

User Manual



# 3-Heights™ PDF Analysis & Repair Shell

Version 4.12.26.2



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# 1 Introduction

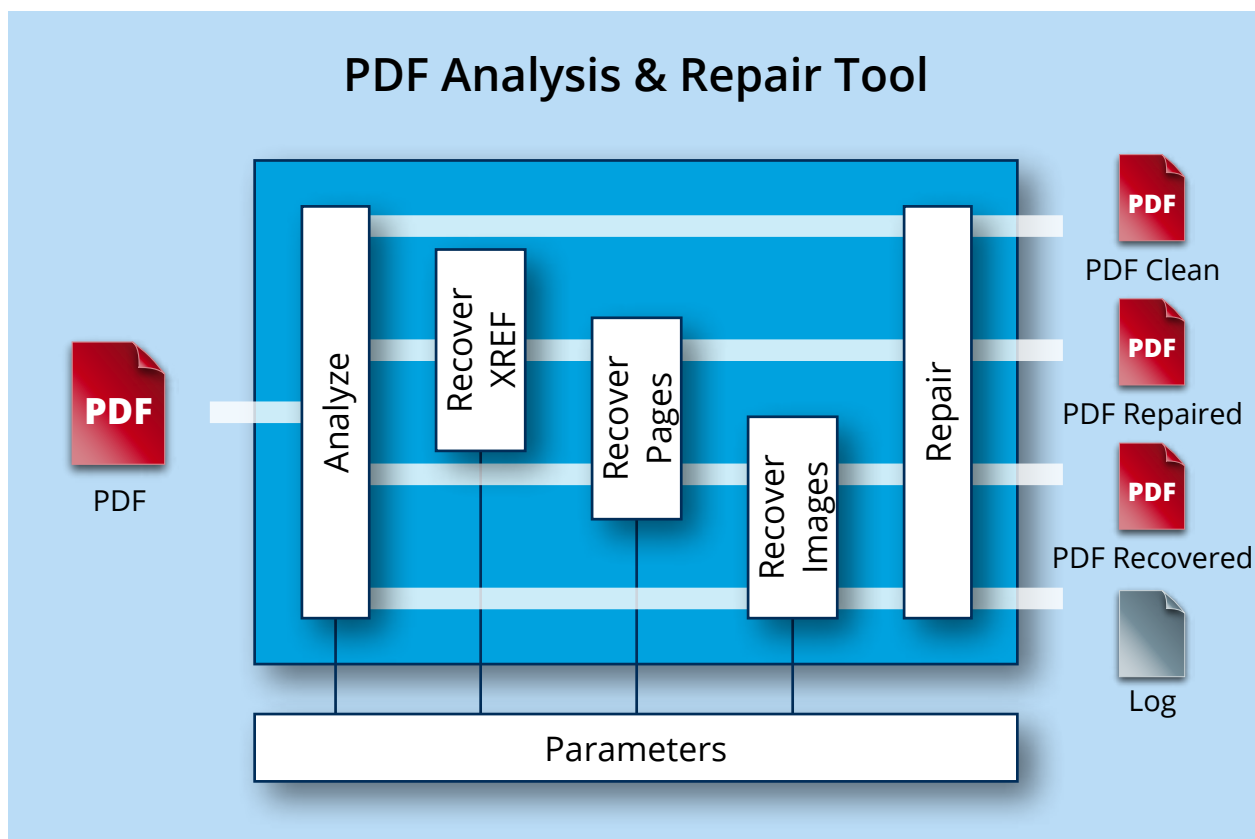
## 1.1 Description

The 3-Heights™ PDF Analysis & Repair Shell tool is used to analyze, repair and restore the content of corrupt PDF documents.

Unfortunately, the number of corrupt PDF documents is incredibly huge. The cause is usually down to defective generating tools, converters and other influences such as attempts at manual editing, copying via FTP without correct settings, system crashes during PDF creation, network interruptions, defective copying on optical media, etc.

The result leads to an enormous loss of important information and to production downtimes caused by corrupt PDF documents.

The 3-Heights™ PDF Analysis & Repair Shell analyzes PDF documents with regard to PDF specifications. Defective files are automatically repaired as far as possible and unreadable data is restored.



## 1.2 Functions

PDF Analysis & Repair Shell is used to check and, where indicated, repair PDF documents. Users can determine customized profiles from a broad range of analysis and repair options. An exact and detailed description is issued for each reported error. The tool is also capable of reading and processing encrypted PDF files without any problems.

### 1.2.1 Features

- Analyze and/or repair one or more PDF Documents
- Set analysis options, including:

- Objects
- Page tree
- Content stream
- Set repair options, including:
  - Restore data streams
  - Restore fonts
  - Restore XRef table
  - Restore pages
  - Restore images if pages cannot be restored
- Display error description for every message, including:
  - Type (errors, warnings, information)
  - Error code
  - Text-based description
  - Page number
  - Number of events
- Write error messages to log file
- Read encrypted PDF files
- Encrypt restored file and set permission flags
- Set error level to identify whether errors, warnings or merely information occur
- Set reporting level to determine which messages should be issued (errors, warnings, information)
- Differentiate between “Repair” (corrects the errors in the document) and “Restore” (recreates the document based on the remaining legible information)

