

ABBYY®

ABBYY® FlexiCapture™ Engine 12

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Introduction

This document is designed to help you install ABBYY FlexiCapture Engine 12 library in various situations and for different purposes.

The first part provides step-by-step descriptions of basic installation scenarios. The second part contains more detailed reference for license management.

Choosing your installation type

Why are you installing the library?

- If you are going to develop a new application which uses the library, turn to the [Developer installation](#) section.

If you have developed an application which uses the library and are installing it on the end user computer, decide if you need a **standalone**, **network**, or **cloud** installation:

- The **standalone** installation is intended for when your application is running on just one local computer; the license information will be kept on the same computer.
- The **network** installation allows you to store the licenses on a remote server and distribute them between the workstations as needed.
- The **cloud** installation is intended for applications deployed to the cloud, but can also be used when installing to one or more workstations. It does not bind to a specific license server (can be shared among several machines), but requires an active Internet connection in order to receive license information from ABBYY at application run-time.

The type of the runtime license required depends on this choice: a Standalone Runtime License for a standalone installation, a Network Runtime License for a network installation, and a Cloud License for cloud installation.

You also need to determine if you are going to use the built-in ABBYY command-line installer (**automatic installation**) or copy the files manually/write your own script to do it (**manual installation**). Manual installation mode can be useful if your application requires a specific functionality subset, and you want to save disk space by omitting all unnecessary resource files.

- If you will deploy your application to the cloud or are using a Cloud License, see the [Cloud runtime installation](#) section.
- If your application will function on a single local computer, and you prefer using the built-in installer, turn to the [Automatic standalone runtime installation](#) section.
- If your application will function on a single local computer, and you need to copy only the necessary resource files, see [Manual standalone runtime installation](#).
- If you will install the application on several computers with the help of the built-in installer and use a remote server for managing licenses, see [Automatic network runtime installation](#).
- If the application will work on several computers, with the remote server managing licenses, and you need to copy only the necessary resource files, turn to the [Manual network runtime installation](#) section.

For both Standalone and Network Runtime Licenses, two types of protection are available: either software protection key – a serial number requiring activation, or hardware protection key – a USB dongle with the license information. There are minor differences in the installation instructions, and each scenario is described for both protection types. Cloud Licenses use a specific protection type which is software-based but does not require license activation. Automatic and manual installation are also possible when using a

Cloud License; these scenarios are generally similar to the standalone installation scenarios and are both described in detail in the [Cloud runtime installation](#) section.

Basic Installation Scenarios

In all the scenarios described below except the developer installation, you need first to install your application on the workstation, then install ABBYY FlexiCapture Engine library, and finally, set up the Runtime License which permits you to use the library.

Developer installation

In this scenario you are about to develop a new application which uses ABBYY FlexiCapture Engine library, and are installing the library on your developer's computer.

You will need:

- your Customer Project ID
- if you are using a Standalone License: the serial number of your Developer License
- if you are using a Network License: your network license server connection details
- if you are using a Cloud License: it is recommended to install the license token file with the library, although it is not required

Run **setup.exe** from the installation DVD-ROM and follow the installation wizard's instructions:

1. Read the Software Developer License Agreement and confirm your possession of a Developer License.
2. Select the features you need to install. See the description of each feature on the right panel as you click on the feature name.
3. Enter your Customer Project ID and select the folder where the library must be installed.
4. On the next screen:
 - a. If you are using a Standalone or Cloud License: skip this step.
 - b. If you are using a Network License: select "Yes, I want to connect to Network License Server" and enter the name or address of the license server and the type of connection protocol. See License Server Administrator's Guide for details about setting up the license server.
Note: Do not select "Yes, I want to connect to Network License Server" if using a Cloud License. Cloud Licenses use a specific protection type which is not compatible with the network licensing model.
5. Wait for installation to complete.
 - a. If you are using a Standalone License, on the final screen choose **Launch the License Manager** to activate your license. Click on the **Activate License...** button and follow the wizard instructions. If your computer has access to the Internet it only takes a few moments. For other activation options (e.g. if your computer is not connected to the Internet) see [License activation](#).
 - b. If you are using a Network License, the installation is now complete. License information will be received from the network license server which you have specified earlier.
 - c. If you are using a Cloud License, place the token file in a folder of your choice. It is recommended to use the %ProgramData%\ABBYY\SDK\12\Licenses folder: it is the default search path for cloud license tokens.

Cloud runtime installation

This section provides guides on installing your application in a cloud environment, using the command line installer or copying the required files manually.

Automatic cloud runtime installation

In this scenario you are using the command line installer to deploy your application to a cloud instance, private virtual machine, or a local workstation. You will need:

- a cloud license token file (named like SWRTXXXXXXXXXXXXXXXXXXXX.ABBYY.Cloud.ActivationToken).

Note that Internet connection is required when the application is running.

Follow the instructions:

1. Install the library on the host.

Run **setup.exe** from installation package with the following options:

- **/q** (or **/qb** if you want a progress bar to be displayed)
- **/v**
Indicates the beginning of the installation parameters list.
- **INSTALLDIR=" <destination path> "**
The path to the folder where the ABBYY FlexiCapture Engine library will be installed.

Note: For additional command-line options, see [Command line installation options](#).

The command line for your installation can look like this:

```
setup.exe /q /v INSTALLDIR="C:\MyFolder"
```

This command line will install the library into **C:\MyFolder** in silent mode, without a progress bar.

2. A Cloud License does not need activation: license information is received at the application run-time from ABBYY cloud licensing services. To authorize, the application sends a license token file and a license password. You will need to place the token file where it is expected by the application. This location must be specified by the developer (default is %ProgramData%\ABBYY\SDK\12\Licenses).
3. At run-time, the application needs to connect to ABBYY cloud licensing services periodically to receive license information and send usage statistics. No private information is exchanged with ABBYY servers.
 - Verify that you allow connections to *.abbyy.com on ports 80 and 443.
If the connection is lost, the application will stop functioning after a certain reconnection timeout is exceeded. The synchronization period and the reconnection timeout are specific parameters of each Cloud License.

Note that it is not possible to use two or more Cloud Licenses simultaneously on the same host. When the application is running and the connection to ABBYY licensing services is working, you can view details of the currently active Cloud License using the [License Manager Utility](#).

Manual cloud runtime installation

In this scenario you deploy your application to a cloud instance, private virtual machine, or a local workstation, using an installer of your choice, a shell script, or manually copying the files. You will need:

- a cloud license token file (named like SWRTXXXXXXXXXXXXXXXXXXXX.ABBYY.Cloud.ActivationToken).

Note that Internet connection is required when the application is running.

Follow the instructions:

1. Make up the list of files required for your application to function. Consult the ABBYY FlexiCapture Engine Distribution Kit section in Developer's Help. The list will include:
 - Files marked as "mandatory" in ABBYY FlexiCapture Engine Distribution Kit. They are system modules and main recognition databases.
 - Recognition databases for handprinted text, if you want to recognize handprinted text.
 - Resource files for interface languages that will be used in your application.
 - Dictionary support files for recognition languages that your application will support. If the recognition languages include languages with the Latin alphabet, make sure that you select the Univers.amd and Univers.amm files.
 - Scanning modules, scanning-specific resources and Twain modules if your application will perform scanning via the ABBYY FlexiCapture Engine interface.
 - Visual Components modules and corresponding specific resources.

You can also create the list of files automatically, with the help of the **FCEngineDistribution.csv** file. See Developer's Help for instructions.

2. Copy the files you selected to the workstation.

Important! *The easiest way to make sure all resource files can be located by the program is to maintain the same folder structure and include in your distribution the SharedFiles.ini file you will find in the **Bin** (or **Bin64**) folder. If you prefer not to use this file, instead of maintaining the folder structure do the following:*

- Copy the **Data\Resource** folder with all subfolders into **Bin** (**Bin64**) folder.
- Copy contents of the **Data\ExtendedDictionaries** folder directly into **Bin** (**Bin64**) folder.
- Copy other files contained in the **Data** folder into **Bin** (**Bin64**) folder.

3. Register the dynamic libraries you will need:

- If your application loads the **Engine** object by means of the **IEngineLoader** interface, register **FCEngine.dll** using the following command line:

```
regsvr32 /s /n /i:"<path to the Inc folder>" "<path to FCEngine.dll>"
```

•

4. Create the folders which will be used by ABBYY FlexiCapture Engine.

- folder %ProgramData%\ABBYY\SDK\12\FlexiCapture Engine;
- folder %ProgramData%\ABBYY\SDK\12\Licenses

Every user running your application must have full control access to these folders.

Note: *You can choose to use another folder for FlexiCapture Engine data folder instead of ...\\ABBYY\\SDK\\12\\FlexiCapture Engine. In this case, you will need to create this folder during installation, ensuring the same access rights. Specify the path to this folder as the value of the **AppDataPath** property of the **IEngineLoader** interface.*

5. Install the License Server. Use ABBYY FlexiCapture Engine and License Server from the same package. Otherwise, compatibility is not guaranteed.

Important! *Administrator access rights are necessary for the installation.*

The License Server requires the [KB2999226](#) update or the Microsoft Visual C++ 2015 Redistributable 14.0.24212. If you are not installing the Windows Update package, you can install the redistributable from the **License Server\VC_Redist** folder on the installation DVD-ROM.

- o For 32-bit Windows, install **vc_redist.x86.exe**.
- o For 64-bit Windows, install both **vc_redist.x86.exe** and **vc_redist.x64.exe**.

After you have installed this update, you can proceed with the License Server installation.

