. Set to false to start the services manually after upgrade installation.
ImportWorkspacepackage	false	Set to true to import the Workspace package after upgrade installation. Review the *Kofax TotalAgility Release Notes* to import the required updates for the Workspace package.

4. Open the Command Prompt window as an Administrator and change the command line to the root directory where Setup.exe resides.
5. Run `Setup.exe /Silent /Upgrade`.
   - Based on the parameters set to true in the silent configuration file, the following items are upgraded automatically:
     - Kofax TotalAgility
     - Kofax Import Connector (KIC)
     - Kofax Transformation Designer
     - Utility for Kofax Export Connector
   - The system generates a summary of log, KofaxTotalAgilitySilentInstallLog.txt on the desktop.
   - Ensure that no error log is created. If any errors occur, by default, TotalAgility creates a log file KofaxTotalAgilityInstallErrorLog.txt on the desktop. Fix those errors and repeat the above steps.
   - The success or failure of the installation is indicated in the event log.
6. Save and close the file.

Interactive upgrade process

You can upgrade TotalAgility using the wizard.

When upgrading TotalAgility, you can choose to upgrade TotalAgility components and databases independently of each other or upgrade TotalAgility components including the databases.

1. Install a base version of Kofax TotalAgility.
2. From your TotalAgility 8.0.0 installation files, navigate to `TotalAgilityInstall` and double-click **Setup.exe**.
3. In the **Kofax TotalAgility Upgrade** window, select one of the following options:
   - **TotalAgility components**: Upgrades only the components and not the datacenter database.
   - **TotalAgility databases**: Upgrades only the datacenter database.
   - **TotalAgility components including databases**: Upgrades both the components and the datacenter database.
4. By default, the services are automatically started. To start services manually, clear the check box for **Automatically start services** and click **Next**.
5. To import the Workspace package, select the check box for **Import system Workspace Package** and click **Next**. (Default: Clear)

   The Import system Workspace Package option is not available when you choose to upgrade only TotalAgility components.
6. In the **Credentials** window, enter the credentials (password and confirm password) and click **Next**.
   The Installation Review window opens. Review the settings and click **Next** to start the installation.
7. Click **Finish** to complete the installation.

   If any errors occur, by default, TotalAgility creates a log file, KofaxTotalAgilityInstallErrorLog.txt, on the desktop. Fix those errors and repeat the above steps.

Additional information

On upgrading the TotalAgility components, if you also want to upgrade Kofax TotalAgility databases, do the following:

a. Navigate to the TotalAgility installation files and double-click **Setup.exe**.

   The Repair/Uninstall/Upgrade Databases window opens.

   Alternatively, you can select the Upgrade Databases option from the Repair/Uninstall/Upgrade Databases window by clicking **Start** > **All Programs** > **Kofax TotalAgility** and select **Uninstall** or **Repair Kofax TotalAgility**.

b. Select **Upgrade Databases**.

c. Click **Next** and follow the instructions.

Change Capture binary data storage

By default, the Capture data is stored in the SQL Server. You can use the preconfigured external data storage services such as Amazon S3, Windows Azure Blob Storage, or SQL Server and File System for saving and processing the Capture data.

Upgrade TotalAgility databases manually using database scripts

When upgrading to TotalAgility 8.0.0 from TotalAgility 7.8.0 or higher, perform the following steps.

1. To run scripts manually, navigate to `\\TotalAgilityInstall\DatabaseScripts\SQL Server\Upgrade Database Scripts`.
2. Run a series of conversion scripts (if they exist) for all versions and patches released since the version you are upgrading from.

   Example: If upgrading from 7.8.0.0 to 8.0.0, run the following conversion scripts.

   - 7.8.0.0 to 7.9.0.0 Conversion Scripts
   - 7.9.0.0 to 7.10.0.0 Conversion Scripts
   - 7.10.0.0 to 7.11.0.0 Conversion Scripts
   - 7.11.0.0 to 8.0.0 Conversion Scripts

   Run the scripts in the following order across databases and follow the instructions inside each script.

   a. `Convert_Main.sql` on the TotalAgility database.

   b. `Convert_Audit.sql` on the Audit database.

   c. `Convert_Archive.sql` on the Finished Jobs database.