## 1.2.2 Formats

### Input Formats

- PDF 1.x (PDF 1.0, ..., PDF 1.7)
- PDF 2.0
- PDF/A-1, PDF/A-2, PDF/A-3

### Output Formats

- PDF 1.x (PDF 1.0, ..., PDF 1.7)
- PDF 2.0

## 1.2.3 Compliance

Standards:

- ISO 32000-1 (PDF 1.7)
- ISO 32000-2 (PDF 2.0)

## 1.3 Operating Systems

The 3-Heights™ PDF Analysis & Repair Shell is available for the following operating systems:

- Windows 7, 8, 8.1, 10 – 32 and 64 bit
- Windows Server 2008, 2008 R2, 2012, 2012 R2, 2016 – 32 and 64 bit
- HP-UX 11i and later PA-RISC2.0 – 32 bit

- HP-UX 11i and later ia64 (Itanium) – 64 bit
- IBM AIX 6.1 and later – 64 bit
- Linux 2.6 – 32 and 64 bit
- Oracle Solaris 2.8 and later, SPARC and Intel
- FreeBSD 4.7 and later (32 bit) or FreeBSD 9.3 and later (64 bit, on request)
- macOS 10.4 and later – 32 and 64 bit

# 2 Installation

## 2.1 Windows

The 3-Heights™ PDF Analysis & Repair Shell comes as a ZIP archive or MSI installer.

The installation of the software requires the following steps.

1. You need administrator rights to install this software.
2. Log in to your download account at <http://www.pdf-tools.com>. Select the product “PDF Analysis & Repair Shell”. If you have no active downloads available or cannot log in, please contact [pdfsales@pdf-tools.com](mailto:pdfsales@pdf-tools.com) for assistance.

You will find different versions of the product available. We suggest to download the version, which is selected by default. If another is required, it can be selected using the combo box.

There is an MSI (\*.msi) and a ZIP (\*.zip) version available. The MSI (Microsoft Installer) provides an installation routine that installs and uninstalls the product for you. The ZIP version allows you to select and install everything individually.

There are 32 and 64-bit versions of the product available. While the 32-bit version runs on both, 32 and 64-bit platforms, the 64-bit version runs on 64-bit platforms only. The MSI installs the 64-bit version, whereas the ZIP file contains both the 32-bit and the 64-bit version of the product. Therefore, on 32-bit systems, the ZIP file must be used.

3. If you select an MSI version, start it and follow the steps in the installation routine.
4. If you are using the ZIP version, follow the steps below. Unzip the archive to a local folder, e.g. C:\Program Files\PDF Tools AG\.

This creates the following subdirectories:

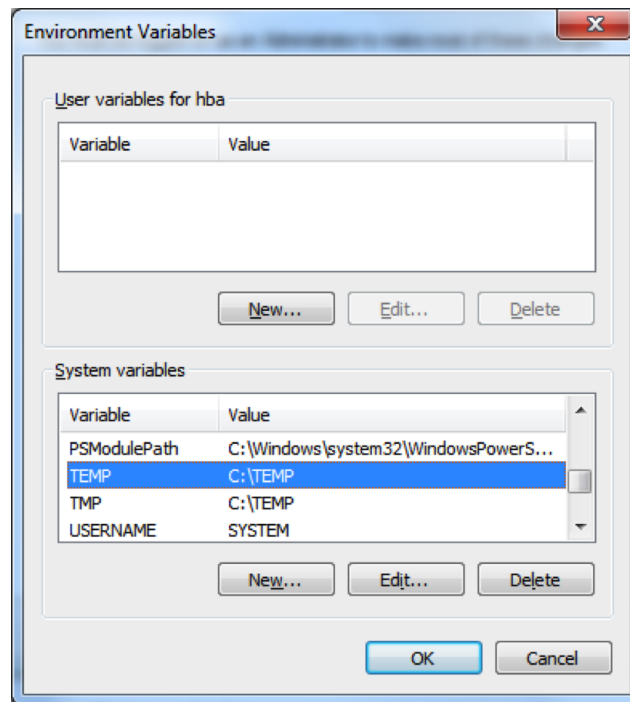
Subdirectory	Description
bin	Contains the runtime executable binaries.
doc	Contains documentation.

5. (Optional) To easily use the 3-Heights™ PDF Analysis & Repair Shell from a shell, the directory needs to be included in the “Path” environment variable.
6. (Optional) Register your license key using the [License Management](#).

### 2.1.1 How to set the Environment Variable “Path”

To set the environment variable “Path” on Windows, go to Start → Control Panel (classic view) → System → Advanced → Environment Variables.

Select “Path” and “Edit”, then add the directory where `pdrepair.exe` is located to the “Path” variable. If the environment variable “Path” does not exist, create it.



## 2.2 Unix

This section describes installation steps required on all Unix platforms, which includes Linux, macOS, Oracle Solaris, IBM AIX, HP-UX, FreeBSD and others.

