bmmtestlabs

bmm signatures v2.0

user manual

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Introduction to BMM Signatures

BMM Signatures was created to provide a tool for the verification of gaming software. The application can be used to generate signatures for folders, individual files, and groups of files. It also has support to generate a signature for full media and partitions on devices such as Compact Flash cards, hard disk drives, or solid state drives. BMM Signatures can also use the Gaming Standards Association's (GSA) Game Authentication Terminal (GAT) protocol.

BMM Signatures is available for download or on a USB Flash Drive by contacting your local BMM office. The application will need to be installed on a computer. If the computer running the application has access to the internet, it will be able to auto update.

BMM Signature Program Features

BMM Signatures supports the following hashing algorithms:

SHA-1 •

SHA-256 •

SHA-512

CRC16

CRC32

MD5

CHECKSUM

HMAC SHA1 (Seeded with a string or hex value)

System Requirements

BMM Signatures v2.0 supports the following desktop operating systems: Windows Vista, Windows 7, and Windows 8. BMM Signatures also supports the following server operating systems: Windows Server 2003, Windows Server 2008, and Windows Server 2012.

Recommended Minimum Hardware Requirements:

- 1 gigahertz (GHz) or faster 32-bit (x86) or 64-bit (x64) processor •
- 4 gigabyte (GB) RAM
- Graphics card with a screen resolution of 1680x1050
- USB Port •
- Serial Port (or USB to serial adaptor) for GAT •

Installing BMM Signatures

- 1. Point a web browser to this address: http://downloads.bmmboat.com.bmmlabs.arvixededicated.com.
- 2. Click the Install button at the bottom of the webpage.



3. Click "Run" from the confirmation dialog.

Do you want to run or save setup.exe (472 KB) fromcom.bmmlabs.arvixededicated.com?									
	<u>R</u> un	<u>S</u> ave	-	<u>C</u> ancel					

4. Click install on the "Application Install - Security Warning"

Application Install - Security Warning
Do you want to install this application?
Name: BMM Signatures 2.0 From (Hover over the string below to see the full domain): downloads.bmmboat.com.bmmlabs.arvixededicated.com Publisher: BMM North America, Inc Install
While applications from the Internet can be useful, they can potentially harm your computer. If you do not trust the source, do not install this software. <u>More Information</u>

5. BMM Signatures will download.

(17%) Inst	alling BMM Signatures 2.0	—
Installir This duri	ng BMM Signatures 2.0 may take several minutes. You can use your computer to do other tas ng the installation.	sks
bmm	Name: BMM Signatures 2.0	
-	From: downloads.bmmboat.com.bmmlabs.arvixededicated.com	1
	Downloading: 1.21 MB of 7.08 MB	
		<u>C</u> ancel

6. Click "Yes" on the security warning dialog, and BMM Signatures will run. BMM Signatures requires Administrator Privileges in order to perform verification on full media signatures on drives and partitions.

Running BMM Signatures

1. Double click on the BMM Signatures v2.0 icon on the desktop.



2. If an update is available, a dialog will open, click "OK" on the dialog.



3. BMM Signatures will update and then automatically run.



4. Click "yes" on the User Account Warning dialog. BMM Signatures need administrator access in order to perform media signatures.

; User Accour	Control										
Do you want to allow the following program to make changes to this computer?											
bmm	Program name:BMM Signatures 2.0Verified publisher:BMM North America, IncFile origin:Hard drive on this computer										
Show <u>d</u> et	ls <u>Y</u> es No										
	Change when these notifications appear										

How to use BMM Signatures

Generating a Folder Signature

A Folder Signature is a single signature of the entire contents of a folder which includes all files and subfolders therein. The Folder Signature will change if the folders, subfolders or files within change by renaming, moving, or modifying.

