Malwarebytes Anti-Malware User Guide

Version 2.2.1 18 March 2016





Notices

Malwarebytes products and related documentation are provided under a license agreement containing restrictions on use and disclosure and are protected by intellectual property laws. Except as expressly permitted in your license agreement or allowed by law, you may not use, copy, reproduce, translate, broadcast, modify, license, transmit, distribute, exhibit, perform, publish, or display any part, in any form, or by any means. You may copy and use this document for your internal, reference purposes only.

This document is provided "as-is." The information contained in this document is subject to change without notice and is not warranted to be error-free. If you find any errors, we would appreciate your comments; please report them to us in writing.

The Malwarebytes logo and Malwarebytes Anti-Exploit are trademarks of Malwarebytes. Windows, Windows 10, Windows 8.1, Windows 8, Windows 7, Windows Vista and Windows XP are registered trademarks of Microsoft Corporation. All other trademarks or registered trademarks listed belong to their respective owners.

Copyright © 2016 Malwarebytes. All rights reserved.

Contents

1.0 What's New in Malwarebytes Anti-Malware 2.	2.1 1
2.0 System Requirements	2
3.0 Installation	3
3.1 Free, Trial or Premium?	3
3.2 Malwarebytes CD	
3.3 Program Download	3
3.4 Common Installation	3
3.5 A Final Word about Administrative Rights	4
3.6 Activation	5
4.0 Screen Layout	8
4.1 Menu Bar	8
4.2 Main Window	8
5.0 Dashboard	9
5.1 Status Banner	
5.2 License	10
5.3 Database Version	10
5.4 Scan Progress	10
5.5 Real-Time Protection	10
5.6 View License Details	11
5.6.1 Deactivate	
5.6.2 Change License	12
6.0 Scan	13
6.1 Threat Scan	13
6.2 Custom Scan	13
6.3 Hyper Scan	15
6.4 Scan Results	15
6.5 View Detailed Log	16
6.5.1 Scan Logs	18
7.0 Settings	19
7.1 General Settings	
7.1.1 Notifications	
7.1.2 Close Notification	
7.1.3 Language	
7.1.4 Explorer context menu entry	
7.2 Malware Exclusions	
7.2.1 Add File	

7.2.3	Remove	23
7.3 W	eb Exclusions	23
7.3.1	Add IP	24
7.3.2	Add Domain	24
7.3.3	Add Process	24
7.3.4	Remove	24
7.4 De	etection and Protection	25
7.4.1	Detection Options	25
7.4.2	Non-Malware Protection	25
7.4.3	Malware Protection (Premium/Trial versions only)	26
7.4.4	Malicious Website Protection (Premium/Trial versions only)	26
7.5 Մյ	odate Settings	26
7.5.1	Update Options	27
7.5.2	Proxy Settings	27
7.6 Hi	story Settings	28
7.6.1	Statistical Data	28
7.6.2	Scan Log Options	28
7.7 Ac	ccess Policies	29
7.8 Ac	lvanced Settings	30
	ıtomated Scheduling	
7.9.1	Basic Mode	32
7.9.2	Advanced Mode	34
7.9.3	Advanced Scan Options	34
	Advanced Update Check Options	
7.10 Al	out	35
8.0 Hist	ory	36
	ıarantine	
8.2 Ar	oplication Logs	36
-	Protection Log	
8.2.2	Scan Log	38
8.2.3	Viewing or Deleting Logs	40
Annendiy	x A: Notification Window Examples	41

1.0 What's New in Malwarebytes Anti-Malware 2.2.1

Malwarebytes Anti-Malware 2.2.1 contains many improvements and bug fixes. Following is a list of changes.

Improvements:

- Context Menu scanning option is now enabled by default. Note if you had this option disabled previously and want to retain that setting, you must disable again manually this one time only. Future updates will retain the setting properly
- Improved renewal experience for those who purchased in retail store so that the original license key is retained post-renewal instead of requiring that a new key be entered and activated
- Improved End of Trial experience so it is clear that trial has expired and real-time protection is no longer available
- Added additional license checks to ensure subscription details are updated as quickly as possible after a renewal is processed
- Updated company and product logos with new logo
- For Premium subscription licenses, removed Renew button from My Account screen to avoid confusion over license term

Issues Fixed:

- Fixed security vulnerability to ensure database updates are downloaded over SSL connections only
- Fixed crash that occurred if Dell Backup and Recovery software was installed on same system
- Fixed issue where scheduled scan did not honor weekly recurrence properly
- Fixed issue where license expiration notices were incorrectly displaying multiple times in rapid succession
- Fixed issue where the Scheduler would continue to run in certain cases after a trial had expired
- Fixed issue where the update progress bar on the Dashboard would appear to hang and would never complete
- Several improvements to Chameleon self-protection

2.0 System Requirements

Following are minimum requirements for a computer system on which *Malwarebytes Anti-Malware* may be installed. Please note that these requirements do not include any other functionality that the computer is responsible for.

- Operating System: Windows 10 (32/64-bit), Windows 8.1 (32/64-bit), Windows 8 (32/64-bit), Windows 7 (32/64-bit), Windows Vista (Service Pack 1 or later, 32/64-bit), Windows XP (Service Pack 2 or later, 32-bit only)
- CPU: 800 MHz or faster, with SSE2 technology. This includes most modern Intel x86 processors as well as AMD's Athlon 64, Sempron 64, Turion 64 and Phenom CPU families. For further information, please go to: https://en.wikipedia.org/wiki/SSE2
- RAM: 2048 MB (64-bit OS), 1024 MB (32-bit OS, except 256 MB for Windows XP)
- Free Disk Space: 20 MB
- Recommended Screen Resolution: 1024x768 or higher
- Active Internet Connection

3.0 Installation

Malwarebytes Anti-Malware is available in two forms, CD and download. Most aspects of the installation are identical, though there are some differences due to different media being involved.

3.1 Free, Trial or Premium?

Before you begin, we want to let you know that throughout this guide, you will see references to the Free, Trial, and Premium versions of *Malwarebytes Anti-Malware*. This is likely unfamiliar territory for new Malwarebytes users. The following link provides a basic rundown on the differences between the Free and Premium versions of *Malwarebytes Anti-Malware*.

https://www.malwarebytes.org/antimalware/

The Trial is a 14-day opportunity to use the Premium version of the program, and to see if it is better suited to your needs. The Trial is available at no cost, but <u>you can only use it one time</u> for each version of *Malwarebytes Anti-Malware*. You must select the Free Trial option during installation. Once installed, the program provides options to convert from Free to Premium, and from Trial to Premium.

If you elect to use the Trial and do not wish to purchase a Premium subscription at the end of the trial, your *Malwarebytes Anti-Malware* program will revert to Free mode. The only differences will be that the added features enabled by the trial will cease to function. All other functionality remains unchanged.

3.2 Malwarebytes CD

Insert the Malwarebytes CD into your CD/DVD player, and close the door. The Malwarebytes installer should begin automatically. If it does not begin automatically, do the following:

- Open Windows Explorer
- Navigate to your CD/DVD drive
- Go to the **Tools** directory
- Double click on file **mbam-setup-consumer-2.2.xxxxexe** to launch the installation program. **xxxx** represents the specific build of the program, and will change depending on exactly when the CD was built. **Please note** that the ".exe" portion of the filename may not be visible if you do not have Windows Explorer configured to show file extensions.

The remainder of the installation process for the CD version of *Malwarebytes Anti-Malware* can be found just below in the Common Installation section.

3.3 Program Download

To begin the installation, double-click on the Malwarebytes Anti-Malware installation file which you downloaded.

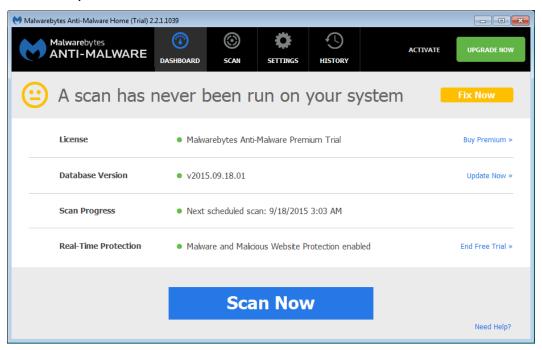
3.4 Common Installation

If you are installing *Malwarebytes Anti-Malware* on a Windows version newer than Windows XP, a Windows dialog box will be presented in the middle of your screen, labeled **User Account Control**. Verify that the publisher is listed as <u>Malwarebytes Corporation</u> and click **Yes**. This is a Windows security feature that began with Windows Vista to assure that an application's capabilities are limited unless and until you authorize higher capabilities. Once approved, the installation will begin. The installation program will display several screens which guide you through the installation, and allow you to provide alternate information if you do not wish to accept installation defaults. Each screen will also allow you to terminate installation if you do not wish to continue. Screens are as follows:

- **Select Setup Language:** You may select from a number of languages to be used during the installation. The language chosen for installation will also be used for program operation.
- **Setup Preparation:** This screen requests that you close all other applications, and temporarily disable both your anti-virus program and firewall program before continuing.
- License Agreement: You must accept the terms of the license agreement if you wish to continue installation.
- **Information Panel:** A change log is presented in the form of an information panel.
- Select an Installation Directory: In most cases, you can simply click Next to accept the default location. <u>Please</u> note that the amount of free disk space required for the program is listed at the bottom of this screen. You should assure that you have sufficient disk space for the program as well as for program logs.
- Select a Start Menu Folder (optional): Links to start Malwarebytes Anti-Malware will be stored here.
- Additional Tasks: You may also create a desktop icon here if you choose.
- Ready to Install: A final confirmation is required from you to perform the installation.
- **Installation Complete:** You may now choose to enable a Trial of *Malwarebytes Anti-Malware* Premium, and you may also launch *Malwarebytes Anti-Malware* at this time.