Here is an overview of the files that come with the 3-Heights™ PDF Analysis & Repair Shell:

### File Description

Name	Description
bin/<platform>/pdrepair	This is the main executable. The directory <platform> is either x86 containing the 32-bit version of the product, or x64 for 64-bit.
doc/*.*	Documentation

### 2.2.1 All Unix Platforms

1. Unpack the archive in an installation directory, e.g. /opt/pdf-tools.com/
2. Verify that the GNU shared libraries required by the product are available on your system:
  - On Linux:

```
ldd pdrepair
```

- On AIX:

```
dump -H pdrepair
```

In case the above reports any missing libraries you have three options:



- a. Download an archive that is linked to another version of the GNU shared libraries and verify whether they are available on your system. Use any version whose requirements are met. Note that this option is not available for all platforms.
  - b. Use your system's package manager to install the missing libraries. On Linux it usually suffices to install the package `libstdc++6`.
  - c. Use GNU shared libraries provided by PDF Tools AG:
    1. Go to <http://www.pdf-tools.com> and navigate to "Support" → "Utilities".
    2. Download the GNU shared libraries for your platform.
    3. Install the libraries manually according your system's documentation. On Linux this typically involves copying them to your library directory, e.g. `/usr/lib` or `/usr/lib64`, and running `ldconfig`.
    4. Verify that the GNU shared libraries required by the product are available on your system now.
3. Create a link to the executable from one of the standard executable directories, e.g:

```
ln -s /opt/pdf-tools.com/bin/<platform>/pdrepair /usr/bin
```

4. Optionally register your license key using the [Command Line License Manager Tool](#).

## 2.3 Uninstall

If you have used the MSI for the installation, go to Start → 3-Heights™ PDF Analysis & Repair Shell... → Uninstall...

If you have used the ZIP file for the installation: In order to uninstall the product, undo all the steps done during installation.

## 2.4 Note about the Evaluation License

With the evaluation license the 3-Heights™ PDF Analysis & Repair Shell automatically adds a watermark to the output files.

# 3 License Management

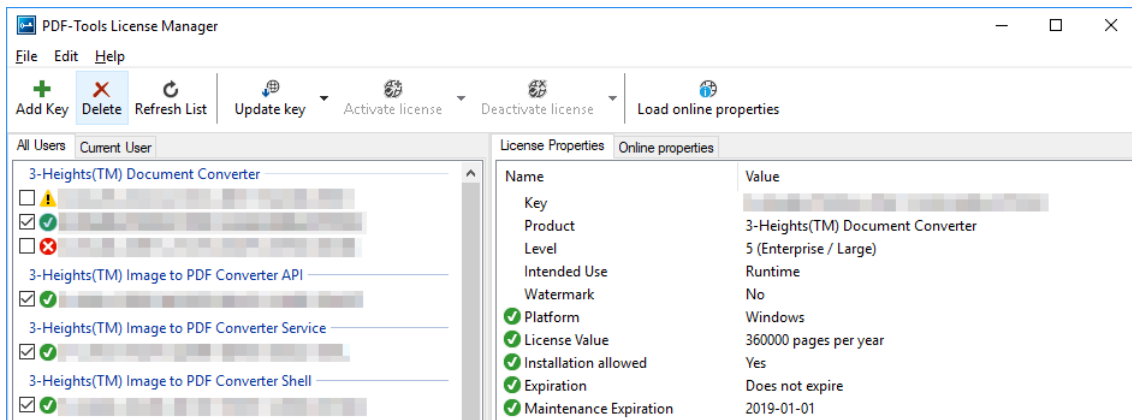
## 3.1 License Installation and Management

There are three possibilities to pass the license key to the application:

1. The license key is installed using the GUI tool (graphical user interface). This is the easiest way if the licenses are managed manually. It is only available on Windows.
2. The license key is installed using the shell tool. This is the preferred solution for all non-Windows systems and for automated license management.
3. The license key is passed to the application at run-time via the switch `-lk`. This is the preferred solution for OEM scenarios.

### 3.1.1 Graphical License Manager Tool

The GUI tool `LicenseManager.exe` is located in the `bin` directory of the product kit (Windows only).



#### List all installed license keys

The license manager always shows a list of all installed license keys in the left pane of the window. This includes licenses of other PDF Tools products. The user can choose between:

- Licenses available for all users. Administrator rights are needed for modifications.
- Licenses available for the current user only.

#### Add and delete license keys

License keys can be added or deleted with the “Add Key” and “Delete” buttons in the toolbar.

- The “Add key” button installs the license key into the currently selected list.
- The “Delete” button deletes the currently selected license keys.

#### Display the properties of a license

If a license is selected in the license list, its properties are displayed in the right pane of the window.

### 3.1.2 Command Line License Manager Tool

The command line license manager tool `licmgr` is available in the `bin\x86` and `bin\x64` directory.

**Note:** The command line tool licmgr is not included in Windows platform kits, as the GUI tool is the recommended tool for managing Licenses. A Windows licmgr shelltool is available on request.

A complete description of all commands and options can be obtained by running the program without parameters:

```
licmgr
```

## List all installed license keys

```
licmgr list
```

The currently active license for a specific product is marked with a \* on the left side.