Steps:

1. With BMM Signatures open and the "Files / Folders" tab selected, click on the "Browse" button.



A dialog box labeled "Browse For Folder" will appear:

Br	rowse For Folder	J
Γ]
	▷ 🖳 Computer 🔷	
	🖻 👽 Network	
	P I Control Panel	
	👿 Recycle Bin	
	bmm Signatures 1.27	
	🖻 퉲 bmm Signatures 1.28	
	🔒 LQ	
	VirtualBox	
	T	
	Make New Folder OK Cancel	

- 2. Navigate to the folder being used for verification.
- 3. Once selected, click on the "OK" button.

This action will insert the folder into the list. If the files contained inside the folder need to have individual signatures generated as well, click on the checkbox for "include files". This will put the contents of the folder into the files list to the right.



4. Next, click the type of signature to generate. Typically a SHA1 is used; however BMM Signatures can use other algorithms as well. When needing a HMAC-SHA1 signature, BMM Signatures allows for the entry of a seed. The seed can be in the form of a text string (characters a-z & numbers 1-0), or a hexadecimal string (characters a-f & numbers 1-0). To calculate more than one signature for a folder, click on the first signature type, next click on "clear done", and then click on the next signature type. Repeat for each signature type needed.

. 1													
	SHA1	SHA256	SHA512	MD5	CRC16	CRC32	CHECKSUM	hmac seed:			Seed Type	HMAC-SH	A1
		location		folde	er/file nan	ne s	ignature type	signature	total bytes	elapsed time			
													export

5. In the bottom pane a list of the folders and their signatures will be displayed.

Note: Signatures shown here are for informational purposes only and are not to be used for verification.

SHA1	SHA256	SHA512	MD5 CRC	16 CRC	32 CHECKSUM	1 hma	ac seed:			Seed Type	HMAC-SI	HA1
	location		folder/file	name	signature type	e	signatur	e		total by	tes ela	-
	[root]:\		\swtools		SHA1		2AB8A27	8BD6D357F2ED	1256A4B137FE1A52F64A	9 1072725	00:0	export
												clear
٠											4	

Once a signature is generated for the folder, the checkbox in the done column will be checked. If the signatures need to be calculated again, uncheck the checkbox in the done column or click the "clear done" button to the left of the folder list.

To save or export the signatures calculated; please see the section on exporting results.

The following buttons are used with folder signatures:



browse The browse button brings up a dialog for the operator to select a folder to generate a signature from.



clear done Once signatures for a folder have been generated, there will be a checkmark in the done column for that folder. This button will clear any done checkmarks so those signatures can be generated again.



The clear all button will remove all items from the folder list.

Generating Individual File Signatures

The Individual File Signature is used for generating single or multiple signatures for individual files.

Steps:

1. With BMM Signatures open and the "Files / Folders" tab selected, click on the "browse files" button.

BMM Signatures 2.0			-		1	
	estlabs	210	EF	and a second	wwv	v.bmmboat.com (2)
Files/Folders Me folder nam browse clear done clear all	e include files do	one browse files clear done clear all	⁶¹ e location	name		done
SHA1 SHA256 SHA512	MD5 CRC16 CRC3	2 CHECKSUM h	mac seed:			Seed Type
location	folder/file name	signature type	signature	total bytes	elapsed time	export Clear

