



CERTIFIED DATA ERASURE

BLANCCO FILE FOR UNIX

Overview

VERSION 2013 - 1.0.0.6

ABSTRACT

This is the official Blancco File for Unix overview. Blancco is the proven data erasure solution for millions of users around the world. As the pioneer and global leader in data sanitization and end-of-lifecycle solutions, the company offers the most certified data erasure within the industry.

Blancco File for Unix allows data storage administrators to securely erase individual files as well as entire Virtual Machines in an active storage environment.

DEFINITIONS

ITEM	EXPLANATION
Administrator Rights	To execute some actions, administrator rights may be required. This means that only the person with permission and unrestricted access or the administrator, has the rights to implement said act.
AIX	Advanced Interactive eXecutive is a series of proprietary Unix operating systems developed and sold by IBM for several of its computer platforms.
DWORD	DWORD is one of the terms used to describe a variety of sizes of data. A DWORD consists of two WORDs which is equal to 32 bits.
HASP key	HASP key is inserted into a USB port and contains the Blancco licensing data.
HP-UX	HP-UX (Hewlett-Packard UniX) is Hewlett-Packard's proprietary implementation of the Unix operating system, based on UNIX System V.
Solaris	Solaris is a Unix operating system originally developed by Sun Microsystems.
string	String is a data type consisting of a sequence of characters. A string is often carried out as a word (byte).
tar ball	A tar file (tar ball) is a file format mainly used to gather many files into one larger file for distribution or archiving.
XML	eXtensible Markup Language is a markup language that defines a set of rules for interpreting documents.

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BLANCCO FILE FOR UNIX

Blancco File for Unix is designed and optimized for secure erasure in active storage environments and file systems based on Unix or Linux.

FEATURES AND REQUIREMENTS

Key Features

- Easy to use administrative interface based on the command line.
- Erasing of selected files.
- Multiple files can be erased concurrently.
- Supports detailed reporting and all leading data erasure standards which enable full compliance with different relevant policies and regulations.

Supported operating systems and file systems

- Solaris under special circumstances. *Read Solaris support chapter below.*
- HP-UX 11.31 with VXFS.
- AIX 5.1 or later with JFS or JFS2.
- VMware Hypervisor ESX and ESXi with VMFS.
- Other operating systems and file systems might be supported. Contact Blancco for more information.

Pre-installation requirements

If the communication with Blancco Management Console should be done by HTTPS, the program requires that *cURL* and *OpenSSH* are installed before the installation of this product. For normal HTTP communication these components are not required.

Licensing

The license system is connected either to the Blancco Management Console and the Blancco HASP system or it is set up as a time limited site license.

The HASP key in use must be activated along with the solution ID, the number of gigabytes or VM machines available for erasure, as well as the agreed end-date in the contract. Please contact your sales representative to go through these licensing options.

User Rights Required

In order to erase a file you need to have sufficient user rights to be able to access and write to that file. This program is not designed to bypass user right restrictions.

Solaris support

In order to support Solaris, the file system needs to be mounted with the parameter *forcedirectio*.

Example of how to remount the file system with this parameter:

```
mount -o remount,forcedirectio /dev/dsk/c8t2d0s2 /disk2
```

INSTALLATION

This solution consists of three different files. They are delivered in a tar ball. These files should all be extracted from the tar ball to the same destination folder. Depending on which tools are installed in the target system, the following step can be seen as an example:

```
# tar xvf BlanccoFile.tar
```

LICENSE FILE

The license file is called *license.dat* and is supplied with each delivery. While the Blancco Management Console and HASP key contain the actual licenses, this file simply contains information about the license validity. If your license has expired and you want to extend it, you only need to replace this file unless instructed otherwise by the Blancco support team.

The license file should be located in the same folder as the rest of the files. If you want to move these files, please refer to the instructions below under *Configuration*.

CONFIGURATION

Included in the installation package is a file named "config.txt" This file is an example of a configuration file and should be modified according to specific user requirements.

Example file

```
# Comment

# The path to the license file.
LicenseFile = "/BFS/license.dat"
# The path to the report folder.
ReportPath = "/var/logs"

# Address to the Blancco Management Console
MCServerAddress = "http://10.10.1.1:8080"
# The user that should be used to import the reports
MCUserName = "blancco"
# Password for the user
MCPassword = "ffds#FF22"

[extra1]
name = "Extra 1"
mandatory = 1
default = "Default Value"
disabled = 1

[extra2]
name = "Extra 2"
mandatory = 0
default = "Default Value"

[info1]
mandatory = 1
default = "info value"
```

Comments

Comments can be added to the configuration file by adding a # sign at the beginning of the row.