### Example:

```
>licmgr list
Local machine:
  Product Name:
    1-XXXXX-XXXXX-XXXXX-XXXXX-XXXXX-XXXXX-XXXXX
    1-YYYYY-YYYYY-YYYYY-YYYYY-YYYYY-YYYYY-YYYYY
    * 1-ZZZZZ-ZZZZZ-ZZZZZ-ZZZZZ-ZZZZZ-ZZZZZ-ZZZZZ
Current user:
```

## Add and delete license keys

Install new license key:

```
licmgr store 1-XXXXX-XXXXX-XXXXX-XXXXX-XXXXX-XXXXX-XXXXX
```

Delete old license key:

```
licmgr delete 1-XXXXX-XXXXX-XXXXX-XXXXX-XXXXX-XXXXX-XXXXX
```

Both commands have the optional argument -s that defines the scope of the action:

**g** For all users

**u** Current user

## Display the properties of a license

```
licmgr info 1-XXXXX-XXXXX-XXXXX-XXXXX-XXXXX-XXXXX-XXXXX
```

Properties that invalidate the license are marked with an X, properties that require attention are marked with an !. In that case an additional line with a comment is displayed.

### Example:

```
>licmgr info 1-XXXXX-XXXXX-XXXXX-XXXXX-XXXXX-XXXXX
- Key:          1-XXXXX-XXXXX-XXXXX-XXXXX-XXXXX-XXXXX
- Product:      Product Name
- Features:     Feature1,Feature2
- Intended use: Development
- Watermark:    No
- Platform:     Windows
- Installation: Yes
! Activation:   2018-05-07
                (The license has not yet been activated.)
- Expiration:   Does not expire
- Maintenance: 2019-04-27
```

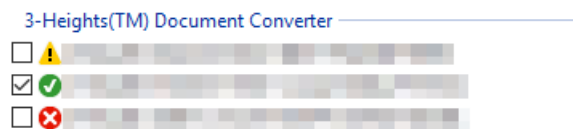
## 3.2 License Selection and Precedence

### 3.2.1 Selection

If multiple keys for the same product are installed in the same scope, only one of them can be active at the same time.

Installed keys that are not selected are not considered by the software!

**In the Graphical User Interface** use the check box on the left side of the license key to mark a license as selected.



**With the Command Line Interface** use the `select` subcommand:

```
licmgr select 1-XXXXX-XXXXX-XXXXX-XXXXX-XXXXX-XXXXX
```

### 3.2.2 Precedence

License keys are considered in the following order:

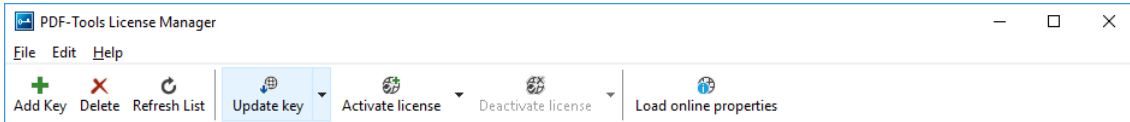
1. License key passed at runtime.
2. License selected for the current user
3. License selected for the current user ([legacy key format](#))
4. License selected for all users
5. License selected for all users ([legacy key format](#))

The first matching license is used, regardless whether it is valid or not.

## 3.3 Key Update

If a license property like the maintenance expiration date changes, the key can be update directly in the license manager.

**In the Graphical User Interface** select the license and press the button "Update Key" in the toolbar:



**With the Command Line Interface** use the update subcommand:

```
licmgr update 1-XXXXX-XXXXX-XXXXX-XXXXX-XXXXX-XXXXX-XXXXX
```

## 3.4 License activation

New licenses keys have to be activated (except for OEM licenses).

**Note:** Licenses that need activation have to be installed in the license manager and must not be passed to the component at runtime.

The license activation is tied to a specific computer. If the license is installed at user scope, the activation is also tied to that specific user. The same license key can be activated multiple times, if the license quantity is larger than 1.

Every license key includes a date, after which the license has to be activated, which is typically 10 days after the issuing date of the key. Prior to this date, the key can be used without activation and without any restrictions.

### 3.4.1 Activation

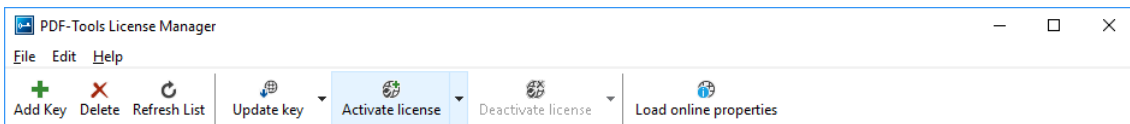
The License can be activated directly within the license manager. Every activation increases the activation count of the license by 1.

It is recommended to add a comment to the activation request which helps keeping track of all activations for a specific license key. In case of problems it also helps us providing support.

The comment is stored in the activation database as long as the license key remains activated. Upon deactivation it is deleted from the database immediately.

All activations and the corresponding comments can be examined using the **Load online properties** function of the license manager. The information is accessible to anyone with access to the license key.

**In the Graphical User Interface** select the license and press the button "Activate license" in the toolbar:



It is recommended to add a comment to the activation request by using the subsequent dialog box.

**With the Command Line Interface** use the activate subcommand:

```
licmgr activate 1-XXXXX-XXXXX-XXXXX-XXXXX-XXXXX-XXXXX-XXXXX
```

Note that the key has to be installed first.