2. A dialog box labeled "Open" will appear.

Open	r b Windows7 OS (C) b Windows b	A 16740	100	- 4	Search Windows	×
	er 🖡 windows/_OS(C:) 🖡 windows 🖡			• •	Search Windows	~
Organize 🔻 New fold	er				8== •	
🖳 Recent Places 🔺	Name	Date modified	Туре	Size		
	i addins	7/13/2009 10:32 PM	File folder			:
Cibraries	AppCompat	7/13/2009 8:20 PM	File folder			
Documents	퉬 AppPatch	5/5/2014 1:44 PM	File folder			
Music	鷆 assembly	5/16/2014 10:15 AM	File folder			
Pictures	퉬 Boot	7/13/2009 10:32 PM	File folder			
Videos	퉬 Branding	7/13/2009 10:32 PM	File folder			
	🐌 CSC	5/19/2013 8:38 PM	File folder			
Windows7 OS (C	Cursors	7/13/2009 10:32 PM	File folder			
	퉬 debug	5/20/2013 10:37 AM	File folder			
	퉬 diagnostics	7/13/2009 10:32 PM	File folder			
Separaments (0:)	퉬 DigitalLocker	7/13/2009 10:37 PM	File folder			
Private Folder (II)	퉬 Downloaded Installations	4/7/2014 8:46 AM	File folder			
X Private Folder (0.	鷆 Downloaded Program Files	3/6/2014 3:45 PM	File folder			
S Network	鷆 ehome	5/20/2013 12:14 PM	File folder			
INCLIVITIE	鷆 en	12/23/2011 10:34	File folder			
Ŧ	en-US	11/20/2010 11:06	File folder			
File <u>n</u>	ame:					•
					Open	Cancel

- 3. Navigate to the file(s) needed for verification.
- 4. Once the file is selected, single click on the "Open" button. Note: Multiple files can be selected for multiple individual signatures to be generated. This action will insert the file(s) into the list for verification.

7			
	file location	name	done
browse files	C:\Windows	explorer.exe	
	C:\Windows	bfsvc.exe	
clear done	C:\Windows	fveupdate.exe	
clear all			

5. Next, click the type of signature to generate. Typically a SHA1 is used; however BMM Signatures can use other algorithms as well. When needing a HMAC-SHA1 signature, BMM Signatures allows for the entry of a seed. The seed can be in the form of a text string (characters a-z & numbers 1-0), or a hexadecimal string (characters a-f & numbers 1-0). To calculate more than one signature for a file, click on the first signature type, next click on "clear done", and then click on the next signature type. Repeat for each signature type needed.

]	L					
	SHA1	SHA256	SHA512	MD5	CRC16	CRC32	CHECKSUM	hmac seed:			Seed Type	HMAC-SHA1	
1											_		•
		location		folde	er/file nan	ne :	signature type	signature	total bytes	elapsed time			▶
												ex	port
												ex	ро

6. This will generate a signature of the file(s) selected. Note: Signatures shown here are for informational purposes only are not to be used for verification.

SHA	1 SHA256 SHA512	MD5 CRC16 CRC3	2 CHECKSUM hn	nac seed:	Seed Type	HMAC-SHA1	
	location	folder/file name	signature type	signature	total bytes	s elapse	-
	C:\Windows	explorer.exe	SHA1	5A49D7390EE87519B9D69D3E4AA66CA066CC8255	2871808	00:00:0	export
	C:\Windows	bfsvc.exe	SHA1	2F1113395CA0491080D1092C3636CDA6CF711998	71168	00:00:0	clear
	C:\Windows	fveupdate.exe	SHA1	2B144924A1B83B1AD924691EC46E47F6B1DEC3AF	15360	00:00:0	
•						+	

Once a signature is generated for the file(s), the checkbox in the done column will be checked. If the signatures need to be calculated again, uncheck the checkbox in the done column or click the "clear done" button to the left of the file list.

To save or export the signatures calculated; please see the section on exporting results.

The following buttons are used with individual file signatures:



browse

files The browse files button brings up a dialog for the operator to select one or more files to generate signatures for.



clear done Just like the clear done button next to the list of folders, the clear done button next to files will remove the done checkmarks next to any files to the signatures for those files can be generated again.

×

clear all Just like the clear all button next to the list of folders, the clear all button next to the list of files will remove all files from the list.

Generating a Full Media Signature

A Full Media Signature is used for generating a single signature of the entire contents of a storage device (e.g. compact flash card, CD, DVD, etc.). This feature can be used on any media that can be connected to a computer and recognized as a drive. This feature cannot be used on EPROMs or other similar devices. Generating media signatures requires administrator privileges to the computer.