At this point, program installation is complete. You will see the user interface as shown below. If you have already purchased a Malwarebytes license, you may wish to activate your copy of *Malwarebytes Anti-Malware* at this time. You can do that now (or at any time) by clicking the <u>Activate</u> link in the black Menu Bar at the top of the Malwarebytes user interface.

You will notice the banner across the interface which tells you that a scan has not been run on this computer. Click the **Fix Now** button to run your first scan.



As the scan began, *Malwarebytes Anti-Malware* automatically downloaded the most current database update – assuming that a live Internet connection was available. This is to assure that you receive the best protection possible.

3.5 A Final Word about Administrative Rights

If you installed *Malwarebytes Anti-Malware* from a downloaded installation file, you had the option of starting a free Trial of our Premium version, as well as the capability to activate the Premium features if you had purchased an annual

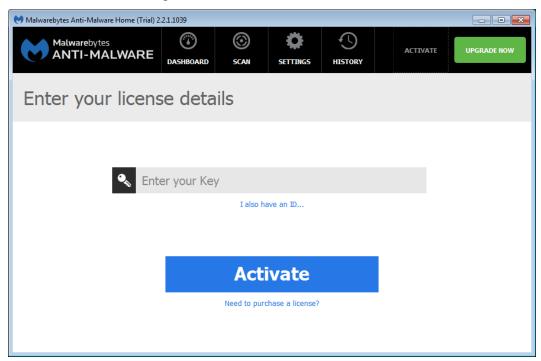
subscription. You may have decided to wait until later. If that is the case, please remember that you should be logged in to Windows as an <u>Administrator</u> before doing either of those tasks.

3.6 Activation

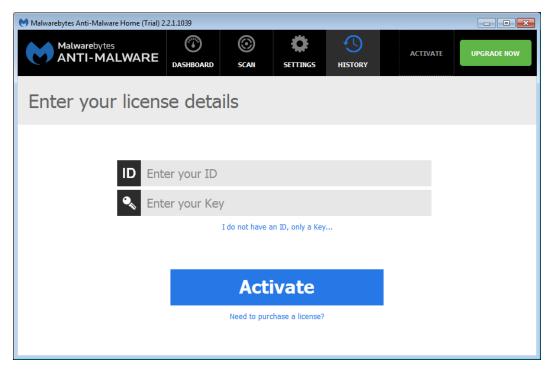
Malwarebytes Anti-Malware is available for any Windows user to download and install at no cost to them. They can also purchase an annual subscription, which entitles them to take advantage of real-time protection, scan/update scheduling, access policies, and the ability to utilize all of these features on up to three computers under the same license.

If no license has been installed into the product, the black Menu Bar at the top of the screen will show an **Activate** link and an **Upgrade Now** button. When clicked, **Upgrade Now** takes the user to a screen which shows the advantages of purchasing a license, and provides the option of launching a browser window which will take them to the Malwarebytes web site to purchase a license.

Your license information will be either in the form of a sticker which was enclosed with your Malwarebytes CD, or in an email sent to you by Malwarebytes at the time of purchase. Locate your license information and click the **Activate** button. You will then see the following screen.

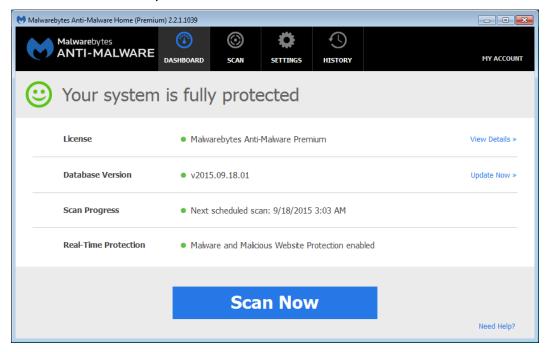


Please note the blue text ("I also have an ID...") directly under the box in which you would enter your **Key**. We have moved to a new licensing system which uses a new license scheme. The new scheme uses only a **Key**. If you are still using the older style license, you will have both an **ID** and a **Key**. If that is the case, click the blue text, and you will see the following screen.



Important: Please note that you must be online with an active Internet connection in order to successfully activate your Premium license.

The construction of the **Key** is different, so make sure that you choose the right screen for entering your license information based on whether you have an **ID** and a **Key**, or just a **Key**. After entering in your license information click the **Activate** button. Your Malwarebytes screen will refresh, as shown below.

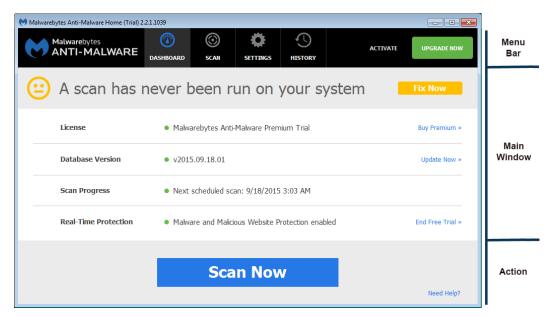


Please note that the two license-related links in the Menu Bar have been replaced by a link called **My Account**. Also note that the <u>License</u> has changed from *Malwarebytes Anti-Malware Premium Trial* to *Malwarebytes Anti-Malware Premium*.

We will go into much more detail about the features of <i>Malwarebytes Anti-Malware</i> , but before doing that, we should introduce you to the Malwarebytes user interface.

4.0 Screen Layout

The *Malwarebytes Anti-Malware* program interface is designed around a screen layout which is simplified and uncluttered. We want to make it easy for you to configure the program to serve your needs, and we hope this layout helps to do that. The screenshot below shows the Malwarebytes user interface, showing the Dashboard – the screen you see when *Malwarebytes Anti-Malware* is launched for the first time.



Let's talk about the primary elements which make up our user interface.

4.1 Menu Bar

The Menu Bar contains the main program options, which will be discussed in detail in this guide. They consist of:

- Dashboard: What you see here. While the exact details change over time, the look is consistent.
- **Scan:** Select the type of scan you wish to run, run it, and view the results.
- **Settings:** Configure every aspect of *Malwarebytes Anti-Malware*, so that it can protect you efficiently.
- History: View historical logs containing information on program updates, database updates, and scan results.

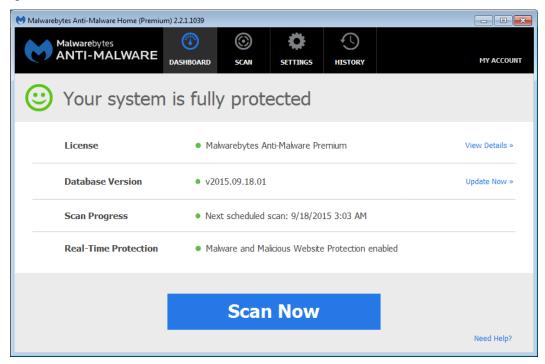
In addition, there are settings for Account information. While in Trial mode, options are present to **Activate** the program, or to buy the Premium subscription. Once you have purchased a subscription, those two options will revert to a single option which handles details of your account. More on those later.

4.2 Main Window

This is the area where almost all activities related to configuration and operation of *Malwarebytes Anti-Malware* will be displayed. In Dashboard mode, the screen simply displays program status. In all other modes, the Main Window is subdivided in a different manner. The left edge of the screen is reserved for a column of buttons (or tabs if you prefer). Clicking any button launches appropriate program content in the remainder of the Main Window. More on this later. In the meantime, let's continue by looking at the *Dashboard* in more detail.

5.0 Dashboard

Each time *Malwarebytes Anti-Malware* is launched, the first page visible to the user is the *Dashboard*. It is designed to provide Malwarebytes status, and to act as a *launch pad* for all program operations. A screenshot of the user interface – featuring the Dashboard – is shown below for reference.



5.1 Status Banner

Within the Main Window, the first item displayed is the <u>Status Banner</u>. This banner displays a status message, along with a face icon, whose color is based on program status. The color is meant to alert the user to conditions which may require intervention. Colors used are similar to traffic stop signals – *green* simply indicates a good status; *orange* indicates a warning of a condition which may become more severe over time; *red* indicates that your immediate attention is needed. Following is a full list of status messages. If a recommended method of correcting the problem is immediately available, it will appear as a functional button on the banner itself.

- Color: green (no problem)
 - Your system is fully protected
 - Malwarebytes Anti-Malware (Free)
- Color: orange (non-critical problem)
 - o A scan has never been run on your system
 - Your databases are out of date
 - Your program version is out of date
 - Your Trial will expire in <X> days
 - Your License will expire in <*X*> days
- Color: red (critical problem)
 - Your free trial has expired
 - Your License period has expired
 - Your system is not fully protected

5.2 License

If you have purchased a license for your copy of *Malwarebytes Anti-Malware*, it is shown here. If your license type is *Malwarebytes Anti-Malware Premium*, there is a <u>View Details</u> link available which allows you to access two options related to your license. That will be covered a bit further down in this section. If you have not purchased a license, the license will be listed as *Malwarebytes Anti-Malware Trial*. There will also be a <u>Buy Premium</u> link, which you may click if you wish to purchase a subscription to the Premium features.

5.3 Database Version

This item shows the version of the Malwarebytes Rules database which is currently installed. Referring to the screenshot (above), the database version is shown as <u>v2015.09.18.01</u>. This indicates that the database was created on September 18, 2015, and was the first update released on that day. Dates and times used in the version number are referenced to Greenwich Mean Time (GMT). This means that versions could appear to be *in the future* depending on the difference between GMT and your time zone. That could change on an hour-by-hour basis. That said, your biggest concern here is a version number that is clearly in the past. The green dot to the left of the version number indicates that this screenshot was created while the database was considered current.

Clicking the **Update Now** link causes *Malwarebytes Anti-Malware* to attempt a non-scheduled database update. If an update is available, you will see a progress bar which shows status of the update until the update has completed. The Database Version will then show a new version number. If no updates are available, the progress bar will indicate the update attempt, to be replaced by the text "No updates available" for several seconds. The database version number will again be displayed.