- a. Copy the files for the Licensing Service and the License Manager utility into a separate folder on the workstation. These files are located into the **License Server** folder on the installation DVD-ROM: copy all files from the **License Server\Common\ABBYY\SDK\12\Licensing** folder and the following files from the **License Server\ABBYY SDK\12\License Server** folder: **Awl.dll**, **LicenseManager.exe**, **LicenseManager12.chm**, **Protection.dll**, and **ProtectionUI.dll**. See the ABBYY FlexiCapture Engine Distribution Kit section in the Developer's Help for details.
- b. Run **LicensingService.exe** with the `"/install"` parameter:

```
LicensingService.exe /install
```

- c. In the folder where other Licensing Service files are located, create a **LicensingSettings.xml** file with the following contents:

```
<?xml version="1.0" encoding="utf-8"?>
<LicensingSettings
  xmlns="http://www.abbyy.com/Protection/LicensingSettings">
  <LocalLicenseServer>
    <EnableCloud Enable="yes" />
  </LocalLicenseServer>
</LicensingSettings>
```

6. A Cloud License does not need activation: license information is received at the application run-time from ABBYY cloud licensing services. To authorize, the application sends a license token file and a license password. You will need to place the token file where it is expected by the application. This location must be specified by the developer (default is %ProgramData%\ABBYY\SDK\12\Licenses).
7. At run-time, the application needs to connect to ABBYY cloud licensing services periodically to receive license information and send usage statistics. No private information is exchanged with ABBYY servers.
 - Verify that you allow connections to *.abbyy.com on ports 80 and 443. If the connection is lost, the application will stop functioning after a certain reconnection timeout is exceeded. The synchronization period and the reconnection timeout are specific parameters of each Cloud License.

Note that it is not possible to use two or more Cloud Licenses simultaneously on the same host. When the application is running and the connection to ABBYY licensing services is working, you can view details of the currently active Cloud License using the [License Manager Utility](#).

Automatic standalone runtime installation

This section provides guides on installing your application on a local workstation in a non-interactive mode using the command line.

Software protection key

In this scenario you are installing your application which uses ABBYY FlexiCapture Engine library on a local workstation via the command line, without any interaction with the user. You will need:

- the serial number of a Standalone Runtime License.

Follow the instructions:

1. Install the library on the workstation.

Run **setup.exe** from the installation DVD-ROM with the following options:

- **/q** (or **/qb** if you want a progress bar to be displayed)
- **/v**
Indicates the beginning of the installation parameters list.
- **INSTALLDIR="<destination path>"**
The path to the folder where the ABBYY FlexiCapture Engine library will be installed.

Note: For additional command-line options, see [Command line installation options](#).

The command line for your installation can look like this:

```
setup.exe /q /v INSTALLDIR="C:\MyFolder"
```

This command line will install the library into **C:\MyFolder** in silent mode, without a progress bar.

2. Activate the license.

After installing the library, you can find the License Manager Utility (**LicenseManager.exe**) in the **Bin** (for 32-bit operating system) or **Bin64** (for 64-bit operating system) folder of your installation.

If your workstation has access to the Internet, run **LicenseManager.exe** with the following options to activate your license:

- **/SilentActivation**
- **/SN:<serial number>**
The serial number of your Standalone Runtime License.
Specify the serial number in one of the following formats: XXXX-XXXX-XXXX-XXXX-XXXX-XXXX or XXXXXXXXXXXXXXXXXXXXXXXX.

The command line for your license activation can look like this:

```
LicenseManager.exe /SilentActivation /SN:XXXX-XXXX-XXXX-XXXX-XXXX-XXXX
```

For other activation options (e.g. if your workstation does not have access to the Internet) see [License activation](#).

Activating the license manually via the GUI is also possible. See [License Manager Utility](#).

Hardware protection key

In this scenario you are installing your application which uses ABBYY FlexiCapture Engine library on a local workstation via the command line, without any interaction with the user. You will need:

- a USB dongle containing the parameters of your hardware protection key.

Follow the instructions:

1. Install the library on the workstation.

Run the **setup.exe** file from the installation DVD-ROM with the following options:

- **/q** (or **/qb** if you want a progress bar to be displayed)
- **/v**
Indicates the beginning of the installation parameters list.
- **INSTALLDIR=" <destination path> "**
The path to the folder where the ABBYY FlexiCapture Engine library will be installed.
- **WIBUDR=Yes**
This option installs the Wibu CodeMeter hardware key drivers.

Note: For additional command-line options, see [Command line installation options](#).

The command line for your installation can look like this:

```
setup.exe /qb /v INSTALLDIR="C:\MyFolder" WIBUDR="YES"
```

This command line will install the library into **C:\MyFolder** in silent mode. A progress bar will be displayed.

2. Connect the hardware protection key to the USB port of the workstation. License activation is not required. Now your application can use ABBYY FlexiCapture Engine library while the key is connected, and you can view the license details in the License Manager.

Manual standalone runtime installation

This section provides guides on manually installing your application on a local workstation.

Note that manual standalone installation is possible only if you are using a software protection key. Using a Wibu CodeMeter hardware key requires key drivers which are installed during the [automatic runtime installation](#).

Software protection key

In this scenario you are installing your application which uses ABBYY FlexiCapture Engine library on a local workstation manually. You will need:

- the serial number of a Standalone Runtime License.

Follow the instructions:

1. Make up the list of files required for your application to function. Consult the ABBYY FlexiCapture Engine Distribution Kit section in Developer's Help. The list will include:
 - Files marked as "mandatory" in ABBYY FlexiCapture Engine Distribution Kit. They are system modules and main recognition databases.

- Recognition databases for handprinted text, if you want to recognize handprinted text.
- Resource files for interface languages that will be used in your application.
- Dictionary support files for recognition languages that your application will support. If the recognition languages include languages with the Latin alphabet, make sure that you select the `Univers.amd` and `Univers.amm` files.
- Scanning modules, scanning-specific resources and Twain modules if your application will perform scanning via the ABBYY FlexiCapture Engine interface.
- Visual Components modules and corresponding specific resources.

You can also create the list of files automatically, with the help of the **FCEngineDistribution.csv** file. See Developer's Help for instructions.

2. Copy the files you selected to the workstation.

Important! *The easiest way to make sure all resource files can be located by the program is to maintain the same folder structure and include in your distribution the `SharedFiles.ini` file you will find in the **Bin** (or **Bin64**) folder. If you prefer not to use this file, instead of maintaining the folder structure do the following:*

- Copy the **Data\Resource** folder with all subfolders into **Bin** (**Bin64**) folder.
- Copy contents of the **Data\ExtendedDictionaries** folder directly into **Bin** (**Bin64**) folder.
- Copy other files contained in the **Data** folder into **Bin** (**Bin64**) folder.

3. Register the dynamic libraries you will need:

- If your application loads the **Engine** object by means of the **IEngineLoader** interface, register **FCEngine.dll** using the following command line:

```
regsvr32 /s /n /i:"<path to the Inc folder>" "<path to FCEngine.dll>"
```

4. Create the folders which will be used by ABBYY FlexiCapture Engine.

- folder `%ProgramData%\ABBYY\SDK\12\FlexiCapture Engine`;
- folder `%ProgramData%\ABBYY\SDK\12\Licenses`

Every user running your application must have full control access to these folders.

Note: *You can choose to use another folder for FlexiCapture Engine data folder instead of `... \ABBYY\SDK\12\FlexiCapture Engine`. In this case, you will need to create this folder during installation, ensuring the same access rights. Specify the path to this folder as the value of the **AppDataPath** property of the **IEngineLoader** interface.*

5. Install the Licensing Service.

Use ABBYY FlexiCapture Engine and Licensing Service from the same package. Otherwise, compatibility is not guaranteed.

Important! *Administrator access rights are necessary for the installation.*

The License Server requires the [KB2999226](#) update or the Microsoft Visual C++ 2015 Redistributable 14.0.24212. If you are not installing the Windows Update package, you can install the redistributable from the **License Server\VC_Redist** folder on the installation DVD-ROM.

- For 32-bit Windows, install **vc_redist.x86.exe**.
- For 64-bit Windows, install both **vc_redist.x86.exe** and **vc_redist.x64.exe**.

After you have installed this update, you can proceed with the License Server installation.

- a. Copy the files for the Licensing Service and the License Manager utility into a separate folder on the workstation

These files are located into the **License Server** folder on the installation DVD-ROM: copy all files from the **License Server\Common\ABBYY\SDK\12\Licensing** folder and the following files from the **License Server\ABBYY SDK\12\License Server** folder: Awl.dll, LicenseManager.exe, LicenseManager12.chm, Protection.dll, and ProtectionUI.dll.

See the ABBYY FlexiCapture Engine Distribution Kit section in the Developer's Help for details.

- b. Run **LicensingService.exe** with the "/install" parameter:

```
LicensingService.exe /install
```

6. Activate the license.

Run **LicenseManager.exe**. Click on the **Activate License...** button and follow the wizard instructions to activate your license. If your computer has access to the Internet you only need to enter the serial number and wait a few moments. For details about the License Manager, see [License Manager Utility](#).

You can also activate the license through the command line. For details, see [Working with the License Manager from the command line](#).

Automatic network runtime installation

This section provides guides on installing your application on a network server and workstations connected to this server using the command line installer.

Software protection key

In this scenario you are installing your application which uses ABBYY FlexiCapture Engine library on a server and workstations connected to this server through a network, via the command line, without any interaction with the user. You will need:

- the serial number of a Network Runtime License.

First you need to install the library and activate the license on a license server — a computer which will manage and distribute licenses among workstations in a network. After that install the library on the workstations. Activation on workstations is not required.

Follow the instructions:

1. Install the library and the Licensing Service on the license server.

Run the **setup.exe** file from the installation DVD-ROM with the following options:

- **/q** (or **/qb** if you want a progress bar to be displayed)
- **/v**
Indicates the beginning of the installation parameters list.