Steps:

1. With BMM Signatures open and the "Media" tab selected, single click on the drive that needs to be validated, or the drive containing the partition that needs to be validated.

Files/Folders Media GAT											
La reset done	hash	media	type	1	b		ha	ash	partition	type	done
ۍ ا		\\.\PHYSICALDRIVE0	Fixed hard disk media	з.	0		[Disk#0 Partition#0	IFS (HPFS, NTFS)	
refresh list		\\.\PHYSICALDRIVE3	Removable Media	1.	0		[Disk#0 Partition#1	IFS (HPFS, NTFS)	
		\\.\PHYSICALDRIVE1	Removable Media	1.	0		[Disk#0 Partition#2	IFS (HPFS, NTFS)	

- 2. If the whole drive is being validated, check the "hash" box next to the drive.
- 3. If one or more partitions are going to be validated, click the "hash" box next to each partition. The overall drive "hash" box may also be checked to include that in the signature calculation process.

道 Files/F	🗿 Files/Folders 🔍 Media 💞 GAT											
La reset done	hash	media	type	I	b		hash	partition		type	done	
۵		\\.\PHYSICALDRIVE0	Fixed hard disk media	з.	0		V	/dev/sd0		Linux EXT2/EX		
refresh list	V	\\.\PHYSICALDRIVE3	Removable Media	1.	0							
		\\.\PHYSICALDRIVE1	Removable Media	1.	0							

4. Once all of the drives and/or partitions are selected, click on the signature that needs to be generated. Typically a SHA1 is used; however BMM Signatures can use other algorithms as well. When needing a HMAC-SHA1 signature, BMM Signatures allows for the entry of a seed. The seed can be in the form of a text string (characters a-z & numbers 1-0), or a hexadecimal string (characters a-f & numbers 1-0). To calculate more than one signature for a folder, click on the first signature type, next click on "clear done", and then click on the next signature type. Repeat for each signature type needed.



5. One or more dialogs will appear to show the current process for the partitions and/or whole media.

- Signature Progress	🖳 Signature Progress
Calculating SHA1 Media Signature	Calculating SHA1 Partition Signature
Media Processed: 0 of 1	Partitions Processed: 0 of 1
\\.\PHYSICALDRIVE3 7%	/dev/sd0 55%
Crust	Creat
Cancei	Cancei

6. When the process is complete, the results will show in the bottom pane.

SHA256 SHA512	MD5 CRC16 CRC3	2 CHECKSUM	hmac seed:	Seed Type
location	folder/file name	signature type	signature	total bytes
\\.\PHYSICALDRIVE3	\\.\PHYSICALDRIVE3	SHA1	BA92E6A730E44F2A6B0B76F07535202033C990F5	512483328 export
/dev/sd0	/dev/sd0	SHA1	163F65BC1B0ED0E1376512BB26E43F2BF7BA77A0	511934976 X clear
	SHA256SHA512location\\.\PHYSICALDRIVE3/dev/sd0	SHA256 SHA512 MD5 CRC16 CRC3 location folder/file name \\.\PHYSICALDRIVE3 \\.\PHYSICALDRIVE3 /dev/sd0 /dev/sd0	SHA256 SHA512 MD5 CRC16 CRC32 CHECKSUM location folder/file name signature type \\.\PHYSICALDRIVE3 \\.\PHYSICALDRIVE3 SHA1 /dev/sd0 /dev/sd0 SHA1	SHA256 SHA512 MD5 CRC16 CRC32 CHECKSUM hmac seed: location folder/file name signature type signature \\.\PHYSICALDRIVE3 \\.\PHYSICALDRIVE3 SHA1 BA92E6A730E44F2A6B0B76F07535202033C990F5 /dev/sd0 /dev/sd0 SHA1 163F65BC1B0ED0E1376512BB26E43F2BF7BA77A0

Once a signature is generated for the drives and/or partitions, the checkbox in the done column will be checked. If the signatures need to be calculated again, uncheck the checkbox in the done column or click the "reset done" button to the left of the drive list.

