



Installation Guide

McAfee Change Control and McAfee  
Application Control 7.0.0

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# Preface

This guide provides the information you need to work with your McAfee product.

## Contents

- ▶ *About this guide*
- ▶ *Find product documentation*

---

## About this guide

This information describes the guide's target audience, the typographical conventions and icons used in this guide, and how the guide is organized.

## Audience





McAfee documentation is carefully researched and written for the target audience.

The information in this guide is intended primarily for:

- **Administrators** — People who implement and enforce the company's security program.

## Conventions

This guide uses these typographical conventions and icons.

<i>Book title, term, emphasis</i>	Title of a book, chapter, or topic; a new term; emphasis.
<b>Bold</b>	Text that is strongly emphasized.
User input, code, message	Commands and other text that the user types; a code sample; a displayed message.
Interface text	Words from the product interface like options, menus, buttons, and dialog boxes.
Hypertext blue	A link to a topic or to an external website.
	<b>Note:</b> Additional information, like an alternate method of accessing an option.
	<b>Tip:</b> Suggestions and recommendations.
	<b>Important/Caution:</b> Valuable advice to protect your computer system, software installation, network, business, or data.
	<b>Warning:</b> Critical advice to prevent bodily harm when using a hardware product.

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## Find product documentation

On the **ServicePortal**, you can find information about a released product, including product documentation, technical articles, and more.

### Task

- 1 Go to the **ServicePortal** at <https://support.mcafee.com> and click the **Knowledge Center** tab.
- 2 In the **Knowledge Base** pane under **Content Source**, click **Product Documentation**.
- 3 Select a product and version, then click **Search** to display a list of documents.

# 1

## Installing the software

Install Change Control or Application Control in the standalone configuration on Windows, Linux, and AIX platforms.

For all supported platforms, the software works on physical and virtual machines (VM). You can install the software in one of these modes.

- **Interactive mode** — An installation wizard guides you through the several steps required to configure and install the software.
- **Silent mode** — Installation is non-interactive installation with no progress bar or displayed messages. Recommended for medium- and large-scale deployments.

### Contents

- ▶ *Prerequisites*
- ▶ *Procure the installer*
- ▶ *Install in Interactive mode*
- ▶ *Install in Silent mode*
- ▶ *Verify the installation*

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## Prerequisites

Before installing Change Control or Application Control, review these guidelines and make sure that your environment conforms to these requirements.

- Verify that the system does not have an existing installation. Installation might fail if another instance of the software is already installed and is in Enabled mode.
  - If upgrade is supported from the installed version (verify by reviewing release notes and [KB84098](#)), see *Upgrading the software*.
  - If upgrade is not supported from the installed version, uninstall the existing version before installing the new version.
- Download the license key from the McAfee Downloads site. Keep it handy before starting installation.
- Review the minimum system requirements, supported operating systems, and supported file systems for Change Control and Application Control (see [KB84098](#)).
- Make sure that the target platform where you want to install the software is supported. See [KB76459](#) (for Change Control) and [KB73341](#) (for Application Control).
- Review the release notes to acquaint yourself with the known issues and identify dependencies.
- Review these platform-specific requirements.

Platform Requirements	
Windows	<ul style="list-style-type: none"> <li>• Make sure that the product is not installed in the &lt;SYSTEM_VOLUME&gt;\Solidcore directory or its subdirectories.</li> <li>• Make sure that the product is installed on a system drive.</li> <li>• For all platforms except Windows 2000, if you have other file-security programs (anti-virus programs or file-encryption programs) installed and running on your system, create a registry key named DfsIrpStackSize under HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Services\Mup\Parameters and set its decimal value to 10. If this registry key already exists, make sure that its decimal value is set to 10.</li> </ul>
AIX	Make sure that the <i>genkex</i> package is installed on the system.
Linux	<p>Review <a href="#">KB82066</a> for information about the supported kernels for the Linux operating system. If the target kernel is not mentioned in this article, there are two ways to get support:</p> <ul style="list-style-type: none"> <li>• Compile the kernel module in your test environment and manually deploy to production endpoints. For more information, see <i>Create builds for unsupported Linux kernels</i>.</li> <li>• Request for kernel support through the <a href="#">McAfee Accept</a> portal by filing a Product Enhancement Request (PER). For information about how to submit a PER, see <a href="#">KB60021</a>.</li> </ul>

## Procure the installer

The Solidcore client is the software component that provides change monitoring, change prevention, and whitelisting features on the systems where it is installed. Download the Solidcore client package before installing the Solidcore client.

### Task

- 1 Download the package from the McAfee downloads site.

The available Solidcore client packages are:

Windows	SOLIDCOR<version>-<build>_WIN.zip
AIX	SOLIDCOR<version>-<build>_AIX.zip
Linux	SOLIDCOR<version>-<build>_LNX.zip



In the file name, <version> and <build> represent the version and build number associated with the product. For example, the SOLIDCOR614-211\_LNX.zip file includes the Solidcore client (version 6.1.4 and build number 211) for the Linux platform.

- 2 Save the package file to an accessible location.
- 3 Open the package file for the required operating system.  
The Solidcore client package file includes the installers for all operating systems.
- 4 Extract the required installer.  
For the Windows operating system, different installers are available based on the target architecture and distribution. Each installer file name uses the `setup-win-<os>-<arch>-<rel>.<build>.exe` syntax. In the syntax:



- <arch>
- x86 for 32-bit architecture
  - ia64 for Intel 64-bit architecture
  - amd64 for AMD 64-bit architecture
- <os>        Indicates the operating system to which the installer applies

---

## Install in Interactive mode

In Interactive mode, the installer starts a wizard that guides you through the installation. Using Interactive mode you can install the software on Windows and AIX platforms. Interactive mode is unavailable for the Linux platform.

### Tasks

- [Install on the Windows platform on page 9](#)  
Install the software in Interactive mode on a Windows system.
- [Install on the AIX platform on page 10](#)  
Install the software in Interactive mode on an AIX system.

## Install on the Windows platform

Install the software in Interactive mode on a Windows system.

### Task

- 1 Log on to the system with administrator rights.
- 2 Navigate to the directory containing the installer file.
- 3 Start the installer.
  - For Windows Vista, Windows 2008, Windows 2008 R2, Windows 7 (with UAC enabled), Windows 8.1, Windows 2012, or Windows 10, right-click the installer file in Windows Explorer and select **Run as Administrator**.
  - For other Windows platforms, double-click the installer file in Windows Explorer.
- 4 On the **Welcome** page, click **Next** to display the **License Agreement** page.
- 5 Accept the terms of the license agreement, then click **Next** to display the **Customer Information** page.
- 6 Enter the user and company information.
- 7 Enter the license key in the **Serial Number** field or select **Install without license key**.
- 8 Click **Next** to open the **Destination Folder** page.
- 9 Specify the installation folder.

By default, the software files are placed in the <system drive>:\Program Files\McAfee \Solidcore folder.
- 10 (Optional) Click **Browse** to specify a batch file (containing commands) or an executable file to use for post-installation configuration.

The specified file is started automatically after the software is installed on the system.
- 11 In the **Ready to Install the Program** page, click **Install** to begin the installation.
- 12 Click **Finish** to complete the installation.

## Install on the AIX platform

Install the software in Interactive mode on an AIX system.

