

# **AppGuard Solo**

# **User Guide**

# Version 6.0

**June 2018** 

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# **Table of Contents**

Introduction	4
AppGuard Solo	
Operating System Requirements	
Hardware Requirements	
Prerequisites	
Installing AppGuard Solo Overview	
Installation Steps	5
Operating AppGuard Solo	
AppGuard Solo Protections	
AppGuard Solo System Tray Icon	
Protection Levels and AppGuard Solo User Interface	
Help	12
Definitions	12
Protection	12
Control and Audit	13
Policy Related Terms	
User Interface	
Tray lcon	14
Popup and Toaster Messages	
AppGuard Solo Activity Report	17
Important Software Installation Note	21
Customizing AppGuard Solo Policy (Optional)	22
Alerts Tab	22
User Space Tab	24
Adding User Space Folders	24
Defining User Space Exclusions	24
Network Drives	25
White-listing User Space Executables	25
Publishers List	25
Automatic Updates	27
Guarded Apps Tab	

Guarded Apps List
Folders Settings
Protected Folders
Exception Folders
Private Folders
Advanced Settings Tab
Suspension Timeout
Pass the hash protection
AppGuard Solo Updates
Privileged Operation – Administrative Controls
Self-Protection
Privileged Mode
Power Applications
Restore All Settings to Default
Application Notes
Running with UAC Enabled
Click-to-Run Applications
Google Chrome
Network Shares Anomalies
Support
Product Online Help
Contact Support
Windows Event Viewer

# Introduction

Conventional "detect and respond" approaches available are not enough in today's cyber world. AppGuard Solo delivers a multi-layered defense, protecting the endpoint at multiple points, including: launch control, run-time application control, and memory protection, to prevent one application from reading or writing to the memory of another. AppGuard Solo protects your computer against certain applications with the greatest risk of malware, such as Microsoft and Adobe products. AppGuard Solo stops the cyberattacks that traditional security products often miss, **even zero-day and file-less malware**. AppGuard Solo prevents suspicious applications from running and stops even allowed applications (such as your browser) from performing high-risk activities that might result in an infected computer.



This document provides information on installing, configuring and using AppGuard Solo.

# **AppGuard Solo**

# **Operating System Requirements**

• Microsoft Windows 7 and above

# **Hardware Requirements**

- Minimum 1.80 GHz 1.00 GB of RAM
- 10 MB Hard Disk free space

# **Prerequisites**

- Disable any antivirus software
- Close all applications and utilities
- The system should have at least the minimum configuration described above

# **Installing AppGuard Solo Overview**

To run the installation program, log-on as a user with local administrator rights on the system.
 Note: The user does not require administrator privileges to run the application, only for installation.

- 2. Launch the setup program from the download or your disk drive.
- 3. Make sure you have your License ID and Password during the install; you will be prompted to enter them for activation.
- 4. Reboot the computer when prompted.

#### **Installation Steps**

- Click the AppGuardSetup.exe file to begin the installation.
- In the User Account Control message, click **Yes** to allow AppGuard Solo to make changes to your computer.
- The InstallShield Wizard will begin and display the Install message below. Click Next to continue.



• Accept the License Agreement and click **Next** to continue.



• Click Install to begin the installation. Make sure you have your License ID and Password available.



• The Activate AppGuard Solo screen will be displayed. If it does not display, please look for this symbol in the system tray to bring up the screen:



- Click the link to Activate AppGuard Solo.
- Click the **Exit** button if you are not ready or do not have your License ID and Password.
- Click the Go to Website link to purchase a License.
- If you click **Exit**, you will need to begin the Install process again when you are ready.



• Enter your License ID and Password in the fields provided and click **Continue**.

License ID and Password			×	<
		AppGuard	d Solo Password	
APPGUARD Solo		Please enter your Li	cense ID:	
		Please enter your Pa	ssword:	
powered by Blue Planet-works	두 Back	💥 Exit	Continue 🔿	

• AppGuard Solo will check with the license server, and then display "Product Activation Successful". Click **Continue** to resume the installation.



- AppGuard Solo will continue with the installation and provide a progress screen.
- When the install is complete, click the **Finish** button.



• Click **Yes** to restart now, or **No** to restart later. You must restart for AppGuard Solo to begin protecting your system.



# **Operating AppGuard Solo**

# **AppGuard Solo Protections**

AppGuard Solo contains several types of protection:

- Zero-day and unknown malware defense assumes all high target applications contain zero-day malware and guards them to prevent any zero-day exploit.
- Drive-by Download Protection stops suspicious programs from launching.
- **Application Containment/Guarded Execution** ensures protected applications are prevented from performing high-risk activities that might be exploited by malware.
- **MemoryGuard** prevents protected programs from writing to, or reading from, other processes' memory.
- InstallGuard prevents installation of programs from untrusted vendors.
- Privacy Mode prevents browsers from reading private folders.
- Pre-Execution Controls and Run-time Protections continually enforce policies.
- File-less types of malware which use built-in Windows tools are blocked by AppGuard Solo.

# **AppGuard Solo System Tray Icon**

AppGuard Solo's User Interface consists of the main user interface, log viewer and tray icon/menu. These interfaces are described in the sections to follow.

The install places an icon on the system tray at the bottom right of the screen. If the icon is not visible, click on the up arrow to Show hidden icons. You can also then click the **Customize** button to make the AppGuard Solo icon always visible.



# **Protection Levels and AppGuard Solo User Interface**

The AppGuard Solo user interface provides the current status of the AppGuard Solo protection level. AppGuard Solo allows you to change the protection level for installations, updates and other functions as required. The image below is the main AppGuard Solo user interface which describes the basic Protection Levels. Click on the AppGuard Solo icon to open the window.

**Protected**: All trusted applications are protected. If AppGuard Solo interferes with an application or if you want to access a private folder with an application, you can add protection for the application according to the instructions below while leaving the protection level at the Protected setting. Setting the protection level to Protected introduces minimal risk while providing the most protection.



**Allow Installs:** Use this level only when installing or updating software. Note that there is a default time of 20 minutes for this level of protection. This period can be changed in the Customize sections described below.



**Off**: Chose this option to temporarily turn AppGuard Solo protection completely off. **Note**: There is a default time of 20 minutes for this level of protection. This period can be changed in the "Customize" sections described below.



# Help

AppGuard Solo includes built-in help, accessible from a link on every user screen. Click on the link to bring up a comprehensive help program, including FAQs.

If you need further assistance, contact **Support@AppGuard.us**. Please include the following information in your email:

- 1. Version of AppGuard Solo, found by right-clicking on the tray icon and selecting the "About" option.
- 2. Explanation of your problem and any troubleshooting steps you may have tried.

Refer to the <u>Support</u> section for more detailed information.

# **Definitions**

The table below provides an explanation of terms used with AppGuard Solo and is itemized by categories.

These definitions and concepts are each used and described in detail throughout this document.

# Protection Guarded Applications AppGuard Solo provides multiple types of protection to endpoints. AppGuard Solo blocks malware by preventing the vulnerabilities in specified applications from being used by attackers to implant malware. This is achieved by blocking write operations of applications to the common targets of attackers (program files, system directories, critical registry keys, and more). AppGuard Solo will also automatically Guard any child processes launched by <u>Guarded Applications</u>. InstallGuard InstallGuard

InstallGuard prevents end users and malware from installing or uninstalling software using the built-in Windows installer (msi) tools. All msi files which are digitally signed by Microsoft will be allowed to install in any protection level. All other installations require the **Protection Level** to be changed to **Install**. Refer to <u>Important Software Installation Note</u> for further information.

# MemoryGuard

Memory protection is designed to prevent one process (originator) from altering or reading the memory of another process (target). Attackers try to re-allocate memory, place executable code into the newly allocated memory, and then execute this code. This attack is called memory code injection or memory scraping. This type of attack is widely used in file-less malware, which exists only in memory, and Trojan malware.

#### **User Space Protection**

User Space is the set of folders that are typically accessible by non-admin Windows users (the desktop, My Documents and removable media). To prevent drive-by download attacks and attacks from malware on USB removable memory devices, AppGuard Solo creates a set of application control policies. The User Space policies specify which applications are allowed to run if they are located in User Space. If a User Space application is permitted to run, AppGuard Solo policy can also specify post-launch controls on the application so that if it is compromised, it is unable to harm the system.

- If the program is signed by a publisher on the <u>Publisher List</u>, then the post-launch controls defined in the publisher list will be applied.
- If the application is signed by a publisher <u>not</u> included in the default Publisher List, then the post launch controls are to Guard, MemoryGuard and execute in Privacy Mode.
- Scripts and unsigned applications are not allowed to execute at all.

#### **System Space Protection**

System Space is protected by Guarding the applications most vulnerable to malware attacks. These are generally the most widely used applications, those that communicate to the Internet or handle information that originated from an untrusted source (Ex: an email attachment or a document downloaded from the Internet). AppGuard Solo includes a <u>default set of applications</u> which are already Guarded.