- **INSTALLDIR=" <destination path> "**

The path to the folder where the ABBYY FlexiCapture Engine library will be installed.

The command line for your server installation can look like this:

```
setup.exe /q /v INSTALLDIR="C:\MyFolder"
```

This command line will install the library into C:\MyFolder in silent mode, without a progress bar, taking the current computer for the license server.

Note: If your license server will not function as one of the workstations, you only need to install the Licensing Service on it. Run **Setup.exe** from the **License Server** folder on the installation DVD-ROM and follow the wizard instructions:

- a. On the first screen select the path to the folder where the Licensing Service will be installed and the connection protocol it will use. Click **Next**.
- b. On the second screen review your settings and click **Install**.

See *License Server Administrator's Guide* for more details.

2. Activate the license on the license server.

After installing the library, you can find the License Manager Utility (**LicenseManager.exe**) in the **Bin** (for 32-bit operating system) or **Bin64** (for 64-bit operating system) folder of your installation.

If the network has access to the Internet, run **LicenseManager.exe** with the following options to activate your license:

- **/SilentActivation**
- **/SN:<serial number>**

The serial number of your Standalone Runtime License.

Specify the serial number in one of the following formats: XXXX-XXXX-XXXX-XXXX-XXXX-XXXX or XXXXXXXXXXXXXXXXXXXXXXXX.

The command line for your license activation can look like this:

```
LicenseManager.exe /SilentActivation /SN:XXXX-XXXX-XXXX-XXXX-XXXX-XXXX
```

For other activation options (e.g. if your network does not have access to the Internet) see [License Activation](#).

Activating the license manually via the GUI is also possible. See [License Manager Utility](#).

3. Install the library on the workstations.

Run the **setup.exe** file from the installation DVD-ROM with the following options:

- **/q** (or **/qb** if you want a progress bar to be displayed)
- **/v**
Indicates the beginning of the installation parameters list.
- **INSTALLDIR=" <destination path> "**
The path to the folder where the ABBYY FlexiCapture Engine library will be installed.
- **LICENSESRV=No**
Indicates that the Licensing Service need not be installed.
- **SERVERNAME=" <the DNS name or IP address> "**
The DNS name or IP address of the license server you set up in the previous step.

The command line for your workstation installation can look like this:

```
setup.exe /q /v INSTALLDIR="C:\MyFolder" LICENSESRV="No"
SERVERNAME="XXX.XXX.XXX.XX"
```

This command line will install the library into C:\MyFolder in silent mode, without a progress bar, and configure the workstation to receive licenses from the license server with the IP-address XXX.XXX.XXX.XX?

Note: You also have the option of setting up a two-server configuration which will allow one of the license servers to act as a backup to another in case it goes offline. For details, see [Setting up a redundant license server configuration](#).

Hardware protection key

In this scenario you are installing your application which uses ABBYY FlexiCapture Engine library on a server and workstations connected to this server through a network, via the command line, without any interaction with the user. You will need:

- a USB dongle containing the parameters of your hardware protection key.

First you need to install the library on a license server — a computer which will manage and distribute licenses among workstations in a network. After that install the library on the workstations.

Follow the instructions:

1. Install the library and the Licensing Service on the license server.

Run the **setup.exe** file from the installation DVD-ROM with the following options:

- **/q** (or **/qb** if you want a progress bar to be displayed)
- **/v**
Indicates the beginning of the installation parameters list.
- **INSTALLDIR="<destination path>"**
The path to the folder where the ABBYY FlexiCapture Engine library will be installed.
- **WIBUDR=Yes**
This option installs the Wibu CodeMeter hardware key drivers.

Note: For additional command-line options, see [Command line installation options](#).

The command line for your server installation can look like this:

```
setup.exe /q /v INSTALLDIR="C:\MyFolder" WIBUDR="Yes"
```

This command line will install the library into C:\MyFolder in silent mode, without a progress bar, and taking the current computer for the license server.

Note: If your license server will not function as one of the workstations, you only need to install the Licensing Service on it. Run **Setup.exe** from the **License Server** folder on the installation DVD-ROM and follow the wizard instructions:

- a. On the first screen select the path to the folder where the Licensing Service will be installed and the connection protocol it will use. Click **Next**.
- b. On the second screen review your settings and click **Install**.

In this case you will have to install the Wibu CodeMeter key drivers yourself, as automatic installation is not provided in the Licensing Service installer. See [License Server Administrator's Guide](#) for more details.

2. Connect the hardware protection key to the USB port of the server. License activation is not required.
3. Install the library on the workstations.

Run the **setup.exe** file from the installation DVD-ROM with the following options:

- **/q** (or **/qb** if you want a progress bar to be displayed)
- **/v**
Indicates the beginning of the installation parameters list.
- **INSTALLDIR="<destination path>"**
The path to the folder where the ABBYY FlexiCapture Engine library will be installed.
- **LICENSESRV=No**
Indicates that the Licensing Service need not be installed.
- **SERVERNAME="<the DNS name or IP address>"**
The DNS name or IP address of the license server you set up in the previous step.

The command line for your workstation installation can look like this:

```
setup.exe /q /v INSTALLDIR="C:\MyFolder" LICENSESRV="No"
SERVERNAME="XXX.XXX.XXX.XX?"
```

This command line will install the library into C:\MyFolder in silent mode, without a progress bar, and configure the workstation to receive licenses from the license server with the IP-address XXX.XXX.XXX.XX?

Note: You also have the option of setting up a two-server configuration which will allow one of the license servers to act as a backup to another in case it goes offline. For details, see [Setting up a redundant license server configuration](#).

Manual network runtime installation

This section provides guides on manually installing your application on a network server and workstations connected to this server.

Note that manual network installation is possible only if you are using a software protection key. Using a Wibu CodeMeter hardware key requires key drivers which are installed during the [automatic runtime installation](#).

Software protection key

In this scenario you are installing your application which uses ABBYY FlexiCapture Engine library on a server and workstations connected to this server through a network manually. You will need:

- the serial number of a Network Runtime License.

First you need to install the Licensing Service and activate the license on a license server — a computer which will manage and distribute licenses among workstations in a network. After that install the library on the workstations and set up the connection to the license server.

Follow the instructions:

1. Install the Licensing Service on the license server.

Use ABBYY FlexiCapture Engine and Licensing Service from the same package. Otherwise, compatibility is not guaranteed.

Important! *Administrator access rights are necessary for the installation.*

The License Server requires the [KB2999226](#) update or the Microsoft Visual C++ 2015 Redistributable 14.0.24212. If you are not installing the Windows Update package, you can install the redistributable from the **License Server\VC_Redist** folder on the installation DVD-ROM.

- o For 32-bit Windows, install **vc_redist.x86.exe**.
- o For 64-bit Windows, install both **vc_redist.x86.exe** and **vc_redist.x64.exe**.

After you have installed this update, you can proceed with the License Server installation.

- a. Copy the files for the Licensing Service and the License Manager utility into a separate folder on the server. These files are located into the **License Server** folder on the installation DVD-ROM: copy all files from the **License Server\Common\ABBYY\SDK\12\Licensing** folder and the following files from the **License Server\ABBYY SDK\12\License Server** folder: **Awl.dll**, **LicenseManager.exe**, **LicenseManager12.chm**, **Protection.dll**, and **ProtectionUI.dll**.

See the ABBYY FineReader Engine Distribution Kit section in the Developer's Help for details.

- b. Create the %ProgramData%\ABBYY\SDK\12\Licenses folder. Every user running your application must have full control access to this folder.
- c. Run **LicensingService.exe** with the "/install" parameter:

```
LicensingService.exe /install
```

- d. Create a **LicensingSettings.xml** file. The XML schema to which it must conform can be found in the **LicensingSettings.xsd** file, which is located in the **Inc** folder of your developer installation or the **CADF\Inc** folder on the installation DVD-ROM.

In this file you need to set up the type of connection protocol your license server will use. The supported types are LocalInterprocessCommunication, NamedPipes, TCP/IP, and Sockets:

```
<LocalLicenseServer>
  <ConnectionProtocol ProtocolType="[your protocol type]"/>
</LocalLicenseServer>
```

By default, the 3022 TCP/IP port is used. If this port is closed on your server, specify another open port:

```
<LocalLicenseServer>
  <ConnectionProtocol ProtocolType="TCP/IP" EndPointName="1025"/>
</LocalLicenseServer>
```

Copy the configured **LicensingSettings.xml** file into the folder where other Licensing Service files are located.

Note: You also have the option of setting up a two-server configuration which will allow one of the license servers to act as a backup to another in case it goes offline. For details, see [Setting up a redundant license server configuration](#).

2. Activate the license on the license server.

Run **LicenseManager.exe**. Click on the **Activate License...** button and follow the wizard instructions to activate your license. If your server has access to the Internet you only need to enter the serial number and wait a few moments. For details about the License Manager, see [License Manager Utility](#).

You can also activate the license through the command line. For details, see [Working with the License Manager from the command line](#).

3. Install the library on workstations.

Note: *If the license server will also function as a workstation, perform this step for the server too.*

- a. Make up the list of files required for your application to function. Consult the ABBYY FlexiCapture Engine Distribution Kit section in Developer's Help. The list will include:
 - Files marked as "mandatory" in ABBYY FlexiCapture Engine Distribution Kit. They are system modules and main recognition databases.
 - Recognition databases for handprinted text, if you want to recognize handprinted text.
 - Resource files for interface languages that will be used in your application.
 - Dictionary support files for recognition languages that your application will support. If the recognition languages include languages with the Latin alphabet, make sure that you select the Univers.amd and Univers.amm files.
 - Scanning modules, scanning-specific resources and Twain modules if your application will perform scanning via the ABBYY FlexiCapture Engine interface.
 - Visual Components modules and corresponding specific resources.