<u>Please note</u> that database updates occur automatically when a scan is initiated (all users), and according to programmed schedules (Trial or Premium users only). All updates are dependent upon a live Internet connection.

5.4 Scan Progress

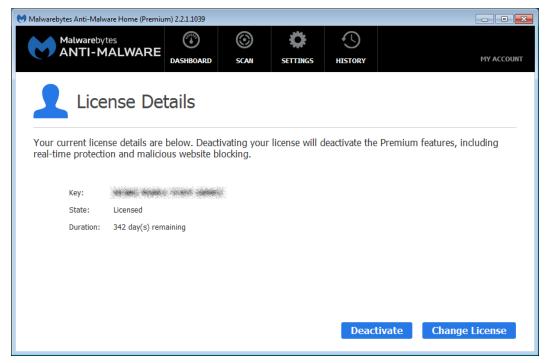
This item shows when the next scan is scheduled to occur. Clicking the **Scan Now** button will cause a scan to occur immediately, and change to the <u>Scan</u> screen at the same time. Clicking the **Dashboard** button at that time will allow you to see scan progress reflected on the Dashboard, though the <u>Scan</u> screen provides much more detailed information. <u>Please note</u> that scheduled scans are available only if you are using <u>Malwarebytes Anti-Malware</u> on a Trial, or if you are a licensed (Premium) user. This feature is not available if you are using the Free version.

5.5 Real-Time Protection

This item shows whether Real-Time Protection is enabled or disabled. If you are in Trial mode, it is enabled <u>unless</u> you click the **End Free Trial** button. <u>Please note</u> that real-time protection is enabled only if you are using <u>Malwarebytes Anti-Malware</u> on a Trial, or if you are a licensed (Premium) user. This feature is not available if you are using the Free version.

5.6 View License Details

If you have purchased an annual subscription for Premium services, this page is accessible from the <u>Dashboard</u> via the **View Details** link, and also by using the **My Account** link in the Top Menu. A screenshot of the page is shown below.



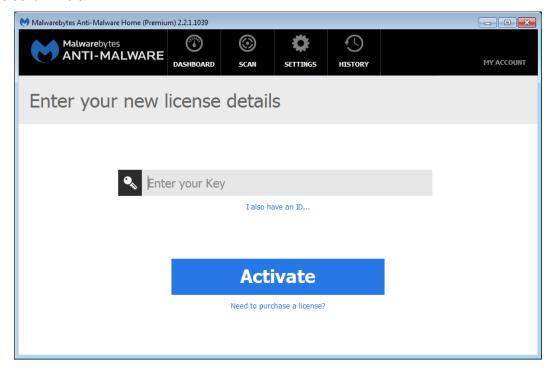
This page shows your license key, the license state, and how long the license is valid for. If you have a lifetime license, the word "Lifetime" will be displayed here instead of the number of days remaining. If you require technical support or license support, information from this page will be requested from you. In addition to this information, there are links in the bottom right corner which allow you to **Deactivate** or **Change License**.

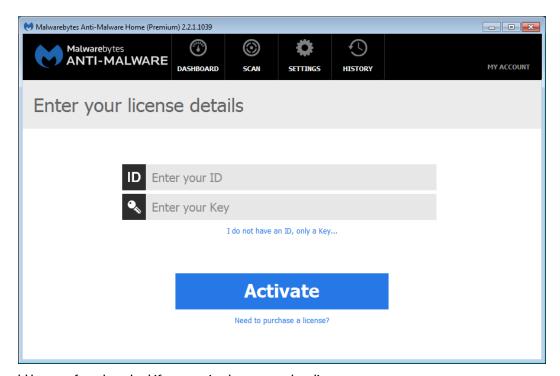
5.6.1 Deactivate

Clicking this link brings up a prompt asking you to confirm that you want to deactivate your license. This is a method you could use as part of transferring your Malwarebytes subscription to another computer. Deactivating your license causes *Malwarebytes Anti-Malware* to change from Premium mode to Free mode.

5.6.2 Change License

Clicking this link brings up a screen so that you can enter a new **Key** (or **ID** and **Key**) to replace those that are currently in use. (The dual licensing scheme was discussed in Section 3.6, earlier in this guide.) The screen for each licensing scheme is shown here.

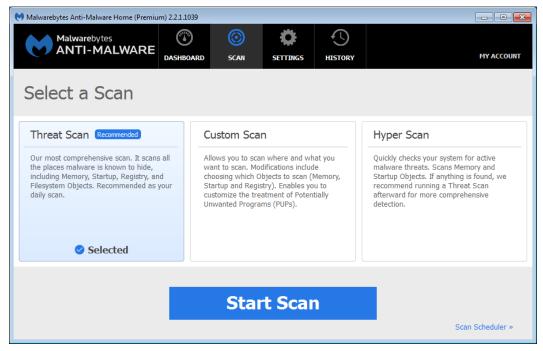




This would be a preferred method if you received a new product license.

6.0 Scan

The <u>Scan</u> option is available from the Malwarebytes Menu Bar. There are two screens directly associated with this option. The screen shown below is your initial view into this option.



If you are a Premium user or are taking advantage of the Premium trial offer, there is a <u>Scan Scheduler</u> link at the bottom right corner of this screen, allowing you to configure a scheduled scan. This feature is discussed in the <u>Settings</u> section of this guide (Section 7). There are three types of scans which can be selected and executed here. Let's talk about each...

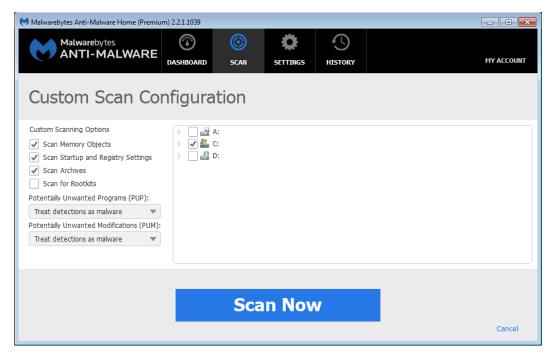
6.1 Threat Scan

This method of scanning detects a large majority of threats that your computer may be faced with. Areas and methods tested include:

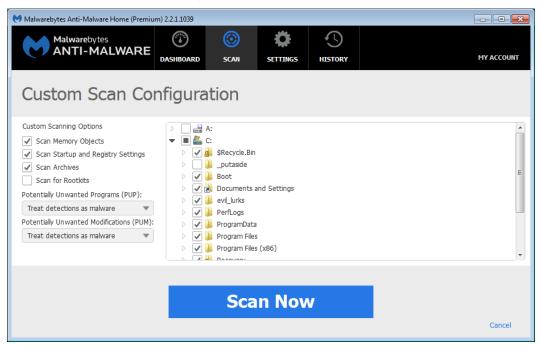
- Memory Objects: Memory which has been allocated by operating system processes, drivers, and other
 applications.
- **Startup Objects:** Executable files and/or modifications which will be initiated at computer startup.
- Registry Objects: Configuration changes which may have been made to the Windows registry.
- File System Objects: Files stored on your computer's local disk drives which may contain malicious programs or code snippets.
- Heuristic Analysis: Analysis methods which we employ in the previously-mentioned objects as well as in
 other areas which are instrumental in detection of and protection against threats, as well as the ability to
 assure that the threats cannot reassemble themselves.

6.2 Custom Scan

You may also choose to run a custom scan. A custom scan allows you to scan according to specifications which you define at the time of the scan. All other Malwarebytes scans are performed according to a set of specifications which you define in *Settings* (to be discussed in Section 7). Here, you can run a "one-off" if you wish. A screenshot of the custom scan configuration screen is shown below.



Custom scanning options (left side of the screen) have been discussed somewhat in the text above, and are discussed much more fully in *Settings* (Section 7). An important feature to note here is the ability to specify certain areas of your file system for scanning, using a Windows Explorer-like presentation model. In the screenshot below, one specific directory has been excluded from scanning by unchecking it.



You will notice that the checkbox for <u>C:</u> is now filled by a square instead of a checkbox. This indicates that *some* of this drive (but not all) will be scanned. You may have your own reasons why certain directories should be scanned or ignored, but *Malwarebytes Anti-Malware* gives you the ability to make that choice.

6.3 Hyper Scan

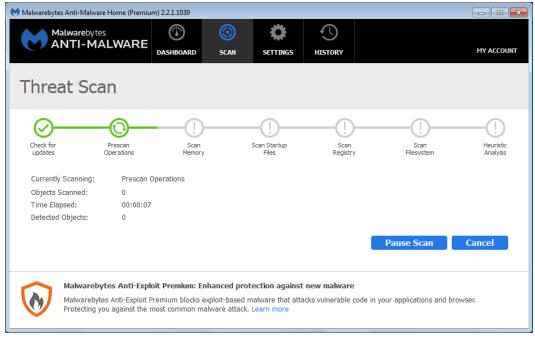
This scanning option is only available to users of *Malwarebytes Anti-Malware* Premium and Trial versions. This method of scanning is limited to detection of immediate threats. Areas and methods tested include:

- Memory Objects: Memory which has been allocated by operating system processes, drivers, and other
 applications.
- Startup Objects: Executable files and/or modifications which will be initiated at computer startup.
- **Heuristic Analysis:** Analysis methods which we employ in the previously-mentioned objects as well as in other areas which are instrumental in detection of and protection against threats, as well as the ability to assure that the threats cannot reassemble themselves.

While a Hyper Scan will clean any threats which have been detected, we strongly recommend that a <u>Threat Scan</u> be performed if a Hyper Scan has detected threats.