#### **Protected and Exception Folders**

**Protected folders** are the areas of the system that Guarded applications are not permitted to alter. This is true even if the application is running with administrator privileges. The default policy includes the registry and all folders on the System drive (usually C:\) except for the user profile folder and program data folders.

**Exception folders** are those that Guarded applications are permitted to access. An example of an exception folder is C:\windows\scs\v2.0.6\namespace, which is a network folder and therefore usually restricted.

A default protected folder policy is included which denies access to "MyPrivateFolder" (created by AppGuard Solo during installation) under "My Documents".

#### **Control and Audit**

#### Publishers

InstallGuard and Application launch control policy rules are based on the <u>Publisher List</u>. Publishers can be added to the list along with their digital signing certificate.

#### **Protection Levels**

AppGuard Solo supports three <u>Protection Levels</u> to accommodate different situations. The end user can be prevented from changing the default Protection Level by using <u>Administrative Controls</u>.

#### **Power Applications**

**Power Applications** are exempt from AppGuard Solo protections. In other words, Power Applications can access protected resources (even if launched by a Guarded Application) including the memory of a Guarded Application. Any application that is launched by a Power application also becomes a Power Application (even

Guarded Applications). Typically, only other security software products are added as Power Applications, and then only if AppGuard Solo indicates that it is blocking the security product's operation.

#### **Removable Media Access Control**

AppGuard Solo protects a computer from drive-by-download attacks by prohibiting the launch of executables from removable media by default.

#### Logging

All AppGuard Solo events and status messages are logged to the Windows Event Log, which can be viewed with the <u>Windows Event Viewer</u>.

#### Administrative Controls

<u>Administrative Controls</u> provide a way to manage how AppGuard Solo can be modified by other users of the computer.

#### **AppGuard Solo Activity Report**

The <u>AppGuard Solo Activity Report</u> lists recent AppGuard Solo events on the main interface page.

- If the AppGuard Solo tray icon is flashing, open the Activity Report to see what is happening.
- Blocking actions are highlighted in red.

#### TamperGuard

AppGuard Solo includes **self-protection** features that prevent end users (even with local Administrator rights) and malware from stopping AppGuard Solo or tampering with AppGuard Solo's critical components. This prevents AppGuard Solo from being disabled.

#### **Policy Related Terms**

#### **Application Guard List**

The <u>Guard List</u> is the set of applications that are explicitly configured to be Guarded by AppGuard Solo. For example, all Microsoft Office applications are Guarded by default.

#### Privacy Mode

AppGuard Solo prevents applications running in privacy mode from accessing (reading or writing) **Private Folders**. When AppGuard Solo is first installed, all browsers, User Space, and USB applications are executed in Privacy Mode, which stops them from accessing the My Documents\MyPrivateFolder directory created during install.

#### **Privacy Folders**

Applications running in **Privacy Mode** are forbidden from accessing any files in Private Folders. These folders are still accessible by unguarded applications as well as by guarded applications that are not running in **Privacy Mode**. When AppGuard Solo is installed, a new folder is also created in My Documents called "MyPrivateFolder".

# **User Interface**

#### **Tray Icon**

The AppGuard Solo tray icon at the bottom right of your screen has two purposes:

1. Provides a status indication. The AppGuard Solo tray icon will flash to alert the user that AppGuard Solo has blocked an executable or installation package from launching. The icon will change, depending on the following states:



AppGuard Solo is in the Locked Down protection level, which is only accessible through the AppGuard Solo menu described below.



AppGuard Solo is in the Protected protection Level



This blinking icon state means that AppGuard Solo blocked either an application or script from executing.

At least one AppGuard Solo protection was disabled by the end user.



AppGuard Solo is in the Allow Installs protection level.



AppGuard Solo protection is off.

2. When right-clicking on the tray icon, a menu will be displayed with the following options:

AppGuard	
Protection Level	>
Allow USB Launches	>
Allow User Space Launches	>
Guarded Execution	>
Privacy Mode	>
Activity Report	
Help	
About	
Exit (GUI)	

- **AppGuard**: Displays the AppGuard Solo user interface
- **Protection Level**: This menu option allows the user to change the protection level or **turn off** AppGuard Solo protection completely. The Locked Down protection level is available only through this menu.
- Allow USB Launches: This menu option will enable the launch of an application or script from a USB memory device in either Guarded or unguarded mode.
- Allow User Space Launches: This option will enable the launch of an application or script from User Space (the part of the computer for users) in either Guarded or unguarded mode.
- **Guarded Execution**: This menu item will appear if you are running a Guarded Application. This will give you the option of unGuarding a single Guarded Application. If you unGuard one of your Guarded applications, this option will allow you to re-enable the protection.
- **Privacy Mode**: This menu item will appear if you are running a Guarded Application in privacy mode. It gives you the option of suspending Privacy Mode for a single application. If you disabled privacy mode for an application, this option gives you the ability to reenable Privacy Mode.
- Activity Report: Displays the AppGuard Solo activity events in an onscreen report. These events are then stored in the Windows Event Viewer.
- Help: Displays the AppGuard Solo Help program.
- **About**: Displays information about the AppGuard Solo application, including the version and the License ID. A link to the AppGuard Solo web page and the support email are also included.

• **Exit (GUI)**: Closes the AppGuard Solo GUI application. The AppGuard Solo service continues to protect your system, but GUI alerts and notifications are suppressed.

	AppGuard
Locked Down Protected Allow Installs Off	Protection Level >
	Allow USB Launches > Allow User Space Launches >
	Activity Report Help About
	Exit (GUI)

Locked Down: This protection level is found using the process in the User Interface – Tray Icon section above. It eliminates the risk of drive-by download attacks by only allowing certain applications to run without restriction. In the Locked Down setting, AppGuard Solo may interfere with some programs such as GoToMeeting. If this occurs, reduce the AppGuard Solo protection level to Protected and initiate the GoToMeeting session. Then, return the protection level to Locked Down once the session is finished if desired.

# **Popup and Toaster Messages**

AppGuard Solo provides the user with notices about events in multiple ways. These alerts can be customized to show more or less events. The detail on customizing these alerts can be found in the "Customizing AppGuard Solo" section below.

#### **Popup Messages**

Popup messages are displayed by default to alert users about blocked launches and privacy mode actions. A popup message requires the user to acknowledge the event and includes a checkbox to not show the message again. Refer to the Customizing AppGuard Solo section to display or hide more alerts.

Blocked I	Program	×
	Prevented process <schtasks.exe> from launching from &lt;\Device\HarddiskVolume5\windows\system32&gt;.</schtasks.exe>	
	io not show this message again.	
	ОК	

#### **Toaster Messages**

Toaster messages are displayed in the bottom right corner of the screen, last a few moments, and then disappear. Again, these messages can be customized in the Alerts tab using the **Customize** button, described in the Customizing AppGuard Solo section.



# **AppGuard Solo Activity Report**

To find out more about how AppGuard Solo is protecting your PC, click the **AppGuard Activity Report** button in the main AppGuard Solo interface.

These are the type of messages that will display if a launch is blocked. The one with the red X is a Windows message, and the bottom message is from AppGuard Solo. The AppGuard Solo icon will blink when this occurs, alerting the user to open the AppGuard Solo Activity Report and view the event



Open the AppGuard Solo main interface and click the **AppGuard Activity Report**. This will display the following types of events:

AppGuard Activity	Report –	×
Activ	ity Report SAPPGUARD period 35 suspicious activities since Thursday, Jun 07, 2018	Solo -works
Events		
DateTime	Event	1
Thu Jun 7 15:42: Thu Jun 7 15:41:	Prevented <microsoft word=""> from writing to &lt;\registry\machine\software\wow6432node\microsof AppGuard stopped &lt;39&gt; suspicious activities while active</microsoft>	t\w
Thu Jun 7 15:40: Thu Jun 7 15:40: Thu Jun 7 15:39:	Prevented <microsoft word=""> from writing to Prevented <microsoft word=""> from writing to Prevented <microsoft word=""> from writing to <td>nic t\av t\av</td></microsoft></microsoft></microsoft>	nic t\av t\av
Thu Jun 7 15:36: Thu Jun 7 15:36:	Prevented <microsoft word=""> from writing to &lt;\registry\machine\software\wow6432node\microsoft Protection level is set to <protected>.</protected></microsoft>	t\av
Thu Jun 7 15:35: Thu Jun 7 15:35: Thu Jun 7 15:30:	Protection level is set to <007. Prevented  Microsoft Word> from writing to  Protection level is set to <allow installs="">.</allow>	t\av
Thu Jun 7 15:29: Thu Jun 7 15:29: Thu Jun 7 15:29:	Prevented <microsoft edge=""> from writing to memory of <microsoft content="" edge="" process="">. Prevented <microsoft edge=""> from writing to memory of <microsoft content="" edge="" process="">. Prevented <microsoft <="" from="" mards="" pre="" to="" writing=""></microsoft></microsoft></microsoft></microsoft></microsoft>	t) av
Thu Jun 7 15:15: Thu Jun 7 15:14:	Prevented <microsoft edge=""> from writing to memory of <microsoft content="" edge="" process="">. Prevented <microsoft edge=""> from writing to memory of <microsoft content="" edge="" process="">.</microsoft></microsoft></microsoft></microsoft>	
Thu Jun 7 15:14: Thu Jun 7 15:14: Thu Jun 7 15:14:	Prevented <microsoft edge=""> from writing to memory of <microsoft content="" edge="" process="">. Prevented <microsoft edge=""> from writing to memory of <microsoft content="" edge="" process="">. Prevented <microsoft edge=""> from writing to memory of <microsoft content="" edge="" process="">.</microsoft></microsoft></microsoft></microsoft></microsoft></microsoft>	
Thu Jun 7 15:14: Thu Jun 7 15:14:	Prevented      Amount Cage - from writing to memory of      Amount Cage - from writing to memory of        Prevented      Amount Cage - from writing to memory of      Amount Cage - from writing to memory of        Prevented      Microsoft Edge > from writing to memory of      Amount Cage - from writing to memory of	
Thu Jun 7 15:13: Thu Jun 7 15:11:	Prevented <adobe genuine="" service="" software=""> from reading memory of <local authority="" p<br="" security="">Prevented <adobe genuine="" service="" software=""> from reading memory of <local authority="" p<="" security="" td=""><td>roc</td></local></adobe></local></adobe>	roc
<ul> <li>Init lun: 7.15(11)</li> <li></li> </ul>		>
	ОК	

Malware-blocking events are found here. When the AppGuard Solo tray icon is flashing, open the AppGuard Solo user interface to find out what is happening. Blocking actions are highlighted in red. The following types of blocking events are reported when the Alert Level is set to the default settings:

- A potential User Space attack was stopped.
- A potential malware attack from a USB device was blocked.
- A suspicious installer file was prevented from executing.
- A protected application attempted a suspicious "write" operation.
- A protected program was prevented from reading or writing to the memory of another program.
- A protected program was prevented from writing into a protected registry key.

Move your cursor over any blocking event to see an explanation of the event:

DateTime	Event	
2/08/15 15:16:06	Prevented process <putty.exe <putty.exe="" c:\windows\expl<="" c:\windows\explore="" prevented="" process="" th=""  =""><th>er.exe&gt; from launching from <c:\user\user\user\desktop>.</c:\user\user\user\desktop></th></putty.exe>	er.exe> from launching from <c:\user\user\user\desktop>.</c:\user\user\user\desktop>
12/08/15 12:54:55 12/08/15 12:54:55 12/08/15 12:54:54 12/08/15 12:54:49 12/08/15 12:54:45	Protection level is set to <medum>. Protection level is set to <locked down="">. Prevented <igfkem module=""> from writing to Protection level is set to <install>. Prevented <igfkem module=""> from writing to <td>Explanation AppGuard user space protection has blocked a process from launching from a User-space folder. This will occu when the AppGuard Protection Level is set to High and an application located in User-space is trying to run. If you are trying to start a program that you trust then you can temporarily allow User-space programs to run or reduce the Security Level. Right click on this message and select "Help" from the menu for more details.</td></igfkem></install></igfkem></locked></medum>	Explanation AppGuard user space protection has blocked a process from launching from a User-space folder. This will occu when the AppGuard Protection Level is set to High and an application located in User-space is trying to run. If you are trying to start a program that you trust then you can temporarily allow User-space programs to run or reduce the Security Level. Right click on this message and select "Help" from the menu for more details.
2/08/15 11:39:38 12/08/15 10:22:17 12/08/15 10:07:42 12/08/15 09:39:17 12/08/15 09:37:42	Prevented <igfxem module=""> from writing to Prevented <igfxem module=""> from writing to AppGuard stopped &lt;201&gt; suspicious activities while Prevented <igfxem module=""> from writing to Protection level is set to <medium>.</medium></igfxem></igfxem></igfxem>	stry/machine\system\controlset001\control\class\{4d36e968-e325-11ce-bfc1-0 stry/machine\system\controlset001\control\class\{4d36e968-e325-11ce-bfc1-0 e active, stry/machine\software\intel\display\igfxcui\mediakeys>.
		>

View Help for a particular message by right-clicking on the event and choosing **Help** from the drop-down menu. This will bring up the online help, pointing to the specific issue.

Events			
DateTime	Event		
12/08/15 15:16:06	Prevented process <putty.exe c:\windows\explorer.exe=""  =""> from launching free</putty.exe>		
12/08/15 15:15:34	Prevented process <putty.exe c:\windows\explorer.exe=""  =""> from launching fr</putty.exe>	Help	
12/08/15 12:54:55	Protection level is set to <medium>.</medium>	Message Info	
12/08/15 12:54:54	Protection level is set to <locked down="">.</locked>	Ignore Message	
12/08/15 12:54:49	Prevented <igfxem module=""> from writing to &lt;\registry\machine\system\conf</igfxem>	Comu	325-11ce-bfc1-
12/08/15 12:54:45	Protection level is set to <install>,</install>	Сору	
12/08/15 12:25:08	Prevented <igfxem module=""> from writing to &lt;\registry\machine\system\cont</igfxem>	Select All	325-11ce-bfc1-
12/08/15 11:39:38 12/08/15 10:22:17	Prevented <igfxem module=""> from writing to &lt;\registry\machine\system\conl Prevented <igfxem module=""> from writing to &lt;\registry\machine\system\conl</igfxem></igfxem>	Clear All	325-11ce-bfc1- 325-11ce-bfc1-
12/08/15 10:07:42	AppGuard stopped <201> suspicious activities while active.	Save As	
12/08/15 09:39:17	Prevented <infxem module=""> from writing to &lt;\registry\machine\software\intel</infxem>	disnlav\igfxcui\mediakeys>.	
	ige Help 四	- 0 ×	
	Hide Back Print Options		
	Prevented process < process AppGuard Status AppGuard Status AppGuard Tray Icon	_name > _name >	
	AppGuard Activity Ropo Alers Dotail Messages Blocking Events Prevented Access Tc Prevented Access Tc Prevented Process F Prevented Process F Prevented Process F Prevented Process F	cess der_name) located in Guard Protection plication located in program that you n user space or	

More details about the message can be viewed by selecting "Message Info" from the same menu:

Message Information	$\times$
Message:	
Prevented process <putty.exe c:\windows\explorer.exe=""  =""> from launching from <c:\users\user\desktop>.</c:\users\user\desktop></putty.exe>	
Information:	
Blocked Application Path: c:\users\user\desktop\putty.exe	
Parent Process: c:\windows\explorer.exe	
Protected Resource:	
Heli	2
Ignore Message OK	

- 1. **Blocked Application Path**: The path of the application that is being blocked. In this case, putty.exe was blocked from launching from the desktop.
- 2. **Parent Process**: If the application is being launched by another application, the Parent Process will be shown. In this case, putty.exe is not a protected application, but it is being launched by Explorer.
- 3. **Protected Resource**: The resource that AppGuard Solo is protecting. In this case, there is no direct resource protected; putty cannot launch.

If you are getting blocking messages that are not interfering with normal operation and you prefer not to be notified, you can choose to suppress blocking messages by clicking on the **Ignore Message** button shown above, or right-clicking on the event and choosing **Ignore Message** from the drop-down menu:

08/15 15:16:06	Prevented process <putty.exe c="" windows\explorer.exe=""  =""> from it</putty.exe>	anothing from contempotents	uådersktop>.
08/15 15:15:34	Prevented process <putty.exe c:\windows\explorer.exe=""  =""> fror</putty.exe>	Help	ktop>.
08/15 12:54:55	Protection level is set to <medium>.</medium>	Message Info	
08/15 12:54:54	Protection level is set to <locked down="">.</locked>	Ignore Message	
08/15 12:54:49	Prevented <igfxem module=""> from writing to &lt;\registry\machin</igfxem>	and the second s	{4d36e968-e325-11ce-bfc1-0
08/15 12:54:45	Protection level is set to <install>.</install>	Сору	
08/15 12:25:08	Prevented <igfxem module=""> from writing to &lt;\registry\machin</igfxem>	Select All	{4d36e968-e325-11ce-bfc1-0
08/15 11:39:38	Prevented <igfxem module=""> from writing to &lt;\registry\machin</igfxem>	(1)	(4d36e968-e325-11ce-bfc1-0
08/15 10:22:17	Prevented <igfxem module=""> from writing to &lt;\registry\machin</igfxem>	Clear All	{4d36e968-e325-11ce-bfc1-0
08/15 10:07:42	AppGuard stopped <201> suspicious activities while active.	Save As	
08/15 09:39:17	Prevented <igfxem module=""> from writing to &lt;\registry\machinets</igfxem>	ontware uncertaispray vigorcum	mediakeys>.