You can also create the list of files automatically, with the help of the **FCEngineDistribution.csv** file. See Developer's Help for instructions.

- b. Copy the files you selected to all your workstations.

Important! *The easiest way to make sure all resource files can be located by the program is to maintain the same folder structure and include in your distribution the **SharedFiles.ini** file you will find in the **Bin** (or **Bin64**) folder. If you prefer not to use this file, instead of maintaining the folder structure do the following:*

- Copy the **Data\Resource** folder with all subfolders into **Bin (Bin64)** folder.
 - Copy contents of the **Data\ExtendedDictionaries** folder directly into **Bin (Bin64)** folder.
 - Copy other files contained in the **Data** folder into **Bin (Bin64)** folder.
- c. Register the dynamic libraries you will need.
 - If your application loads the **Engine** object by means of the **IEngineLoader** interface, register **FCEngine.dll** using the following command line:

```
regsvr32 /s /n /i:"<path to the Inc folder>" "<path to FCEngine.dll>"
```

- d. Create the folders which will be used by ABBYY FlexiCapture Engine.
 - folder %ProgramData%\ABBYY\SDK\12\FlexiCapture Engine;
 - folder %ProgramData%\ABBYY\SDK\12\Licenses

Every user running your application must have full control access to these folders.

Note: *You can choose to use another folder for FlexiCapture Engine data folder instead of*

...\ABBYY\SDK\12\FlexiCapture Engine. In this case, you will need to create this folder during installation, ensuring the same access rights. Specify the path to this folder as the value of the **AppDataPath** property of the **IEngineLoader** interface.

4. Create a **LicensingSettings.xml** file, setting up the same type of connection protocol you specified for the server and the address of the server:

```
<LicensingServers>
  <MainNetworkLicenseServer ServerAddress="[your server address]"
    ProtocolType="[your protocol type]" />
</LicensingServers>
```

If you set another TCP/IP port for the server, repeat the same setting here.

```
<LicensingServers>
  <MainNetworkLicenseServer ServerAddress="[your server address]"
    ProtocolType="TCP/IP" EndPointName="1025" />
</LicensingServers>
```

Copy the configured file into **Bin** (for 32-bit operating system) or **Bin64** (for 64-bit operating system) folder of your library installation on every workstation.

Note: If the license server will also function as a workstation, the **LicensingSettings.xml** file for the server must contain both **LicensingServers** and **LocalLicenseServer** tags similar to those specified above. The contents of the file will look like this:

```
<?xml version="1.0" encoding="utf-8"?>
<LicensingSettings
  xmlns="http://www.abbyy.com/Protection/LicensingSettings">
  <LicensingServers>
    <MainNetworkLicenseServer ServerAddress="[your server address]"
      ProtocolType="[your protocol type]" />
  </LicensingServers>
  <LocalLicenseServer>
    <ConnectionProtocol ProtocolType="[your protocol type]" />
  </LocalLicenseServer>
</LicensingSettings>
```

Uninstalling the library

Uninstalling the developer installation

For developer installation, use the **Uninstall or change a program** Windows menu (**Control Panel > Programs and features**).

Uninstalling the automatic runtime installation

Automatic runtime uninstallation is the same for standalone and network installations. For network installation, perform the required steps on every workstation.

If ABBYY FlexiCapture Engine library was installed using a built-in installer (automatic runtime installation), it must be uninstalled also with the help of that installer. Run **setup.exe** from the installation DVD-ROM with the following options:

- **/q** (or **/qb** if you want a progress bar to be displayed)
- **/v**
Indicates the beginning of the installation parameters list.
- **INSTALLDIR="<destination path>"**
The path to the folder where the ABBYY FlexiCapture Engine library was installed.
- **DeinstallRuntime=Yes**
Indicates that the runtime installation must be removed.

Uninstalling the manual runtime installation

Manual runtime uninstallation is the same for standalone and network installations. For network installation, perform the required steps on every workstation, and those concerned with Licensing Service on the license server.

Follow the instructions:

1. Unregister the dynamic library **FCEngine.dll** if it was registered during manual installation.

```
regsvr32.exe /u "<path to FCEngine.dll>"
```

2. Uninstall the Licensing Service if it was installed (i.e. from the workstation for standalone installation, and from the license server for network installation):

```
LicensingService.exe /uninstall
```

Then remove the folder with the Licensing Service files.

3. Remove all files of ABBYY FlexiCapture Engine library. They may be located in **Bin**, **Bin64** (only for 64-bit operating systems), and **Data** folders in your installation folder.
4. Delete the folders that were used by ABBYY FlexiCapture Engine.
 - folder %ProgramData%\ABBYY\SDK\12\FlexiCapture Engine;
 - folder %ProgramData%\ABBYY\SDK\12\Licenses

Specifications

Workstation requirements

The system requirements for the workstation on which your application is installed are the same for all scenarios:

ABBYY FlexiCapture Engine 12 Requirements

- PC with x86-compatible processor (1 GHz or higher).
- Operating system:

- Windows Server 2016
- Windows 10
- Windows Server 2012 R2 with the April 2014 update rollup ([KB2919355](#))
- Windows 8.1 with the April 2014 update rollup ([KB2919355](#))
- Windows Server 2012
- Windows 8
- Windows Server 2008 R2 SP1
- Windows 7 SP1

ABBYY FlexiCapture Engine has been tested on the following cloud computing platforms:

- Microsoft Azure:
 - Azure App Services
 - Azure Cloud Services
 - Azure Service Fabric
 - Azure Virtual Machines
- Amazon EC2

ABBYY FlexiCapture Engine has been tested in the following virtual environments:

- Microsoft Hyper-V Server 2008
- Microsoft Hyper-V Server 2008 R2 SP1
- Microsoft Hyper-V Server 2012
- Microsoft Hyper-V Server 2012 R2
- Microsoft Hyper-V Server 2016
- Oracle VM VirtualBox 5.2
- Parallels Desktop for Mac 13.0.1
- VMware ESXi 6.5
- VMware Workstation Player 12.5
- VMware Workstation Pro 14.0.0

ABBYY FlexiCapture Engine can also be run in a Docker container on supported platforms.

- Memory:
 - for processing one-page documents — minimum 400 MB RAM, recommended 1 GB RAM;
 - for processing multi-page documents — minimum 1 GB RAM, recommended 1,5 GB RAM.
 - for parallel processing — $350 \text{ MB} * (\text{cores number}) + 450 \text{ MB}$ RAM;
 - for parallel processing of documents in Arabic or CJK languages — $850 \text{ MB} * (\text{cores number}) + 750 \text{ MB}$ RAM.
- Hard disk space: 1400 MB for library installation and 100 MB for program operation plus additional 15Mb for every processing page of a multi-page document.
- 100% TWAIN-compatible scanner, digital camera, or fax modem — for scanning only.
- Video card and monitor (min. resolution 1024*768) — for displaying GUI elements.

- Keyboard, mouse or other input device
- The following registry branches should be accessible from the workstation:
 - "HKEY_CURRENT_USER\Software\ABBYY\SDK\12\FlexiCapture Engine" — full control
 - "HKEY_CURRENT_USER\Software\ABBYY\SDK\12" — full control for installation only
 - "HKEY_LOCAL_MACHINE\Software\ABBYY\SDK\12" — full control for installation only
- The following folders should be accessible from the workstation:
 - Folder with ABBYY FlexiCapture Engine binary files — access for reading
 - System temporary folder — full control access
 - folder ProgramData\ABBYY\SDK\12\FlexiCapture Engine — full control access;
 - folder ProgramData\ABBYY\SDK\12\Licenses — full control access
- The following components should be installed:
 - Microsoft® Internet Explorer 8.0 or higher

ABBYY SDK 12 License Server Requirements

- PC with x86-compatible processor (1 GHz or higher).
- Operating system:
 - Windows Server 2016
 - Windows 10
 - Windows Server 2012 R2 with the April 2014 update rollup ([KB2919355](#))
 - Windows 8.1 with the April 2014 update rollup ([KB2919355](#))
 - Windows Server 2012
 - Windows 8
 - Windows Server 2008 R2 SP1
 - Windows 7 SP1

ABBYY SDK 12 Licensing Service has been tested in the following virtual environments:

- Microsoft Hyper-V Server 2008
- Microsoft Hyper-V Server 2008 R2 SP1
- Microsoft Hyper-V Server 2012
- Microsoft Hyper-V Server 2012 R2
- Microsoft Hyper-V Server 2016
- Oracle VM VirtualBox 5.2
- Parallels Desktop for Mac 13.0.1
- VMware ESXi 6.5
- VMware Workstation Player 12.5
- VMware Workstation Pro 14.0.0
- 25 MB of free hard-disk space
- folder ProgramData\ABBYY\SDK\12\Licenses — full control access

Command line installation options

This section describes all supported command-line options of the built-in installer.