If Audit and Archive databases are maintained as the TotalAgility databases, then run the `Convert_Audit.sql` and `Convert_Archive.sql` scripts on the TotalAgility database.

d. `Convert_Forms.sql` on the TotalAgility database.

e. `Convert_KLS_OnPremise.sql` on the TotalAgility database.

f. `Convert_KFS.sql` on the TotalAgility database.

g. `Convert_DataLayer.sql` on the TotalAgility_Documents database.

h. Run the following conversion scripts for the Reporting databases:
   - `Kofax Reporting Analytics.SQL_Convert.sql` on the TotalAgility_Reporting database.
   - `Kofax Reporting Analytics.Staging.SQL_Convert.sql` on the TotalAgility_Reporting_Staging database.

3. Navigate to `<C:\Program Files\Kofax\TotalAgility\Agility.Server.Web\bin>` and open **Agility.Installation.Server.Upgrade.exe.config**. In the <appSettings> section, update the value for the following settings.
   - `<add key="UpgradeFromVersion" value =""/>` where the value is the TotalAgility version from which you want to perform an upgrade. For example, if you are upgrading TotalAgility from 7.10.0 to 7.11.0, set the value as follows: `<key="UpgradeFromVersion" value ="7.10.0"/>`.
   - `<add key="SystemSessionId" value="" />`. Take the system session ID from the TotalAgility Designer or database.
   - `<add key="UserName" value="" />` where the username is the currently logged on user's name.

   If the TotalAgility components are already installed before the manual database upgrade, you can find the upgrade.exe and its configuration files under `<C:\Program Files\Kofax\TotalAgility\Agility.Server.Web\bin>`.
   Otherwise, you can execute these files from the TotalAgility installation files. Open `Agility.Installation.Server.Upgrade.exe.config`. In the `<appSettings>` section, update the value for the following settings.
   - <add key="UpgradeFromVersion" value =""/> where the value is the TotalAgility version from which you want to perform an upgrade. For example, if you are upgrading TotalAgility from 7.10.0 to 7.11.0, set the value as follows: <key="UpgradeFromVersion" value ="7.10.0"/>.
   - <add key="SystemSessionId" value="" />. Take the system session ID from the TotalAgility Designer or database.
   - <add key="UserName" value="" /> where the username is the currently logged on user's name.
   - If running from the installation files, ensure all the Database Connection string settings are correct and the InstallDirectory setting is updated in the configuration file.

4. On the Command Prompt, run `Agility.Installation.Server.Upgrade.exe` by passing the `Agility.Installation.Server.Upgrade.exe` "PreUpgradeDatabaseArtifacts" as a parameter.

5. Run all the PostUpgrade_ scripts on the database where the corresponding Convert_ scripts were executed.
6. On the Command Prompt, again run `Agility.Installation.Server.Upgrade.exe` by passing the `Agility.Installation.Server.Upgrade.exe <ImportWorkspacepackage>` as a parameter, such as `Agility.Installation.Server.Upgrade.exe false`. To import the Workspace package, pass the `Agility.Installation.Server.Upgrade.exe true` as a parameter.

   To generate any logs, update the System diagnostics section of Agility.Installation.Server.Upgrade.exe.config to define the path of the log file in <add name="KTALog" type="System.Diagnostics.TextWriterTraceListener" initializeData="<log file path> <log file name>".

7. Start the Kofax TotalAgility Core Worker service manually:
   a. At Run, type **Services.msc** and press **Enter**.
   b. Right-click **Kofax TotalAgility Core Worker** and click **Start**.

Chapter 22

Troubleshooting

This section describes the issues you may encounter and their resolution.

TotalAgility AppPool exists

TotalAgility creates an application pool called TotalAgilityAppPool. Ensure you do not have an existing application pool of the same name as it may cause issues when installing or upgrading.

Download software updates

When downloading an installation package or a service pack from the ftp.Kofax.com site, please ensure this site is added as a trusted site, otherwise, the downloaded file may get corrupted.