This will display a window allowing you to ignore the message and choose how to suppress the message.

lg	nore Messages	$\times$	
	Ignore Messages of this type:		
	Prevented process <putty.exe c:\windows\explorer.exe=""  =""> from launching from <c:\users\user\desktop>.</c:\users\user\desktop></putty.exe>		
	Customize (optional):		
	The field(s) below may be customized as follows: A '*' wildcard can be specified at the beginning and end of each field. If the fields are left blank, then all messages of this type are ignored.		
	putty.exe   c:\windows\explorer.exe		
	c:\users\user\desktop		
	Disable Status Display Disable Event Log Apply for All Users		
	OK		

If you decide later that you would like to see a message that you previously set to ignore, you can either set the Alert Level to **All** or you can remove the message from the Ignored Messages List. This list is located on the Alerts Tab on the AppGuard Solo Configuration Interface.

The status messages will automatically clear out over time and are saved in the Windows Event Log.

# **Important Software Installation Note**

When installing applications, you must reduce AppGuard Solo's Protection Level to Install mode. If the software installation requires a reboot, check the "Automatically resume <protection level>" checkbox so the new software can continue installing after a reboot. AppGuard Solo will resume after 20 minutes. This suspension timeout value can be changed in the **Customize**  $\rightarrow$  **Advanced tab**.



# **Customizing AppGuard Solo Policy (Optional)**

The default protection policy that is installed with AppGuard Solo generally does not require customization. If you wish to make changes or exceptions based on your system, the following information will help you to customize AppGuard Solo without compromising security.

The AppGuard Solo user interface allows you to customize AppGuard Solo for your computers. Click the **Customize** button to perform any customization.



Each of these tabs will be described in greater detail in the sections following.

- Change the Alert Level and manage Ignored Messages.
- Modify the definition of User Space.
- Add or remove an application from the Guarded Apps list.
- Modify the Trusted Publisher list.
- Modify the Advanced settings.

# Alerts Tab

AppGuard Solo reports events in multiple ways:

- The AppGuard Solo tray icon **blinks**.
- Status reports are sent to the **AppGuard Solo Activity Report** user interface.
- The event is sent and saved to the Windows Event Log.
- Both toaster and popup messages alert the user about events.

AppGuard Solo reports the following types of events:

- 1. **Guarded Execution Events**: These events occur whenever AppGuard Solo prevents an application from performing a risky operation.
- 2. **MemoryGuard Events**: These events occur whenever AppGuard Solo prevents an application from reading from or writing to the memory of another process.
- 3. **Blocked Launches**: These events occur whenever AppGuard Solo blocks an application or installation file from running.
- 4. **Privacy Events**: These events occur when AppGuard Solo blocks an application from accessing a private folder.

AppGua	rd Customize										×
Alerts	User Space G	uarded Apps	Advanced	ł							
Aler	ts	E	Blink Icon	Activity Rp	t Event Loa	Popup	Toaste	er			
-	Guarded Execut	tion Events:									
	- MemoryCu	ard Events:								All	
	Memorydu	aru Events.									
	- Blocked	l Launches:	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$			None	
	- Pri	vacy Mode:		$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$				
Ignore	ed Messages:							Report	Ignor	red Messages	
Even	nt Field1			Fie	ld2		G	L	Α		
1073	3741 *\appgı	uard IIc\AppGu	iard\AppG	uar			N	o No	Y		
1074	1003 wmic.ex	xe*		*			N	οY	Y		
1074	1003 schtask	s.exe		*			N	οY	Y		
1074	4003 *			\re	gistry\machine\	system\contro	ols N	o No	Y		
1074	1003 *			\re	gistry\machine\	software\micr	os N	o No	Y		
1074	1003 *			*_(	classes\*		N	o No	Y		
1074	1003 *			*:\	WINDOWS\syst	em32\ctfmon.	exe N	o No	Y		
1074	1003 *:\Prog	ram Files\Inte	rnet Explo	orer *:\	Program Files\1	nternet Explor	er N	o No	Y		
1074	1003 *:\Prog	ram Files\Inte	rnet Explo	orer *:\	Windows\explo	rer.exe	N	o No	Y		
											_
			Edit		Remove	Clear A	All			Hein	
										neip	
~~	Custon	nize									
						ОК		Cance			Apply

**Popup** messages must be acknowledged by the user; **toaster** messages are displayed in the bottom right corner for a bit and then disappear. To get the alerts for any of the types of events described above, simply check the box for the alert(s) and then click **Apply** or **OK**. It can be unchecked at any time.

To change any of the Alerts settings, simply check or uncheck the setting as desired and click the **Apply** or **OK** button.

- To quickly turn on all alerts, click the **All** button followed by the **Apply** or **OK** button.
- To turn off all alerts, click the **None** button followed by the **Apply** or **OK** button.
- To restore the Alerts setting to the default settings, enable Privileged Mode on the Advanced Settings tab and click the **Reset all settings to default** button.

The Alerts tab also contains the controls for managing the Ignored Messages list.

- To Un-Ignore a message, select the message in the Ignored Message list and click the **Remove** button.
- To display Ignored Messages without removing them from the Ignored list, check the **Report Ignored Messages** checkbox.

# **User Space Tab**

User Space refers to the computer storage space that is typically accessible by non-admin Windows users. It contains the user's profile directory (which includes the My Documents folder and Desktop), removable storage devices, network shares, and all non-system hard drives such as additional external and internal disk drives. AppGuard Solo will either block or protect the execution of any programs contained in User Space directories.

AppGuard Solo protects a computer from User Space attacks by stopping the launch of executables from User Space (e.g., My Documents, Desktop, etc.), non-system internal or external hard drives (D:\, E:\, etc.), removable media, and network drives. These initial directories included in the AppGuard Solo protection cannot be deleted, but other folders can be added.

# **Adding User Space Folders**

You can define your own set of directories to protect by including them in the User Space definition. When you specify a folder to include in User Space, all sub-folders will be protected as well. To add a User Space folder, click the **Add** button and either type or navigate to the directory name.

The default entries cannot be deleted or modified.

# **Defining User Space Exclusions**

Select "No" in the **Include** column to specify any drives, sub-folders or files within a protected folder where you might want to allow launches (be sure to click **Apply** or **OK** after making any changes). This applies only to directories you have added, not to the default AppGuard Solo directories.

Drive-by Download attacks are usually st User Space programs and Guards legitin programs on the Guard List are permitte	aged from nate User ed to run.	m User 9 Space   "No" in	Space. To programs the "Inclu	block su In the Lo ude" colu	ch attack cked Dow mn tells /	s, AppGuard, prol wn protection leve AppGuard to ignor	hibits suspicious el, only User Spa re that folder or
User space					Include		Add
c:\windows\system32\schtasks.exe					Yes		
c:\windows\system32\at.exe					Yes		Delete
🚞 c:\programdata					Yes		
C:\users\kpeterson					Yes		
Removable Media					Yes		
Setwork Drive					Yes		<u> </u>
Publisher:							Add
Publisher	Guar	Priv	Me	Install	Level		^ Delete
O=LogMeIn, Inc. L=Boston S=Massachusett	No	Off	On	Allow			
	No	Off	On	Allow			
O=Cisco WebEx LLC L=Santa Clara S=Califo	No	Off	On	Allow			
0=Cisco WebEx LLC L=Santa Clara S=Califo 0=Cisco WebEx LLC L=San Jose S=Californi	NO		On	Allow			
0=Cisco WebEx LLC L=Santa Clara S=Califo 0=Cisco WebEx LLC L=San Jose S=Californi 0=Citrix Online L=Fort Lauderdale S=Florid	No	Off	0.1				*
0-Cisco WebEx LLC L=Santa Clara S=Califo 0=Cisco WebEx LLC L=San Jose S=Californi 0=Citrix Online L=Fort Lauderdale S=Florid 0=Intuit I=Mountain View S=California C=IIS	No	Off	0n	Allow			
O-Cisco WebEx LLC L=Santa Clara S=Califo O=Cisco WebEx LLC L=San Jose S=Californi O=Citrix Online L=Fort Lauderdale S=Florid O-Tothuit I=Mountain View S=California C=LS.	No No to run fro	Off Off om User	On Space in	Protected	l level		
O-Cisco WebEx LLC L=Santa Clara S=Califo O=Cisco WebEx LLC L=San Jose S=Californi O-Citrix Online L=Fort Lauderdale S=Florid O-Intuit I-Mountain View S-California C-ILS Allow only files signed by Trusted Publishers	No No to run fro	Off Off om User	On Space in	Protected			<u>Help</u>

This feature might be helpful to facilitate Google updates, for example. If you exclude the Google Update directory (C:\Documents and Settings\<username>\Local Settings\Application Data\Google\Update\ Download) from User Space, AppGuard Solo will allow the updates to install while still protecting the rest of User Space.