### Task

- 1 Log on to the system with administrator rights.
- 2 Open a terminal and navigate to the directory containing the installer file.
- 3 Run this command to run the installer.

```
# ./solidifier-<rel>-<build>-aix-<arch>.bin
```

A message indicates that the start of the installation is displayed.

```
-----
Welcome to the McAfee Solidifier Setup Wizard
-----
Please read the following License Agreement.
You must accept the terms of this agreement before continuing with the installation.
Press [Enter] to continue :
```

- 4 Press **Enter** to display the McAfee End-User License Agreement.
- 5 View all pages of the agreement until a message prompts you to accept the agreement.

```
Do you accept this license? [y/n]:
```

- 6 Type **Y** to accept the agreement.

A message prompts you to specify the installation path.

```
-----
Install Path
Please enter the path where you wish to install McAfee Solidifier.
Install path for McAfee Solidifier [/usr/local]:
```

- 7 Press **Enter** to accept the default installation path (`/usr/local/mcafee/solidcore`) or specify the installation path.

A message prompts you to specify the license key.

```
-----
Product License Key:
Please enter the product license key:
License key for the product (Press ENTER to skip this step and add license key after
installation) [ ]
```

- 8 Perform one of these steps.
  - Enter the license key, then press **Enter**.
  - Press **Enter** to specify the license key after installation by using the `sadmin license add` command.

This message is displayed.

```
-----  
Setup is now ready to begin installing McAfee Solidifier on your computer  
Do you want to continue? [Y/N]:
```

- 9 Type **Y** or press **Enter** to start the installation.

This message is displayed after successful installation of the product.

```
Setup has finished installing McAfee Solidifier on your computer.
```

---

## Install in Silent mode

To perform a silent installation, use the provided command-line options to suppress all interaction and provide parameters for all options.

When you perform a silent installation, no messages are displayed. Instead, a log file captures installation information, including whether the installation was successful. You can review the log file and determine the installation results. Using Silent mode, you can install the software on Windows, AIX, and Linux platforms.

### Tasks

- [Install on the Windows platform on page 12](#)  
Install the software in Silent mode on a Windows system.
- [Install on the Linux platform on page 12](#)  
Install the software in Silent mode on a Linux system.
- [Install on the AIX platform on page 13](#)  
Install the software in Silent mode on an AIX system.

## Install on the Windows platform

Install the software in Silent mode on a Windows system.

### Task

- 1 Log on to the system with administrator rights.
- 2 Verify that the required installer is available.
- 3 Open a command window and run one of these commands.

```
<installer-file> /s /v" /qn SERIALNUMBER=xxxx-xxxx-xxxx-xxxx-xxxx"
```

```
<installer-file> /s /v" /qn UNLICVER=1"
```

Notice the double quotes (") after /v and space between /s and /v. There is no space between /v and double quotes ("). Here is description of all possible arguments for the command. In addition to the SERIALNUMBER or UNLICVER arguments, you can optionally specify one or more of these arguments with the command.

Argument	Description
SERIALNUMBER	Specify the license key for the installation. <pre>&lt;installer-file&gt; /s /v" /qn SERIALNUMBER=xxxx-xxxx-xxxx-xxxx-xxxx"</pre>
UNLICVER	Install the software without specifying the license key. Possible values for this argument are 0 and 1. A value of 1 indicates that you are installing the software without using the license key. <pre>&lt;installer-file&gt; /s /v" /qn UNLICVER=1"</pre>
SHORTCUT	Create a desktop shortcut to access the command-line tool. Possible values for this argument are 0 and 1. Specify a value of 1 to create the shortcut and 0 to skip the shortcut creation. <pre>&lt;installer-file&gt; /s /v" /qn UNLICVER=1 SHORTCUT=1"</pre>
POSTINSTALL	Specify a file to perform post-installation configuration on the system. To specify file paths that contain spaces, enclose the paths in double quotes ("). <pre>&lt;installer-file&gt; /s /v" /qn UNLICVER=1 POSTINSTALL=\"C:\\My Dir\\batch.exe\""</pre>
INSTALLDIR	Install the software at a user-specified location. With this argument, you can specify a folder path of up to 240 characters (total string length including special characters). <pre>&lt;installer-file&gt; /s /v" /qn SERIALNUMBER=xxxx-xxxx-xxxx-xxxx-xxxx INSTALLDIR=\"C:\\My Dir\\McAfee\\Solidcore\""</pre>
/l+*v	Change the default location of the Solidcore_Installer.log file. By default, this file is placed in the SYSTEMROOT directory. <pre>&lt;installer-file&gt; /s /v" /qn UNLICVER=1 /l+*v \"C:\\Solidcore_Installer.log\""</pre>

## Install on the Linux platform

Install the software in Silent mode on a Linux system.

### Before you begin

Before installing on the Linux operating system, review [KB82066](#) for information about the supported kernels. We add support for new kernels through kernel release cycles. We recommend that you review the kernel list before installing. If the target kernel is not mentioned in this article, there are two ways to get support:

- Compile the kernel module in your test environment and manually deploy to production endpoints. For more information, see *Create builds for unsupported Linux kernels*.
- Request kernel support through the [McAfee Accept](#) portal by filing a Product Enhancement Request (PER). For information about how to submit a PER, see [KB60021](#).

**Task**

- 1 Log on to the system with administrator rights.
- 2 Open a terminal and navigate to the directory containing the installer file.
- 3 Extract the contents of the Solidcore client package file.
- 4 Run the mapkg\_install script file.

```
./mapkg_install.sh
```

The installation script performs installation-related tasks. By default, the software is installed in the `/usr/local/mcafee/solidcore` directory.

- 5 Review the log file. See *Verify the installation*.

**Install on the AIX platform**


Install the software in Silent mode on an AIX system.

**Task**

- 1 Log on to the system with administrator rights.
- 2 Open a terminal and navigate to the directory containing the installer file.
- 3 Run this command to run the installer.

```
./solidifier-<rel>-<build>-aix-<arch>.bin --mode unattended
```

You can specify these optional parameters while running the installer.

Parameter	Description
<code>--licensekey</code>	Specify the license key during installation. Here is an example.  <pre># ./solidifier-6.0.1-1007-aix-ppc32.bin --mode unattended --licensekey 1234-1234-1234-1234</pre> <div style="border: 1px solid gray; padding: 5px; margin-top: 10px;">  If you install the product without specifying the license key, you can enter the license key later by using the <code>sadmin license add</code> command. </div>
<code>--prefix</code>	Install the product at a user-specified location. Here is an example.  <pre># ./solidifier-6.0.1-1007-aix-ppc64.bin --mode unattended --prefix /usr/john/myapps</pre>
<code>--optionfile</code>	Use an ASCII file to specify all installation options. Here is an example.  <pre># ./solidifier-&lt;rel&gt;-&lt;build&gt;-aix-&lt;arch&gt;.bin --optionfile /usr/john/myopfile</pre> <p>The ASCII file must include the installer options in this syntax:</p> <pre>mode=unattended [ licensekey=&lt;licensekey&gt; ] [ prefix=&lt;pathname&gt; ]</pre> <p>Here is an example of an options file.</p> <pre>mode=unattended licensekey=1234-1234-1234-1234 prefix=/usr/john/myapps</pre>

---

## Verify the installation

Verify that the software was installed successfully.

