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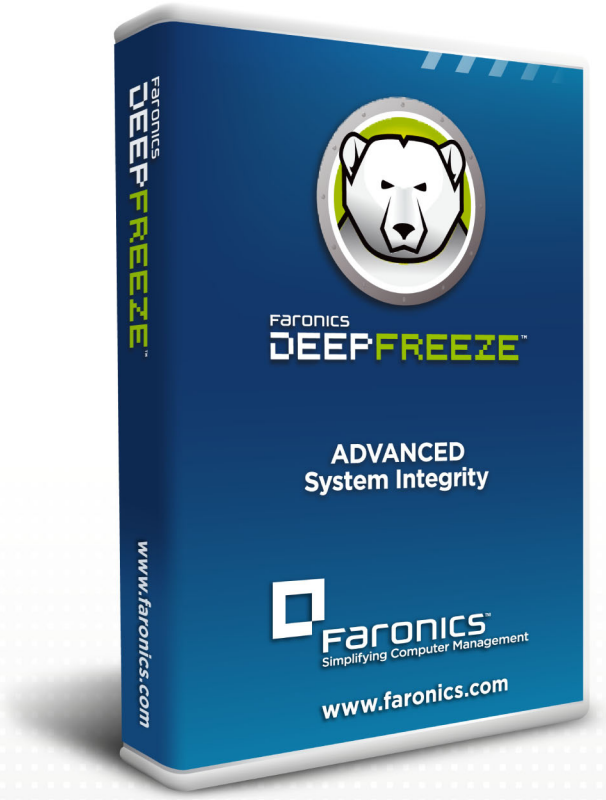


# Deep Freeze Standard

## Advanced System Integrity

# User Guide

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# Preface

This user guide explains how to install, configure and use Deep Freeze Standard.

## Topics

Important Information
Technical Support

# Important Information

This section contains important information about your Faronics Product.

## About Faronics

Faronics delivers market-leading solutions that help manage, simplify, and secure complex IT environments. Our products ensure 100% machine availability, and have dramatically impacted the day-to-day lives of thousands of information technology professionals. Fueled by a market-centric focus, Faronics' technology innovations benefit educational institutions, health care facilities, libraries, government organizations, and corporations.

## Product Documentation

The following documents form the Deep Freeze Standard documentation set:

- Deep Freeze Standard User Guide — This document guides you how to use the product.
- Deep Freeze Standard Release Notes — This document lists the new features and known issues and closed issues.

# Technical Support

Every effort has been made to design this software for ease of use and to be problem free. If problems are encountered, contact Technical Support.

Technical Support: www.faronics.com/support

Web: www.faronics.com

# Introduction

Faronics Deep Freeze helps eliminate computer damage and downtime by making computer configurations indestructible. Once Deep Freeze is installed on a computer, any changes made to the computer—regardless of whether they are accidental or malicious—are never permanent. Deep Freeze provides immediate immunity from many of the problems that plague computers today—inevitable configuration drift, accidental system misconfiguration, malicious software activity, and incidental system degradation.

Deep Freeze protects the computers that are set to boot from the hard drive. Configure the CMOS to boot from the hard drive only. The CMOS must be password protected to prevent unauthorized changes. Deep Freeze protects the Master Boot Record (MBR) when the computer is Frozen.

## Topics

System Requirements

# System Requirements

Deep Freeze is supported on:

- Windows 7 (32 and 64-bit)
- Windows 8.1 (32 and 64-bit)
- Windows 10 up to version 21H1 (32 and 64-bit)
- Windows 11 up to version 22H2 (64-bit)

Deep Freeze requires 10% free hard drive space.

The hardware requirements are the same as the recommended hardware requirements for the host operating system.

Deep Freeze is currently incompatible with the Core Isolation feature of Windows. Core Isolation must be manually disabled before installing Deep Freeze.

Refer to https://www.faronics.com/core-isolation for more information.

# Installing Deep Freeze

This chapter describes the installation process.