#### **Network Drives**

AppGuard Solo includes all network drives in User Space to prevent malware from attacking your PC. If you want to allow programs to execute from a particular network drive, explicitly exclude that network drive from the User Space definition by adding it to the folder list and select "No" in the **Include** column. See <u>Folder Settings</u> for more information on how to do this.

# White-listing User Space Executables

User Space executables can be "white-listed" by excluding them from User Space. An example of a User Space executable is putty.exe on a desktop. Click the **Add** button and browse to the executable.

Add the file and set the Include column to **No** (note when browsing to a file, select the file and click the **OK** button – do NOT double-click the file). The executable will no longer be considered part of User Space and will be allowed to execute in all protection levels. These executables will not be protected unless they are launched (or loaded) by a protected application.

# **Publishers List**

When not in the Locked Down protection level, AppGuard Solo's default policy will allow User Space applications and installations to execute if they are digitally signed by a publisher contained in the Publisher list. It is possible (though not recommended) to allow *any* digitally signed application to run by unchecking the "Allow only files signed by Trusted Publishers to run from User Space in Protected level" box.

# **Default Publisher List**

This is the list of publishers included in AppGuard Solo by default. You can add, delete, and specify protections by following the directions below.

Publisher	Guarded	Privacy	Memory	Install	Level
Adobe	No	Off	On	Allow	
Apple	No	Off	On	Allow	
Blue Ridge Networks	No	Off	Off	Allow	Install
Citrix	No	Off	On	Allow	
Cisco WebEx	No	Off	On	Allow	
Google Chrome	No	Off	On	Allow	
Internet Explorer	No	Off	On	Allow	
Intuit	No	Off	On	Allow	
LogMeIn	No	Off	On	Allow	
McAfee	No	Off	Off	Allow	Install
Microsoft	No	Off	On	Allow	
Mozilla Firefox	No	Off	On	Allow	
Oracle	No	Off	Off	Allow	Install
Sun Microsystems	No	Off	On	Allow	
Symantec Corporation	No	Off	On	Allow	

For each publisher, the following can be specified:

- **Guarded**: Indicates whether a User Space program published by this publisher should be protected when it executes.
- **Privacy**: Indicates whether a User Space program published by this publisher should execute in privacy mode.
- **MemoryGuard**: Indicates whether a User Space program published by this publisher should be prevented from accessing another program's memory when it executes.
- **Install**: Indicates whether installation programs published by this publisher should be permitted, including updates.
- **Level**: indicates AppGuard Solo will automatically lower the level to Install for that publisher when a program digitally signed by that publisher is executed from User Space.

Click the **Browse** button to browse for a signed executable or use the **Delete** button to remove a publisher. When AppGuard Solo is first installed, several publishers are contained on the Publisher List as noted. AppGuard Solo will also allow Publishers on this list to automatically install updates for their products, such as Windows, Microsoft, Quicken (Intuit), and Java (Oracle).

ppGuard Customize								×
Alerts User Space Guarded Apps Advanced								
Drive-by Download attacks are usually st User Space programs and Guards legitin programs on the Guard List are permitte	aged fro nate Use d to run.	m User S r Space   . "No" in	Space. To programs the "Incl	block su In the Lo ude" colur	ch attacks, cked Down nn tells Ap	AppGuard, proh n protection leve opGuard to ignor	ibits suspic I, only User e that folde	ious Space r or file.
User space					Include		~ A	dd
c:\windows\system32\schtasks.exe					Yes			
c:\windows\system32\at.exe					Yes		De	lete
😑 c:\programdata					Yes			
C:\users\kpeterson					Yes			
Removable Media					Yes			
Setwork Drive					Yes		~	
Publisher:							A	dd
Publisher	Guar	Priv	Me	Install	Level		^ De	lete
O=LogMeIn, Inc. L=Boston S=Massachusett	No	Off	On	Allow				
O=Cisco WebEx LLC L=Santa Clara S=Califo	No	Off	On	Allow				
O=Cisco WebEx LLC L=San Jose S=Californi	No	Off	On	Allow				
O=Citrix Online L=Fort Lauderdale S=Florid	No	Off	On	Allow				
O-Intuit I - Mountain View S-California C-US	No	Off	On	Allow			*	
Allow only files signed by Trusted Publishers	to run fr	om User	Space in	Protected	level			
							Н	elp
🗙 Customize				ОК		Cancel		Apply

To add a Publisher, click the **Browse** button in the middle of the screen and navigate to a digitally signed file (\*.exe, \*.dll, or \*.ocx). If it is digitally signed, AppGuard Solo will automatically populate the Publisher field. The **Add** button will be enabled if the publisher is not already contained in the publisher list (if the publisher is already in the list, the **Add** button will remain disabled). The defaults for publishers are:

- 1. Guard an application.
- 2. Privacy mode is off.
- 3. MemoryGuard is on, except for some security applications.
- 4. Install (including updates) is Allowed.
- 5. Level is not applicable.

Make any changes required by clicking on the column and selecting the right response.

Not all files are digitally signed. To verify if a file has a digital signature, select the file, right-click on it and select "Properties". The file properties will have a Digital Signatures tab if it is digitally signed. Follow the steps in the picture below to verify the certificate information.

# Automatic Updates

If an application is digitally signed, and you would like to allow automatic updates, add the publisher using the directions above, but do not Guard the publisher.

		Security General	Details Compatibility	Previous Versions Digital Signatures	
		Signature list			
		Name of sign AppGuard LLC	Digest algorit Timestamp sha256 Saturday, April 14.		
igital Signature De General Advanced	tails 2	? ×		Details	
Digital Signal This digita	nature Information I signature is OK.		General Details Certification	on Path 3	2
Signer information			Show <all></all>	~	
Name:	AppGuard LLC				
E-mail:	Not available		Field	Value	^
Signing time:	Saturday, April 14, 2018 10:39	:14 AM w Certificate	Serial number Signature algorithm Signature hash algorithm Issuer	120238332b48871bfaa58 sha256RSA sha256 Symantec Class 3 Extend	
Countersignatures			Valid from	Tuesday, July 11, 2017 8: Friday, July 12, 2019 7:5	
Name of sign Symantec Ti	E-mail addre Timestamp Not aveilable Saturday, April	1	Subject	AppGuard LLC, Software	~
		Details			
		UK		Edit Properties Copy to	File

# **Guarded Apps Tab**

The Guarded Apps tab provides a list of the currently guarded applications. On this tab, you can alter the Privacy and MemoryGuard settings for a protected application. You can also disable protection as well as add additional

applications to the Guarded Apps list if you find that protecting the application is interfering with its normal behavior. You may also remove any applications included by AppGuard Solo as default.

Note that not all the Guarded Apps listed in the chart below will be displayed; AppGuard Solo only displays those applications currently installed on your computer.

# **Guarded Apps List**

AppGuard Solo prevents applications on the Guarded Apps list from performing high-risk activities that might be exploited by malware. The Guarded Apps tab can be accessed through the **Customize** button on the main user interface.

Most widely deployed applications are automatically protected by AppGuard Solo, as are several programs that are commonly used as attack vectors. The following programs are configured to be protected. This is a comprehensive list; please note that only those applications actually installed on your computer will show up in your own Guarded Apps list. Note that the MemoryGuard functions are separated into Memory Read and Memory Write.

Application	Privacy	Memory Write	Memory Read
Acrobat Reader	Off	On	On
AOL Desktop (Browser)	On	On	On
AOL Instant Messenger	On	On	On
Google Chrome	On	On	On
Internet Explorer	On	On	On
Mozilla Firefox	On	On	On
Opera	On	On	On
Microsoft Office Access	Off	On	On
Microsoft Office Excel	Off	On	On
Microsoft Office Outlook	Off	On	On
Microsoft Office PowerPoint	Off	On	On
Microsoft Office Word	Off	On	On
Microsoft Register Server	Off	On	On
Power DVD	Off	On	On
Windows Host Process (Rundll32)	Off	On	On
Outlook Express	Off	On	On
Windows Command Processor	Off	On	On
Windows Media Player	Off	On	On
VLC Media Player	Off	On	On

#### **Folders Settings**

From the Guarded Apps tab, you may add additional Protected Folders, Private Folders, Exception Folders and Files.