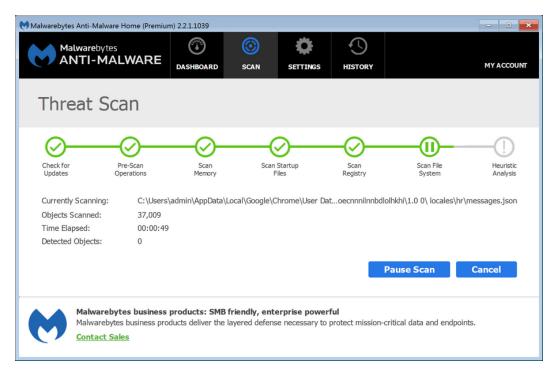
6.4 Watching Scan Progress

The three types of scans which may be executed each require a certain amount of time to complete. The custom scan is highly variable because the time required is completely dependent on the number of locations – and the number of files in those locations – which must be scanned. We have redesigned the scan screens to help you see the progress of the scan as it is taking place. Refer to the screenshot below for an example of an *in-process* scan screen.



The progress bar shows milestones for each phase of the scan, with each milestone represented by a green or gray symbol. The first milestone in the above screenshot contain a green checkmark, indicating that phase of the scan has been completed. The second milestone is represented by an animation which indicates that this phase of the scan is currently being performed. The last five milestones – all shown by gray exclamation points – are phases of the scan yet to be completed. As you run a scan, you will see this progress bar changing, until finally the scan completes.

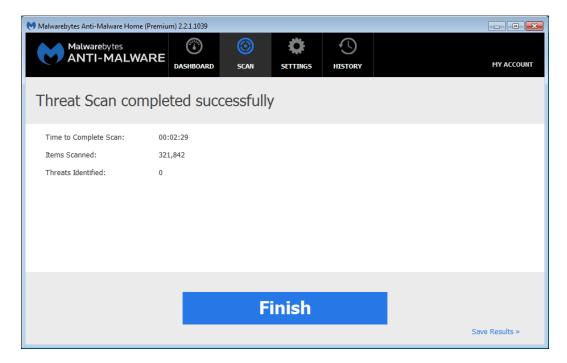
You may also pause a scan while it is in process by clicking the **Pause Scan** button. Doing so produces the result as shown in the following screenshot.



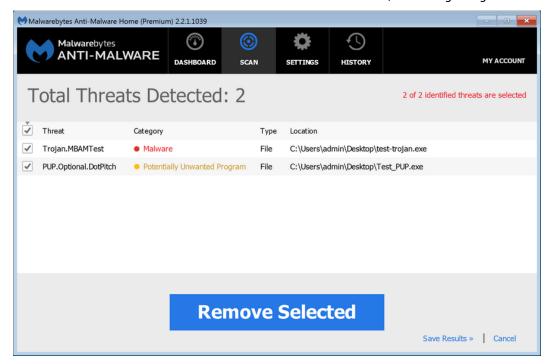
As shown here, five phases of the scan had been completed, and the **Pause Scan** button was pressed while the file system was being scanned. Click **Resume Scan** to continue the scan where it left off. You may also click **Cancel** at any time to terminate the scan. Results of the scan will be reported as if the scan ran to completion.

6.5 Scan Results

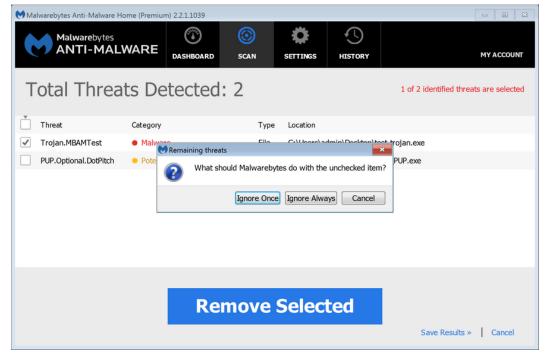
After a scan has been executed, a different page is displayed. Here, we see the display when no threats were detected.



When threats are detected during a scan, the user must decide how these threats should be handled. The following series of screenshots detail this flow. In the first screenshot, two threats have been detected. By default, all are selected for removal. Please note that the total number of detected threats is shown above the list of threats, and the number of threats that have been selected for removal is shown in red on the same line (near the right edge of the screen).

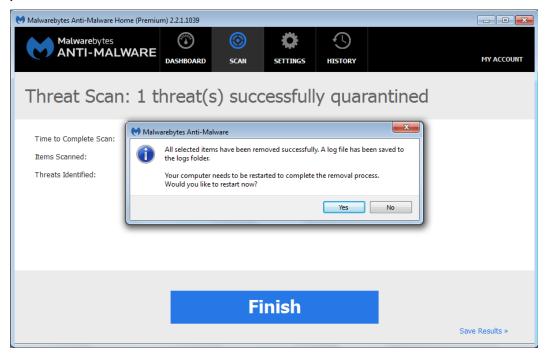


In order to demonstrate the behavior of this screen, we will uncheck the second threat. This indicates that only the first threat is to be removed. Clicking the **Remove Selected** button results in the screen shown below.



The threat that was not selected still requires remediation, based on input supplied by the user. In this case, the choices available are **Ignore Once**, **Ignore Always** and **Cancel**. Clicking the **Ignore Once** button temporarily ignores the threat,

although it will be shown as a threat on subsequent scans. Selecting **Ignore Always** results in the threat being added to the Exclusion List. It would not be scanned in the future. Clicking **Cancel** keeps you on this screen until you choose how to handle the detected threat. Once a disposition has been selected for all detected threats, the screen below will be displayed.



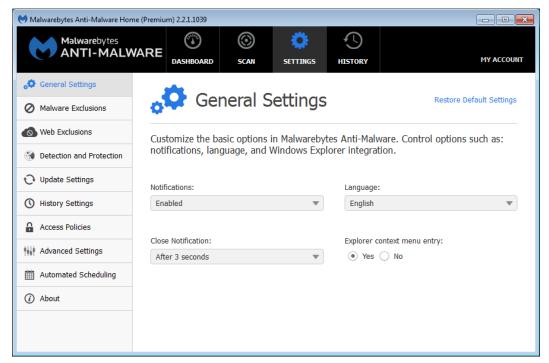
Although a threat has been quarantined, you must restart the computer to assure the threat removal process is complete. If you choose to wait on the restart, you will be reminded.

6.5.1 Scan Logs

Scan results are available in Scan Logs which are retained by *Malwarebytes Anti-Malware* (see Section 7 of this guide for details), or click the **Save Results** link at the bottom right corner of the screen to save results to your clipboard (for use with other programs), to a text file, or to an XML file. You can also view Scan Logs from within the *Malwarebytes Anti-Malware* user interface. See section 8.2.2 of this guide for details on viewing of logs.

7.0 Settings

The <u>Settings</u> screen is the top-level page which controls all configuration settings for *Malwarebytes Anti-Malware*. A screenshot of this screen is shown below.



Throughout this section, the Main Window is divided into two areas. The left edge shows a column of buttons. We have grouped settings by the areas/functions which they control, in order to maintain a clean user interface. These buttons provide access to each of the various groups of settings. As you click any of the buttons, you will see the large portion of the Main Window change to reflect the button which you pushed. At the same time, the background of the button itself changes color. Also, if you navigate away from *Settings* – to *Dashboard*, *Scan* or *History* – you will always return to the <u>General Settings</u> tab when you click on <u>Settings</u>.

Before we dig in to each of the Settings tabs, a brief description of each is in order.

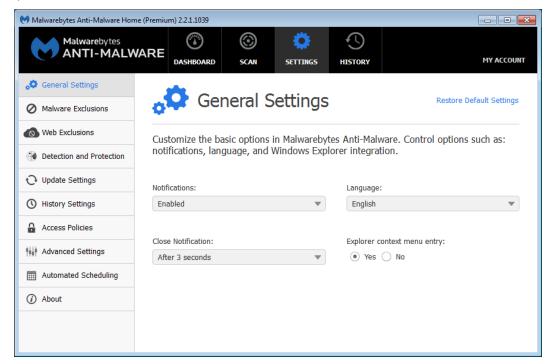
- General Settings: Look and feel of Malwarebytes Anti-Malware
- Malware Exclusions: Files and/or folders to be excluded from scanning
- Web Exclusions: IP addresses, internet domains or processes to be excluded from blocking by Malwarebytes
 Website Protection
- Detection Settings: Behavior of Malwarebytes Anti-Malware as it relates to threat detection
- Update Settings: Settings related to program or rules database updates
- History Settings: Formatting of program logs
- Access Policies: "Who can do what." This is of value when multiple people use the same computer.
- Advanced Settings: Specific behavior of real-time protection
- **Automated Scheduling:** Scheduling of scans and updates
- **About:** Program version number and third-party license notices

Most Settings tabs offer a link (in the upper section of the Main Window) to return settings to their original state. For each tab, this guide will specify the default/recommended value for each setting.

Now, let's take a look at General Settings!

7.1 General Settings

This is the first screen you will see when you click on <u>Settings</u> in the Menu Bar. It controls the basic look and feel of *Malwarebytes Anti-Malware*. A screenshot of this screen is shown below.



There are four settings which can be configured here. They are as follows:

7.1.1 Notifications

Notifications regarding rules database updates, program updates, and scan operations occur in notification windows. These windows appear at the lower right corner of your screen, outside of the *Malwarebytes Anti-Malware* interface. You may enable or disable these notifications. Notifications are enabled by default. **Please note** that some non-critical information may not be visible if you disable notifications.

Also, certain notifications may not be disabled. They will continue to be displayed regardless of this setting. The notifications which cannot be disabled are listed below. In many cases, these notifications will disappear after the amount of time selected by the Close Notification setting. Others exhibit different behavior. If this is the case, their behavior is also listed below.