To save or export the signatures calculated; please see the section on exporting results.

The following buttons are used with media signatures:

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reset done The reset done button will clear the done checkmarks for physical drives and media which have had signatures generated.

φ

refresh list The refresh list button will refresh the list of available physical drives and media for selection to generate signatures for. If you start BMM Signatures and then attach a CF card, the operator can click this button to refresh the list to show the CF card as available for signature calculation.

\\.\PHYSICALDRIVE0

Each physical drive in the list is a button. When the button is clicked, all of the available partitions are shown in the partition list to the right of physical drive list.

Game Authentication Terminal (GAT)

A Game Authentication Terminal or GAT signature makes a request to the gaming device's CPU to calculate the hash of the various program storage media on the gaming device. This is accomplished by connecting the computer running the BMM Signatures to the gaming device via a serial cable to a specific port on the gaming device. Once the computer is connected and communications established, the user can specify a seed value, and instruct the gaming device to calculate the HMAC-SHA1.

Steps:

- 1. Open the main door of the gaming device's cabinet.
- 2. Locate the connector that is used for GAT communications. Please see the documentation for the gaming device or contact BMM Testlabs for assistance if the connector is unknown.



3. Double-click on the BMM Signatures 2.0 icon on the computer desktop.



4. Select the GAT tab from the UI

BMM Signatures 2.0			×
bmm ^{testlabs}	777		www.bmm.com
😂 Files/Folders 🔍 Media 🐼 GAT			
COM6 🔹 💉 get egm status get special func	tions get last authentication result	request new results	gat version: NA
hmac-sha1 seed	function		
current status			
NA			
last authentication level			
NA			
NA	<u>.</u>		

5. Select the COM port from the drop down box and the program will automatically connect to the game.

Files/Folders Media	E. C. C.	www.bmm.con
COM6 🔹 💉 get egm status get special functions	get last authentication result request new results	gat version:
hmac-sha1 seed	function	
abcd1234	Get FileAuthenticationResponse.xml%%SHA1_HMAC%%	
current status	ComponentCore_EXE%%SHA1_HMAC%%	
Finished. (Ready to disconnect)	ComponentCore_DLL%%SHA1_HMAC%%	
	ComponentUtility_DLL%%SHA1_HMAC%%	
last authentication level	ComponentGame_Display%%SHA1_HMAC%%	
NA	ComponentSAS Module%%SHA1 HMAC%%	

- 6. If needed, or desired, enter a value for the seed that will be communicated to the gaming device.
- 7. For a quick method to use the entered seed value and have the game calculate signatures for all components, click on the "request new results" button. For more control on what gets verified, continue with the next steps, otherwise proceed to step 10.
- 8. Click on the "get special functions" button to obtain a list of the components that the game can generate signatures for verification. Note: if any previous results are saved on the game, they will be erased.
- From the Functions list, click on the item for verification. Note: Each gaming device may rename or change the position of the functions that will return the GAT signature response.
- 10. When the current status changes to "Calculating (Ready to Disconnect)" and the link button lights up, press the button and the serial cable can be unplugged from the game, and connected to another game when checking a whole bank of games. When you reach back to the first game started, connect

the serial cable and click the "get egm status" button. If the current status says "Finished", click on the "get last authentication result" button.