Installation failure in IPv4 and IPv6 environment

If the SQL server is configured to listen only on IPv6 addresses on a dual-stack (IPV46), client connection attempts using IPv4 address will fail and it may take longer than default timeout, contributed by default TCP timeout logic during connection establishment handshakes. Even though the subsequent IPv6 connection can succeed immediately, the connection may still fail.

To resolve this issue, disable IPv4 in SQL Server Configuration Manager.

1. Start **SQL Server Configuration Manager**.
2. Open the **Properties** for the TotalAgility server instance TCP/IP protocol.
3. Set **Listen All** to **No**.

   This setting allows fine control over which interfaces the TAServerSQLInstance will listen for connections.

4. Click the **IP Address** tab.
5. Set **Enabled** to **No** for all entries except for ::1 which is the IPv6 local host address.
6. Select **OK** to commit changes and **OK** at the service restart dialog.
7. Restart the SQL Server (<TAServerInstance>) service where TAServerInstance is the actual instance used by TotalAgility (for example, Kofax TotalAgility).

Images not displayed in Workspace after scanning

No images are displayed on Workspace after scanning if you log into the machine as a non-admin user. The images display normally if you log in as an admin user.

1. If you have not installed DosadiLog, the diagnostic logging tool for the WebCapture plugin, please do so now. See the instructions and download link at: `http://www.eztwain.com/dosadilog.htm`.
2. Edit the <system.diagnostics> section of the Web.config file as follows:

   If you copy and paste the code from this guide, fix the line breaks.

```
<system.diagnostics>
<!--<sources>
<source name="System.ServiceModel"
switchValue="Information, ActivityTracing"
propagateActivity="true">
<listeners>
<add name="traceListener"
type="System.Diagnostics.XmlWriterTraceListener"
initializeData= "c:\log\Traces.svclog" /> </listeners> </source> </sources>-->
 <trace autoflush="true">
<listeners> <add name="ThinClientServer" traceOutputOptions="DateTime,ThreadId"
type="System.Diagnostics.TextWriterTraceListener" initializeData="c:
\ThinClientServerLog.txt">
<filter type="System.Diagnostics.EventTypeFilter" initializeData="Verbose" /> </
add>
<!--<add type="Microsoft.WindowsAzure.Diagnostics.DiagnosticMonitorTraceListener,
Microsoft.WindowsAzure.Diagnostics, Version=1.0.0.0, Culture=neutral,
 PublicKeyToken=31bf3856ad364e35"
name="AzureDiagnostics">
<filter type="" />
</add>-->
</listeners>
</trace>
</system.diagnostics>
```

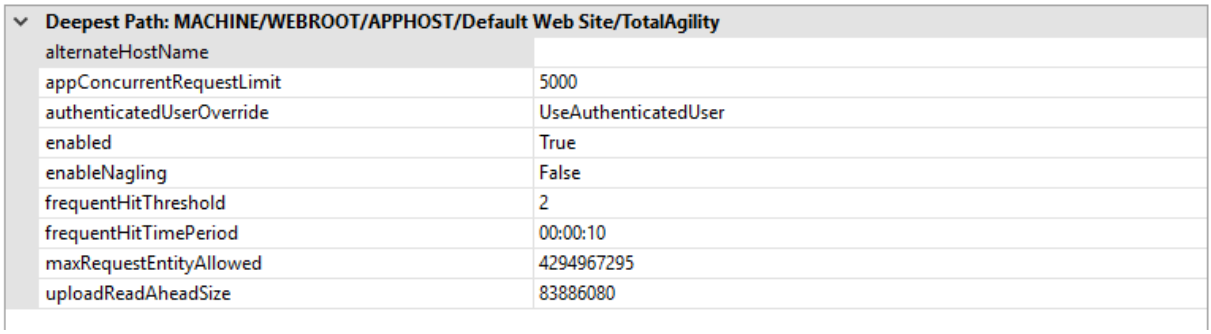
3. To ensure that non-admin users are able to log in, add the link to Trusted Sites:
   a. Go to **Internet Options** in IE 11.
   b. Click the **Security** tab.
   c. Click **Sites**.
   d. Add the domain to the trusted sites, such as http://<domain>.