AppGuard Customize						×
Alerts User Space Guarded Apps Advanced						
Application	Priv	Mem	MemR			
Google Chrome	On	On	On			
Internet Explorer	On	On	On			
Microsoft Access	Off	On	On			
Microsoft Edge	On	On	On			
Microsoft Excel	Off	On	On			
Microsoft Outlook	Off	On	On			
Microsoft PowerPoint	Off	On	On			
Microsoft Word	Off	On	On			
Microsoft(C) Register Server	Off	On	On			
✓ Windows Command Processor	On	On	On			
Windows host process (Rundll32)	Off	On	On			
Vindows Media Player	Off	On	On			
Windows PowerShell	Off	On	On			
Windows Wordpad Application	Off	On	On			
Add Program Delete						
Folders						_
Designate additional protected folders, exception folders or private for	lders.		5	Settings		
					Heln	
🗙 Customize		74	Concel		Appl	b.
		JK	Cancel		жррі	Y.

To change the Privacy Mode or Memory settings, select the Application and change the appropriate column to **On** or **Off**:

On	On	On
On		
	On	On
Off	On	On
off -	On	On
On	On	On
Off	On	On
		Off Ch On On On On

To add additional Protected Folders, Private Folders or Exception Folders and Files click the **Settings** button.

AppGuard Customize					>	×
Alerts User Space Guarded Apps Advanced						
Application	Priv	Mem	MemR			
Google Chrome	On	On	On			
Internet Explorer	On	On	On			
Microsoft Access	Off	On	On			
Microsoft Edge	On	On	On			
Microsoft Excel	Off	On	On			
Microsoft Outlook	Off	On	On			
Microsoft PowerPoint	Off	On	On			
Microsoft Word	Off	On	On			
Microsoft(C) Register Server	Off	On	On			
Windows Command Processor	On	On	On			
Windows host process (Rundll32)	Off	On	On			
✓ Windows Media Player	Off	On	On			
✓ Windows PowerShell	Off	On	On			
Windows Wordpad Application	Off	On	On			
Add Brogram Delete						
Add Flogram Delete						
Folders						
Designate additional protected folders, exception folders or private fold	lers.		5	Settings		
					<u>Help</u>	
🗙 Customize	c	ж	Cancel		Apply	

The following will be displayed. Click the **Add** button to specify a new folder. For a detailed description of each folder type refer to the description section at the top of the window.

Add Folder			×					
Add a folder ar	nd set the "Type" as follows:							
Protected:	Guarded Apps are not permitted to write to folders on the system drive (usually C:\) exfolders.	uarded Apps are not permitted to write to these folders/files. The default policy includes all olders on the system drive (usually C:\) except for the user profile folder and the program data olders.						
Exception:	Suarded Apps are permitted to write to these folders/flies. If a Guarded app needs to write to a subfolder within a protected folder (for instance c:\windows\csc\v2.0.6\namespace), add it as an "exception" folder.							
Private:	Guarded Apps with "Privacy" set to "On" ar	e prohibited from accessing these folders/files.						
Folder c:\bvtbin c:\users\publ c:\users\publ c:\users\publ c:\users\publ c:\users\user	ic\music\desktop.ini ic\videos\desktop.ini ic\desktop.ini ic\pictures\desktop.ini ic\libraries\recordedtv.library-ms \documents\myprivatefolder	Type Exception (Read/W ~ Private (Deny Access) Protected (Read Only) Exception (Read/W Exception (Read/W Private (Deny Acce						
Add Help	Delete	OK Cancel						

After the folder is added, change the "Type" column as follows:

- For a Protected Folder: Read Only
- For an Exception Folder: Read/Write
- For a Private Folder: Deny Access

# **Protected Folders**

AppGuard Solo prevents protected applications from writing to a set of protected folders and registry settings. By default, AppGuard Solo prevents applications from writing to all folders on the System Drive (usually C:\) except for the user profile directory and the program data directory.

Folder	XP Folder	Win7 or VISTA Folder
User Profile	C:\Documents and Settings\John	C:\Users\John
Program Data	C:\Documents and Settings\All Users\Application Data	C:\ProgramData

Sometimes users require that software applications be installed elsewhere such as a separate partition or hard drive. These locations are not regarded as system-space by default; therefore, malware or hackers could maliciously modify these applications, transforming them into harmful tools.

Following the instructions above, use the **Add** button on the Guarded Apps tab to add a protected folder. After the folder is added, change the Type to **Read Only**.

# **Exception Folders**

If a protected application requires write access to a folder or file within a protected folder, you will need to add an exception folder or file. For example, on some operating systems Windows Media Player requires access to several files within C:\users\public.

Following the instructions above, use the **Add** button on the Guarded Apps tab to add a protected folder. After the folder is added, change the Type to **Read/Write**.

# **Private Folders**

Private folders cannot be accessed by applications running in privacy mode. By default, "My Documents\ MyPrivateFolder" is created during the AppGuard Solo install and included as a private folder.

Following the instructions above, use the **Add** button on the Guarded Apps tab to add a protected folder. After the folder is added, change the Type to **Deny Access**.

# **Advanced Settings Tab**

The Advanced Settings tab allows the user to:

- Set the suspension timeout value.
- Set the policy for AppGuard Solo Updates.
- Set Administrative Controls and Super Users.
- Disable/enable Self Protection.
- Disable/enable Privileged Mode.
- Add Power Applications.
- Restore all settings to default.

AppGuard Customize	×
Alerts User Space Guarded Apps Advanced	
Suspension timeout 20 minutes I Pass the hash protection	
AppGuard Updates	
Periodically Check for AppGuard Updates Check for Updates	
Automatically Install Updates	
Privileged Operation	
User Name: Stop Self Protection (TamperGuard)	
Password: Administrative Controls	
Power Applications	
Power Applications are exempt from AppGuard protections. They are not Guarded (even when launched by a Guarded Application).	
Typically only other security software products should be added as power applications and only if AppGuard is indicating that it is blocking the security product's operation.	
c:\program files\common files\microsoft shared\clicktorun\officec2rclient.exe	Add
	Delete
Restore all settings to default	<u>Help</u>
Customize OK Cancel	Apply

The following sections provide more details about AppGuard Solo's advanced settings.

#### **Suspension Timeout**

When a user changes the protection level to Install, a default suspension timeout value of 20 minutes starts. After 20 minutes, the protection level will automatically return to the default Protected level.

#### Pass the hash protection

When this box is checked, AppGuard is protecting against pass the hash and pass the ticket attacks.

#### **AppGuard Solo Updates**

The user can choose to periodically check for AppGuard Solo updates, as well as whether or not to automatically install any update it finds. There is also a button to check for updates now for AppGuard Solo. The default is to periodically check for updates, but not to automatically install updates. The user will be reminded to install periodically.

#### **Privileged Operation - Administrative Controls**

Administrative Controls provide a way to manage how AppGuard Solo can be modified by other users of the PC.

Until a Super User is specified in the Administrative Controls dialog, all users are considered AppGuard Solo Super Users. This means that any user on the computer is able to temporarily suspend protections, and any Windows Administrator is able to uninstall AppGuard Solo. Click the **Administrative Controls** button to get started.

1. Designate the desired Windows login account(s) as an AppGuard Solo Super User.

- 2. The AppGuard Solo Super User can then designate which AppGuard Solo permissions are available to non-Super Users. Designate any user accounts that you would like to be Super Users, modify the check boxes as desired, and then click **OK**.
- 3. Once a Super User account has been created, only a Super User is permitted to modify the default policy or uninstall AppGuard Solo.

	Domain	Group	SuperUser
Maureen	win7x64ms.	. Users	No
festing [	win7x64ms	. Administrators	Yes
			Yes No
Allow users to:	ad applications	Change protection	lavel
Modify Memor	ovGuard	Modify timeout va	lue
Suspend Guar	ded execution	Suspend user spa	ce protection
		Specify user space	e folders
Modify alerts			ch protection
Modify alerts	acy mode	Suspend USB laun	CI DI
<ul> <li>Modify alerts</li> <li>Suspend privation</li> <li>Specify AppGi</li> </ul>	acy mode uard folders	Suspend USB laun	lications

Important: Make sure you know the Windows credentials for at least one of the Super User accounts. Once a Super User is designated, the login credentials of a Super User are required in order to modify Administrative Controls.

If no permissions are allowed, then most of the controls on the user interface will be disabled. For example:

AppGuard Customize			E
Alerts User Space Guarded Apps Advanced			
Application	Privacy	MemWrite	MemRead
Google Chrome	On	On	On
Internet Explorer	On	On	On
Microsoft(C) Register Server	Off	On	On
Windows Command Processor	Off	On	On
Windows host process (Rundll32)	Off	On	On
Windows Media Player	Off	On	On
Add Program Delete			
Folders			
Designate additional protected folders, exception folders or private folders		Satting	10
beignate additional proceeder rolder by exception rolders or private rolders.		Securi	J
			Help
	ОКСС	ancel	Apply

Additionally, the tray menu will only display those controls which are allowed:



Administrative controls will apply to all non-Super Users. A Super User can disable Administrative Controls on behalf of the non-Super Users by enabling Privileged Mode. In Privileged Mode any AppGuard Solo protection can be temporarily suspended.