### Tasks

- *Verify on the Windows platform on page 14*  
Verify that the software was installed successfully on the Windows platform.
- *Verify on the Linux and AIX platforms on page 14*  
Verify that the software was installed successfully on the Linux and AIX platforms.

## Verify on the Windows platform

Verify that the software was installed successfully on the Windows platform.

### Task

For details about product features, usage, and best practices, click ? or Help.

- Make sure that these components exist:
  - An entry for McAfee Solidifier is added to the **Programs** menu.
  - The `swin.sys` file is added to the `%SystemRoot%\System32\Drivers` location.
  - The McAfee Solidifier Service is added under Windows services.
  - Product-specific registry settings are created:
    - `HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Services\swin`
    - `HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Services\scsrvc`
  - Additional files are placed in the installation directory. These files are internal to the product and should not be modified.
  - `Solidcore_Installer.log` and `solidcore_setup.log` files are created under `%SYSTEMROOT%`. You can view the log file contents to verify if errors occurred during the installation.

## Verify on the Linux and AIX platforms

Verify that the software was installed successfully on the Linux and AIX platforms.

### Task

For details about product features, usage, and best practices, click ? or Help.

- 1 Review the log file.

- Linux
  - If the installation succeeds, the `solidcoreS3_install_<rel>-<build>.log` file is created in the `/var/log/mcafee/solidcore` directory.
  - If the installation fails, the `solidcoreS3_install.log` file is present in the `/tmp` directory. For error details, review the most-recent `bitrock_installer.log` or `bitrock_installer_<PID>.log` file in the `/tmp` directory. To further investigate installation failures, contact McAfee Support (<https://mysupport.mcafee.com/>) with the log file.
- AIX Review the most-recent `bitrock_installer.log` or `bitrock_installer_<PID>.log` file in the `/tmp` directory. To further investigate failures, contact McAfee Support (<https://mysupport.mcafee.com/>) with the log file and gatherinfo logs.

- 2 Verify that the Solidcore product is reported in the package database of the system.

Linux (all distributions) # rpm -q solidcores3 solidcores3-kmod  
These messages are displayed.

```
solidcores3-<rel>-<build>  
solidcores3-kmod-<rel>-<build>
```

Linux (Ubuntu) dpkg -l solidcores3 solidcores3-kmod  
These messages are displayed.

```
solidcores3      <rel>-<build>  The McAfee Solidifier provides a  
comprehensive control solution for enterprise server systems.
```

```
solidcores3-kmod <rel>-<build>  This package provides the kernel  
component of McAfee Solidifier for Linux.
```

AIX # lslpp -l solidcoreS3

These messages are displayed.

```
Fileset Level State Description  
-----  
Path: /usr/lib/objrepos solidcoreS3 <rel>.<build> COMMITTED McAfee  
Solidifier for AIX, <rel>.<build>.
```

- 3 Verify that the `solidcore.conf` file is created in the `/etc` directory during installation.

```
# ls -ls /etc/mcafee/solidcore/solidcore.conf
```

- 4 Make sure that the software service (`scsrvc`) is added to the system.

- Linux — # `ls -ls /etc/init.d/scsrvc`
- AIX — # `ls -ls /etc/scsrvc`

- 5 Verify that the software service (`scsrvc`) is running.

```
# ps -ef | grep scsrvc
```

The output of this command should show at least two `scsrvc` processes running from the installation location.

- 6 Make sure that the product files are placed in the installation directory.

```
# ls -ls <install-dir>
```





# 2

## Upgrading the software

Upgrade Change Control or Application Control in the standalone configuration. You can upgrade the software in one of these modes.

- **Interactive mode** — An installation wizard guides you through the several steps required to upgrade the software.
- **Silent mode** — Upgrade is non-interactive with no progress bar or displayed messages. Instead, a log file captures information, including whether the upgrade was successful. You can review the log file and determine the results of the upgrade. Recommended for medium- and large-scale deployments.

### Contents

- ▶ *Before you begin*
- ▶ *Upgrade in Interactive mode*
- ▶ *Upgrade in Silent mode*
- ▶ *Upgrade verification*

---

## Before you begin

Before upgrading Change Control or Application Control, review these guidelines and make sure that your environment conforms to the requirements.

- Upgrade is possible only at the existing installation location. Upgrading to an alternate path is not supported.
- Upgrade is supported in Update, Enabled, and Disabled modes.
  - You can upgrade the software in Enabled mode on all supported Windows platforms. Upgrade in Enabled mode is not available on the UNIX platforms. If you are using a software distribution tool to upgrade in Enabled mode, assign updater privileges to all relevant binary files of the software distribution tool. To assign updater privileges to a file, use this command.  
updaters add <binary file>
  - If you upgrade in Disabled mode, make sure that you recreate the whitelist for the system when using the Application Control software. Also, for the Windows platform, restart the system after you upgrade the software.



Application Control also supports the Observe mode. However, this mode is unavailable in the standalone configuration and is available only when McAfee® ePolicy Orchestrator® (McAfee ePO™) manages the system.

- The default rule list (as available in a fresh installation) is not imported on upgrade. All existing monitoring, filter, read-protect, and write-protect rules applied before upgrade remain intact.
- Review the release notes to acquaint yourself with the known issues and identify dependencies you must consider.

- Review [KB82066](#) for information about the supported kernels for the Linux operating system. If the target kernel is not mentioned in this article, there are two ways to get support:
  - Compile the kernel module in your test environment and manually deploy to production endpoints. For more information, see *Create builds for unsupported Linux kernels*.
  - Request for kernel support through the [McAfee Accept](#) portal by filing a Product Enhancement Request (PER). For information about how to submit a PER, see [KB60021](#).

## Upgrade in Interactive mode

Using Interactive mode you can upgrade the software on Windows and AIX platforms.

### Tasks

- [Upgrade on the Windows platform on page 18](#)  
Upgrade the software in Interactive mode on a Windows system.
- [Upgrade on the AIX platform on page 19](#)  
Upgrade the software in Interactive mode on an AIX system.

## Upgrade on the Windows platform

Upgrade the software in Interactive mode on a Windows system.

### Task

- 1 Log on to the system with administrator rights.
- 2 Navigate to the directory containing the installer file.
- 3 Switch to Update mode.

```
> sadmin begin-update
```



If your system is currently in Enabled or Disabled mode, you can upgrade in the current mode. In Enabled mode, you can upgrade the software on all supported Windows platforms. Before using a software distribution tool to upgrade in Enabled mode, assign updater privileges to all relevant binary files of the tool. To assign updater privileges to a file, use the `updaters add <binary file>` command.

- 4 Start the installer.
  - For Windows Vista, Windows 2008, Windows 2008 R2, Windows 7 (with UAC enabled), Windows 8.1 or Windows 2012, right-click the installer file in Windows Explorer and select **Run as Administrator**.
  - For other Windows platforms, double-click the installer file in Windows Explorer. A message prompts you to confirm if you want to upgrade the software. Click **Yes** to proceed.
- 5 Click **Next** to begin the upgrade.
- 6 When the **Update Complete** page appears, click **Finish**.
- 7 When prompted to restart the system, click **Yes**.
- 8 Exit Update mode.

```
> sadmin end-update
```

This step places the system in Enabled mode.