It is recommended to add a comment to the activation request by using the `-c` or `-cd` option:

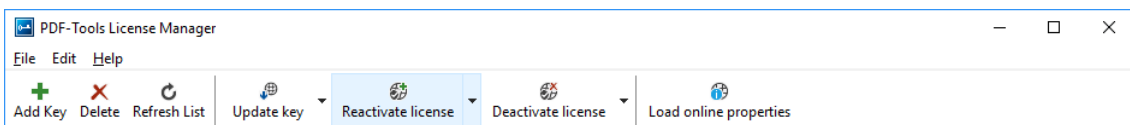
```
licmgr activate -cd 1-XXXXX-XXXXX-XXXXX-XXXXX-XXXXX-XXXXX
licmgr activate -c "custom comment" 1-XXXXX-XXXXX-XXXXX-XXXXX-XXXXX-XXXXX
```

## 3.4.2 Reactivation

The activation is tied to specific properties of the computer like the MAC address or host name. If one of these properties changes, the activation becomes invalid and the license has to be reactivated. A reactivation does **not** increase the activation count on the license.

The process for reactivation is the same as for the activation.

**In the Graphical User Interface** the button "Activate license" changes to "Reactivate license":



**With the Command Line Interface** the subcommand `activate` is used again:

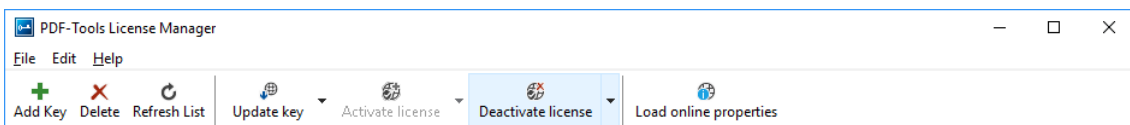
```
licmgr activate 1-XXXXX-XXXXX-XXXXX-XXXXX-XXXXX-XXXXX
```

## 3.4.3 Deactivation

To move a license to a different computer, it has to be deactivated first. Deactivation decreases the activation count of the license by 1.

The process for deactivation is similar to the activation process.

**In the Graphical User Interface** select the license and press the button "Deactivate license" in the toolbar:



**With the Command Line Interface** use the `deactivate` subcommand:

```
licmgr deactivate 1-XXXXX-XXXXX-XXXXX-XXXXX-XXXXX-XXXXX
```

## 3.5 Offline Usage

The following actions in the license manager need access to the internet:

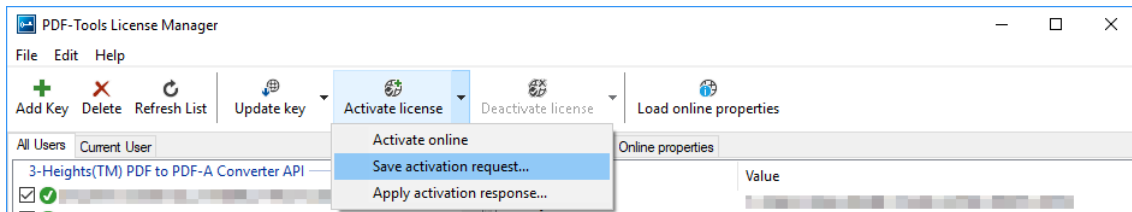
- [License Activation](#)
- [License Reactivation](#)

- [License Deactivation](#)
- [Key Update](#)

On systems without internet access, a three step process can be used instead, using a form on the PDF Tools website.

### 3.5.1 First Step: Create a Request File

**In the Graphical User Interface** select the license and use the dropdown menu on the right side of the button in the toolbar:



**With the Command Line Interface** use the `-fs` option to specify the destination path of the request file:

```
licmgr activate -fs activation_request.bin 1-XXXXX-XXXXX-XXXXX-XXXXX-XXXXX-XXXXX
```

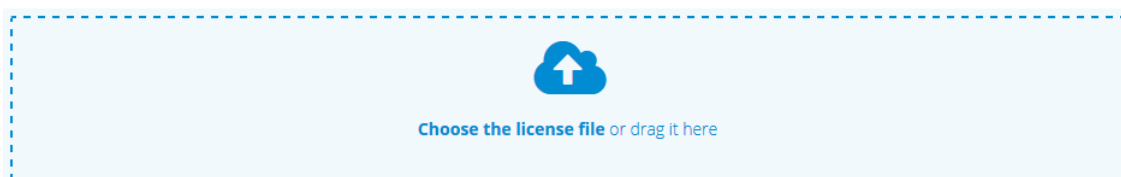
**License Deactivation:** When saving the deactivation request file, the license is **deactivated immediately** and cannot be used any further. It can however only be activated again after completing the deactivation on the website.

### 3.5.2 Second Step: Use Form on Website

Open the following website in a web browser: <http://www.pdf-tools.com/pdf20/en/mypdftools/licenses-kits/license-activation/> Upload the request by dragging it onto the marked area:

#### License activation (offline)

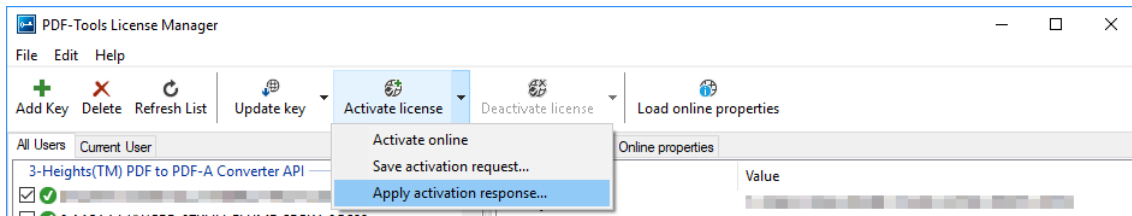
Upload your license request. For more information and instructions please check the manual of your product.