Option	Default Value	Description
INSTALLDIR=" <i><destination path></i> "		<p>The path to the folder where the ABBYY FlexiCapture Engine library will be installed.</p> <p>Important! <i>This parameter is required.</i></p>
DeinstallRuntime=Yes No	No	Specifies if the existing runtime installation of the library must be uninstalled.
ARCH=x86 x64 Auto	Auto	<p>Specifies whether 32-bit or 64-bit files should be installed. If ARCH=Auto, the set of files is selected depending on the operating system architecture.</p> <p>Note: <i>On a 64-bit operating system, the 64-bit version of License Manager is always installed, even if you specify ARCH=x86.</i></p>
ADDITIONALLANGUAGES= <i><list of languages></i> No	CJK, Thai, Vietnamese, Arabic	<p>The list of recognition language modules that you want to install. The following additional languages are available: CJK, Thai, Vietnamese, Arabic. The language</p>

Option	Default Value	Description
		names must be separated with commas (,). For example, ADDITIONALLANGUAGE S=CJK,Thai,Vietnamese. If you do not want to install any of these modules, set this option to No.
PDF=Yes No	Yes	Specifies whether the modules, which are necessary for PDF opening, should be installed.
FRE=Yes No	No	Set the value to "Yes", if you want ABBYY FineReader Engine 12 to be installed.
WIBUDR=Yes No	No	Specifies whether hardware key drivers (CodeMeter) must be installed.
LICENSESRV=Yes No	Yes	Specifies whether Licensing Service must be installed. If WIBUDR=Yes, the Licensing Service is installed automatically and cannot be excluded from the installation. The Licensing Service is installed to the % ProgramFiles%

Option	Default Value	Description
		<p> \Common Files\ABBYY\SDK\12\Licensing folder on a 32-bit operating system, and % ProgramFiles(x86)%\Common Files\ABBYY\SDK\12\Licensing folder on a 64-bit operating system. </p> <p> Important! <i>Licensing Service is required for working with ABBYY FlexiCapture Engine library, and for correct installation you must do one of the following:</i> </p> <ul style="list-style-type: none"> <i>If you have a Standalone or a Cloud license, you should install the Licensing Service on the same computer on which ABBYY FlexiCapture Engine is installed. Set this parameter to Yes.</i> <i>In the case of Network license, you should install the Licensing Service beforehand on a network server — a computer which will manage and distribute licenses among workstations in a network. Set this parameter to No and specify the address of the server in the</i>

Option	Default Value	Description
		<i>SERVERNAME</i> parameter during installation on your workstation. If you set this parameter to No and omit the server address, an error will be returned and installation will not be completed.
SERVERNAME= <the DNS name or IP address>		The DNS name or IP address of the computer where the Licensing Service is installed.
BCPATTERNS=Yes		Selects bytecode modules and patterns for installation. If this option is not used, standard files are installed.
RegisterCOM=Yes No Force	Yes	<p>Specifies whether the COM wrappers should be registered. The registration is performed by calling the DllRegisterServer function from FCEngine.dll. If the library is already registered with the different path:</p> <ul style="list-style-type: none"> • if this option is set to Yes, an error is returned; • if this option is set to

Option	Default Value	Description
		<p>Force, the library is re-registered to the new path and the installation is continued.</p> <p>If the MODULES option contains VC or is set to All, the library must be registered. Setting this option to No will cause an error and the installation will not be completed.</p>
/v		Indicates the beginning of the list of installation parameters.
/q		<p>Silent mode. This is mandatory option because the runtime installation can be performed only in silent mode. Use the /qb option if you want a progress bar to be displayed during the installation. No other dialog boxes will be displayed.</p>

ABBYY FlexiCapture Engine 12 Modules

The functionality of ABBYY FlexiCapture Engine 12 is represented by a set of modules. Each module is a group of Engine functions. Some modules can be included in ABBYY FlexiCapture Engine licenses as predefined modules and others as additional ones.

For additional licensing information, please contact the ABBYY office serving your region. You can find the list of ABBYY offices in the How to Buy section.

An ABBYY FlexiCapture Engine 12 License allows you to process a certain number of pages per period (usually per month). This means that the user can process (analyze, recognize, or export to any format) no more pages than is allowed by the user's license. The counter is incremented by 1 when processing an A4 page or smaller. When processing a page which is n times larger than A4, the counter will be incremented by n.

The modules available in ABBYY FlexiCapture Engine 12 are listed in the table below.

Module	Description
<i>FlexiLayouts</i>	Allows you to work with flexible descriptions (created with ABBYY FlexiLayout Studio).
<i>Number of fields</i>	Specifies the maximum number of fields, which can be recognized in a document. Note: <i>If the license contains this restriction, the Document Definitions, which contain table blocks, cannot be applied.</i>
<i>Verification</i>	Provides access to the verification-related objects, extended character information, and some features of export to XML format.
<i>Searchable PDF</i>	Allows you to export electronic copies of documents to searchable PDF (IImageExportParams::CreateSearchablePDF).
<i>Licensed custom components only</i>	This module allows you to use either both protected and unprotected custom components, or only protected custom components.
Additional languages (OCR)	
<i>Chinese</i>	This module provides access to the Chinese (PRC), Chinese (Taiwan) recognition languages.
<i>Korean</i>	This module provides access to the Korean, Korean (Hangul) recognition languages.
<i>Japanese</i>	This module provides access to the Japanese and Japanese (Modern) recognition language.

Module	Description
<i>Thai</i>	This module provides access to Thai recognition language.
<i>Vietnamese</i>	This module provides access to Vietnamese recognition language.
<i>Arabic</i>	This module provides access to Arabic recognition language.
<i>Additional languages (ICR)</i>	
<i>Cyrillic</i>	This module allows you to recognize Cyrillic hand-printed texts.

License-related errors

When unavailable method is called, unsupported value is assigned to an object property or passed as an argument to an object method, the operation will fail, and the CO_E_NOT_SUPPORTED error code will be returned.

When number of processed pages exceeds the value allowed by **Limited** modification, the recognition methods will fail, and the E_FAIL error code will be returned.

When the license has been expired or not loaded, all methods of the **Engine** object will fail and return CLASS_E_NOTLICENSED error code.

Licensing Reference

License Activation

ABBYY FlexiCapture Engine must be activated before use. If you have a Standalone license, you should activate ABBYY FlexiCapture Engine on the same computer on which ABBYY FlexiCapture Engine is installed. In the case of Network license, you should activate ABBYY FlexiCapture Engine on a network server – a computer which will manage and distribute licenses among workstations in a network. However ABBYY FlexiCapture Engine may be installed both on the network server and on workstations.

Both Standalone and Network licenses require Licensing Service (LicensingService.exe) for correct operation of ABBYY FlexiCapture Engine. The Licensing Service can be installed automatically during the Developer installation and the Runtime installation of the ABBYY FlexiCapture Engine library in automatic mode. If you need to install it manually, see Installing the Licensing Service for details.

Note: The Licensing Service settings are provided in the LicensingSettings.xml file. The file is required for network installation and for standalone installation if Hardware or Cloud protection key is used. This file is generated automatically during automatic installation. When installing manually, you must specify the correct settings in this file. The XML scheme of the settings is located in the LicensingSettings.xsd file. You can find this file in the Inc folder (Start > Programs > ABBYY FlexiCapture Engine 12 > Installation Folders > Include Files Folder). The detailed description of the settings is provided in the [Working with the LicensingSettings.xml File](#) section.

For managing licenses ABBYY FlexiCapture Engine provides the [License Manager](#) utility. With the help of this utility you can add, remove, activate, deactivate, update licenses and view license properties. The License Manager utility allows you to work with licenses of all protection types:

- **Software protection key**
Uses an activation file that should be obtained from the ABBYY server during an activation process.
- **Hardware protection key**
Uses a USB dongle that contains the license parameters. In the case of a hardware protection key, license activation is not required.
- **Cloud protection**
Uses a password-protected file that contains the license parameters. In this case license activation is not required.

If you choose a hardware protection key

If you choose the hardware protection key, the Wibu CodeMeter drivers must be installed on the computer where the License Service is installed, which is currently possible only during automatic runtime installation. Once the installation is completed, connect the hardware protection key to the USB port of the computer. Make sure that you do it before the first run of the program. No license activation is required. To view license properties, use the License Manager utility.

If you choose cloud protection

If you choose cloud protection, you need to ensure that the Licensing Service installed on your computer can connect to ABBYY cloud licensing services: allow connections to ***.abbyy.com** on ports **80** and **443**.

With cloud protection, license activation is not required, but the Licensing Service synchronizes with cloud in set time intervals. If the connection to the cloud licensing service is lost, there is also a certain timeout during which it can be re-established, otherwise the license is invalidated until the Licensing Service connects to the cloud again. The synchronization and timeout periods are the parameters of your license.

The same Cloud License can be used on multiple computers; no specific actions are required to allow concurrent usage.

If you choose a software protection key

A software protection key requires the activation of its serial number by means of the License Manager utility.

How is activation carried out?

Activation takes very little time and is carried out with the help of an **Activation Wizard**. This wizard is built into the License Manager utility. The Activation Wizard has a friendly interface and is used for sending the necessary activation information to ABBYY. The same wizard is used for loading the **ABBYY License File** (*.ABBYY.License file) which you receive from ABBYY during activation.

Activation information is sent as a code (Installation ID) which is generated on the basis of information about the computer on which the program is being installed. No personal information about the user or computer is used for generating this code and this code cannot be used for identifying the user.

Activation methods:

- **Via the Internet**

Activation is carried out automatically and takes only a few seconds. An Internet connection is required for this type of activation.

- **By e-mail**

The user needs to send an e-mail message generated by the program and containing information required for activation to product-activation-robot@abbyy.com. To ensure a quick reply from the mail robot, do not alter the information in the message body or Subject field.

- **By e-mail from another computer**

This method is suitable, if your computer does not have an Internet connection. The program will generate an e-mail message containing information required for activation and offer you to copy the message and send it to ABBYY from another computer.

In the case of activation via the Internet, the whole process is carried out automatically. In the case of activation by e-mail, the user needs to enter the path to the Activation File received from ABBYY in the corresponding field of the Activation Wizard.

Once the activation is complete, the program can be used.

Reactivation

ABBYY FlexiCapture Engine 12 can be reinstalled on one and the same computer an unlimited number of times without reactivation. However, if you make major upgrades, format your hard drive, or reinstall the operating system on the computer where the Licensing Service is installed, an additional activation may be required.