To permanently remove Administrative Controls, remove all Super User designations.

# **Self-Protection**

AppGuard Solo prevents end users and malware from stopping AppGuard Solo or tampering with AppGuard Solo's critical components. This ensures that AppGuard Solo is always protecting your computer.

Self-protection can be disabled from the Advanced tab by checking the box. This should be done only to uninstall AppGuard Solo, or to be able to stop the AppGuard Solo service. If Administrative Controls are activated, then only Super Users can disable self-protection. When self-protection is disabled, the AppGuard Solo service can be stopped from the Windows Services Control Panel. In addition, the AppGuard Solo default policy file can be modified when self-protection is disabled.

# **Privileged Mode**

AppGuard Solo has two modes of operation: Normal Mode and Privileged Mode. In Normal mode, all users are restricted as to which AppGuard Solo protections they can control or suspend. Super Users are restricted to the permissions specified in the default policy while regular users are further restricted by Administrative Controls (if defined). Running in Privileged Mode enables any user to temporarily suspend any AppGuard Solo protection. This is true even if Administrative Controls or default AppGuard Solo policy does not permit the suspension. Privileged Mode also enables a "factory reset" of the user's AppGuard Solo policy. This is done by clicking the **Reset all settings to default** button that appears at the bottom of the AppGuard Solo Configuration Interface when in Privileged Mode.

Privileged Mode can be enabled from the Advanced tab by checking the box. If a regular user is logged into Windows (and at least one Super User is defined), then the Windows login credentials of one of the designated Super Users is required to enable Privileged Mode. Otherwise, a regular user can check the box without restrictions.

Alerts User Space Guarded Apps Advanced	
Suspension timeout value: 20 minutes	
AppGuard Updates	
Periodically Check for AppGuard Updates	Check for updates now
Automatically Install Updates	
Privleged Operation	
	Stop Self Protection (TamperGuard)
User Name:	Enable Privileged Mode
Password:	Administrative Controls
Power Applications	
Power Applications are exempt from AppGuard protections. a Guarded Application).	They are not Guarded (even when launched by
Typically only other security software products should be ad indicating that it is blocking the security product's operation.	ded as power applications and only if AppGuard is

Privileged Mode is in effect until the Privileged Mode box is unchecked. This is true even if a user logs out and another user logs in.

Operation	Super User	User	Privileged
Enforce Administrative Controls	Ν	Y	Ν
Modify Administrative Controls	Y	Ν	Y
Uninstall AppGuard Solo	Y	N	Y
Suspend TamperGuard	Y	Ν	Y
Designate Super Users	Y	N	γ
Return all settings to default	N	N	Υ

The following table illustrates which operations are allowed for each type of user and in privileged mode:

Designate any user accounts that you would like to be Super Users by changing the Super User column from No to **Yes** and click **OK**.

# **Power Applications**

In rare cases, AppGuard Solo's protection may interfere with a program's operation. Power Applications are exempt from AppGuard Solo post-launch protections. In other words, they are not guarded or memory guarded (even if they are launched from a guarded application). Caution should be taken when adding Power Applications especially from user-space as they may not be protected by AppGuard Solo and may even become an attack vector used by sophisticated zero-day malware. Typically, only other security software products should be added as Power Applications and only if AppGuard Solo is indicating that it is blocking the security product's operation. Applications launched by a Power Application are also considered to be Power Applications.

To determine if AppGuard Solo is interfering with an application, examine the AppGuard Solo events on the main AppGuard Solo Activity Report user interface. You may see messages similar to those below:

Prevented < Antimalware Service Executable > from reading memory of < Microsoft Outlook >. Prevented < Antimalware Service Executable > from writing to memory of < Microsoft Outlook >. Prevented < Antimalware Service Executable > from reading memory of < Google Toolbar Broker >. Prevented < Antimalware Service Executable > from reading memory of < Internet Explorer >. Prevented < Antimalware Service Executable > from writing to memory of < Internet Explorer >. In the case of most applications the above events are not disruptive, but for a security product, the above blocking events may indicate that AppGuard Solo is interfering with the security product's operation. To allow a security product to operate without AppGuard Solo blocking its operation, the security product's executable should be added to the Power Applications list on the Advanced tab. If AppGuard Solo is blocking other security program operations, it is because of one of the following reasons:

- The security product has been added to the Guarded Apps list. Typically, security products should not be added to the Guarded Apps list. If that is the case, remove the security product from the list.
- The security product is located in User Space. In this case, consider installing the security program in system space (i.e. Program Files). If that is not possible, the executable should be added to the Power Applications list. Also consider adding the file's path as a protected resource folder on the Guarded Applications tab.
- The security product is being launched by a protected application. In this case the security product executable should be added to the Power Applications list.
- The security product is trying to launch a program that is not permitted by AppGuard Solo User Space policy. Adding the security application to the Power Applications list should remedy the problem.

# **Restore All Settings to Default**

Clicking the **Restore all settings to default** button on the Advanced tab will restore all AppGuard Solo's settings to the default settings that were installed with AppGuard Solo. Any user modifications will be lost.

# **Application Notes**

# **Running with UAC Enabled**

If the user overrides an AppGuard Solo blocking event through UAC, AppGuard Solo will not interfere.

# **Click-to-Run Applications**

Click-to-Run Applications (such as Office Starter) are streamed from the Internet to a virtualized disk (usually the Q: drive) on your computer. Because these applications are not always digitally signed, AppGuard Solo prevents them from running in the Locked Down protection level. They can be launched by placing the AppGuard Solo protection level back to Protected. When launched in the Protected level, these applications are automatically protected by AppGuard Solo.

Another option is to exclude the "Q" drive from User Space. This will enable these applications to be launched in the Locked Down protection level. Although AppGuard Solo will not protect these applications, Microsoft's virtualization provides some isolation of these applications from the critical components of the OS.

# **Google Chrome**

In order to To use Google Chrome in the Locked Down protection level, do either of the following:

- Install Google Chrome in the Program Files directory (preferred).
- Exclude the following directories from the User Space protection definition:
  - o C:\Users\<UserName>\AppData \Local\Google\Chrome\Application
  - o C:\Users\<UserName>\AppData \Local\Google\Update

# **Network Shares Anomalies**

The following are known anomalies with AppGuard Solo 6.0.

- 1. Sometimes protected execution of an application located on a network share drive cannot be suspended from the tray menu. If you encounter this problem, suspend the application from the Guarded Apps tab on the AppGuard Solo Customize interface.
- Using a mapped drive letter (vs. the computer name) to specify a Guarded Application path is not supported. Instead, use "<u>\\FullyQualifiedSharePath\shared\program.exe</u>" vs. "z:\shared\program.exe" to include program.exe in the Guard List.

# **Support**

There are multiple ways to get information or support.

# **Product Online Help**

The comprehensive help menu can be accessed from any page by clicking the **Help** link in the bottom right corner. Detailed information is provided about the majority of blocking events and includes a Troubleshooting FAQ section.

# **Contact Support**

If you have any questions about AppGuard Solo, or require troubleshooting assistance, please contact support and include the information about your version and License ID. These are displayed in your "About AppGuard Solo" window, accessed by right-clicking on your tray icon, and selecting "About..." from the menu.

Email support: <a href="mailto:support@appguard.us">support@appguard.us</a>



# Windows Event Viewer

All AppGuard Solo events and status messages are logged to the **Windows Event Log**, which can be reviewed with the **Windows Event Viewer**. To view or download AppGuard Solo events in the Windows Event Viewer, follow these steps.

1. To view and collect events, open the Windows Event Viewer (type "Event Viewer" in the Start Menu):



2. When you open the Windows Event Viewer you should see the following screen:

Event Viewer (Local)	Event Viewer (Local)	Actions			
<ul> <li>Gustom Views</li> <li>Windows Logs</li> <li>Applications and Services Log</li> </ul>	Overview and Summary Last refres_	Event Viewer (Local) of Open Saved Log			
<ul> <li>Cappleations and Services Lo</li> <li>Saved Logs</li> <li>Subscriptions</li> </ul>	Overview   Create Custom View  To view events that have occurred on your computer, select the appropriate source, log or custom view node in the  Connect to Another Compi				
	Summary of Administrative Events    Event Type Event ID Source	View Refresh			
	Recently Viewed Nodes				
	Log Summery .				

