CLScan Usage Guide

v1.3.8

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Introduction

CLScan is a command line tool for Microsoft Windows operating system to enable you to scan from TWAIN devices with ease. It helps you script your most common scan procedures with a few simple commands and can also be invoked from your application code thus avoiding the need for third party scanning libraries. This usage guide will cover all available command line parameters and show you a few examples on how to get started quickly with CLScan.

Command Line Parameters

/SetScanner

Pass the name of the desired scanner to this parameter. This parameter is case sensitive. Use the **/GetScanners** command line switch to retrieve a list of available scanners.

/SetFileName

Sets the output file name for scanned images/documents. The output name can use system environment variables for filename creation.

e.g.: **%HOMEPATH%\test%COUNTER%.jpg**

If multiple files are scanned the resulting filenames would be:

-C:\users\Administrator\test1.jpg

-C:\users\Administrator\test2.jpg

-C:\users\Administrator\test3.jpg

The list of allowed variables is:

%HOMEPATH% - User home path

%USERNAME% - Username of current user.

%USERDOMAIN% - Domain of currently logged in user

%USERPROFILE% - Profile location of currently logged in user

%COUNTER% - in case of more files with same name

(test%COUNTER%.jpg) name will be test01.jpg,test02.jpg…

%DD% - Day

%MM% - Month

%YYYY% - Year

%HH% - Hour

%MIN% - Minute

%SEC% - Second

%MSEC% - Milisecond

/GetResolutions

This parameter will list all available resolutions for the choosen scanner. If **/SetScanner** is omitted it wil list the resolutions of the default scanner.

/SetResolution

This parameter will set the resolution of the scan. Recommended value is 300DPI however please note that not all scanners support the same DPI values so beforehand check the available list of resolutions using the **/GetResolution** switch.

/GetScanners

This lists all available TWAIN imaging devices present on the workstation where CLScan is executed. When CLScan is invoked with this parameter all other command line parameters are ignored.

/ShowUI

This will show the Scanners user interface which will allow you to configure the scanning parameters using the manufacturers interface. Please note that settings set on the UI have a higher priority then settings passed through the command line. The settings take effect only for the active scanning session and at next run will revert to default values.

/SetPageSize

Sets the page size of the scan. To get a list of supported page sizes please invoke CLScan with the **/GetPageSize** switch.

/GetPageSizes

Lists all the available page sizes from the scanner set by **/SetScanner.** If the /SetScanner parameter is ommited you will receive a list of page sizes from the local default TWAIN scanner.

/Help

Will show you the command line help with the list of available command line parameters.

/LogToFile

Sets the name of the file where the scan procedure will be logged. Use the log file to receive additional information about the scans. It is also useful to catch exceptions occuring during scanning.

/SetJpegQuality

Sets the quality of the JPEG files after scanning. The parameters takes a number from 0 to 100 as value. Zero being the worst and hunderd being the best quality. When this parameters is ommited a default value of 85 will be used. Reducing the quality of JPEGs also reduced the resulting file sizes after scanning.

/SetColorType

Most scanner will support three color types: Black and White, GrayScale, Color. However please use the **/GetColorTypes** switch to retrieve a list of support color types on your scanner.

/GetColorTypes

Will list the available color types supported by your scanner.

/SetThreshold

This parameter can only be used in conjuction with the Black and White color type. By setting this value you defined at which point a pixel becomes white or black depending on the amount of gray in it. In most cases this value is between 0 and 255 but please check the available range on your scanner by using the **/GetThreshold** switch.

/GetThreshold

This parameter will list the range of values supported by your scanner for setting the black and white threshold value.

/SetSource

Sets the source from where the papers should be pulled for scanning. Home scanners for example often have only one source which is the flatbed glass on which you lay the desired paper to be scanned however office scanners often have additional source like ADF (automatic document feeder) which allows you to stack multiple pages in them to be scanned in one session. The most often occuring sources are:

-Auto
- ADF
- Flatbed

However always check the available list of scanning sources. In case this parameter is ommited CLScan will use the default source defined by the scanner.