## Upgrade on the AIX platform

Upgrade the software in Interactive mode on an AIX system.

### Task

- 1 Log on to the system with administrator rights.
- 2 Open a terminal and navigate to the directory containing the installer file.
- 3 Switch to Update mode.  

```
# sadmin begin-update
```



If your system is currently in Disabled mode, you can choose to upgrade in the current mode.

- 4 Run the installer with this command.  

```
# ./solidifier-<rel>-<build>-aix-<arch>.bin
```

This message is displayed:

```
McAfee Solidifier is in update mode.  
Press [Enter] to continue:
```

- 5 Press **Enter** to display the McAfee End-User License Agreement.
- 6 Press **Enter** until you view all pages of the agreement.  
A message prompts you to accept the agreement.

```
Do you accept this license? [y/n]:
```

- 7 Read the agreement carefully and type **Y** to accept the agreement.  
A message prompts you to choose the next action.

```
Solidifier is already installed. Please select the option:  
[1] Exit  
[2] Upgrade  
Please choose an option [1]
```

- 8 Type **2** to proceed with the upgrade.



Be careful after this step. Canceling or interrupting the upgrade (by pressing **[Ctrl] + [C]**) can leave the existing installation in an inconsistent state.

- 9 When prompted to reboot, press **Enter**.
- 10 Type **Y** or press **Enter** to proceed with the upgrade.  
On successful upgrade of the product, this message is displayed.

```
Setup has finished installing McAfee Solidifier on your computer.
```

- 11 Exit Update mode.  

```
# sadmin end-update
```
- 12 Restart the system to complete the upgrade.

---

## Upgrade in Silent mode

To perform a silent upgrade, use the command-line options to suppress interaction and provide parameters for all options. Using Silent mode you can upgrade the software on Windows, AIX, and Linux platforms.

### Tasks

- [Upgrade on the Windows platform on page 20](#)  
Upgrade the software in Silent mode on a Windows system.
- [Upgrade on the Linux platform on page 21](#)  
Upgrade the software in Silent mode on a Linux system.
- [Upgrade on the AIX platform on page 22](#)  
Upgrade the software in Silent mode on an AIX system.

## Upgrade on the Windows platform

Upgrade the software in Silent mode on a Windows system.

### Task

- 1 Log on to the system with administrator rights.
- 2 Verify that the required installer is available.
- 3 Open a command window and switch to Update mode.

```
> sadmin begin-update
```



If your system is currently in Enabled or Disabled mode, you can upgrade in the current mode. In Enabled mode, you can upgrade the software on all supported Windows platforms. Before using a software distribution tool to upgrade in Enabled mode, assign updater privileges to all relevant binary files of the tool. To assign updater privileges to a file, use the `updaters add <binary file>` command.

4 Run one of these commands.

```
<installer-file> /s /v" /qn SERIALNUMBER=xxxx-xxxx-xxxx-xxxx-xxxx"
```

```
<installer-file> /s /v" /qn UNLICVER=1"
```

Notice the double quotes (") after /v and space between /s and /v. There is no space between /v and double quotes ("). Here is description of all possible arguments for the command. In addition to the SERIALNUMBER or UNLICVER arguments, you can optionally specify one or more of these arguments with the command.

Argument	Description
SERIALNUMBER	Specify the license key for the installation. <pre>&lt;installer-file&gt; /s /v" /qn SERIALNUMBER=xxxx-xxxx-xxxx-xxxx-xxxx"</pre>
UNLICVER	Install the software without specifying the license key. Possible values for this argument are 0 and 1. A value of 1 indicates that you are installing the software without using the license key. <pre>&lt;installer-file&gt; /s /v" /qn UNLICVER=1"</pre>
SHORTCUT	Create a desktop shortcut to access the command-line tool. Possible values for this argument are 0 and 1. Specify a value of 1 to create the shortcut and 0 to skip the shortcut creation. <pre>&lt;installer-file&gt; /s /v" /qn UNLICVER=1 SHORTCUT=1"</pre>
POSTINSTALL	Specify a file to perform post-installation configuration on the system. To specify file paths that contain spaces, enclose the paths in double quotes ("). <pre>&lt;installer-file&gt; /s /v" /qn UNLICVER=1 POSTINSTALL=\"C:\\My Dir\\batch.exe\""</pre>
INSTALLDIR	Install the software at a user-specified location. With this argument, you can specify a folder path of up to 240 characters (total string length including special characters). <pre>&lt;installer-file&gt; /s /v" /qn SERIALNUMBER=xxxx-xxxx-xxxx-xxxx-xxxx INSTALLDIR=\"C:\\My Dir\\McAfee\\Solidcore\""</pre>
/l+*v	Change the default location of the Solidcore_Installer.log file. By default, this file is placed in the SYSTEMROOT directory. <pre>&lt;installer-file&gt; /s /v" /qn UNLICVER=1 /l+*v \"C:\\Solidcore_Installer.log\""</pre>

5 Restart the system to complete the upgrade.

6 Exit Update mode.

```
> sadmin end-update
```

This step places the system in Enabled mode.

## Upgrade on the Linux platform

Upgrade the software in Silent mode on a Linux system.

### Before you begin

Before upgrading on the Linux operating system, review [KB82066](#) for information about the supported kernels. We add support for new kernels through kernel release cycles. We recommend that you review the kernel list before upgrading. If the target kernel is not mentioned in this article, there are two ways to get support:

- Compile the kernel module in your test environment and manually deploy to production endpoints. For more information, see *Create builds for unsupported Linux kernels*.
- Request for kernel support through the [McAfee Accept](#) portal by filing a Product Enhancement Request (PER). For information about how to submit a PER, see [KB60021](#).

**Task**

- 1 Log on to the system with administrator rights
- 2 Open a terminal and navigate to the directory containing the installer file.
- 3 Switch to Update mode.

```
# sadmin begin-update
```



If your system is currently in Disabled mode, you can choose to upgrade in the current mode. If you are upgrading from 6.1.0 to a later release, restart the endpoint before upgrading.

- 4 Run the `mapkg_install` script file.

```
./mapkg_install.sh
```

The script file performs all upgrade-related tasks. For detailed information about the workflow, see *Create builds for unsupported Linux kernels*.

- 5 Review the log file. See *Upgrade verification*.
- 6 Restart the system to complete the upgrade.
- 7 Exit Update mode.

```
# sadmin end-update
```

This step places the system in Enabled mode.

**Upgrade on the AIX platform**

Upgrade the software in Silent mode on an AIX system.

**Task**

- 1 Log on to the system with administrator rights.
- 2 Open a terminal and navigate to the directory containing the installer file.
- 3 Switch to Update mode.

```
# sadmin begin-update
```




If your system is currently in Disabled mode, you can choose to upgrade in the current mode.

- 4 Execute this command to run the installer.

```
./solidifier-<rel>-<build>-aix-<arch>.bin --mode unattended
```

You can specify these optional parameters while running the installer.