Upon success, the response will be downloaded automatically if necessary.

### 3.5.3 Third Step: Apply the Response File

**In the Graphical User Interface** select the license and use the dropdown menu on right side of the button in the toolbar:



**With the Command Line Interface** use the `-fl` option to specify the source path of the response file:

```
licmgr activate -fl activation_response.bin 1-XXXXX-XXXXX-XXXXX-XXXXX-XXXXX-XXXXX-XXXXX
```

## 3.6 License Key Versions

As of 2018 all new keys will have the format 1-XXXXX-XXXXX-XXXXX-XXXXX-XXXXX-XXXXX-XXXXX. Legacy keys with the old format 0-XXXXX-XXXXX-XXXXX-XXXXX-XXXXX-XXXXX are still accepted for a limited time period.

For compatibility reasons, old and new version keys can be installed side by side and one key of each version can be selected at the same time. In that case, the software always uses the new version.

## 3.7 License Key Storage

Depending on the platform the license management system uses different stores for the license keys.

### 3.7.1 Windows

The license keys are stored in the registry:

- "HKLM\Software\PDF Tools AG" (for all users)
- "HKCU\Software\PDF Tools AG" (for the current user)

### 3.7.2 macOS

The license keys are stored in the file system:

- /Library/Application Support/PDF Tools AG (for all users)
- ~/Library/Application Support/PDF Tools AG (for the current user)

### 3.7.3 Unix/Linux

The license keys are stored in the file system:

- /etc/opt/pdf-tools (for all users)
- ~/.pdf-tools (for the current user)

**Note:** The user, group and permissions of those directories are set solely by the license manager tool. It may be necessary to change permissions to make the licenses readable for all users. Example:

```
chmod -R go+rx /etc/opt/pdf-tools
```



## 3.8 Troubleshooting

### 3.8.1 License key cannot be installed

The license key cannot be installed in the license manager application. The error message is: "Invalid license format."

#### Possible causes:

- The license manager application is an older version that only supports the [legacy key format](#).

#### Solution

Use a current version of the license manager application or use a license key in the legacy key format if available.

### 3.8.2 License is not visible in license manager

The license key was successfully installed previously but is not visible in the license manager anymore. The software is still working correctly.

#### Possible causes:

- The license manager application is an older version that only supports the [legacy key format](#).

#### Solution

Use a current version of the license manager application.

### 3.8.3 License is not found at runtime

The license is not found at runtime by the software. The error message is: "No license key was set."

#### Possible causes:

- The license key is actually missing (not installed).
- The license key is installed but not selected in the license manager.
- The application is an older version that only supports the [legacy key format](#), while the license key has the new license format.

#### Solution

Install and select a valid license key that is compatible with the installed version of the software or use a newer version of the software. The new license key format is supported starting with version 4.10.26.1

For compatibility reasons, one license key of each format can be selected at the same time.

### 3.8.4 Eval watermark is displayed where it should not

The software prints an evaluation watermark onto the output document, even if the installed license is a productive one.

#### Possible causes:

- There is an evaluation license key selected for the **current user**, that takes precedence over the key for **all users**.

**Note:** The software might be run under a different user than the license manager application.

- An evaluation license key that is passed at runtime takes precedence over those selected in the license manager.
- There is an evaluation license key selected with a [newer license format](#) that takes precedence over the key in the older format.
- The software was not restarted after changing the license key from an evaluation key to a productive one.

#### Solution

Disable or remove all evaluation license in all scopes, check that no evaluation key is passed at runtime and restart the software.

### 3.8.5 Activation is not recognized

The license is installed and activated in the license manager, but the software does not recognize it as activated. The error message is: "The license has not been activated."

#### Possible causes:

- There is an unregistered license key selected for the **current user**, that takes precedence over the key for **all users**. This leads to an error even if the same license is registered for all users.

**Note:** The software might be run under a different user than the license manager application.

- A license key that is passed at runtime takes precedence over those selected in the license manager. This leads to an error even if the same license is registered in the license manager.

**Note:** Licenses that need activation have to be installed in the license manager and must not be passed to the component at runtime.

- The software was not restarted after activating the license.

#### Solution

Disable, remove or activate all unregistered licenses in all scopes, check that no key is passed at runtime and restart the software.

### 3.8.6 Activation is invalidated too often

The license activation is invalidated regularly, for no obvious reason.

#### Possible causes:

- The MAC address used for computing the machine fingerprint is not static. This may happen e.g. for virtual network adapters with dynamic MAC address (VPN, Juniper, ...).

## Solution

Update to a newer version ( $\geq 4.12$ ) of the PDF Tools product, deactivate the license key using the new license manager and activate it again. After that, an improved fingerprinting algorithm is used.

Deactivation and activation have to be **executed separately**, a reactivation of the license in one step does not change the fingerprinting algorithm and thus does not solve the problem.

**Note:** After this procedure, older products might not recognize the activation as valid anymore. Reactivating the license using an old license manager will revert the activation to the old fingerprinting algorithm.

As an alternative, remove any virtual network adapter with a dynamic MAC address.

## 3.8.7 Connection to the licensing service fails

The license activation/deactivation/update fails because the license manager cannot reach the licensing server.