Changing the location of the Configuration file

The default location of the configuration file is the File installation path. However, it is possible to change both the path as well as rename the file itself.

This can be accomplished with the parameter `-configfile` See below for an example in which the path is changed to `/root` and the name is changed to `config1.txt`

```
# BfShred /ssl 0 /vmfs/volumes/datastore1/example -configfile=/root/config1.txt
```

License file

This software requires a file called "license.dat" to be located in the current folder. If you want change the path to this file, you need to define where this file is located.

```
# The path to the license file.  
LicenseFile = "/BFS/license.dat"
```

Report path

The path for storing the locally saved erasure reports is determined by this parameter. In the previous page example, the reports will be saved in `/var/logs`

Blancco Management Console configuration

BMC is used for both licensing purposes as well as centralized logging. Define the URL to the Management Console. Remember to also define the port.

```
MCServerAddress = "http://10.10.1.1:8080"
```

The reports have to be owned by a user created in the BMC. Define the user properties according to the following (the below variables used are only examples):

```
# The user that should be used to import the reports  
MCUserName = "blancco"  
# Password for the user  
MCPassword = "ffds#FF22"
```

Extra and Info fields

The report can contain user defined values. These values will also be imported to the BMC where they can be used for filtering and searching.

The following is an example of adding an extra field called "Company":

Order of the field. This has to be defined in order.

```
[extra1]
```

Name of the field. Presented to the user when the user has to type in the value.

```
name = "Company"
```

The program will not continue before a valid value has been entered. Empty values are not allowed.

```
mandatory = 1
```

Default value prompted to the user.

```
default = "Default Value"
```

Defines that the user cannot change the value. The default value will always be used.

```
disabled = 1
```


More extra and info fields can be created by using the same template as above. If no extra fields are needed, remove the information in the configuration file and the user will no longer be prompted.

USER GUIDELINES

Usage

When starting the application from the console without any parameters, it will print out a short help instruction as seen below. The instructions depend on the operating system.

```
Blancco File - Unix Edition 1.0.0.6  
=====
```

```
BFSHred [options] <command> <algorithm> <file path> [...]
```

```
Show available algorithms:  
BFSHred -standards
```

```
Import an existing report to Management Console:  
BFSHred -send <file path>
```

Available commands

Silently erase files or folders. Log will be generated.

Command	[options] /ssl algorithm file [file...]
Flags	
Algorithm	Specifies the algorithm to run. The value must be from 0-12. See below.
File	Specifies the file or folder to erase. Folders are erased recursively. More files can be specified and separated with spaces. The whole path should be specified, i.e. /temp/temp.txt

Erase a file example

To start an erasure, specify the algorithm of choice and path to the file or files to erase (with space in between each new input value).

Example:

```
# BFShred /ssl 0 /etc/test.txt /tmp/file.txt
```

This example will erase the file /etc/test.txt using the HMG Infosec Baseline standard. After the completion of file /etc/test.txt, file /tmp/file.txt will be erased with the same algorithm.

The algorithm is selected by the number in the table below. Specify the path directly or relative to the command so the file can be located.

The user will be prompted if any extra or info fields must be defined.

```
Blancco File - Unix Edition 1.0.0.6  
=====
```

```
Enter extra and info field information:  
-----
```

```
Project ID: Default Value  
Extra 2: Default Value  
Info1: info value
```

During the operation, a progress bar will inform the user how much of the erasure has currently been completed.

```
Shredding of file: /etc/test.txt  
[XXXXXXXXXXXXX 42% (19 MB/s) Elapsed: 00:00:21 Remaining:  
00:00:32 .....]
```

After the operation has completed, the program clearly indicates if the operation was successful or not. It also displays statistics about the operation. Please see the below example:

```
[XXXXXXXXXXXXX 100% (19 MB/s) Elapsed: 00:00:53 Remaining:  
00:00:00 XXXXXXXXXXXXX]  
Shredding of /etc/test.txt was successful  
1073742336 bytes erased in 53.128 secs (19 MB/sec)
```

All or none

If you only want to perform the erasing operation in the case that all files will erase successfully, you can provide the option `-aon`. Before the erasing operation starts, the program will go through all the files and check for user permissions as well as that some files are not locked by other applications. If all files are available for erasing, the operation then automatically continues and erases the specified files.