Parameter	Description
--licensekey	<p>Allows you to specify the license key during installation. Here is an example.</p> <pre># ./solidifier-6.0.1-1007-aix-ppc32.bin --mode unattended --licensekey 1234-1234-1234-1234-1234</pre> <div style="border: 1px solid gray; background-color: #f0f0f0; padding: 5px; margin-top: 10px;"> <p> If you install the product without specifying the license key, you can enter the license key later by using the <code>sadmin license add</code> command.</p> </div>
--optionfile	<p>Allows you to use an ASCII file to specify all installation options. Here is an example.</p> <pre># ./solidifier-&lt;rel&gt;-&lt;build&gt;-aix-&lt;arch&gt;.bin --optionfile /usr/john/myopfile</pre> <p>The ASCII file must include the installer options in this syntax:</p> <pre>mode=unattended [ licensekey=&lt;licensekey&gt; ] [ prefix=&lt;pathname&gt; ]</pre> <p>Here is an example of an options file.</p> <pre>mode=unattended licensekey=1234-1234-1234-1234-1234 prefix=/usr/john/myapps</pre>

- 5 Restart the system to complete the upgrade.

- 6 Exit Update mode.

```
# sadmin end-update
```

This step places the system in Enabled mode.

## Upgrade verification

Verify that the Change Control or Application Control software was upgraded successfully on the system.

Platform	Steps
Verify on the Windows platform	Run the <code>sadmin version</code> command to verify that the correct version the software is listed.
Verify on the Linux platform	<p>1 Review the log file.</p> <ul style="list-style-type: none"> <li>If the upgrade succeeds, the <code>solidcoreS3_install_&lt;rel&gt;-&lt;build&gt;.log</code> file is created in the <code>/var/log/mcafee/solidcore</code> directory.</li> <li>If the upgrade fails, the <code>solidcoreS3_install.log</code> file is present in the <code>/tmp</code> directory. For error details, review the most-recent <code>bitrock_installer.log</code> or <code>bitrock_installer_&lt;PID&gt;.log</code> file in the <code>/tmp</code> directory. To further investigate failures, contact McAfee Support (<a href="https://mysupport.mcafee.com/">https://mysupport.mcafee.com/</a>) with the log file and gatherinfo logs.</li> </ul> <p>2 Run this command to verify that the Solidcore product is reported in the package database of the system.</p> <ul style="list-style-type: none"> <li>For Linux (all distributions):           <pre># rpm -q solidcoreS3 solidcoreS3-kmod</pre> <p>These messages are displayed.</p> <pre>solidcoreS3-&lt;rel&gt;-&lt;build&gt; solidcoreS3-kmod-&lt;rel&gt;-&lt;build&gt;</pre> </li> <li>For Linux (Ubuntu):           <pre>dpkg -l solidcores3 solidcores3-kmod</pre> <p>These messages are displayed.</p> <pre>solidcores3      &lt;rel&gt;-&lt;build&gt;    The McAfee Solidifier provides a comprehensive control solution for enterprise server systems.</pre> <pre>solidcores3-kmod &lt;rel&gt;-&lt;build&gt;    This package provides the kernel component of McAfee Solidifier for Linux.</pre> </li> </ul>
Verify on the AIX platform	<p>1 Review the most-recent <code>bitrock_installer.log</code> or <code>bitrock_installer_&lt;PID&gt;.log</code> file in the <code>/tmp</code> directory. To further investigate failures, contact McAfee Support (<a href="https://mysupport.mcafee.com/">https://mysupport.mcafee.com/</a>) with the log file and gatherinfo logs.</p> <p>2 Run this command to verify that the Solidcore product is reported in the package database of the system.</p> <pre># lslpp -l solidcoreS3</pre> <p>This message is displayed.</p> <pre>Fileset Level State Description--- Path: /usr/lib/objrepos solidcoreS3 &lt;rel&gt;.&lt;build&gt; COMMITTED SolidcoreS3 McAfee Solidifier for AIX, &lt;rel&gt;.&lt;build&gt;</pre>



# 3

## Uninstalling the software

Uninstall Change Control or Application Control.

### Contents

- ▶ [Uninstall in Interactive mode](#)
- ▶ [Uninstall in Silent mode](#)

---

### Uninstall in Interactive mode

In Interactive mode, the installer starts a wizard that guides you through the uninstallation. Using Interactive mode you can uninstall the software on Windows and AIX platforms.

#### Tasks

- [Uninstall on the Windows platform on page 25](#)  
Remove the software from a Windows system using Interactive mode.
- [Uninstall on the AIX platform on page 26](#)  
Remove the software from an AIX system using Interactive mode.

### Uninstall on the Windows platform

Remove the software from a Windows system using Interactive mode.

#### Task

- 1 Log on to the system with administrator rights.
- 2 Switch to Disabled mode.

```
> sadmin disable
```



Disabling the software requires a system reboot.

- 3 Start the installer.
  - For Windows Vista and later, navigate to and open the **Programs and Features** window.
  - For other Windows platforms, navigate to and open the **Add or Remove Programs** window.
- 4 Select **McAfee Solidifier** from the list of programs and click **Remove**.  
A message prompts you to confirm if you want to remove the software.
- 5 Click **Yes** to proceed.

The software is removed from the system. During uninstallation, all software-related files are removed from the system. A few files might remain on your system. Perform these steps to remove the remaining files:

- Empty `Solidcore` folder in the installation directory (typically, `C:\Program Files\McAfee`)
- `Certificate` folder if it contains any public certificates

If needed, you can manually delete these components.

## Uninstall on the AIX platform

Remove the software from an AIX system using Interactive mode.

### Task

1 Log on to the system with administrator rights.

2 Open a terminal and switch to Disabled mode.

```
# sadmin disable
```



Disabling the software requires a system reboot.

3 Navigate to the installation directory and run this command to uninstall the software.

```
# ./uninstall
```

4 When prompted, type `Y` or press **Enter** to proceed with the uninstall.

The uninstallation begins. This message is displayed after the product is uninstalled.

```
Info: Uninstallation completed
      Press [Enter] to continue:
```

5 Press **Enter**.

---

## Uninstall in Silent mode

To perform a silent uninstall, use the command-line options to suppress interaction and provide parameters for all options. Using Silent mode you can uninstall the software on Windows, AIX, and Linux platforms.

### Tasks

- [Uninstall on the Windows platform on page 27](#)  
Remove the software from a Windows system using Silent mode.
- [Uninstall on the Linux platform on page 27](#)  
Remove the software from a Linux system using Silent mode.
- [Uninstall on the AIX platform on page 27](#)  
Remove the software from an AIX system using Silent mode.

## Uninstall on the Windows platform

Remove the software from a Windows system using Silent mode.

### Task

- 1 Log on to the system with administrator rights.
- 2 Open a command window and switch to Disabled mode.

```
> sadmin disable
```



Disabling the software requires a system reboot.

- 3 Run this command.

```
%SYSTEMROOT%\system32\msiexec.exe /X{432DB9E4-6388-432F-9ADB-61E8782F4593} /qn
```

## Uninstall on the Linux platform

Remove the software from a Linux system using Silent mode.

### Task

- 1 Log on to the system with administrator rights.
- 2 Open a terminal and switch to Disabled mode.

```
# sadmin disable
```



Disabling the software requires a system reboot.

- 3 Navigate to the installation directory.

By default, the software is installed in the `/usr/local/mcafee/solidcore` directory.

- 4 Run this command to uninstall the software.

```
# ./uninstall
```

- 5 (Optional) Verify uninstallation by reviewing the `solidcoreS3_uninstall.log` file in the `/tmp` directory.