The error message depends on the platform and the exact error condition.

### Possible causes:

- The computer is not connected to the internet.
- The connection is blocked by a corporate firewall.

## Solution

Make sure that the computer is connected to the internet and that the host `www.pdf-tools.com` is reachable on port 443 (HTTPS).

If this is not possible, try [Offline Usage](#) instead.

## 3.8.8 Offline usage fails due to a request/response mismatch

The offline license activation/deactivation/update fails because the response file does not match the request file.

The error message is: "Mismatch between request and response."

### Possible causes:

- The response file is applied to a different machine than the request file was created.
- The response file is applied to a different user than the request file was created.
- The response file was applied to a specific user while the request was created for all users, or vice versa.
- The response file is applied to the wrong license key.
- Another request file has been created between creating the request file and applying the response file.
- The license key was updated between creating the request file and applying the response file.
- The license key was removed and re-added between creating the request file and applying the response file.

## Solution

Delete any old request and response files to make sure they are not used by accident.

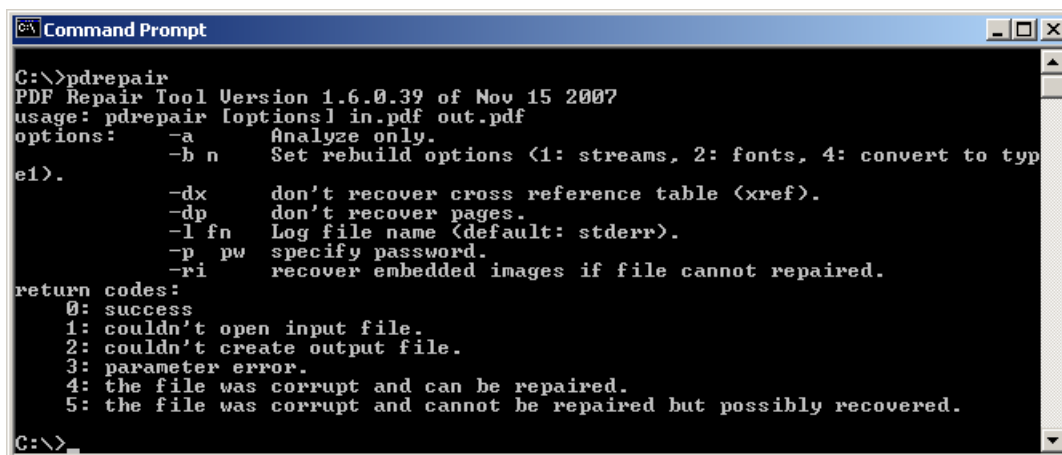
Retry the entire process as outlined in [chapter 3.5](#) and refrain from making any other license-related actions between creating the request file and applying the response file.

Make sure that the response file is applied to exactly the same license key in exactly the same location (machine, all users or specific user) where the request file was created.

## 4 Getting Started

### 4.1 Usage

By typing `pdrepair` without parameters, the usage, the version and a list of available options is returned.



```
C:\>pdrepair
PDF Repair Tool Version 1.6.0.39 of Nov 15 2007
usage: pdrepair [options] in.pdf out.pdf
options:
  -a      Analyze only.
  -b n    Set rebuild options (1: streams, 2: fonts, 4: convert to typ
el).
  -dx     don't recover cross reference table (xref).
  -dp     don't recover pages.
  -l fn   Log file name (default: stderr).
  -p pw   specify password.
  -ri     recover embedded images if file cannot repaired.

return codes:
  0: success
  1: couldn't open input file.
  2: couldn't create output file.
  3: parameter error.
  4: the file was corrupt and can be repaired.
  5: the file was corrupt and cannot be repaired but possibly recovered.

C:\>
```

### 4.2 Repair a File

The 3-Heights™ PDF Analysis & Repair Shell requires at least two parameters: A name of an existing PDF input file and the desired name for the repaired PDF output file.

**Example:** Read the damaged input file `input.pdf`. Repair the file and save the result in a new file called `output_rep.pdf`.

```
pdrepair input.pdf output_rep.pdf
```

### 4.3 Specify the Folder of the Output File

The output folder can simply be added in front of the output file name

```
pdrepair input.pdf myfolder\output.pdf
```

or absolute (Windows):

```
pdrepair input.pdf C:\myfolder\output.pdf
```

### 4.4 Repairing all Files in a Directory

The 3-Heights™ PDF Analysis & Repair Shell reads the input file while it already writes on the output file. For this reason, it is not possible to directly overwrite the input file.

If you would like to repair all PDF documents in a directory, it is required to use a variable to name the output files. Here is an example using the `for` command of the CMD shell:

**Example:** Process and repair all files in the current directory.

```
for %i in (*.pdf) do pdrepair "%i" "%~ni_rep.pdf"
```

Of course, one can adjust the paths, or use a different output name.

If you would like the repaired file to have the same name as the original file, it is suggested to use the following process:

1. Repair the file and create a repaired copy of the original file (like in the for loop above).
2. Ensure the repaired documents are generated correctly. For example check the return code of the repair tool and require it to be 0 or 4, or ensure the files are not empty (i.e. just a few bytes in size).
3. When you are sure the repaired file is okay and you do not need the original file anymore, delete the original file and rename the recovered file.