/SetTransferType

Defines the way in which the scanner should retrieve the image from the TWAIN imaging devices. By default most scanners will return the image using the Native transfer method. Beside the native method there is also Memory and File as availalble options where Memory is always supported but File only on certain scanning devices. Our suggestion is to skip the use of this parameter if it is not adviced otherwise by the manuafcturer of your device.

/SetDuplex

By using this parameter you will tell the scanner to scan each page twice so that you get both sides of the page scanned. Not all scanning devices support Duplex scanning so please consult the documentation of your scanning device for further information.

/SetContrast

Sets the contrast of the scanned image.

/GetContrast

Retrieves the range of supported values for the /SetContrast parameters. In most cases this value ranges from -1000 to 1000 with 0 being the default value.

/SetBrightness

Sets the brightness of the scanned image.

/GetBrightness

Retrieves the range of supported values for the /SetBrightness parameters. In most cases this value ranges from -1000 to 1000 with 0 being the default value.

/SetWidth

Sets the width of the to be scanned image.

/SetHeight

Sets the height of the to be scanned image.

/SetNumberOfImages

Sets the number of images to be scanned from the scanner. This parameter is used when scanning from an ADF scanner which has more pages inserted for scanning then you need. You can also scan single images from an ADF scanner using this parameter.

/SetMultiFile

`Defines that in ADF scanner every image will be scanned to its own file.`

/ReadFromIni

This will read the configuration of the scan from the INI file created by the user interface which can be invoke from the **/SetConfig** switch**.**

/SetInvert

By using this switch you will invert the picture being scanned which means that each color will take the opposite value (black becoming white and vice versa).

/SetConfig

When using this switch the graphical configuration user interface will show up which you then can use to generate INI files which can be passed to CLScan to set its scanning settings. More information about the interface can be found in the Graphical Configuration of CLScan section.

/UseScan2

This parameter will tell CLScan to differently access each scanning devices. We introduced this feature in case some scanners show unexpected behavior. The TWAIN specification is not strictly followed by all imaging devices manufacturers so sometimes a little different approach during the scan initialization process can resolve those issues. If you encounter any issues while scanning please try to invoke the scan procedure with this switch to see if it will resolve the problems you are experiencing.

/SetDeskew

If scanner has that capability, it tries to deskew selected image.

/SetCrop

If scanner has that capability, it tries to automatically detect paper size in the scanner.

/IgnoreBlankPages

Ignores blank pages.