11. After clicking the "get last authentication result" button or if the serial cable was not disconnected, a list of the components and their signatures will appear in the bottom pane when the calculation is completed.

current stat	tus		ComponentCore_EXE%%SHA1_	HMAC%%					
Finished.			ComponentCore_DLL%%SHA1_	ComponentCore_DLL%%SHA1_HMAC%%					
last authen	tication level		ComponentUtility_DLL%%SHA1	L_HMAC%%					
Special Func	tion		ComponentGame_Display%%S	HA1_HMAC%%					
Special Func			ComponentSAS_Module%%SH	A1_HMAC%%					
time 02:17:	:06 since last results were calculated		ComponentOS_Sha_Dump%%S	SHA1_HMAC%%					
egm#	game name	manufacturer	component	checksum					
	Duck_Dynamite_2_22x32_v1.0.0	Lightning Gaming	Core_EXE	c8 f2 fa ed 26 22 05 98 57 94 06 66 ce 60 9f cf 25 8f 31 d8					
	Duck_Dynamite_2_22x32_v1.0.0	Lightning Gaming	Core_DLL	db 9e 4c e9 f9 77 d4 1a 64 31 1c ca e5 cd d6 6e c9 7d bb d2					
	Duck_Dynamite_2_22x32_v1.0.0	Lightning Gaming	Utility_DLL	0e 81 47 19 f3 27 3a c5 55 be c1 fa c9 44 aa 4d 11 66 be 3e					
	Duck_Dynamite_2_22x32_v1.0.0	Lightning Gaming	Game_Display	97 43 00 1f 86 ef 6c 5e 8c 58 94 ad 94 b4 d1 bd ba c8 6f 45					
	Duck_Dynamite_2_22x32_v1.0.0	Lightning Gaming	SAS_Module	d4 11 78 ff 94 de 34 fe 9f 92 f1 8b 97 f2 0a 74 75 54 a0 d4					
	Duck_Dynamite_2_22x32_v1.0.0	Lightning Gaming	OS_Sha_Dump	07 93 0e 24 25 c6 c2 24 17 c4 80 74 4f 7d c6 90 73 ac f8 d3					

When performing GAT verifications, after each game returns the results of the authentication, the operator can enter the machine or asset ID into the "egm#" field in the results table. This will be saved with the results if exported. A very handy feature when checking a whole bank of games and verification analysis will be performed at a later time.

To save or export the signatures calculated; please see the section on exporting results.

The following buttons are used with GAT signatures:

get egm status

The get egm status button queries the EGM for its current status.

get special functions

The get special functions button will query the EGM for available components to generate a signature for. This button can cause the EGM to erase any currently stored and completed signatures.

get last authentication result

The get last authentication result button will query the EGM for any currently stored and completed signatures that were previously requested.

request new results

The request new results is a quick shortcut to issue a request to the EGM to generate signatures for all components.

Exporting results from BMM Signatures

BMM Signatures can save or export the results accumulated in the bottom pane of the application, regardless of the type or combination of types of results. The exported results are saved to a comma separated values (CSV) file.

Steps:

1. Click on the "export" button once a list of results is compiled.

SHA1	SHA256 SHA512	MD5 CRC16 CRC3	2 CHECKSUM h	mac seed:	Seed Type	**
	location	folder/file name	signature type	signature	total bytes	-
•	\\.\PHYSICALDRIVE3	\\.\PHYSICALDRIVE3	SHA1	BA92E6A730E44F2A6B0B76F07535202033C990F5	512483328	export
	/dev/sd0	/dev/sd0	SHA1	163F65BC1B0ED0E1376512BB26E43F2BF7BA77A0	511934976	clear

2. A "Save As" dialog will open allowing the results to be saved in a convenient location with an operator specified name. The results will only save in a CSV format.