Start the program with the optional parameter `-aon`.

Example:

```
# BfShred -aon /ssl 0 /etc/test.txt
```

Simple user interface

If your terminal does not support the command given to create the normal user output the program defaults on a terminal width of 80 characters. If no progress is shown or is deformed, the program can be started with a simpler user interface.

Start the program with the optional parameter `-simpleui`.

Example:

```
# BfShred -simpleui /ssl 0 /etc/test.txt
```

This will cause the program to print a simpler progress for the user.

```
34% (13 MB/s) Elapsed: 00:04:38 Remaining: 00:08:45
34% (13 MB/s) Elapsed: 00:04:39 Remaining: 00:08:44
34% (13 MB/s) Elapsed: 00:04:40 Remaining: 00:08:43
35% (13 MB/s) Elapsed: 00:04:41 Remaining: 00:08:42
```

This simpler user interface should be used when the above described problem occurs.

Erasure standards

The following erasure standards are available as default. Others can be requested and implemented as part of a contracted solution.

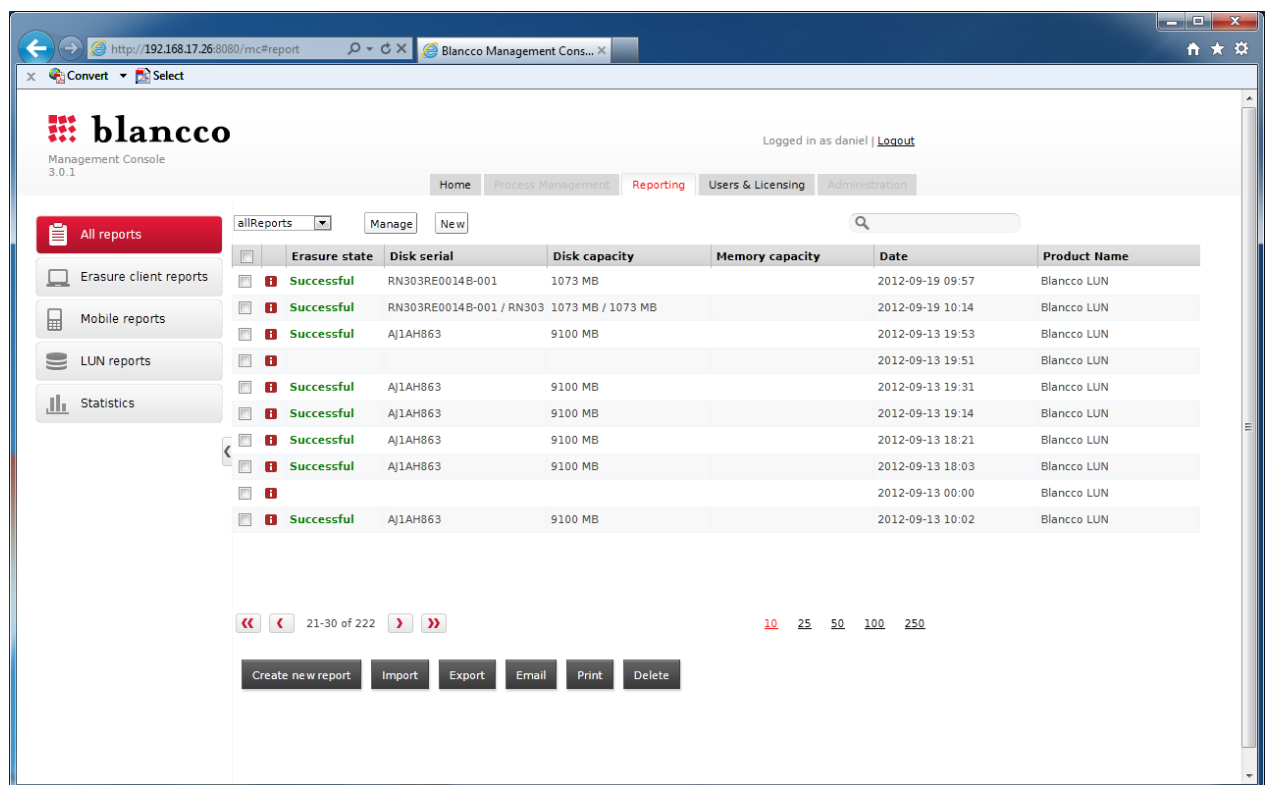
Erasing Algorithms (as used above)	
0	HMG Infosec, Baseline (DEFAULT ALGORITHM)
1	HMG Infosec, Enhanced
2	Peter Gutman's Algorithm
3	U.S Department of Defense
4	Bruce Schneier's Algorithm
5	Navy Staff Office Publ.
6	NCS Center
7	Air Force System Security
8	US Army
9	German Standard VSITR
10	OPNAVINST 5239.1A
11	NSA 130-1
12	DoD 5220.22-M ECE
13	BSI-2011-VS (Similar)