## Uninstall on the AIX platform

Remove the software from an AIX system using Silent mode.

### Task

- 1 Log on to the system with administrator rights.
- 2 Open a terminal and switch to Disabled mode.

```
# sadmin disable
```



Disabling the software requires a system reboot.

- 3 Navigate to the installation directory and run this command to uninstall the software.

```
# ./uninstall --mode unattended
```

- 4 (Optional) Verify uninstallation by reviewing the `solidcoreS3_uninstall.log` file in the `/tmp` directory.



# A

## Create builds for unsupported Linux kernels

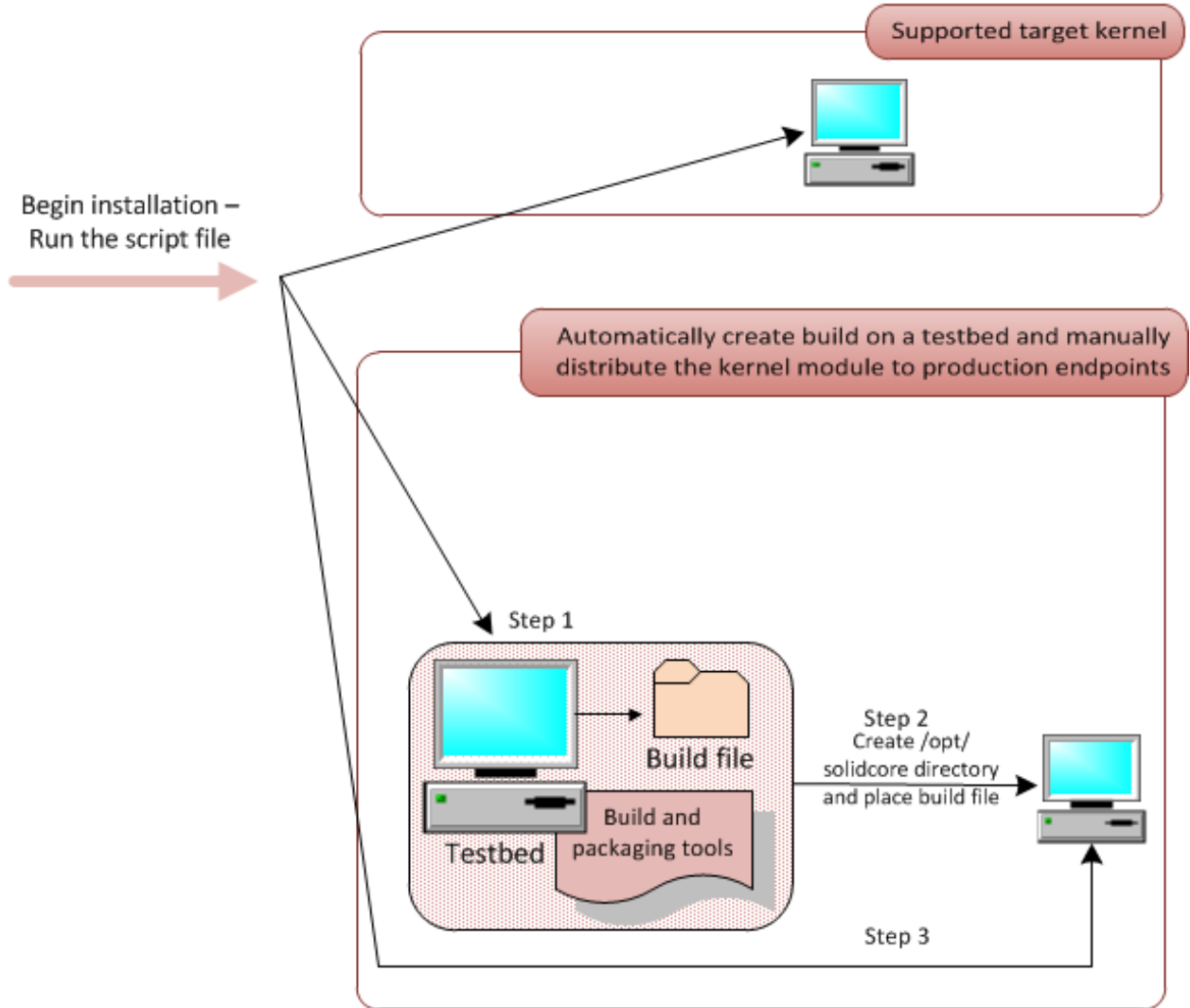
Here is information about how to create builds for unsupported Linux kernels.

Application Control includes support for numerous kernels. This allows you to directly install the software on kernels listed in [KB82066](#). If you need to install on a kernel that is not listed in [KB82066](#), you can perform one of these tasks:

- Create a build file for the target kernel (on a testbed) and manually deploy the build to other production endpoints.
- Request for kernel support through the [McAfee Accept](#) portal by filing a Product Enhancement Request (PER). The Product Management team will accommodate the kernel in upcoming kernel release cycles. For information about how to submit a PER, see [KB60021](#).

### What are the possible deployment scenarios?

The installation workflow on the Linux operating system varies based on whether the target kernel is supported. Review [KB82066](#) to verify whether support is available for the target kernel.



### How do I install when the target kernel is supported?

Query	Response
Has anything changed for me since the previous release?	No. If the target kernel is supported, direct installation occurs on the kernel.
Do I need to take care of any prerequisites?	None.
How do I install?	Perform the steps listed in <i>Install on the Linux platform</i> .

### How do I install when the target kernel is not supported?

Starting with the 6.1.0 release, we have included capability to create kernel modules for targets. You can create the needed build on a testbed and manually deploy the kernel module to production endpoints running the same kernel.

Component	Prerequisites	How do I install?	
Testbed	Make sure that these tools are installed on the testbed. Any non-conformance to the listed build environment results in build and installation failures.	Make sure that the testbed meets the prerequisites and then follow the instructions listed in <i>Install on the Linux platform</i> . The needed build is placed in the <code>&lt;install directory&gt;/dks</code> directory and the software is installed on the testbed.	
	Build and packaging tools		<ul style="list-style-type: none"> <li>• gmake (provided by package make)</li> <li>• gcc (provided by package gcc)</li> <li>• ld (provided by package binutils)</li> <li>• ar (provided by package binutils)</li> <li>• rpmbuild (provided by package rpm-build on Red Hat and package rpm on SUSE)</li> <li>• cpio (provided by package cpio)</li> </ul> Package versions should be the same as the versions that are packaged with the distribution ISO.
	Kbuild framework		Make sure that framework is installed under <code>/lib/modules/&lt;kernelversion&gt;/build/</code> (provided by package kernel-source on SUSE 10, linux-headers on Ubuntu distributions, and package kernel-devel on other distributions).
	Kernel source package		If you are running a 3.5.x or later kernel, make sure that you download the kernel source package and place it in the <code>/usr/src</code> directory.
Production endpoints	<ul style="list-style-type: none"> <li>• No build or package tools are needed on production endpoints.</li> <li>• Make sure that you create the <code>/opt/solidcore</code> directory on each production endpoint. This directory does not exist by default and must be manually created.</li> </ul>	Make sure that the endpoints meet the prerequisites and then follow the instructions listed in <i>How do I install on production endpoints?</i> .	

### How do I install on production endpoints?

Complete these steps to manually deploy a kernel module to production endpoints.