ome Save As		LA DOM			 X
Computer	r ► Windows7_OS (C:) ► Windows ►	▼ 4 9 5	Search Windows		٩
Organize 🔻 New folde	ſ			•	0
🔶 Favorites	Name	Date modified	Туре	Size	e 🔺
🧮 Desktop	鷆 addins	7/13/2009 10:32 PM	File folder		=
🐌 Downloads	퉬 AppCompat	7/13/2009 8:20 PM	File folder		
🗐 Recent Places	퉬 AppPatch	5/5/2014 1:44 PM	File folder		
-	퉬 assembly	5/16/2014 10:15 AM	File folder		
🥃 Libraries 👘	퉬 Boot	7/13/2009 10:32 PM	File folder		
Documents	퉬 Branding	7/13/2009 10:32 PM	File folder		
🎝 Music	퉬 CSC	5/19/2013 8:38 PM	File folder		
Pictures	퉬 Cursors	7/13/2009 10:32 PM	File folder		
🛃 Videos 📃	퉬 debug	5/20/2013 10:37 AM	File folder		
) diagnostics	7/13/2009 10:32 PM	File folder		
👰 Computer	퉬 DigitalLocker	7/13/2009 10:37 PM	File folder		
🏭 Windows7_OS (C]] Downloaded Installations	4/7/2014 8:46 AM	File folder		
👝 Removable Disk (퉬 Downloaded Program Files	3/6/2014 3:45 PM	File folder		-
🥟 PortableApps.coi 🖕	■ .	E /00 /0010 10 14 DM	PH (11)		
Eile namer					
File name:					
Save as type: CSV (*	*.csv)				
) Hide Folders			Save	Cance	

3. Once saved, the CSV file can be opened in either a text editor or in a spreadsheet program for easy manipulation to import into other databases or programs.

1	Paste v V Format Painter	BIU -	<u>ð</u> • <u>A</u> • ≡	🖀 🗐 ோ 📰 Merge & Center 🗸 🗌	\$ • % ,	Condition	nal Format Ce g ≠ as Table ≠ Style	II Insert
	Clipboard 🕞	Font	G	Alignment 🕞 Number		G	Styles	
	G1 ▼ (* <i>f</i> _x							
	A	В	С	D	E	F	G	
1	Location	FileFolderName	SignatureType	Signature		Total Bytes Read	Elapsed Time	Ī
2	\\.\PHYSICALDRIVE3	\\.\PHYSICALDRIVE3	SHA1	BA92E6A730E44F2A6B0B76F07535202	033C990F5	512483328	01:16.6	
3	/dev/sd0	/dev/sd0	SHA1	163F65BC1B0ED0E1376512BB26E43F2	BF7BA77A0	511934976	01:16.8	
4								
5								

The following buttons are used when exporting signatures:



export The export button will allow the operator to save the current results to a comma separated value (CSV) file. The filename that is selected will be overwritten if selected a second time. The CSV file is able to be opened in a spreadsheet program, such as Microsoft Excel, for further analysis after the signatures have been generated.

×

clear The clear button will remove all of the current results from the bottom results window. It will not reset the done checkmarks for folders or files.

Terms of Use

This application is only to be used with permission from BMM Testlabs. This application may not be redistributed without permission from BMM Testlabs.

This application will not work for every authentication situation. It is up to the user to decide if the situation is appropriate for using this application for authentication.

The Group Signature feature uses proprietary methods of generating signatures for a folder which are not shared by other applications. Use of the Group Signature feature results in creating signatures that are unique and different from similar tools.

The Partial Full Media feature is designed to allow the creation of a signature on a portion of the media and then verify the remaining portion of the media to insure that it contains only a specified HEX value. These signatures will not match when compared with another tool which generates a signature on the full media regardless of blank space.

THE LICENSED PROGRAM IS PROVIDED TO USERS ON AN "AS IS" BASIS WITHOUT WARRANTY OF ANY KIND, EITHER EXPRESSED OR IMPLIED, INCLUDING BUT NOT LIMITED TO ANY IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. THE ENTIRE RISK AS TO THE QUALITY AND PERFORMANCE OF THE LICENSED PROGRAM IS WITH THE USER. SHOULD THE LICENSED PROGRAM PROVE DEFECTIVE, THE USER ASSUMES THE ENTIRE COST OF ALL NECESSARY SERVICING, REPAIR OR CORRECTION.