Deactivation

ABBYY FlexiCapture Engine 12 license can be deactivated. The deactivated license can be then activated on another computer. The number of allowed deactivations can be restricted by your license.

Deactivation takes very little time and is carried out with the help of a **Deactivation Wizard**. This wizard is built into the License Manager utility. During the deactivation the Activation File (*.ABBY.License file) which you receive from ABBYY during activation is deleted. Any copy of this file cannot be used for activation again.

The deactivation can be performed only via the Internet. Deactivation is carried out automatically and takes only a few seconds. An Internet connection is required. Once the deactivation is complete, the license can be activated on another computer.

License update

If you have purchased additional modules or an additional amount of pages for ABBYY FlexiCapture Engine 12 and your license does not allow you to use them, you need to update the license. The license update process is similar to the activation process. The update process is carried out with the help of the **Update Wizard** and can be performed via the Internet or by e-mail. Once the update is complete, the newest functionality of the program can be used.

About the LicensingSettings.xml File

The LicensingSettings.xml file contains the ABBYY FlexiCapture Engine protection settings. This file is necessary for correct work of the Licensing Service in the network. When Licensing Service is used on a local computer, this file is required if you use a Hardware protection key.

The file is generated automatically during Developer or Runtime installation in automatic mode. When installing manually, you must specify the correct settings in this file. The XML scheme of the settings is located in the LicensingSettings.xsd file. You can find this file in the Inc folder (Start > Programs > ABBYY FlexiCapture Engine 12 > Installation Folders > Include Files Folder).

Changing the Licensing Service settings

The Licensing Service settings include two main parts:

- the settings of the Licensing Service installed on the current computer, which are specified in the `<LocalLicenseServer>` tag,
- and the parameters of connection with the network server, where the Licensing Service is installed. These parameters are specified in the `<LicensingServers>\<MainNetworkLicenseServer>` tag.

If ABBYY FlexiCapture Engine is installed on a local computer, you should specify the settings only in the `<LocalLicenseServer>`, if necessary. While if ABBYY FlexiCapture Engine works in a network, `<LocalLicenseServer>` parameters are specified on the server, and `<LicensingServers>\<MainNetworkLicenseServer>` parameters on workstations. If a computer is used both as a server and as a workstation, both `<LocalLicenseServer>` and `<LicensingServers>\<MainNetworkLicenseServer>` parameters should be specified. See the descriptions of tags below for details.

To change TCP/IP port

The Licensing Service uses 3022 TCP/IP port by default. If this port is closed on the computer where the Licensing Service is installed, the Licensing Service will not work. In this case, specify an open port in EndPointName attribute of <LocalLicenseServer> or <LicensingServers>\<MainNetworkLicenseServer> tag, for example:

```
<LocalLicenseServer>
  <ConnectionProtocol ProtocolType="TCP/IP" EndPointName="1025" />
</LocalLicenseServer>
```

or

```
<LicensingServers>
  <MainNetworkLicenseServer ServerAddress="computername"
    ProtocolType="TCP/IP" EndPointName="1025" />
</LicensingServers>
```

To disable hardware protection keys

The Licensing Service enables using both hardware and software protection keys by default. If you do not use hardware protection keys, you can disable them. Set the Enable attribute of <LocalLicenseServer>\<EnableCodeMeterLicenses> tag to "no":

```
<LocalLicenseServer>
  <ConnectionProtocol ProtocolType="<Protocol type>" />
  <EnableCodeMeterLicenses Enable="no" />
</LocalLicenseServer>
```

Setting up a cloud license

If you are manually installing the Licensing Service to work with a Cloud License, your **LicensingSettings.xml** should specify only the <EnableCloud> tag:

```
<?xml version="1.0" encoding="utf-8"?>
<LicensingSettings
  xmlns="http://www.abbyy.com/Protection/LicensingSettings">
  <LocalLicenseServer>
    <EnableCloud Enable="yes" />
  </LocalLicenseServer>
</LicensingSettings>
```

Other settings should be left default.

Setting up a redundant license server configuration

For licenses distributed via the network, you have the option of setting up a two-server configuration which will allow one of the servers to act as a backup to another in the case it goes offline.

In this case you will need Network Runtime Licenses, which will be activated on both license servers. The workstations must specify the addresses of both servers in

<LicensingServers>\<MainNetworkLicenseServer> and <LicensingServers>\<BackupNetworkLicenseServer> tags. Each of the servers must specify the address of the other in <LocalLicenseServer>\<RedundancyNetworkLicenseServer>, together with the synchronization settings. While using the license, the workstations will interact with the main license server, sending the license parameters and usage statistics to it. The main license server will regularly synchronize this data with the backup server. The time interval for synchronization is specified by the *RedundancySynchronizationTime* attribute.

If the main license server fails, the backup server takes over the license management and continues to store information coming from the workstations. When the main server goes online, the license data is synchronized with the backup, and the main server again starts managing the licenses. However, if the main server is not restored during the time specified in the *RedundancyLiveTime* attribute, the backup server will stop functioning when this time runs out.

If the backup license server fails while the main server is working, the system will continue to work as if there is only one license server. When the backup server is restored, it will be synchronized with the main server and start function as a backup again.

Sample of a redundant configuration

For the workstation:

```
<LicensingServers>
  <MainNetworkLicenseServer ServerAddress="mainserver"
ProtocolType="TCP/IP" EndPointName="1025"/>
  <BackupNetworkLicenseServer ServerAddress="backupserver"
ProtocolType="TCP/IP" EndPointName="1025"/>
</LicensingServers>
```

For the main license server:

```
<LocalLicenseServer>
  <ConnectionProtocol ProtocolType="TCP/IP" EndPointName="1025"/>
  <RedundancyNetworkLicenseServer ServerAddress="backupserver"
ProtocolType="TCP/IP" EndPointName="1025"
RedundancySynchronizationTime="10" RedundancyLiveTime="20"/>
</LocalLicenseServer>
```

For the backup license server:

```
<LocalLicenseServer>
  <ConnectionProtocol ProtocolType="TCP/IP" EndPointName="1025"/>
  <Redundancy NetworkLicenseServer ServerAddress="mainserver"
ProtocolType="TCP/IP" EndPointName="1025"
RedundancySynchronizationTime="10" RedundancyLiveTime="20"/>
</LocalLicenseServer>
```

Note: If you need to use this configuration, please make sure that your license supports it. Contact your sales manager to find out.

Description of Tags

Tag	Type	Multiplicity	Parent Tag	Description
LicensingSettings	<p>LicensingSettings.</p> <p>Elements:</p> <ul style="list-style-type: none"> LocalLicenseServer LicensingServers 	1	no	Protection settings.
LocalLicenseServer	<p>LocalLicenseServerSettings.</p> <p>Elements:</p> <ul style="list-style-type: none"> ConnectionProtocol EnableCodeMeterLicenses EnableCloud RedundancyNetworkLicenseServer 	0..1	LicensingSettings	The parameters of the Licensing Service located on the same computer.
ConnectionProtocol	<p>Complex Type.</p> <p>Attributes:</p> <ul style="list-style-type: none"> <i>ProtocolType</i> — the protocol type: LocalInterprocessCommunication, NamedPipes, TCP/IP, or Sockets. <p>Note: This is an additional protocol type for the local Licensing Service. It is not necessary to specify this attribute for a standalone installation, as Standalone licenses are always used</p>	0..1	LocalLicenseServer	The parameters of the connection protocol.

	<p>with the <i>LocalInterprocessCommunication</i> protocol type.</p> <ul style="list-style-type: none"> • <i>EndPointName</i> — (optional) TCP/IP port. By default, "3022". 			
EnableCloud	<p>Complex Type.</p> <p>Attributes:</p> <ul style="list-style-type: none"> • <i>Enable</i> — specifies whether cloud licenses can be used on the computer (set it to "yes" or "no"). By default, "yes". 	0...1	LocalLicenseServer	Specifies whether cloud licenses can be used on the computer.
EnableCodeMeterLicenses	<p>Complex Type.</p> <p>Attributes:</p> <ul style="list-style-type: none"> • <i>Enable</i> — specifies whether CodeMeter protection keys can be used on the computer (set it to "yes" or "no"). By default, "yes". 	0...1	LocalLicenseServer	Specifies whether CodeMeter protection keys can be used on the computer.
RedundancyNetworkLicenseServer	<p>NetworkServerAddress.</p> <p>Attributes:</p> <ul style="list-style-type: none"> • <i>ServerAddress</i> — the DNS name or IP address of another server in the redundant configuration. • <i>ProtocolType</i> — the protocol type: 	0...1	LocalLicenseServer	Specifies the settings of connection to another server and synchronization with it for each of the network license servers which work together in a redundant two-

	<p>LocalInterprocessCommunication, NamedPipes, TCP/IP, or Sockets.</p> <ul style="list-style-type: none"> • <i>EndPointName</i> — (optional) TCP/IP port. By default, "3022". • <i>RedundancySynchronizationTime</i> — the time (in seconds) in which the license information changes are to be synchronized between the main and the backup server. The value must be the same for both servers. Possible values: from 10 to 300. By default, 30. • <i>RedundancyLiveTime</i> — the time (in hours) during which the backup server can function without a connection to the main server. The value must be the same for both servers. Possible values: from 1 to 48. By default, 24. 			server configuration.
LicensingServers	<p>Complex Type.</p> <p>Elements:</p> <ul style="list-style-type: none"> • MainNetworkLicenseServer 	0..1	LicensingSettings	The list of network servers where the Licensing Service is installed.