## Topics

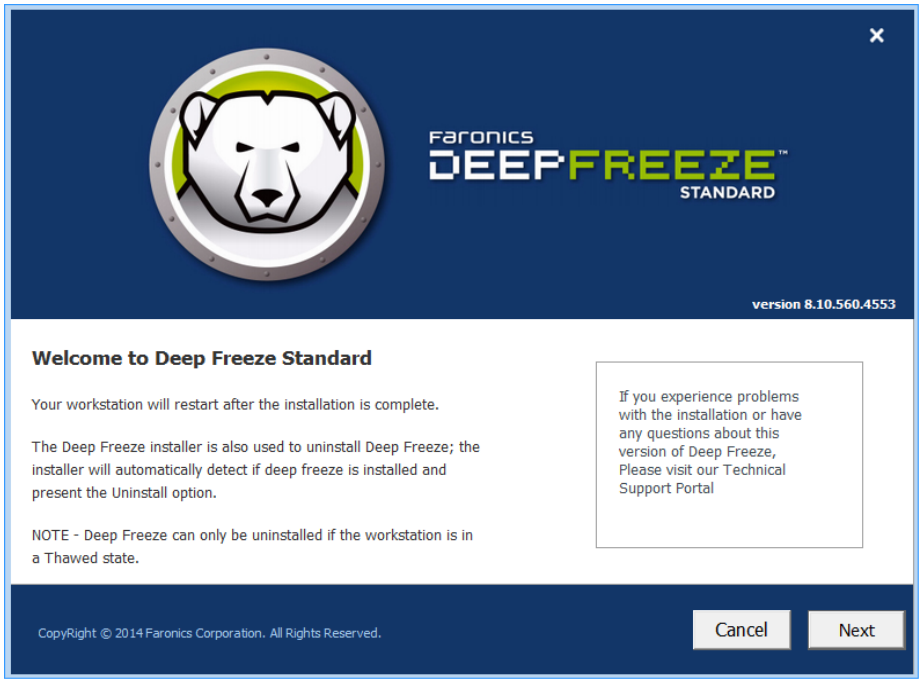
Installing Deep Freeze Standard
Upgrading Deep Freeze
Install Using Imaging

# Installing Deep Freeze Standard

Complete the following steps to install Deep Freeze Standard.

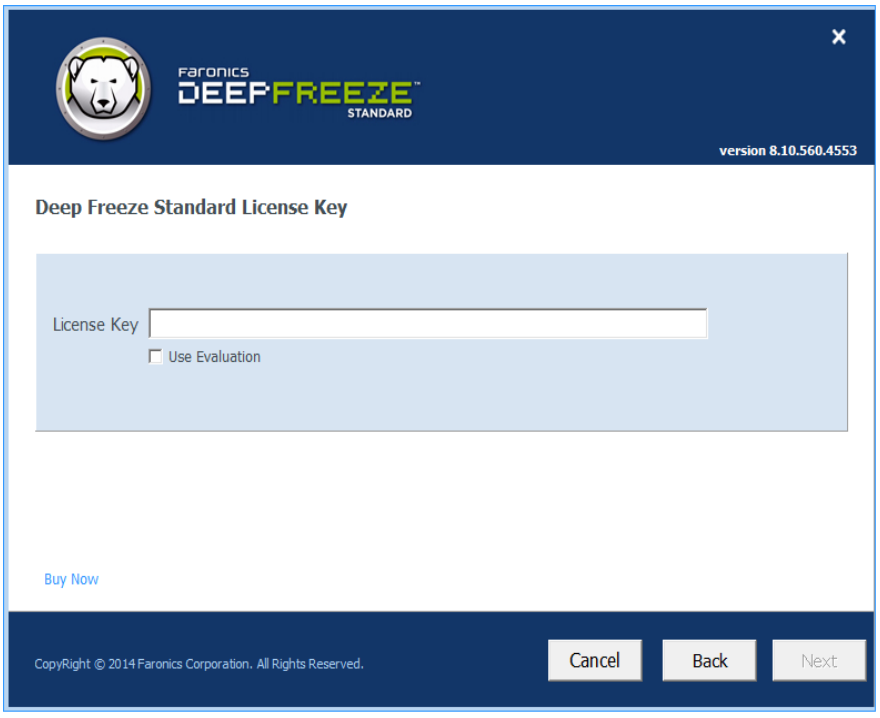
All background utilities and anti-virus software should be disabled and all applications should be closed prior to installation. These programs may interfere with the installation, which could result in Deep Freeze not functioning correctly.