Exception during Transformation Designer project import

An exception is generated while importing projects using Transformation Designer which is connected to a TotalAgility web service that uses SSL.

1. If you run your server using SSL, set the **Client certificates** option to **Ignore** under SSL Settings.

2. To use Client certificates for authentication (Accept or Require), set the value for uploadReadAheadSize in IIS in one of the following ways:
   - In the IIS Manager:
     a. Open the Configuration Editor of the TotalAgility site.
     b. On the Section list, expand **system.webServer** and select **serverRuntime**.
     c. On the From list, select **ApplicationHost.config <location path='Default Web Site/Totalgility'/>**.
     d. Set an appropriate value in bytes for **uploadReadAheadSize**.



Deepest Path: MACHINE/WEBROOT/APPHOST/Default Web Site/TotalAgility	
alternateHostName	
appConcurrentRequestLimit	5000
authenticatedUserOverride	UseAuthenticatedUser
enabled	True
enableNagling	False
frequentHitThreshold	2
frequentHitTimePeriod	00:00:10
maxRequestEntityAllowed	4294967295
uploadReadAheadSize	83886080

   - Modify the IIS main configuration file:
     a. Open the **applicationHost.config** file located in the `C:\Windows\System32\inetsrv\config\` directory.
     b. If the <serverRuntime> node does not exist, add the node below the <security> node in the <system.webServer> section.

```
<location path="Default Web Site">
    <system.webServer>
        <security>
...
        </security>
        <serverRuntime uploadReadAheadSize="10485760" />
    </system.webServer>
</location>
```

     c. Set an appropriate value in bytes for **uploadReadAheadSize**.

(405) Method not allowed error

While Installing TotalAgility, the error "(405) Method Not Allowed" may occur.

To resolve the issue, re-register ASP.NET 4.x for IIS.

1. Open the command prompt.
2. Navigate to `%WINDIR%\Microsoft.NET\Framework\v4.0.30319`.
3. Execute `aspnet_regiis.exe-i`.

MimeType error

When trying to access the Tenant Management or TotalAgility websites from the IIS, the web page does not render with the following error: `Cannot add duplicate collection entry of type mimeMap with unique attribute field Extension set to .xap`;

This means there are conflicting mime types in two different configuration files (for example, one at the application level and the other at the site level).

To resolve this issue, do either of the following:

1. Remove one of the two conflicting mimeMap extensions from the configuration files.
2. If the IIS Administrator needs both the conflicting mime mappings, add the remove tag above the conflicting mimeMap.
   Example: Consider your application has the following mimeMap in the application-level configuration file located at `//inetpub/wwwroot/web.config`:
   `<mimeMap fileExtension=".xap" mimeType="application/octet-stream" /> ;`
   if this mimeMap creates a conflict with the same mimeMap in the applicationhost.config file, add **<remove fileExtension=".xap" />** above the mimeMap as follows:

   ```
   <remove fileExtension=".xap" />
   <mimeMap fileExtension=".xap" mimeType="application/octet-stream" />
   ```

   where .xap is the mime type.

Appendix A

Generic terms

This topic describes the generic terms used in the TotalAgility installation guide.

Core Service

The Core Service is responsible for executing the background system tasks, such as Perform Auto Activities, Evaluate Jobs and more.

Reporting Service

The Reporting Service extracts the capture data from the Reporting Staging database, transforms it and then loads it into the Reporting Main database. This service should be run on a dedicated server as it performs CPU-intensive translation of data.

License Service

The License Service Decrements user and volume license counts.

Export Service

The export Service exports documents to the customer's choice of store. Once exported, the documents can be removed from the main TotalAgility database. In a Docker container, the Export service cannot run inside a container and must be run directly on a host server, because the export connectors have multiple dependencies which are not available in the container.

Transformation Service

The Transformation Service polls the database for automatic capture activities to perform Image Processing, Separation, Classification, Extraction, and PDF Generation. As these operations are CPU intensive, this service must run on a dedicated server to perform its work when not running in Real Time Transformation Service mode. If running in Real Time Transformation Service mode, where it provides customers with enhanced features aimed at mobile/capture APIs, it works with in-memory documents to improve performance.