	<ul style="list-style-type: none"> BackupNetworkLicenseServer 			
MainNetworkLicenseServer	<p>NetworkServerAddress.</p> <p>Attributes:</p> <ul style="list-style-type: none"> <i>ServerAddress</i> — the DNS name or IP address of the computer where the Licensing Service is installed. <i>ProtocolType</i> — the protocol type: LocalInterprocessCommunication, NamedPipes, TCP/IP, or Sockets. <i>EndPointName</i> — (optional) TCP/IP port. By default, "3022". 	1	LicensingServers	The parameters of the connection with the main network server where the Licensing Service is installed.
BackupNetworkLicenseServer	<p>NetworkServerAddress.</p> <p>Attributes:</p> <ul style="list-style-type: none"> <i>ServerAddress</i> — the DNS name or IP address of the computer where the Licensing Service is installed. <i>ProtocolType</i> — the protocol type: LocalInterprocessCommunication, NamedPipes, TCP/IP, or Sockets. <i>EndPointName</i> — (optional) 	0...1	LicensingServers	The parameters of the connection with the backup network license server.

	TCP/IP port. By default, "3022".			
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Samples

The sample below shows a simple LicensingSettings.xml file for a standalone installation. Local inter-process communication is used. Hardware protection keys are disabled.

```
<?xml version="1.0" encoding="utf-8"?>
<LicensingSettings
  xmlns="http://www.abbyy.com/Protection/LicensingSettings">
  <LocalLicenseServer>
    <ConnectionProtocol ProtocolType="LocalInterprocessCommunication" />
    <EnableCodeMeterLicenses Enable="no" />
  </LocalLicenseServer>
</LicensingSettings>
```

The samples below show simple LicensingSettings.xml files for a network installation: a file for workstations and a file for a server. Licensing Service is located on the computer with the name "computername". The TCP/IP protocol is used for communication between the server and workstations.

For a workstation:

```
<?xml version="1.0" encoding="utf-8"?>
<LicensingSettings
  xmlns="http://www.abbyy.com/Protection/LicensingSettings">
  <LicensingServers>
    <MainNetworkLicenseServer ServerAddress="computername"
      ProtocolType="TCP/IP" />
  </LicensingServers>
</LicensingSettings>
```

For a server:

```
<?xml version="1.0" encoding="utf-8"?>
<LicensingSettings
  xmlns="http://www.abbyy.com/Protection/LicensingSettings">
  <LocalLicenseServer>
    <ConnectionProtocol ProtocolType="TCP/IP" />
  </LocalLicenseServer>
</LicensingSettings>
```

The sample below shows the **LicensingSettings.xml** that should be used with a Cloud License. Note that when you enable cloud licensing, other settings should be left default.

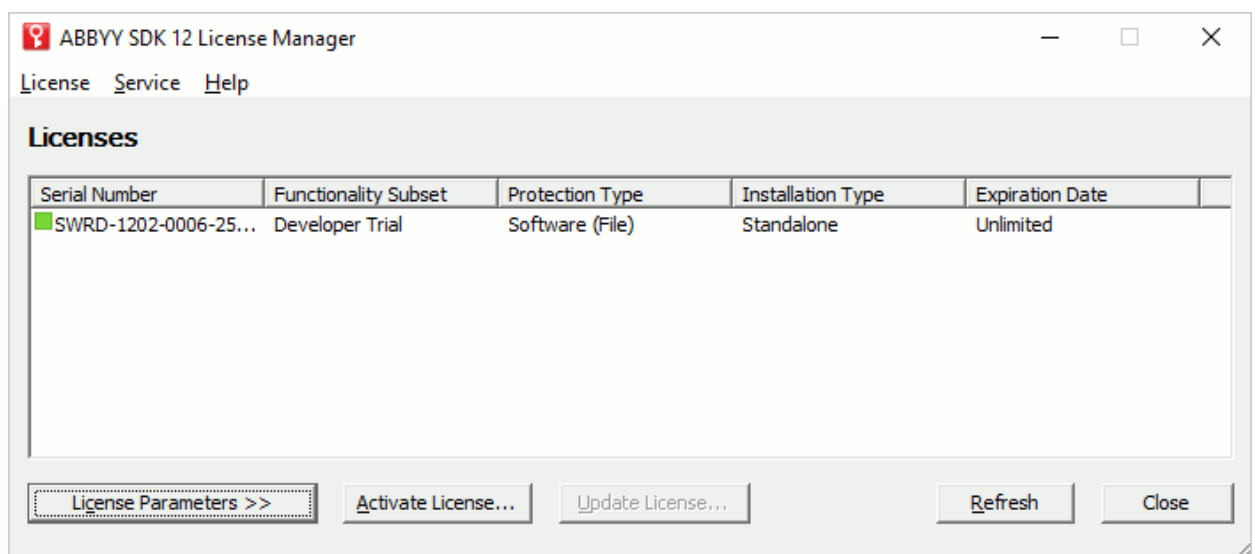
```
<?xml version="1.0" encoding="utf-8"?>
<LicensingSettings
  xmlns="http://www.abbyy.com/Protection/LicensingSettings">
  <LocalLicenseServer>
    <EnableCloud Enable="yes" />
  </LocalLicenseServer>
</LicensingSettings>
```

License Manager Utility



The License Manager utility (LicenseManager.exe) allows you to manage ABBYY FlexiCapture Engine licenses of all types. In the ABBYY SDK 12 License Manager dialog box you can activate, deactivate, or update license and view the properties of an activated license.


The License Manager utility is installed automatically during a Developer installation or during a Runtime ABBYY FlexiCapture Engine library installation in automatic mode together with the Licensing Service. This utility is accessible through **Start > Programs > ABBYY FlexiCapture Engine 12 > License Manager** or in the **Bin** folder. This utility is distributed along with other ABBYY FlexiCapture Engine 12 files allowed for distribution and is used for Runtime Licenses activation. Developers can also use the License Manager utility via [command line](#) to create their own registration utilities.

ABBYY SDK 12 License Manager dialog box



The following information about your ABBYY FlexiCapture Engine 12 license is available in the **ABBYY SDK 12 License Manager** dialog box:

Column	Description
Serial number	<p>The ABBYY FlexiCapture Engine 12 serial number.</p> <p>Note: The icon in front of the serial number shows whether the license is currently in use:</p> <ul style="list-style-type: none">  The license is not in use now, all available CPU cores are free. The license can be used for processing.  The license is in use, but there are some free CPU cores. Some recognition processes can

Column	Description
	<p>be run with this license.</p> <p> The license is in use, all available CPU cores are busy. No more recognition processes can be run with this license.</p> <p>You can view the detailed statistics of license usage in the menu Service > License Use Statistic.</p>
Functionality subset	The functionality subset of the license.
Protection type	<p>The protection type:</p> <ul style="list-style-type: none"> • Software (File) — software protection key; • Hardware — hardware protection key. • Cloud — cloud protection.
Installation type	<p>The installation type:</p> <ul style="list-style-type: none"> • Standalone — the license is used on a local computer; • Network — the license is located on a network computer.
Expiration date	The expiration date.

More details about the license you can find in the [License Parameters](#) table. To show or hide license parameters, use the **License Parameters/Hide License Parameters** button.

Activating, updating, or deactivating the license

To activate, update, or deactivate the license, press the corresponding button, or select the corresponding item in the menu, and follow the instructions in the dialog box that opens. See details about license activation, deactivation and update in the [Activation](#) section.

Buttons

- **License Parameters/Hide License Parameters**

Shows or hides license parameters.

- **Activate license...**

Starts the License Activation Wizard.

- **Update license...**

Starts the License Update Wizard for the selected license.

- **Refresh**

Updates the license list.

- **Close**

Closes the License Manager.