- Trial Expired: You may close this notification temporarily by clicking the Later button, or permanently by clicking End Trial. You may also click Buy Now to purchase the product and receive a license key which will eliminate this notification once it has been activated. This notification will appear only in Trial mode. If you click Later, this notification will appear each time you launch the Malwarebytes Anti-Malware user interface.
- Malware Detected (auto-quarantine): This notification will only appear in Trial or Premium modes.
- Malware Detected (manual quarantine): This notification is associated with real-time protection, and prompts
 you to choose how the threat should be handled. You may choose to Allow Once (temporarily ignore the
 detection), Allow Always (add the threat to the Exclusion List), or Quarantine. If you do not respond with a
 specific action within forty (40) seconds, the threat will be quarantined automatically. This notification will
 only appear in Trial or Premium modes.
- Non-Malware Detected (manual quarantine): This notification is associated with real-time protection, and your decision to treat PUPs/PUMs as malware. You will be prompted to choose how the threat should be handled. You may choose to Allow Once (temporarily ignore the detection), Allow Always (add the threat to

- the Exclusion List), or **Quarantine**. <u>If you do not respond with a specific action within forty (40) seconds, the threat will be guarantined automatically.</u> This notification will only appear in Trial or Premium modes.
- Malicious Website Blocked: This notification is associated with real-time protection. You may click the Manage Web Exclusions link to review current web exclusions. This notification will automatically disappear. This notification will only appear in Trial or Premium modes.
- **Scan Complete Malware Detected:** Malware was detected during execution of a scan. Click the notification to view scan results. This notification will automatically disappear.
- Scan Complete Non-Malware Detected: Non-malware (PUPs/PUMs) was detected during execution of a scan. Click the notification to view scan results. This notification will automatically disappear.
- **Databases Out of Date:** Malwarebytes threat signatures are out of date. Click Update Now to attempt to update threat signatures. This notification will automatically disappear upon an update attempt, but will reappear if the update was unsuccessful. See Section 7.5 of this guide for information pertaining to this setting.
- **Protection Disabled:** Real-time protection has been disabled. This may be due to user selection, and may be an indication of system and/or malware problems. This notification will remain on screen until real-time protection is functioning normally. This notification will only appear in Trial or Premium modes.

7.1.2 Close Notification

When a notification window is displayed on your screen, it remains visible for a time period which you configure here. That time is configurable in a range of 3-15 seconds. The default time is three (3) seconds.

7.1.3 Language

This setting determines the language used throughout *Malwarebytes Anti-Malware*. This is pre-set, based on the language used during program installation. It can be modified at will.

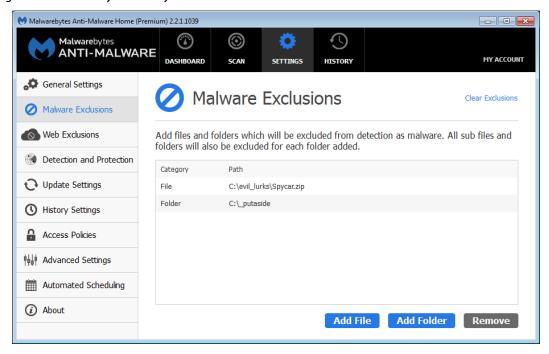
7.1.4 Explorer context menu entry

Malwarebytes Anti-Malware has the capability to launch a *Threat Scan* upon one or more individual files or directories from within Windows Explorer by using the context menu that becomes available when the files/directories are right-clicked. This setting allows that capability to be turned on or off. The default setting is Yes (on).

PLEASE NOTE: If you had previously disabled this feature, the version 2.2.1 program update requires you to disable the feature following the program update. Once disabled, that setting will be retained.

7.2 Malware Exclusions

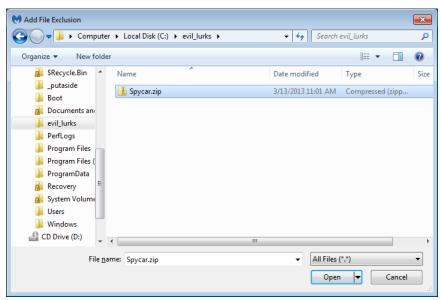
This screen allows files and/or folders to be excluded from Malwarebytes scans. While you may have your own reasons for excluding files or folders from scans, the primary reason for doing so is to prevent potential conflicts with anti-virus software. Malwarebytes works well alongside most anti-virus software, but anti-virus updates by some vendors may occasionally be flagged as a threat. For this reason, we offer the provision for you to exclude certain disk content from scanning. This is commonly offered by anti-virus vendors as well. A screenshot of this screen is shown below.



This screen features three actions which may be performed.

7.2.1 Add File

Clicking the <u>Add File</u> button allows you to exclude one file from scanning by *Malwarebytes Anti-Malware*. The file to be excluded is selected in a separate window, which is shown here.



If you wish to exclude multiple files within a single directory, you must exclude each individually. You may exclude as many files as you wish, but they must be specified individually. Once specified, the file(s) will appear in the Exclusion List in the main window. Please note that the dimensions of this window have been modified from the size that the window opens to initially. This was done for clarity of presentation here. You may modify the size of this window to suit your needs as well.

7.2.2 Add Folder

You may also exclude folders from scanning. As with files, you may exclude as many folders as you wish, but each must be specified individually. <u>Please note</u> that selecting a folder for exclusion will also cause every file in that folder as well as any sub-folders and files contained within those sub-folders to be excluded. Folder exclusion will be performed in a second window which is identical in construction to the window used for file exclusion. Once selected, excluded folders will be shown in the exclusion List.

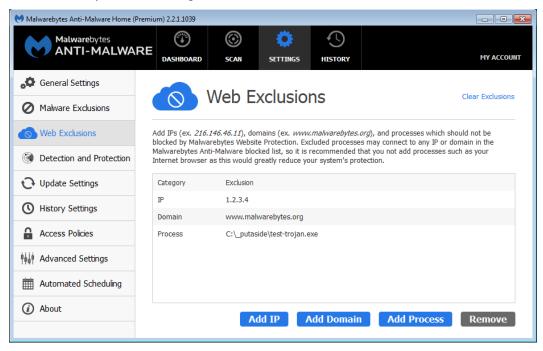
7.2.3 Remove

It is a very simple process to remove a file or folder from the Exclusion List. Click the file or folder in the Exclusion List to select it, then click the **Remove** button. It will immediately disappear from the Exclusion List, and will no longer be excluded. You may remove all exclusions at once by clicking the **Clear Exclusions** link.

7.3 Web Exclusions

This screen allows users of *Malwarebytes Anti-Malware* Premium and Trial versions to exclude IP addresses, Internet domains and processes from Website Protection. <u>This screen is disabled for users of the Free version</u>, because Malicious Website Protection is disabled in the Free version.

<u>Please note</u> that this is <u>not</u> a method of blocking access. It is exactly the opposite. Unless you are a knowledgeable computer user, you will likely find out what needs to be excluded because of blocked access to a web site and resulting notifications that alerted you to the blockage. A screenshot of this screen is shown here.



For demonstration purposes, three entries have been added to the Web Exclusions list shown on this screenshot. These are described here.

7.3.1 Add IP

Clicking the **Add IP** button allows you to exclude an IP address from Malwarebytes Website Protection. You should not use wildcard characters in the IP address to be excluded, as exclusion of IP addresses which you are not familiar with can compromise your safety. You can also add an IP address exclusion when it is blocked by Malwarebytes Website Protection by clicking the link in the block notification message.

7.3.2 Add Domain

Clicking the **Add Domain** button allows you to exclude an Internet domain from Malwarebytes Website Protection. You can also add an Internet domain exclusion when it is blocked by Malwarebytes Website Protection by clicking the link in the block notification message. **Please note** the following two important items:

- If adding a domain manually, you should add it both with and without the "www." prefix. Depending on several external factors, the domain may still be blocked if only one variation is entered.
- The ability to add a domain to the Web Exclusion list is only functional on Windows Vista Service Pack 2, Windows 7, Windows 8.x and Windows 10.

7.3.3 Add Process

Clicking the **Add Process** button allows you to exclude a process which would otherwise be blocked from accessing an Internet address. <u>Please note</u> that this option is only functional on Windows Vista Service Pack 2, Windows 7, Windows 8.x and Windows 10. This is typically of value to users who need to access file sharing and/or peer-to-peer applications. On occasion, IP addresses used by these applications may be blacklisted, so that Malwarebytes Website Protection blocks access to the website as a whole. Excluding the IP address makes the user more vulnerable, as would exclusion of the domain (if the website uses a domain name). Excluding the process – providing that the process is <u>not</u> an internet browser – would allow the P2P application to function without increasing risk.

7.3.4 Remove

It is a very simple process to remove an IP address, domain or process from the Exclusion List. Click on its entry in the Exclusion List, then click the **Remove** button. It will immediately disappear from the Exclusion List, and will no longer be excluded. You may remove all exclusions at once by clicking the **Clear Exclusions** link.

7.4 Detection and Protection

This screen allows you to define how *Malwarebytes Anti-Malware* searches for potential threats on your computer, and what actions will be taken when threats are detected. A screenshot of this module is shown below, with recommended (default) settings displayed.



7.4.1 Detection Options

The <u>Detection Options</u> settings determine specifically what methods *Malwarebytes Anti-Malware* uses to detect and identify modifications which are determined (or suspected) to be malicious in nature. **Use Advanced Heuristics Engine (Shuriken)** enables a second method of heuristic analysis as part of our malware detection techniques. Heuristic analysis is always employed, even when this option is not selected.

Scan for rootkits utilizes a specific set of rules and tests to determine if a rootkit is present on your computer. For readers who are unfamiliar with this term, an explanation may be handy. A rootkit is malicious software that can be placed on a computer which can modify operating system files in a manner that hides its presence. Malware detection methods that rely on hooks to the operating system for detection and analysis would prove ineffective if the hooks had been purposely manipulated by malware. Our testing method is more intensive and more effective, but including rootkit scans as part of your overall scan strategy increases the time required to perform a scan.

When **Scan within archives** is enabled, *Malwarebytes Anti-Malware* will scan three levels deep within archive (ZIP, RAR, 7Z, CAB and MSI) files. If this option is disabled, only the first level of the archive is tested. **Please note** that encrypted archives cannot be fully tested.