REPORTING

This solution will log information about the erasing in log files (reports). These reports can be handled by an administrator. The report includes time, date and the unit being erased, as well as information about the erasure standard. Extra data fields for customer specific data to be entered into the report are also supported.

Importing the reports to the Blancco Management Console

The generated XML reports can be imported into Blancco Management Console. The reports are available for importing one by one or all at once. Single reports are named after the date and time of when the erasure was started. The file containing multiple reports is named "all.xml".



The screenshot shows the Blancco Management Console interface. The browser address bar displays `http://192.168.17.26:8080/mc#report`. The page title is "Blancco Management Console" and the user is logged in as "daniel". The navigation menu includes "Home", "Process Management", "Reporting" (active), "Users & Licensing", and "Administration".

The "Reporting" section features a sidebar with options: "All reports" (selected), "Erasure client reports", "Mobile reports", "LUN reports", and "Statistics". The main content area shows a table of reports with columns: "Erasure state", "Disk serial", "Disk capacity", "Memory capacity", "Date", and "Product Name".

Erasure state	Disk serial	Disk capacity	Memory capacity	Date	Product Name
Successful	RN303RE0014B-001	1073 MB		2012-09-19 09:57	Blancco LUN
Successful	RN303RE0014B-001 / RN303	1073 MB / 1073 MB		2012-09-19 10:14	Blancco LUN
Successful	AJ1AH863	9100 MB		2012-09-13 19:53	Blancco LUN
Successful	AJ1AH863	9100 MB		2012-09-13 19:51	Blancco LUN
Successful	AJ1AH863	9100 MB		2012-09-13 19:31	Blancco LUN
Successful	AJ1AH863	9100 MB		2012-09-13 19:14	Blancco LUN
Successful	AJ1AH863	9100 MB		2012-09-13 18:21	Blancco LUN
Successful	AJ1AH863	9100 MB		2012-09-13 18:03	Blancco LUN
Successful	AJ1AH863	9100 MB		2012-09-13 00:00	Blancco LUN
Successful	AJ1AH863	9100 MB		2012-09-13 10:02	Blancco LUN

At the bottom of the table, there are navigation controls: "21-30 of 222" and pagination options "10", "25", "50", "100", "250". Below the table are buttons for "Create new report", "Import", "Export", "Email", "Print", and "Delete".

Picture: Choose which report to view from a list of imported reports.

TROUBLESHOOTING

1. **The program freezes when the erasure is supposed to start.** The program has not crashed but simply cannot show the erasure progress. Start the program with the parameter *-simpleui*. See *User Guidelines* (p.9-12).
2. **Remote erasure.** Verify that you have a stable connection and avoid using a modem connection for erasure purposes.
3. **Sufficient user rights.** Make sure that the account you are using has full access to the unit/units where the erasure will be executed.
4. **Using an older version of cURL.** If the version of cURL is older than that which is required to allow the software to run (for example libcurl.so.3 instead of the libcurl.so.4) it is possible to link the name of the required version to the older version. This will then allow the application to run without having to update the software in the OS installation. This can be done by using the following command: `CD /usr/lib64` (use `CD /usr/lib32` if it is a 32-bit system). Once in the directory lib64, type the following command to link the name of the correct version to the current version: `ln -s libcurl.so.3 libcurl.so.4`

CONTACT INFORMATION

Visit the technical knowledgebase (FAQ) and contact Blancco Technical Support by submitting a technical support ticket at:

<http://support.blancco.com/>

See the instructional videos for Blancco products at:

<http://www.blancco.com/en/videos>

For contact information and the latest information about secure data erasure solutions, visit the Blancco website at:

<http://www.blancco.com/>

We are always looking for ways to improve our products. Please let us know if you have any suggestions!

For further information, please visit
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