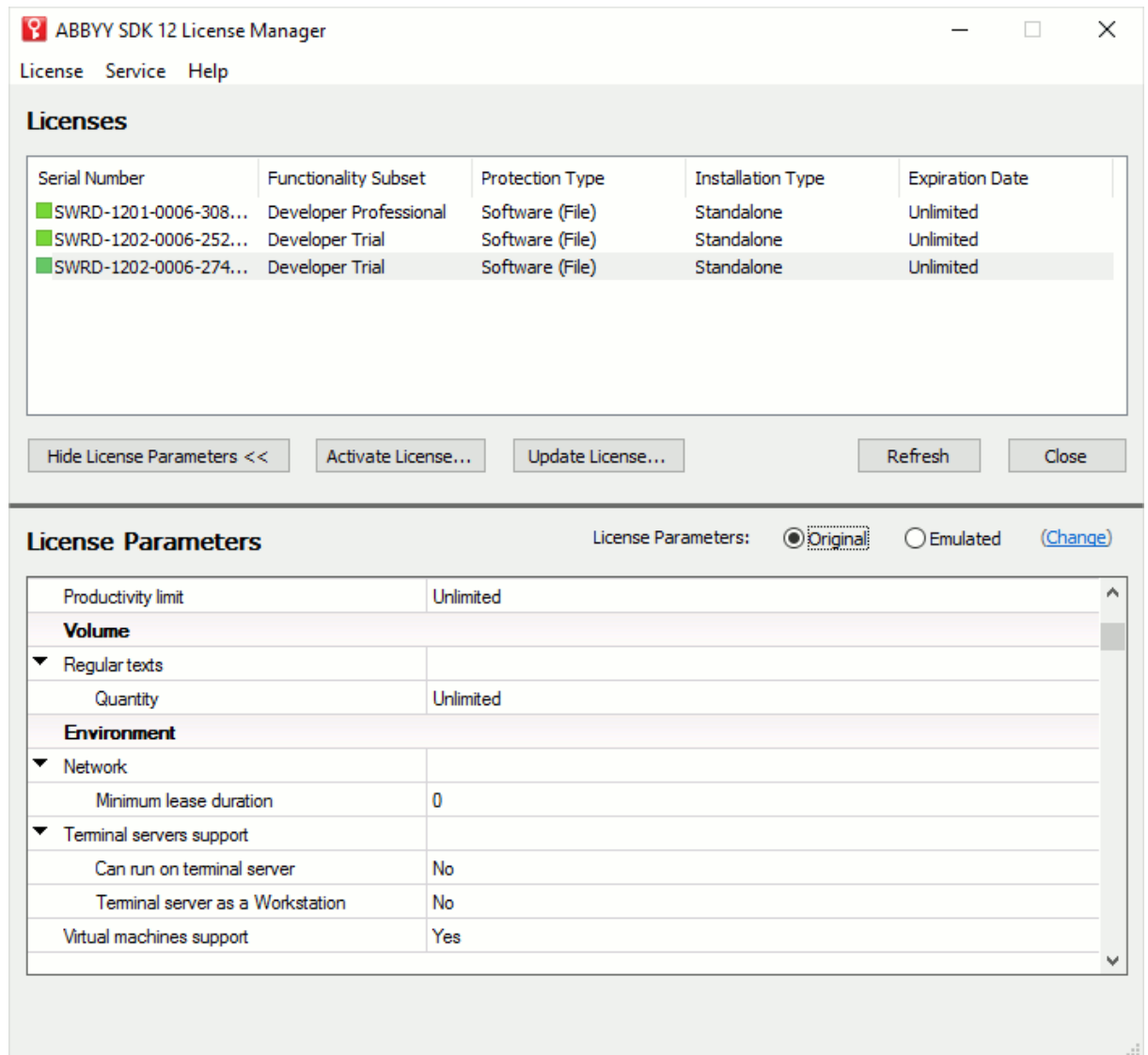
Menu items

Item		Description
License	Activate...	Starts the License Activation Wizard.
	Update...	Starts the License Update Wizard for the selected license.
	Deactivate...	Starts the License Deactivation Wizard for the selected license.
	Copy Serial Number	Copies the selected license.
	Close	Closes the License Manager.
Service	License Use Statistic...	Shows the statistics of license usage on the workstations.
	Refresh	Updates the license list.
Help	Help	Opens the License Manager Help.

License Parameters

The license parameters are displayed in the table below the list of the licenses in the License Manager. To view or hide license parameters, use the **License Parameters/Hide License Parameters** button in the main window of the License Manager.

License Parameters



The License Parameters table provides information about your license. The following information about your ABBYY FlexiCapture Engine 12 license is available:

- Functionality subset of the license
- Type of protection (software, hardware or cloud protection)
- ABBYY FlexiCapture Engine 12 serial number
- Customer Project ID
- Expiration date for your ABBYY FlexiCapture Engine 12 license
- Performance limitation: CPU core limit (the number of CPU Core which can be used for recognition), minimum number of CPU cores which can be used on a station, performance limit (e.g. characters per second)
- Environment limitation: usage in a network, on virtual machines, on Amazon EC2 and Microsoft Azure.
- [List of features that are allowed by your license](#) (text types, export formats, additional modules, etc.)

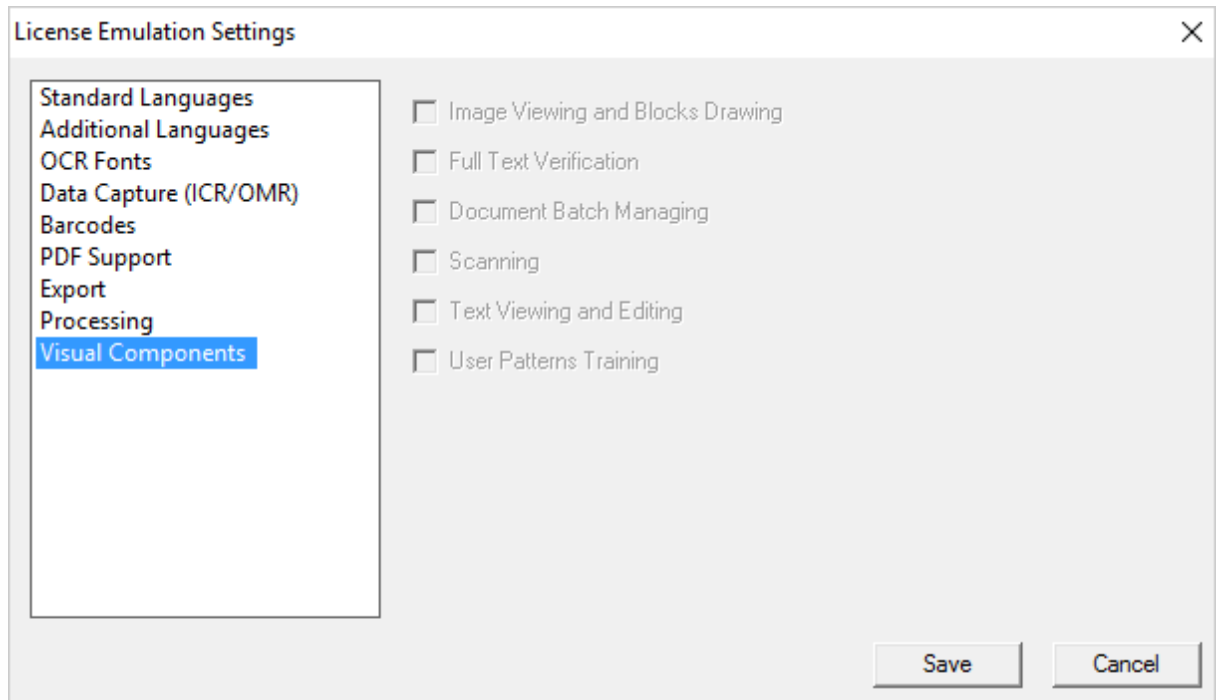
Runtime license emulation

You can use your Developer's license in the Runtime emulated mode. That allows you to test your application which uses ABBYY FlexiCapture Engine 12 library.

To try emulation, select **Emulated** mode for license parameters. To change the settings, click **Change** and in the **License Emulation Settings** dialog box that appears, select modules that will be enabled for your Runtime License (you can select only those modules which are supported by your Developer License). If some modules are not used for your Runtime License, disable them.

Note: License emulation is not available for ABBYY FlexiCapture Engine modules.

License Emulation Settings



Working with the Command Line

The current version of the [License Manager](#) allows you to activate licenses from the command line. The following command line parameters are supported:

Parameter	Action
/SilentActivation	Use this parameter to activate the license that corresponds to the serial number specified after /SN.
/SN:<serial number>	Use this parameter to specify the serial number of the license to be activated. Specify the serial number in one of the following formats: XXXX-XXXX-XXXX-XXXX-XXXX or XXXXXXXXXXXXXXXXXXXXXXXX.

Parameter	Action
/SaveActivationEMailToFile:<file name>	Use this parameter to save to file the text of the message generated by the program and containing the information required for activation of the number specified in the /SN= parameter.
/LoadActivationFile:<file name>	Loads the ABBYY License File and activates the serial number corresponding to this file.

When launched from the command line, the License Manager may return the following return codes:

Return code	Description
-1	No command line parameters were specified.
0	No errors.
1	Invalid serial number.
2	The serial number has been already activated.
3	Unable to activate the serial number via the Internet. Try to activate it by e-mail.
4	The license with hardware protection cannot be activated by e-mail.
5	The specified file has not been found or is unavailable.
6	Incorrect license file.
7	Unable to load the application.
8	Unable to save to file the text of the activation request.

Return code	Description
9	Unknown command line parameter.
11	Unable to find the USB key to activate the license with hardware protection.
12	Several USB keys have been found. Please, leave only one USB key plugged to the computer.
13	Unable to connect to Licensing Service.

Technical Support

If you have any questions regarding the use of ABBYY FlexiCapture Engine, first of all consult the documentation provided with this product (this Developer's Help and the Readme file). Useful information can also be found in the technical support section of our Web site at www.abbyy.com.

If you cannot find the answer to your question, please contact the [ABBYY office](#) serving your region by e-mail. Please provide the following information when contacting technical support:

- your first and last name;
- the name of your organization;
- your phone number (or fax, or e-mail);
- the serial number of your ABBYY FlexiCapture Engine package;
- the protection type of your ABBYY FlexiCapture Engine package (software or hardware);
- the build number (to determine the build number, see Properties in the FCEngine.dll local menu or the Readme.html file);
- a description of the problem;
- a project that demonstrates the problem (with the necessary data files). This may be a slightly modified ABBYY FlexiCapture Engine sample. We recommend that you compress the files using any popular archiving program (WinZIP, WinRAR, etc.);
- the name of your development tool;
- the type of your computer and processor;
- the version of your Windows operating system.

You can gather some of the above mentioned information automatically:

1. Run the **Alno** utility (Alno.exe) from the **<Installation folder>/Bin/Support** folder.
2. A dialog box will open displaying available information. Save this information to a ZIP file.

Note: *No personal information or information about the user's computer is collected. You can view all the saved information in the created archive.*

You can also provide any additional information you consider important.

Support contacts

North/Central Americas

Customers from USA, Canada, Japan, Mexico or other Central American countries, please contact ABBYY North American Headquarters at dev_support@abbyyusa.com

Western Europe

Customers from Austria, Benelux, Denmark, France, Germany, Italy, Ireland, Norway, Portugal, Spain, Sweden, Switzerland, the United Kingdom or other Western European countries, please contact ABBYY European Headquarters at TechSupport_eu@abbyy.com

Eastern Europe and the Mediterranean

Customers from Ukraine, Moldova, Turkey, Israel or Eastern European countries, please contact ABBYY Eastern European Headquarters at

engine_support@abbyy.ua

All other regions

Customers from the countries not mentioned above,
please contact ABBYY International Headquarters at
SDK_Support@abbyy.com