7.4.2 Non-Malware Protection

In addition to malicious software detection and elimination, *Malwarebytes Anti-Malware* also detects and acts upon two classes of *non-malware*. These are Potentially Unwanted Programs (PUP's) and Potentially Unwanted Modifications (PUM's). In many cases, PUP's appear in the form of toolbars and other application software which are installed on your computer as part of a bundle. You may have asked for one application, and it came with a second application that was not mentioned, *or* was mentioned, but you did not uncheck the checkbox next to it to prevent it from being installed at the same time. You may also want and use the PUP. We do not judge the merit of the program or its usability. We do offer a method of removing it if you choose to.

PUM's are a bit different. These are modifications that are typically related to the Windows registry. As a user, you will generally not be making changes to the registry that would qualify as a PUM – though the possibility does exist. Because it does, we allow you to define your own rules when it comes to how they are treated.

With regard to both types of modifications, we provide three handling methods. These are:

- **Ignore Detections:** Malwarebytes will not act on detection, nor will you be alerted.
- Warn user about detections: You will be alerted to the detection, and you may choose to ignore it, create an exclusion, or treat it as malware.
- Treat detections as malware: The detection will be treated as malware, and corrective actions will occur.

While PUP's and PUM's are both handled in the same manner, each is handled according to separate guidelines which you specify.

7.4.3 Malware Protection (Premium/Trial versions only)

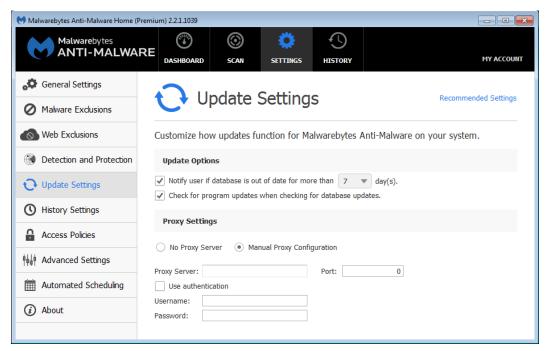
Malwarebytes Anti-Malware allows you to disable Malware Protection when necessary. While we do not recommend disabling this protection mechanism, there may be times when it needs to be done to troubleshoot compatibility issues that arise with anti-virus updates or computer startup problems. If either situation does occur, start your computer in Safe Mode, disable Malwarebytes Malware Protection, isolate and correct the issue, then turn Malware Protection back on. <u>Please note</u> that settings for this option are disabled (grayed out) if you are using the Free version.

7.4.4 Malicious Website Protection (Premium/Trial versions only)

This option allows you to enable or disable protection revolving around websites as a whole. This option does <u>not</u> treat different protocols differently. It does not distinguish between your favorite game being served on one port and a potential malware source being served on another. Should you choose to disable this feature, you could inadvertently compromise your computer's safety. <u>Please note</u> that settings for this option are disabled (grayed out) if you are using the Free version.

7.5 Update Settings

This screen allows configuration of update settings for your Malwarebytes installation. A screenshot of this module is shown here.



7.5.1 Update Options

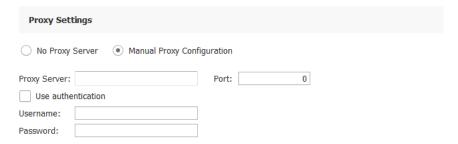
You may specify if you will be notified if your rules database is out of date, and if so, how many days late it may be before you are notified. The date range is adjustable between one (1) and twenty-eight (28) days. We recommend that you do not allow the rules database to become dated, as much damage is caused by zero-day infections – those threats that are too new to be adequately protected against by anti-virus software.

You also have the option to check for program updates when checking for database updates, or limiting the check to database updates only.

7.5.2 Proxy Settings

This setting determines whether connections to the Internet (for database and program updates) will use a proxy server in conjunction with that access. In a home environment, only advanced users utilize proxy servers, and then on a limited basis. They are more often used on a corporate network. They have two primary purposes. The first is to funnel all communications to and from the outside world through a single connection point, thus assuring anonymity of all computers on the corporate network. The second purpose is to utilize *content caching*. This means that any external content which had recently been requested by any user could be saved locally for some period of time, then subsequent requests by that user (or others) could use the recently-saved data. This method often conserves significant bandwidth, resulting in lower operating costs for companies that use this strategy.

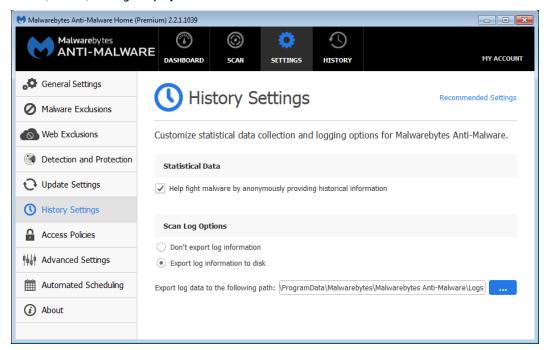
By default, *Malwarebytes Anti-Malware* does not use a proxy. If configured to do so, the bottom panel will change to provide configuration options as shown in the following screenshot.



You can now specify the IP address or name of a proxy server, as well as the appropriate port number. If a proxy is in use, the name and port number must be specified by the person who controls access to the proxy server. He will also be able to tell you whether authentication is required to use the server, and if so, provide a username and password which have been assigned to you.

7.6 History Settings

This screen controls logging options for *Malwarebytes Anti-Malware*. A screenshot of this module is shown below, with recommended (default) settings displayed.



7.6.1 Statistical Data

If you check this box, you will be sending us information that helps us do our jobs. Our Marketing organization likes to know what countries *Malwarebytes Anti-Malware* is being used in, and the breakdown of subscriptions, Trial versions, and Free versions. Our Research organization likes to keep track of what malware we are detecting and how often. We can learn that from what you send us, and that allows us to serve you more effectively. That's all the information we collect, and that's fine with us. We hope that's fine with you as well.

7.6.2 Scan Log Options

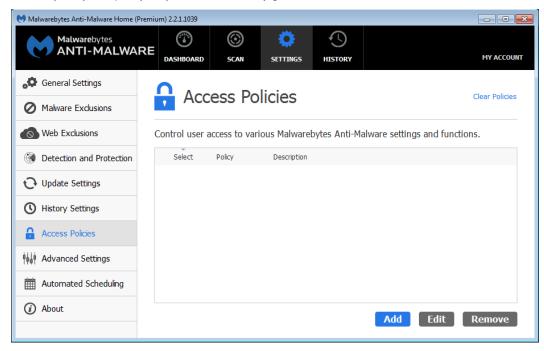
You can choose to **Export log information to disk**. This option and the **Don't export log information** option work together. If one radio button is selected, the other is deselected. If you choose to export log information to disk, it is stored in Extensible Markup Language (XML) format. When exporting logs, you may accept the default path as shown, or specify a new path. Scan logs are stored in:

- Windows XP:C:\Documents and Settings\All Users\Application Data\Malwarebytes\ Malwarebytes Anti-Malware\Logs
- Other OS versions: C:\ProgramData\Malwarebytes\Malwarebytes Anti-Malware\Logs

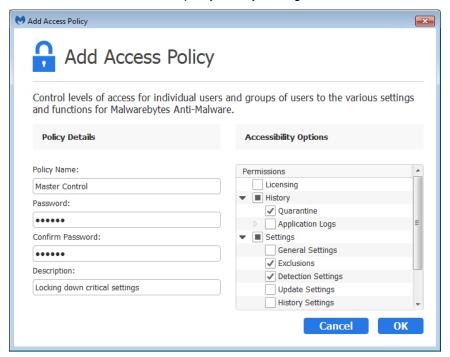
When specifying a new path, clicking the button to the right of the default path brings up a window similar to that used in Windows Explorer. There, you may specify the new path.

7.7 Access Policies

This screen allows users of *Malwarebytes Anti-Malware* Premium and Trial versions to restrict access to various features and functions in *Malwarebytes Anti-Malware* with password protection. This feature is not available to users of the Free version. Currently, only one policy may be in effect at any given time. A screenshot of this module is shown below.



The bottom portion of the screen provides buttons to allow you to **Add** a new policy, **Edit** or **Remove** an existing policy, or **Clear Policies** as a whole. Let's add a new access policy now by clicking the **Add** button.



The screenshot above shows a newly-created Access Policy. The left half of the screen shows that information to identify the policy has been provided, along with a password. The right side shows the specific functions of

Malwarebytes Anti-Malware to be controlled by the new Access Policy. Every program function is listed here, but this screenshot shows only those that are to be controlled. The black square in front of *Settings* means some – but not all – of this group are affected. The checkmarks specify which are affected.

When attempting to gain access to any checked areas, you will be required to enter a password (as shown below).

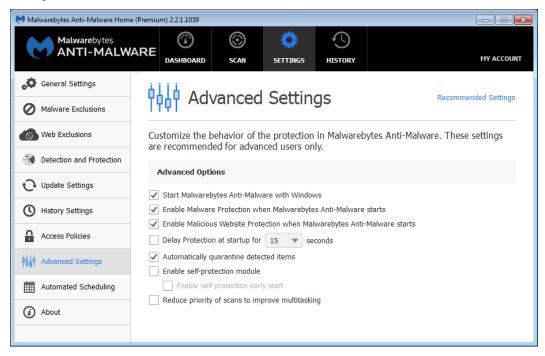


Because <u>Access Policies</u> have been placed under control of the new policy, the password is also required to add, edit, remove or clear policies.

WARNING: Please don't forget your password. If you do lose your password, the only way to regain control of password-affected areas is to uninstall and reinstall *Malwarebytes Anti-Malware*.

7.8 Advanced Settings

This screen allows users of *Malwarebytes Anti-Malware* Premium and Trial versions to control certain protection settings for *Malwarebytes Anti-Malware*. This feature is not available to users of the Free version. Settings which may be changed here are based upon two reasons – compatibility issues with other installed software, or specialized use of *Malwarebytes Anti-Malware* on your computer. These settings should only be modified by advanced users, or as directed by Malwarebytes Technical Support. A screenshot of this module is shown below, using recommended (default) settings.