### 4.4.1 Difference between repairable and recoverable

**Repairable** The input PDF file contains errors which are repairable. These are for example PDF syntax errors. In the repaired PDF output file, these errors are fixed.

**Recoverable** The input PDF file is missing data. For example data of an embedded image, which got lost/overwritten when copying the file from one location to another failed partially. When relevant data is lost, the file is irreparable, however the file can be recovered, such that the output PDF is valid according to the PDF Specification.

**Example:** Assuming an original PDF (file O) is valid.

- Somehow the file gets corrupted (→ file C) and file O gets lost.
- If file O can be rebuilt based on file C, then file C is repairable.
- If a new file N can be built based on file C, and file N is a valid PDF and contains (part of) the content of file O, then file C is recoverable.

# 5 InterfaceReference

## 5.1 Configuration Options

### 5.1.1 -a Analyze Only

**Analyze Only** -a

When using this option, the processed input files are only analyzed and a log file is generated. There is no output created.

### 5.1.2 -b Set the Rebuild Options

**Set the Rebuild Options** -b <n>

This options controls what parts of the PDF are to be repaired. Available options are:

- |   |                                   |
|---|-----------------------------------|
| 1 | Rebuild streams.                  |
| 2 | Rebuild fonts.                    |
| 4 | Convert CFF fonts to Type1 fonts. |

If 4 is applied, the compressed fonts are decompressed, this can potentially lead to an increase of the file size. CFF fonts can be converted to Type1 fonts only if fonts are rebuilt, i.e. 4 can be used together with 2 only.

If multiple options are to be selected, add the values.

**Example:** Repair the file and rebuild all

```
pdrepair -b 7 myfile.pdf myfile_rep.pdf
```

### 5.1.3 -dp Do Not Recover Pages

**Do Not Recover Pages** -dp

If pages are not part of the page tree (loose pages), they will be recovered and added at the end of the document. If the option -dp is selected, loose pages will not be recovered and will be left out of the recovered document.

### 5.1.4 -dx Do Not Repair Cross-Reference Table

**Do Not Repair Cross-Reference Table** -dx

With this option a corrupt XREF table will not be repaired or recovered. This option is useful if it is taking too long to process a document, since repairing the cross-reference table is very time consuming.

## 5.1.5 -l Set the Log File

**Set the Log File** -l <fn>

Using the switch -l followed by a file name, log messages during the repair process are written into the specified log file. If no log file is specified, the log messages are written to standard error (stderr).

**Example:** Write messages to the log file log.txt instead of standard error.

```
pdrepair -l log.txt myfile.pdf myfile_rep.pdf
```

## 5.1.6 -lk Set License Key

**Set License Key** -lk <key>

Pass a license key to the application at runtime instead of using one that is installed on the system.

```
pdrepair -lk X-XXXXX-XXXXX-XXXXX-XXXXX-XXXXX ...
```

This is required in an OEM scenario only.

## 5.1.7 -p Read an Encrypted PDF File

**Read an Encrypted PDF File** -p <password>

A PDF document that has a user password (the password to open the document) can only be processed when either the user or the owner password is provided. The password can be provided using the option -p followed by the password.

**Example:** The input PDF document is encrypted with a user password. Either the user or the owner password of the input PDF is "mypassword". The command to process such an encrypted file is:

```
pdrepair -p mypassword input.pdf output.pdf
```

When a PDF is encrypted with a user password and the password is not provided or is incorrect, the 3-Heights™ PDF Analysis & Repair Shell cannot read and process the file. Instead it will generate the following error message:

```
Password wasn't correct.
```

## 5.2 Return Codes

All return codes other than 0 indicate an error in the processing.

## Return Codes

Value	Description
0	Success.
1	Couldn't open input file.
2	PDF output file could not be created.
3	Error with given options, e.g. too many parameters.
4	PDF input file is corrupt and can be repaired.
5	PDF input file is corrupt and cannot be repaired but possibly recovered.
10	License error, e.g. invalid license key.



## 6 Troubleshooting

### 6.1 The Repair Time Takes Too Long

Try excluding the cross-reference table (switch [-dx](#)). This will speed up the repair time.

### 6.2 The File Cannot Be Repaired

If the switch [-dx](#) has been selected and the cross-reference table is corrupt, the file cannot be repaired. Ensure the switch [-dx](#) is not set.

# 7 Version History

## 7.1 Changes in Version 4.12

No functional changes.

## 7.2 Changes in Version 4.11

- **New** support for reading and writing PDF 2.0 documents.
- **New** support for the creation of output files larger than 10GB (not PDF/A-1).
- **New** treatment of the DocumentID. In contrast to the InstanceID the DocumentID of the output document is inherited from the input document.

## 7.3 Changes in Version 4.10

- **Improved** robustness against corrupt embedded font files.
- **Improved** robustness against corrupt input PDF documents.

## 7.4 Changes in Version 4.9

- **Improved** support for recovering certain corruption types.
- **Improved** support for and robustness against corrupt input PDF documents.
- **Improved** repair of embedded font programs that are corrupt.
- **New** support for OpenType font collections in installed font collection.
- **Improved** metadata generation for standard PDF properties.

## 7.5 Changes in Version 4.8

- **Added** repair functionality for TrueType font programs whose glyphs are not ordered correctly.

## 8 Licensing, Copyright, and Contact

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