/BlankPageThreshold

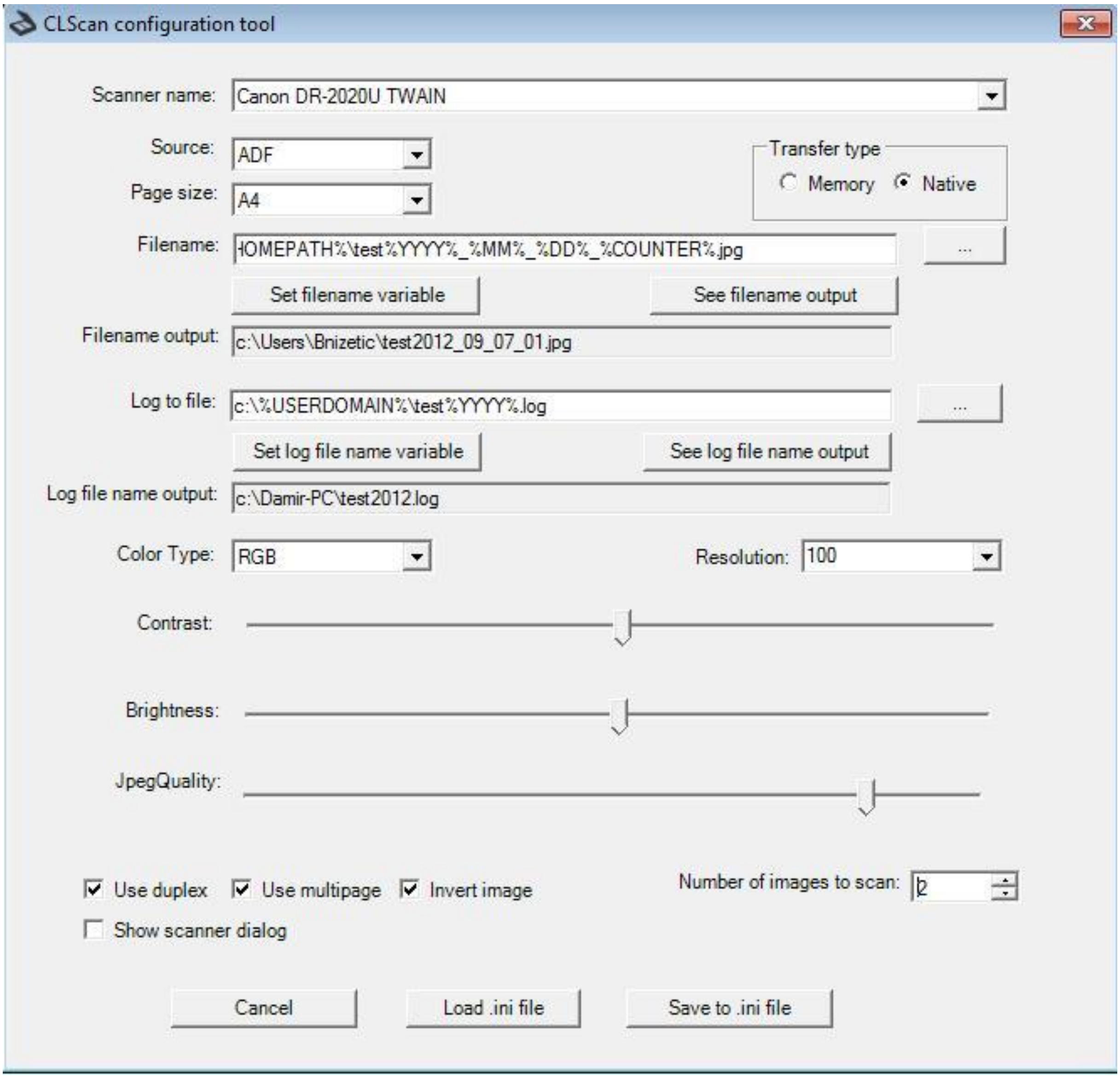
Percentage of darkness which is allowed to consider something as non blank page.
Default is 1%. Allowed values are between 0 and 100. This switch has effect only in combination with /IgnoreBlankPages switch.

/License

Shows the licensing dialog where you can check your license type and your hardware-id.

Graphical Configuration of CLScan

To ease the configuration of CLScan we created a graphical user interface which will enable you to quickly configure the scanning parameters and save them for future use. To use the GUI for configuring your scanning parameters execute CLScan with the /SetConfig switch. The following interface will appear:



CLScan configuration tool

Scanner name: Canon DR-2020U TWAIN

Source: ADF

Page size: A4

Transfer type: ○ Memory ● Native

Filename: HOMEPATH%\test%YYYY%_%MM%_%DD%_%COUNTER%.jpg

Filename output: c:\Users\Bnizetic\test2012_09_07_01.jpg

Log to file: c:\%USERDOMAIN%\test%YYYY%.log

Log file name output: c:\Damir-PC\test2012.log

Color Type: RGB

Resolution: 100

Contrast:

Brightness:

JpegQuality:

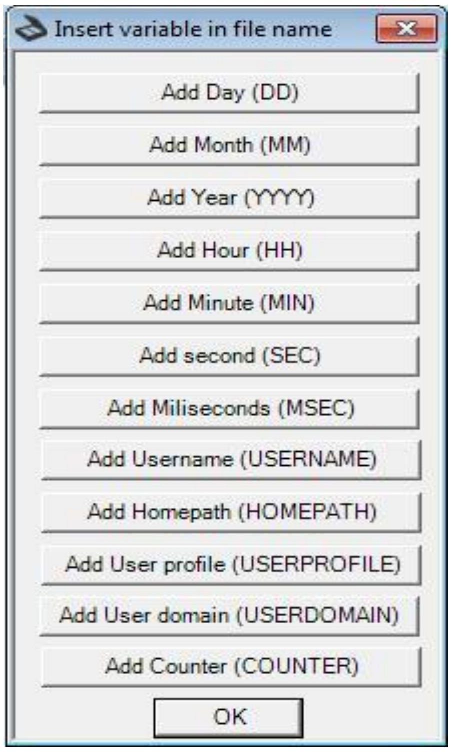
☑ Use duplex ☑ Use multipage ☑ Invert image

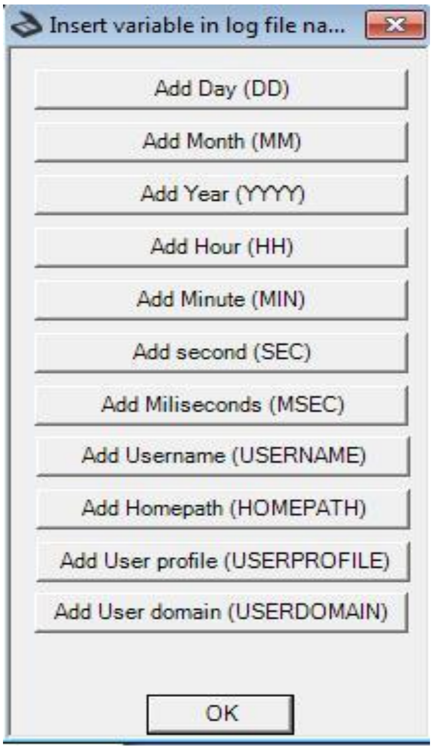
☐ Show scanner dialog

Number of images to scan: 2

The available GUI options are self explanatory and correlate to the available command line parameters.

Using this interface you can also easily create the templates for the output filename and log file name. To get a list of available variables for your templates click the **Set filename variable** or **Set log file name variable.** By pressing the buttons your will get the following interfaces:





When pressing one of those variables they will get inserted at the current cursors position in the filename or log file name field. To preview your templates press the ***See filename*** output or ***See log file name output.***

Using CLScan from web application (e.g. PHP)

CLScan in some cases, when launched from some web applications (e.g. PHP), doesn't have available console which is used to display the visual output from CLScan.

For example if you execute /getscanners or some similar command.

If you have the need for a visual output, you can do a console redirection to some file.

It can be done like this: clscan /getscanners > output.txt

This command will write the output of /getscanners switch to output.txt file.

Examples

Show command line help

To list the available command line parameters and a quick overview of them invoke CLScan in the following way.

```
c:\clscan.exe /Help
```

Scan using predefined settings

To scan using a configuration INI file generated with the graphical user interface execute CLScan in the following way.

```
c:\clscan.exe /ReadFromIni "c:\clscan.ini"
```

List all available scanners

To get a list of all available scanners invoke CLScan like this:

```
c:\clscan.exe /GetScanners
```

Get scanner properties

You can get a list of all your scanners properties by invoking CLScan like this:

```
c:\clscan.exe /GetResolutions /GetPageSizes /GetColorTypes
           /SetScanner "LX100_Scanner"
```

Scan from default scanner and log to file

It will do the scanning from the default scanner and it will create tiff file in "c:\scan_result\testImage.tiff". It will write all relevant information in log file "c:\scan_log\log.txt"

```
c:\clscan.exe /LogToFile "C:\scan_log\log.txt"
           /SetFileName "C:\scan_result\testImage.tiff"
```