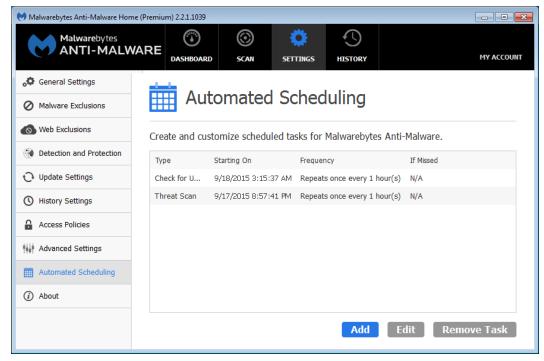


Let's look at each of these settings in detail, but with a focus on what's <u>not</u> recommended. Sometimes it's good to know why things are the way they are!

- Start Malwarebytes Anti-Malware with Windows: If this setting is unchecked, *Malwarebytes Anti-Malware* will not start with Windows. Malware Protection and Malicious Website Protection will not start when Windows starts, though they may still be started manually by launching *Malwarebytes Anti-Malware*.
- Enable Malware Protection when Malwarebytes Anti-Malware starts: If left unchecked, real-time Malware Protection will not start automatically when *Malwarebytes Anti-Malware* is launched. This setting does not affect the setting for Malicious Website Protection at program startup. It will override the <u>Malware Protection</u> setting in <u>Detection Settings</u>.
- Enable Malicious Website Protection when Malwarebytes Anti-Malware starts: If left unchecked, real-time Malicious Website Protection will not start automatically when *Malwarebytes Anti-Malware* is launched. This setting does not affect the setting for Malware Protection at program startup. It will override the <u>Malicious Website Protection</u> setting in <u>Detection Settings</u>.
- **Delay Protection at startup for <** >> **seconds:** There may be times when the startup of system services used by *Malwarebytes Anti-Malware* conflicts with services required by other applications at boot time. When this is the case, check this box. You will need to experiment with the specific delay setting necessary to compensate for the conflict. When required, this must be done on a case-by-case basis. The delay setting is adjustable from 15-180 seconds, in increments of 15 seconds.
- **Automatically quarantine detected items:** When unchecked, any threats detected will not be quarantined immediately. A notification will instead be presented, and you must choose how to respond. If you do not respond within forty (40) seconds, the threat will be quarantined automatically.
- Enable self-protection module: This setting controls whether *Malwarebytes Anti-Malware* creates a *safe zone* to prevent malicious manipulation of the program and its components. Checking this box introduces a one-time delay as the self-protection module is enabled. While not a negative, the delay may be considered undesirable by some users. When unchecked, the "early start" option which follows is disabled.
- **Enable self-protection early start:** When the self-protection module is enabled, you may choose to enable or disable this option. When enabled, the self-protection module will become enabled earlier in the computer's boot process essentially changing the order of services and drivers associated with your computer's startup.
- Reduce priority of scans to improve multitasking: When checked, *Malwarebytes Anti-Malware* may use lower relative system resources during execution of a scan. Actual performance differences will be determined by the operating system and hardware configuration. This may provide better performance when executing several concurrent tasks.

7.9 Automated Scheduling

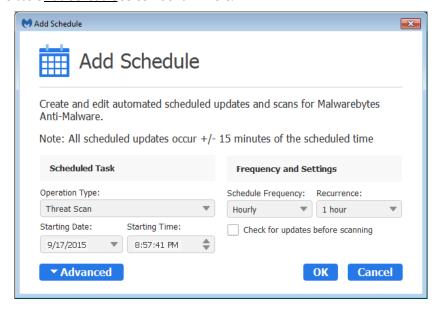
This screen allows users of *Malwarebytes Anti-Malware* Premium and Trial versions to add, edit and remove scheduled tasks to be executed by *Malwarebytes Anti-Malware*. This feature is not available to users of the Free version. Two types of tasks can be executed by Malwarebytes – scans and updates. A screenshot of this module is shown below.



One scan and one update are defined when *Malwarebytes Anti-Malware* is installed. You are free to modify or delete them at will. <u>Please note</u> that if either task is deleted without a replacement task being defined, your *Malwarebytes Anti-Malware* program will not deliver the positive results that you expect. The same methods are used here to add a new task as well as to edit an existing task, so let's **Add** a new task in Basic mode.

7.9.1 Basic Mode

A screenshot of the basic Add Schedule screen is shown here.



You can choose the specific task to be added on the left side of the screen, in the <u>Scheduled Task</u> area. You may choose from the following tasks:

- Threat Scan
- Custom Scan
- Hyper Scan
- Check for Updates

Scan types have been previously discussed in the <u>Scan</u> section of this guide (Section 6). Please refer to that section for further information if desired. The <u>Frequency and Settings</u> section allows you to define the timeframe (Schedule Frequency) that a task will be executed, and how often (Recurrence). For scans, this translates to:

- Frequency = Hourly, recurrence in range of 1-48 hours
- Frequency = Daily, recurrence in range of 1-60 days
- Frequency = Weekly, recurrence in range of 1-8 weeks
- Frequency = Monthly, fixed setting
- Frequency = Once, fixed
- Frequency = On Reboot, fixed

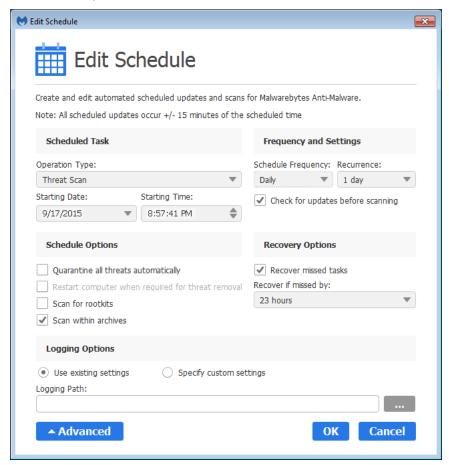
You may also check for updates prior to execution of the scan. We strongly recommend that you always run a scan with the most current database. If you have defined <u>Check for Updates</u>, the <u>Frequency and Settings</u> variables are:

- Frequency = Realtime, recurrence in range of 1-59 minutes
- Frequency = Hourly, recurrence in range of 1-48 hours
- Frequency = Daily, recurrence in range of 1-60 days
- Frequency = Weekly, recurrence in range of 1-8 weeks
- Frequency = Monthly, fixed setting
- Frequency = Once, fixed
- Frequency = On Reboot, fixed

Our Research group updates the Rules database anywhere from 8-15 times daily (unless there is a specific reason to update more often). Based on this, there is really no reason to check for updates more often than once per hour.

7.9.2 Advanced Mode

At the bottom left corner of the <u>Add Schedule</u> window is the **Advanced** button. Click that to expand the <u>Add Schedule</u> window to expose several more options. A screenshot is shown below.



In <u>Advanced Mode</u>, we add options which allow you to tailor the task more to your liking. Let's look a little deeper, beginning with the advanced options for scans.

7.9.3 Advanced Scan Options

<u>Schedule Options</u> provides several added capabilities to the basic settings which have already been described. Here's a rundown on the advanced options.

- Quarantine all threats automatically: This option determines if a newly-detected threat would be automatically quarantined, or if you would be notified so that you could choose a course of action. While automatic quarantine may seem to be the best course of action, it could have negative implications if a false positive was encountered. A false positive is the categorization of a legitimate file as a malicious file. It does rarely occur, and when it does, Malwarebytes Technical Support will assist you in having the offending file evaluated more fully by our Research group.
- Restart computer when required for threat removal: This is available only if threats are automatically quarantined, and is not selected by default. Some threats may require a computer restart to completely eliminate the threat, but we feel it's best to notify you at the time, so you may save your work before restarting your computer. If this were checked, you could lose work unless you were monitoring the scan in progress.
- **Scan for rootkits:** This option allows specialized testing for the presence of rootkits. Due to its nature, it increases the required time for a scan to execute. This option is not available for Hyper Scans.

• Scan within archives: This is selected by default. It allows scanning to go three levels deep within archive files. This option is not available for Hyper Scans.

<u>Recovery Options</u> allow you to recover from a missed task (e.g. your computer was off at the time a scan was to take place). A scheduled task – if missed – will run at its next opportunity as long as it is within the duration specified by the **Recover if missed by** selector and the **Recover missed tasks** checkbox is checked.

<u>Logging options</u> allows you to use existing settings (as specified in *History Settings*, Section 7.6) or to choose an alternate path.

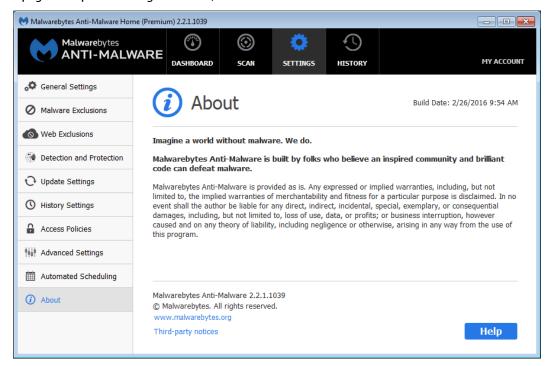
7.9.4 Advanced Update Check Options

Advanced options are limited when checking for updates. Under <u>Schedule Options</u>, you may choose whether a notification appears after a successful rules database update.

<u>Recovery Options</u> allows you to perform a database update if you missed your scheduled one. See the previous paragraph for further information. <u>Please note</u> that this option is non-functional if <u>Frequency Settings</u> is set to check for updates on a real-time basis. As with advanced scan options, you may specify an alternate log path and format.

7.10 About

The *About* page is simple and straight-forward, and is shown below.