- 1 Create the `/opt/solidcore` directory on each production endpoint.
- 2 Fetch the created build from the `<install directory>/dks` directory of the testbed.

The file name includes kernel details. The naming convention followed for the builds is `solidifier-kmod-<rel>-<build>.<distro>.<kernel>.<arch>.<ext>`. Here are details of the components in the file name:

- `<distro>` — the available distributions. LEL5 represents Red Hat Enterprise Linux 5, LEL6 represents Red Hat Enterprise Linux 6, LSES10 represents SuSE Enterprise Linux 10, LSES11 represents SuSE Enterprise Linux 11, and LUBT12 represents Ubuntu 12.
- `<kernel>` — the kernel for which the build was created.
- `<arch>` — `i386` for 32-bit architecture and `x86_64` for AMD 64-bit architecture.
- `<ext>` — `.deb` for Ubuntu and `.rpm` for other distributions.

Here is an example of a build created for the Red Hat Enterprise Linux 6 version:

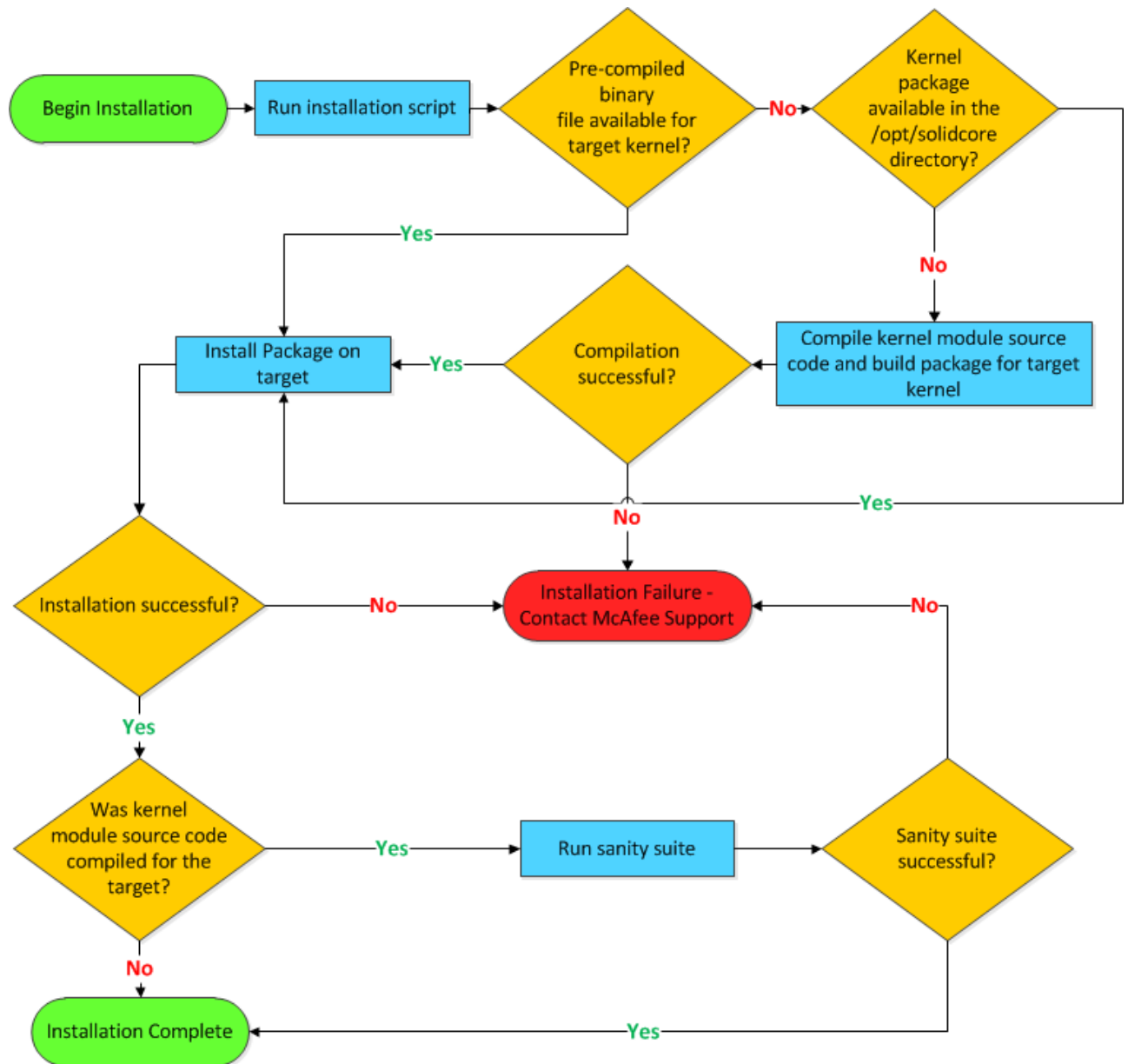
```
solidifier-kmod-6.1.0-9321.LEL6.2.6.32-279.2.1.el6.i686.i386.rpm
```

- 3 Place the build in the `/opt/solidcore` directory of the endpoint. Contact your system administrator to distribute the created build to production endpoints running the same kernel.
- 4 Follow the instructions listed in *Install on the Linux platform*.



## How does installation occur?

When you begin installation, the software executes the installation script that performs these checks and tasks.





# B

## Frequently asked questions

Here are answers to frequently asked questions.

### **Can the same Solidcore client be used for Change Control and Application Control?**

The license key determines the features available for use; any or all features can be used at a time. At any time, you can add and enable a new stock-keeping unit (SKU) on a system where the Solidcore client is enabled. For example, if you are currently using Change Control and want to add and use Application Control, complete these steps.

- 1 Disable the Solidcore client on the system.
- 2 Enter the license.
- 3 Enable the Solidcore client on the system.

### **Can the Solidcore client be deployed on a virtual machine?**

The Solidcore client works on a virtual machine if the operating system installed on the virtual machine is supported by the Solidcore client. For a list of the supported platforms, see [KB76459](#) (for Change Control) and [KB73341](#) (for Application Control).

### **Can I use third-party software to distribute and deploy this software?**



You can install, upgrade, or uninstall the Change Control and Application Control software using third-party tools, such as Microsoft System Center Configuration Manager. For more information about software distribution, see the documentation for your third-party tool.

While installing using the third-party tool, you must specify the commands to install the software. For more information about the commands to use for installation, see *Installing the software*.