3. Open "Application Log" in the Windows Logs Folder:

Event Viewer (Local)	Application N	umber of events: 4,492 (1) Ne	ew events ava	ilable		
Custom Views Windows Logs	P Filtered: Lo	g: Application; Source: app	guard. Numb	er of events	31	
Application	Level	Date and Time	Source	Event ID	sk Ca	
Security	(1) Information	6/14/2018 1:24:59 PM	AppGu	11	pGu_	
Setup	(1) Information	6/14/2018 1:22:13 PM	AppGu	11	pGu	
System	(i) Information	6/14/2018 1:17:55 PM	AppGu	11	pGu	
Forwarded Events	(1) Information	6/14/2018 1:04:52 PM	AppGu	11	pGu	
Subscriptions	(1) Information	6/14/2018 12:55:47 PM	AppGu	8	pGu	
and another the second	<li>Information</li>	6/14/2018 12:46:53 PM	AppGu	11	pGu	
	<li>Information</li>	6/14/2018 12:43:25 PM	AppGu	11	pGu	
	(1) Information	6/14/2018 12:40:16 PM	AppGu	11	pGu	
	(1) Information	6/14/2018 12:38:00 PM	AppGu	11	pGu	
	(1) Information	6/14/2018 12:36:26 PM	AppGu	11	pGu	
	(1) Information	6/14/2018 12:34:38 PM	AppGu	11	pGu	
	<li>Information</li>	6/14/2018 12:33:42 PM	AppGu	20	nfig	
	<li>Information</li>	6/14/2018 12:31:45 PM	AppGu	11	pGu	
	Information	6/14/2018 12:29:17 PM	AppGu	8	pGu_	
	<li>Information</li>	6/14/2018 12:28:47 PM	AppGu	8	pGu	
	<li>Information</li>	6/14/2018 12:28:45 PM	AppGu	8	pGu	
	<li>Information</li>	6/14/2018 12:28:10 PM	AppGu	8	pGu	
	(1) Information	6/14/2018 12:27:05 PM	AppGu	11	pGu	
	(1) Information	6/14/2018 12:24:18 PM	AppGu	9	pGu	1

4. If there are a lot of events, right-click the **Application Log** and select "Filter Current Log" to view only the AppGuard Solo events.

THE REAL PROPERTY AND	01					
Event Viewer (Local)	Application N	umber of events: 4,492 () No	w events avai	lable		
Windows Loos	P Filtered Lo	g: Application; Source: app	guard. Numb	er of events	531	
Application	Inel	Dete and Time	Source	Event ID	lask Ca	
Securi	Open Saved Log.	1/2018 1:24:59 PM	AppGu	11	lopGu.	
Setup	Create Custom View.	1/2018 1:22:13 PM	AppGu	15	AppGu.	
Syster	Import Custom View.	1/2018 1:17:55 PM	AppGu	11	AppGu_	
Forwa		4/2018 1:04:52 PM	AppGu	11	AppGu.	
Appicatio	Clear Log_	1/2018 12:55:47 PM	AppGu	8	AppGu.	
12 sourcebu	Filter Current Log.	8/2018 12:46:53 PM	AppGu	11	AppGu.	
	Clear Filter	1/2018 12:43:25 PM	AppGu	11	AppGu.	
	Properties	1/2018 12:40:16 PM	AppGu	11	AppGu.	
	Find.	1/2018 12:3800 PM	AppGu	11	AppGu.	
	Care Education File As	\$/2018 12:36:26 PM	AppGu	11	Αρράα	
	save mittered Log me Au.	\$/2018 12:3438 PM	AppGu	11	AppGu	
	Atlach a Task To this Log.	\$/2018 12:33:42 PM	AppGu	20	Config	
	Save Filter to Custom View	\$/2018 12:31:45 PM	AppGu	11	AppGu.	
	View	. 1/2018 12:2917 FM	AppGu	8	AppGu.	
		\$/2018 12:28:47 PM	AppGu	8	Аррби	
	Refresh	1/2018 12:28:45 FM	AppGu	8	Аррби.	
	Hele	, 1/2018 12:28 10 PM	AppGu	8	AppGu_	
	Louis .		AppGu	11	AppGu.	
	Distormation	6/14/2018 12:2418 PM	AnnGu	9	loogu.	

5. In the Event Sources field below, select "AppGuard" and click on OK.

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Logged:	Any time		~
Event level:	Critical	Warning Verbose	
		Information	
By log	Event logs:	Application	2
O By source	Event sources:		
Includes/Excl exclude criter	udes Event IDs: En ia, type a minus si	nter ID numbers and/or ID ranges separated by comi ign first. For example 1,3,5-99,-76	mas. To
Includes/Excl exclude criter	udes Event IDs: En ia, type a minus si <all event="" ids<="" td=""><td>nter ID numbers and/or ID ranges separated by comi ign first. For example 1,3,5-99,-76 s&gt;</td><td>mas. To</td></all>	nter ID numbers and/or ID ranges separated by comi ign first. For example 1,3,5-99,-76 s>	mas. To
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6. In the filtered events, double-click an event to view more about it.

Event Viewer (Local)	Application N	umber of events: 4,490 () N	ov ovonts avai	labin		
Custom Views	Level	Date and Time	Source	Event ID	Task Ca.	
Application	(1) Information	6/14/2018 12:3800 PM	AppGu	11	AppGu.	
Security	() Information	6/14/2018 12:36/26 PM	AppGu	11	AppGu_	
Setup	Information	6/14/2018 12:34:38 PM	AppGu	11	AppGu_	
System	() Information	6/14/2018 12:33:42 PM	AppGu	20	Config	
Forwarded Events	Information	6/14/2018 12:31:49 PM	Outlook	30	None	
Applications and Services Loc	(i) Information	6/14/2018 12:31:45 PM	AppGu	11	AppGu	
Subscriptions	Error 0	6/14/2018 12:2931 PM	SideBy_	35	None	
	() Information	6/14/2018 12:29:17 PM	AppGu	8	AppGu	
	Information	6/14/2018 12:2905 PM	ESENT	916	General	
	() Information	6/14/2018 12:2847 PM	AppGu	8	AppGu_	
	Information	6/14/2018 12:28:45 PM	AppGu	8	AppGu_	
	() Information	6/14/2018 12:28:10 PM	AppGu	8	AppGu	
	Information	6/14/2018 12:27:05 PM	AppGu	11	Аррби	
	Information	6/14/2018 12:24:18 PM	AppGu	9	AppGu	
	Information	6/14/2018 12:23:05 PM	Securit	16384	None	
	() Information	6/14/2018 12:22:35 PM	Securit	16394	None	
	() Information	6/14/2018 12:22:26 PM	AppGu	9	AppGu	
	Information	6/14/2018 12:19/20 PM	AppGu	9	AppGu	
	Information	6/14/2018 12:1805 PM	Securit_	16384	None	
	(1) Information	6/14/2018 12:1802 PM	AppGu	8	AppGu_	

Event Properties -	Event 8, AppGuard				×
General Details Prevented <c:\win \microsoft.microsoft<="" \microsoftedge.ex="" td=""><td>dows\systemapps\microsoft. e&gt; from writing to memory o oftedge_8wekyb3d8bbwe\mic</td><td>microsoftedge_8 f <c:\windows\sy crosoftedgecp.ex</c:\windows\sy </td><td>wekyb3d8bbwe /stemapps e&gt;.</td><td>_</td><td></td></c:\win>	dows\systemapps\microsoft. e> from writing to memory o oftedge_8wekyb3d8bbwe\mic	microsoftedge_8 f <c:\windows\sy crosoftedgecp.ex</c:\windows\sy 	wekyb3d8bbwe /stemapps e>.	_	
Log Name: Source: Event ID: Level: User: OpCode: More Information:	Application AppGuard 8 Information N/A <u>Event Log Online Help</u>	Logged: Task Category: Keywords: Computer:	6/14/2018 12:29:17 PM AppGuard Action Classic DESKTOP-GT1P7SP		•
Сору				Clos	se

 To get assistance with troubleshooting, right-click **Application** again and choose Save the Filtered Log File As.... Name the file and send to AppGuard Solo support – <u>Support@appguard.us</u>.

Event Viewer Local	Application N	amber of events 4,492 III Na	w monts avai	lable		
Custom Views	P Filtered: Log	: Application; Source: app	guard. Numb	er of events	1,531	
Application     Security     Application     Security     Security     Application     Creat     Societ     Application     Creat     Propus     Subscript:     Filter     Clear     Propus     Attac     Save     View     Refre     Help	II c.m.d. Swelt Gg. Log. Current Log. Filter erties - Filtered Log File Ac. h a Task To this Log. Filter to Custom View. sh	Revi and Time 2018 12439 PM 2018 12439 PM 2018 12439 PM 2018 12459 PM 2018 12454 PM 2018 125547 PM 2018 12547 PM 2018 124457 PM 2018 124457 PM 2018 124457 PM 2018 123457 PM 2018	Source AppGu AppGu AppGu AppGu AppGu AppGu AppGu AppGu AppGu AppGu AppGu AppGu AppGu AppGu AppGu AppGu AppGu AppGu	Event ID 11 11 11 11 11 11 11 11 11 1	Так С.а. Аррби Аррби Аррби Аррби Аррби Аррби Аррби Аррби Аррби Аррби Аррби Аррби Аррби Аррби Аррби Аррби Аррби	