Scan with custom settings

The following command will do the scanning from scanner "LX100_Scanner" and it will create one jpeg file in "c:\scan_result\testImage.tiff" with 3 images scanned from the scanner using defined values for contrast, brightness, threshold, jpegquality and color type. It will write all relevant information in log file "c:\scan_log\log.txt"

```
c:\clscan.exe /LogToFile "C:\scan_log\log.txt"
           /SetFileName "C:\scan_result\testImage.jpeg" /SetContrast "45"
           /SetBrightness "50" /SetTreshold "40" /SetJpegQuality "90"
/SetScanner "LX100_Scanner" /SetNumberOfImages 3 /SetSource ADF
           /SetMultiFile /SetDuplex /SetColorType "RGB" /SetPageSize
"USLETTER"
```

Code Samples

Use CLScan from C#

```
using System;
using System.Collections.Generic;
using System.Text;
using System.Diagnostics;
namespace ClScanExample
{
    class Program
    {
        static void Main(string[] args)
        {
            Process clscan = new Process();

            clscan.StartInfo.FileName = "d:\\clscan\\clscan.exe";
            // It displays available sources, page sizes, color types,
brightness, threshold and contrast for the default scanner
            clscan.StartInfo.Arguments = "/getsources /getpagesizes
/getcolortypes /getbrightness /getresholds /getcontrast";
            clscan.Start();
            // /ReadFromIni is only command line parameter that is case
sensitive - if you write /readfromini it wouldn't work
            clscan.StartInfo.Arguments = "/ReadFromIni";
            clscan.Start();
            // /ReadFromIni is only command line parameter that is case
sensitive - if you write /readfromini it wouldn't work
            clscan.StartInfo.Arguments = "/SetScanner \"TWAIN2 FreeImage
Software Scanner\" /SetFileName \"c:\\test100.jpg\"";

            // Following two lines hide the CLScan console window from
showing up.
            clscan.StartInfo.CreateNoWindow = true;
            clscan.StartInfo.WindowStyle = ProcessWindowStyle.Hidden;
            clscan.Start();
        }
    }
}
```

Use CLScan from VB.NET

```
Module Module1
    Sub Main()
        Dim clscan As Process = New Process()
        clscan.StartInfo.FileName = "d:\clscan\clscan.exe"
        ' It displays available sources, page sizes, color types,
brightness, threshold and contrast for the default scanner
        clscan.StartInfo.Arguments = "/getsources /getpagesizes
/getcolortypes /getbrightness /getresholds /getcontrast"
        clscan.Start()
        ' ReadFromIni is only command line parameter that is case sensitive
- if you write /readfromini it wouldn't work
        clscan.StartInfo.Arguments = "/ReadFromIni"
        clscan.Start()
        ' ReadFromIni is only command line parameter that is case sensitive
```

```
- if you write /readfromini it wouldn't work
        clscan.StartInfo.Arguments = "/SetScanner ""TWAIN2 FreeImage
Software Scanner"" /SetFileName ""c:\test100.jpg"""
        'Following two lines hide the CLScan console window from showing
up.
        clscan.StartInfo.CreateNoWindow = True
        clscan.StartInfo.WindowStyle = ProcessWindowStyle.Hidden
        clscan.Start()
    End Sub
End Module
```

Use CLScan from Java

```
package com.commandlinescanning;

import java.io.IOException;

public class SampleClass {

    /**
     * @param args
     */
    public static void main(String[] args) {

        try {

            String arguments = "
/setfilename:\"c:\\clscan\\1.3.5\\test3.pdf\" ";

            Runtime rt = Runtime.getRuntime();

// It will scan from default scanner to c:\clscan\1.3.5\test3.pdf
            Process proc = rt.exec("C:\\CLScan.exe " + arguments);

            String line;

            Reader inStreamReader = new
InputStreamReader(proc.getInputStream());
            BufferedReader in = new BufferedReader(inStreamReader);

            while((line = in.readLine()) != null) {
                System.out.println(line);
            }
            in.close();
            System.out.println("Stream Closed");

            System.out.println(proc.waitFor());

            } catch (Exception e) {
                  // TODO Auto-generated catch block
                  e.printStackTrace();
            }
        }
    }
}
```