Before using the software distribution tool to upgrade the Change Control and Application Control software, assign updater privileges to all relevant binary files of the tool. To assign updater privileges to a file, use this command.

```
updaters add <binary file>
```

### **I installed the Change Control and Application Control software in standalone configuration on the Windows platform. Can I now use McAfee ePO to manage the system?**

Is McAfee Agent installed?	McAfee Agent installation mode	Do this to use the system in managed configuration
Yes — Installed before installing Change Control or Application Control	Managed	No action required
Yes — Installed before installing Change Control or Application Control	Unmanaged	Connect McAfee Agent to the McAfee ePO server before installing Change Control or Application Control on the system. You can then directly use the system in managed configuration.
Yes — Installed after installing Change Control or Application Control	Managed or Unmanaged	<ol style="list-style-type: none"> <li>Type this command.  <pre>instaConfig.exe /connect</pre> <div style="border: 1px solid #ccc; background-color: #f0f0f0; padding: 5px; margin: 5px 0;">  Make sure the <code>instaConfig.exe</code> file has updater privileges. </div> <p>McAfee Agent connects with the Solidcore service after the agent-server communication interval (ASCI) lapses. All McAfee ePO-dependent features are enabled at the next policy enforcement interval.</p> </li> <li>Reboot the system.</li> </ol>
No	Not applicable	<ol style="list-style-type: none"> <li>Download the McAfee Agent version that is needed for your system. See <a href="#">KB76459</a> (for Change Control) and <a href="#">KB73341</a> (for Application Control).</li> <li>Install McAfee Agent in Managed mode.</li> <li>Type this command.  <pre>instaConfig.exe /connect</pre> <div style="border: 1px solid #ccc; background-color: #f0f0f0; padding: 5px; margin: 5px 0;">  Make sure the <code>instaConfig.exe</code> file has updater privileges. </div> <p>McAfee Agent connects with the Solidcore service after the agent-server communication interval (ASCI) lapses. All McAfee ePO-dependent features are enabled at the next policy enforcement interval.</p> </li> <li>Reboot the system.</li> </ol>

### I installed the Change Control and Application Control software in standalone configuration on the UNIX platform. Can I now use McAfee ePO to manage the system?

For detailed information, review [KB73661](#).

### How can I manually remove the Solidcore client if there is an unclean uninstallation on a Windows system?

Perform these steps to clean the Windows system.

- Switch to Disabled mode.

```
> sadmin disable
```



Disabling the software requires a system reboot.

- 2 Disable McAfee VSE Access Protection, if installed.
- 3 Open a command window and run these commands:
 

```
sc stop scsrvc

sc delete scsrvc

sc delete swin
```
- 4 Open Windows Explorer.
- 5 Delete these components:
  - <system drive>:\WINDOWS\system32\drivers\swin.sys or <system drive>:\WINDOWS\system32\drivers\swin1.sys file
  - All files in the <system drive>:\Solidcore directory
  - <system drive>:\Program Files\McAfee\Solidcore directory
  - <system drive>:\Documents and Settings\All Users\Start Menu\Programs\McAfee\Solidifier directory
- 6 Delete the {432DB9E4-6388-432F-9ADB-61E8782F4593} registry key.  
For detailed information, see [314481](#) article.
- 7 If the software is listed in the **Add or Remove Programs** list, navigate to `HKEY_CLASSES_ROOT\Installer\Products` key and delete the entry corresponding for the software.

### How can I manually remove the Solidcore client if there is an unclean uninstallation on a Linux system?

Run these commands to clean the Linux system.

```
# /etc/init.d/scsrvc stop
# chkconfig --del /etc/init.d/scsrvc
# rm -f /etc/init.d/scsrvc
# rpm -e solidcoreS3 --noscripts
# rpm -e solidcoreS3-kmod --noscripts
# rm -rf /opt/bitrock/solidcoreS3-*
# rm -rf /etc/mcafee
# rm -rf /var/log/mcafee
# rm -rf <install-dir>/mcafee/
# rm -f /usr/sbin/sadmin
```

### When trying to install the software on the Windows platform using a non-administrative user account, I receive an error message.

When you try to install the software by using a non-administrative user or standard user account under Administrators group, this message appears:

```
Unable to save file C:\windows\Downloaded Installations\{D4BAC82D-A01B-47AC-AFC9-581EEBDD0F45}.
```

To successfully install the software, use an account with administrator rights. Alternatively, if the user is a normal or standard user account under the Administrators group, right-click the installer file in Windows Explorer and select **Run as Administrator**.

### How can I upgrade the kernel on my Linux system where Change Control or Application Control is installed?

- 1 Place Change Control or Application Control in Update mode.  
# `sadmin begin-update`
- 2 Install the new kernel.
- 3 Exit Update mode and place Change Control or Application Control in Enabled mode.  
# `sadmin end-update`
- 4 Review [KB82066](#) to verify whether the target kernel is supported.
- 5 Perform one of these steps.
  - If the target kernel is supported, boot with the new kernel to upgrade the software.
  - If the target kernel is not supported, create a build on a testbed and then manually deploy created build to production endpoints.
    - 1 Make sure that the testbed meets the needed prerequisites. For detailed information, see *Create builds for unsupported Linux kernels*.



If the target kernel is not supported and you have filed a PER to get support, upgrade the software before booting with the new kernel.

- 2 Perform one of these tasks:
  - If Change Control or Application Control was already installed on the testbed, boot with the new kernel to upgrade the software.
  - If Change Control or Application Control is not installed on the testbed, install the software on the testbed by following the instructions listed in *Create builds for unsupported Linux kernels*.
- 3 Create the `/opt/solidcore` directory on the endpoint.
- 4 Fetch the created build from the `<install directory>/dks` directory of the testbed and place it in the `/opt/solidcore` directory of the endpoint. Contact your system administrator to fetch the created build to the endpoint.
- 5 Boot with the new kernel to upgrade the software. Regardless of the mode in which the Change Control or Application Control is running, the software automatically detects the new kernel.

### **I installed Change Control or Application Control on kernel 2.6.32–279.EL6.x86\_64. Will my existing setup work accurately if I upgrade to 2.6.32–279.1.1.EL6.x86\_64, 2.6.32–279.2.1.EL6.x86\_64, or any other similar kernel?**

While it seems like only minor differences exist between the kernels, 2.6.32–279.1.1.EL6.x86\_64 and 2.6.32–279.2.1.EL6.x86\_64 are different from the installed kernel 2.6.32–279.1.1.EL6.x86\_64. Because these are different, you must follow the workflow that you would follow when you upgrade the kernel.

To verify if two kernels are the same, check the output of the `uname -r` for both kernels. If the outputs for both commands match, the kernels are that same. A few accepted exceptions exist for SuSE 11. For example, if kernel 3.0.80–0.7.1 is installed, output for the `uname -r` command kernel is 3.0.80–0.7.

**I installed Change Control or Application Control and am now unable to place my Linux system in Enabled mode. Alternatively, I am unable to place my Linux system in Enabled or Update mode from Disabled mode. What could be the cause?**

If your target kernel is not supported, the software automatically creates the required build for the installed kernel (if all prerequisites are available). After installation is complete, the software runs the sanity suite to validate the installation. You might be unable to place the endpoint in Enabled mode if the sanity suite fails.

Review and verify the results of the sanity suite by viewing the contents of the RESULTS file stored in the `/usr/local/mcafee/solidcore/sanity` directory. Contact McAfee Support if the sanity suite has failed.

**On the Ubuntu platform, I am trying to create a kernel module for a target kernel and have completed the prerequisites for the testbed. However, I am still unable to create a build for a target kernel.**

Before you create a kernel module for a 3.5.x or later kernel on the Ubuntu platform, you must install the source package of the kernel. Verify the folder name of the kernel source package that is placed in the `/usr/src` directory. Make sure that the folder name is similar to `linux-lts-<release-name>-<kernel x.x.x>`.

For example, if you are running the 3.8.0-41-generic kernel, the corresponding directory is `/usr/src/linux-lts-raring-3.8.0`. Similarly, for kernel 3.5.0-23-generic the corresponding directory is `/usr/src/linux-lts-quantal-3.5.0`.





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