Import Service

Use this service to install multiple instances of the Message Connector. When you uninstall TotalAgility, all the instances of Message Connector are also uninstalled.

Streaming Service

Used to import and export packages in the TotalAgility Designer. You must use a Windows service as IIS only supports a maximum of 2 GB for a stream. This service runs on the Web Server. In a separate Web/Application, it runs on both the web tier and the application tier.

Capture Binary Data Storage

By default, the binary data such as Capture documents, .NET Store DLLs, and CCM Packs are stored in the TotalAgility database. You can use preconfigured external cloud data storage services such as Amazon S3 or Windows Azure Blob Storage for saving and processing binary data. The cloud services help to reduce the SQL Server maintenance costs, delegate maintenance to external services and provide encryption. If you change the storage type to Azure/Amazon blob storage or SQL Server and File System, the binary data is saved in the selected storage type. Once the storage type is changed, you cannot turn it off later.

FILESTREAM

A FILESTREAM is a specific file group in the database where the Capture documents are stored. You can perform actions on the documents using the SQL Server database.

The Administrator creates these file groups. For these file groups to appear under the File storage settings, you must enable the FILESTREAM feature.

1. Select Start > Programs > SQL Server Configuration Manager > SQL Server properties > 'FILESTREAM'. The file groups configured in the SQL Server configuration manager are listed under the File storage settings.
2. Select a file group to store the Capture binaries.

FILESTREAM is not supported with SQL Server authentication or when the databases do not exist.

KofaxTotalAgilityInstallErrorLog.log

KofaxTotalAgilityInstallErrorLog.log is the log file created if any errors occur during installation. This file is created at the same location where setup.exe exists if the path in the System diagnostics section of the Setup.exe.config is not defined. You can define the name and the path

to the log file in the <add name="KTALog" type="System.Diagnostics.TextWriterTraceListener" initializeData="<logfile path> <log file name>". The log file is also created on the desktop.

ETL

ETL (Extract, Transform, Load) is the main part of the Kofax TotalAgility Reporting Service. It is the general procedure of copying data from one or more sources into a destination system that represents the data differently from the source(s) or in a different context than the source(s).

L2S

L2S is a version of ETL implementation. It uses only three tables from this database: wsa_messages, kfx_db_version, and existing_id_values.

Staging database

The Staging database contains the wsa_messages table. Each row of this table represents a separate wsa_message.

Other tables of the Staging database are used by the Reporting Service 7.9 and earlier for pre-processing information from the wsa_messages table.

wsa_messages table

wsa_messages table is the main table of the Staging database. Reporting Service periodically starts Kofax.CEBPM.Reporting.AzureETL.exe to extract rows from this table, process them, and load the result into the Warehouse database.

wsa_message

wsa_message is a structure containing reporting data that is generated by activity during job data processing. The activity writes wsa_message into the wsa_messages table of the Reporting Staging database during and after the TotalAgility activity completion (batch session). Each wsa_message corresponds to a separate row in the wsa_messages table.

Kofax.CEBPM.Reporting.AzureETL.exe

Kofax.CEBPM.Reporting.AzureETL.exe is an executable that is run by Reporting Service. It starts ETL iterations and interrupts ETL iterations by request from Reporting Service.

ETL iteration

ETL iteration is responsible for the creation and initialization of classes supporting ETL. The number of iterations performed by Kofax.CEBPM.Reporting.AzureETL.exe is defined by the environment variable, MaxMQ2StagingIterationsNum.

Warehouse database

The Warehouse database contains a set of tables collecting wsa_messages processing results.

Completed batch session

The completed batch session is a collection of wsa_messages generated by the activity at runtime. It contains several BatchEdit wsa_message that are written to the database throughout the session and one KCBatchAction wsa_message that is written at the end of the activity execution.

Kofax.CEBPM.EncryptConfig.exe

Kofax.CEBPM.EncryptConfig.exe is a utility that is used to encrypt or decrypt the configuration files of executables.