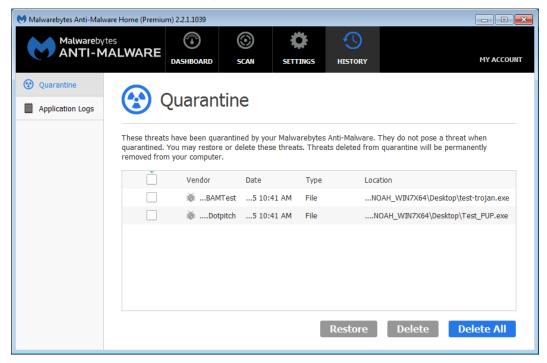
The upper panel contains version information, which is important information when you request Technical Support or are in need of a program update. The lower panel contains a simple statement of our purpose as a company, an abbreviated End User Licensing Agreement (EULA), links to all of the open source projects used within *Malwarebytes Anti-Malware*, and finally a **Help** button which, when clicked, brings you to our Support portal, where you can access our online Knowledge Base, view a web-based version of this guide, or contact our Support Team directly.

8.0 History

Malwarebytes Anti-Malware History is divided into two categories which are presented to the user – quarantine and program logs. While a lot of activity happens behind the scenes, the user is primarily interested in whether they are being protected or if problems are preventing the protection they expect. History information presented here provides the desired information.

8.1 Quarantine

When executing scans (on-demand or as part of real-time protection), some programs or files may have been categorized as threats. At that time, they were removed from the disk location where they were stored, placed in quarantine, and modified so that they could not pose a threat to your computer. There may be files which fall into this category, but are not malicious. It is up to individual users to research and make this determination. Upon entry to the <u>History</u> module of *Malwarebytes Anti-Malware*, you are presented with the <u>Quarantine</u> page, as shown below.

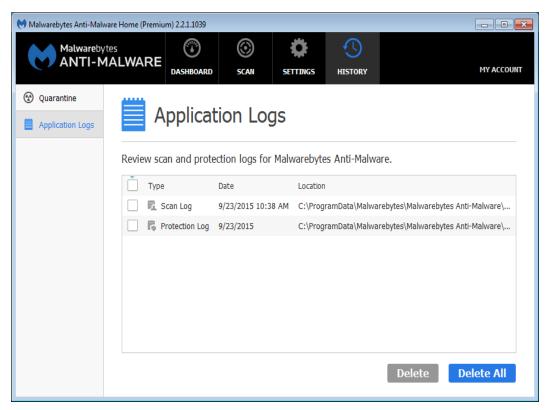


This page allows the user to view the contents of quarantine, and to restore or delete files if desired. Quarantined files are shown in a table format, with pertinent information presented to help you determine what action needs to be taken. Each file listed has a select checkbox in the leftmost column. Check the checkbox to restore or delete the selected file. Please note that the **Restore** and **Delete** buttons are greyed out until files are selected. If you wish to apply the same action to all quarantined items, select the checkbox in the table header and click **Restore** or **Delete**.

Please be aware that quarantined items which are not deleted or restored will continue to be visible here until action is taken.

8.2 Application Logs

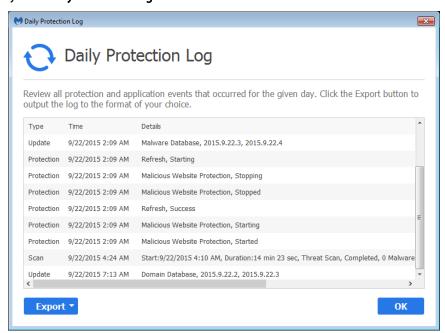
As part of normal program operation, *Malwarebytes Anti-Malware* produces two different logs. The **Protection Log** is a daily log which itemizes critical events of real-time protection, as well as updates to the Malwarebytes rules database. The **Scan Log** is an event log which shows program configuration and results of each scan that has been executed on the computer which Malwarebytes is installed on. The <u>Application Logs</u> program screen is shown here.



This page allows the user to view and/or delete logs. By selecting a specific log, it may also be exported to other formats. Let's look at these more in depth...

8.2.1 Protection Log

The **Daily Protection Log** shows information in three main categories – updates, protection and scans. A single log is produced daily, beginning with the first activity which fits log criteria, and is updated throughout the day with subsequent activity. The **Daily Protection Log** is shown below.



Update entries are typically limited to updates to our rules databases (malware, rootkit), the intelligence behind all Malwarebytes protection. Entries will also be created for failed updates, which may at times be an indication of a system problem. *Protection* entries are related to status changes of real-time protection, as well as integration of updates into real-time protection. *Scan* entries are single-line summaries of scans which have taken place during the day. These are not meant to replace the more detailed **Scan Log**, which is described in the next section.

By clicking on the headers in the table, you will be able to sort information according to your needs. At the bottom of the Daily Protection Logs, you will also note output options. You may **Copy to Clipboard**, which allows log data to be imported directly into another document. You may also **Export** log data into a number of formats, as listed here:

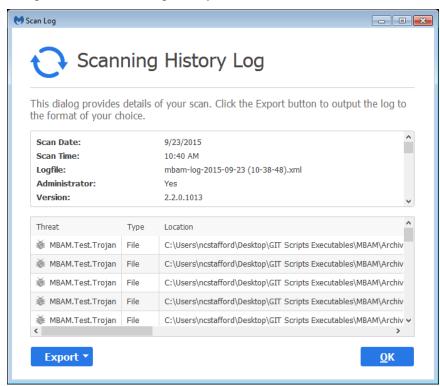
- **Text file (.txt)** A generic text file (in comma-delimited format) which may be used directly or input into a program of your choice.
- Extensible Markup Language (XML) file (.xml) A file utilized by XML parsers (or other intermediate processing) to categorize and present data based on requirements of other applications.

8.2.2 Scan Log

A Scan Log is created each time that a scan is executed. Scan logs are stored in:

- Windows XP:C:\Documents and Settings\All Users\Application Data\Malwarebytes\
 Malwarebytes Anti-Malware\Logs
- Other OS versions: C:\ProgramData\Malwarebytes\Malwarebytes Anti-Malware\Logs

If you have installed Malwarebytes in a non-standard installation path, these locations will be different. Also, you may have elected to store logs in another location separate from the program installation path. You may confirm that by checking <u>History Settings</u> (Section 7.6). Scan logs are (by default) stored in XML format.



Each time a scan is executed, a log is created. The above screenshot shows the Scanning History Log as it is viewed from within the *Malwarebytes Anti-Malware* user interface. The top portion provides a rundown of your system specifications and *Malwarebytes Anti-Malware* program settings. The bottom portion is a listing of any threats detected

during execution of the scan. Please note that if no threats are detected during a scan, the upper part of this screen will expand to fill the full screen area.

The following information is presented on the Scanning History Log. All information except <u>Detected Threats</u> is in the top (scrollable) portion, while <u>Detected Threats</u> make up the bottom portion of the screen. Please note that the sections shown below do not exist in the log itself. They are presented here to help you understand the way that information is grouped.

Scan Information

- Scan Date: Date when scan was executed
- o **Scan Time:** Time when scan was completed
- o **Logfile:** Log file name, which includes year, month, day, hour, minute, and second in the filename. Times use a 24-hour clock, and are referenced to the start time of the scan.
- o Administrator: Whether the user running the scan was logged on with administrator rights

Version Information

- **Version:** *Malwarebytes Anti-Malware* program version
- o Malware Database: Rules database version
- o **Rootkit Database:** Anti-Rootkit database version
- License: License type (valid values are Free, Premium or Trial)
- o **Malware Protection:** Whether malware protection is enabled (valid values are enabled or disabled)
- Malicious Website Protection: Whether malicious website protection is enabled (valid values are enabled or disabled)
- o **Self-protection:** Whether *Chameleon* self-protection is enabled (valid values are enabled or disabled)

System Information

- o **OS:** Operating System version, which also may contain Service Pack information
- o **CPU:** CPU type (valid values are x86 and x64)
- o File System: File system used on the primary (OS) disk drive (valid values are NTFS, FAT and FAT32)
- o **User:** Windows user name associated with this scan

Scan Details

- Scan Type: Type of scan executed (valid values are Threat Scan, Custom Scan, Hyper Scan and Context Scan)
- o **Result:** Final scan result (valid values are cancelled, completed or failed)
- o **Objects Scanned:** Number of objects scanned
- o **Time Elapsed:** Elapsed time of scan, from start to finish
- o **Remaining Categories:** For each category, the number of items detected during the scan
- Object Types/Targets Scanned
 - Eight object types/targets are listed. Each may be enabled (included in scan) or disabled (excluded from scan)

Detected Threats

- Threats detected during scan execution, containing the following information:
 - **Vendor:** Name of threat, or threat family (as categorized by Malwarebytes Research team)
 - Type: Container in which the threat was detected (file, registry key)
 - Path: Location where the threat was found; This will be a directory/file name for file systembased threats, and key/value name/value data for registry-based threats
 - Action: What action was taken with regard to the detected threat
 - **ID:** This is the identifier that Malwarebytes Research team uses for the specific threat. This may be requested by Malwarebytes Technical Support if a question arises pertaining to blocking of a specific threat.

Please note that an **Export** button is shown at the bottom left corner of this screen. This allows you to make a copy of the log for use by other programs. You may export to your clipboard, text (TXT) file, or Extensible Markup Language

(XML) file. The clipboard and text files are presented on a line-by-line basis, while the XML file is formatted according to XML standards.

8.2.3 Viewing or Deleting Logs

You may view any log file by clicking the log to select it, then clicking the **View** button. As mentioned previously, there are several output options for Protection Logs. A single format is available for Scan Logs, as chosen in *History Settings* (Section 7.6). To delete logs, click the checkbox corresponding to those logs you wish to delete, then click the **Delete** button. To delete all logs at once, click the **Delete All** button. When deleting all logs, you do not need to select any specific logs to enable this action.

Please bear in mind that computers which have significant threat activity will also have logs of significantly larger size. You should periodically check how much disk space is being used for logs, so that logs do not impact normal operation of your computer.

Appendix A: Notification Window Examples

Malwarebytes Anti-Malware provides a number of user notifications during operation. These notifications are always positioned in the lower right corner of your screen. The length of time that they will remain on your screen is configurable in *General Settings* (Section 7.1).