1. Double-click *DFStd.exe* to begin the installation process. The following screen appears:

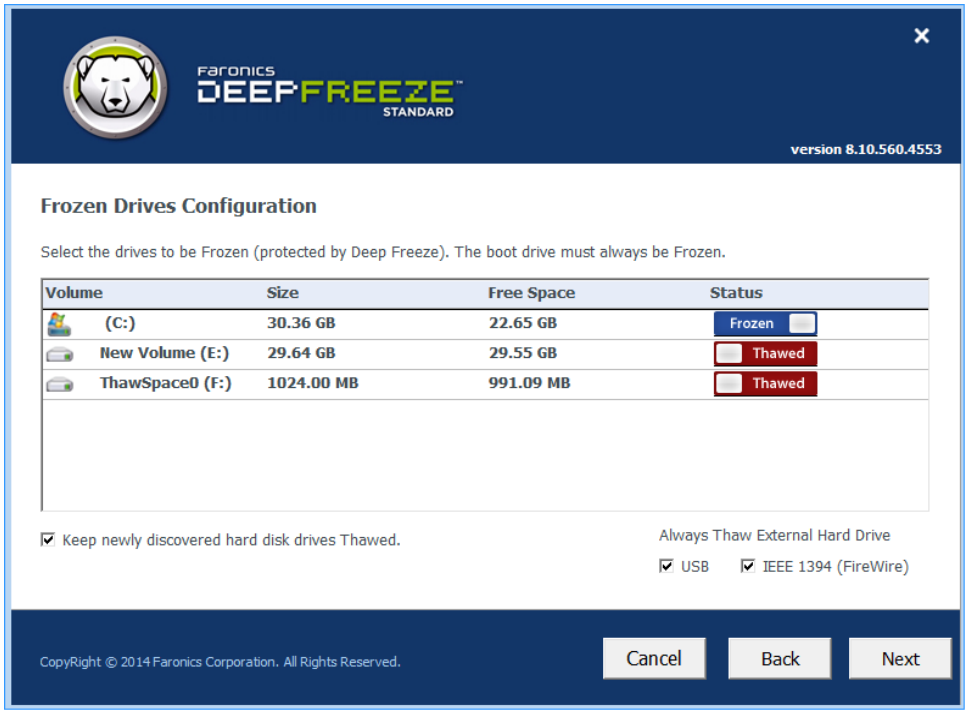


2. Click *Next*. Click *I agree to the terms in the License Agreement*. Click *Next*.

3. Enter the License Key or select the *Use Evaluation* checkbox to install Deep Freeze in Evaluation mode. The Evaluation period ends 30 days after installation. Contact Faronics to purchase a License Key. Click *Next*.



4. Choose the drives to Freeze from the displayed list. Click *Next*.

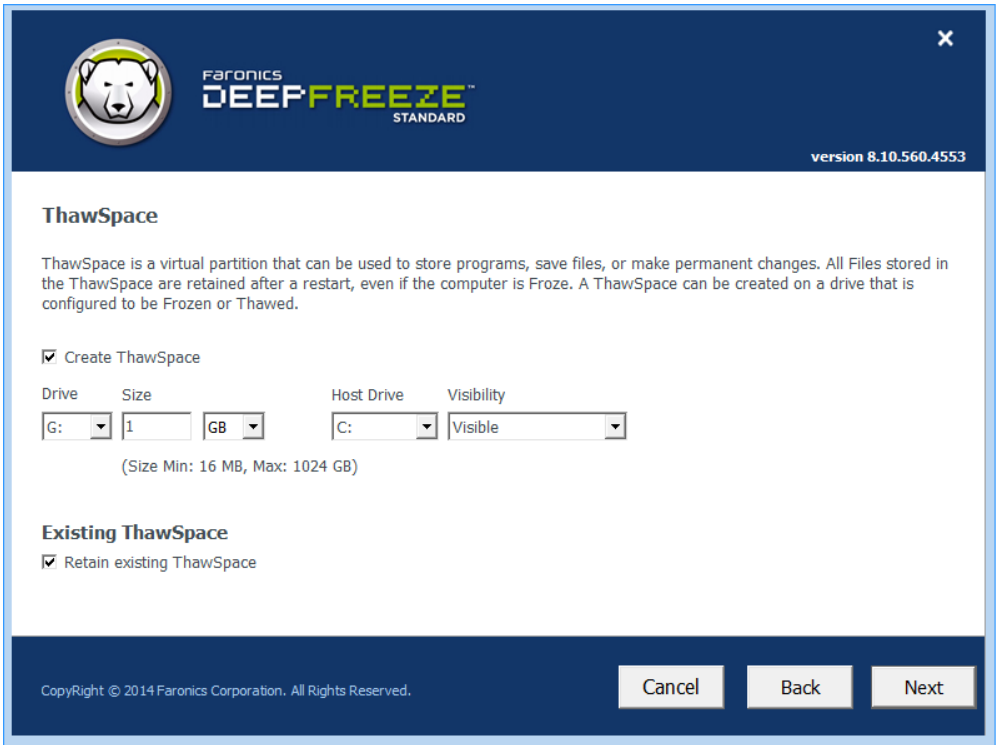



> Keep newly discovered hard disk drives Thawed — select this option if you want to keep the newly discovered hard disk drives in a Thawed state. Changes made on the newly discovered hard disk drives will be retained.

> Always Thaw External Hard Drives — this option has two checkboxes, *USB* and *IEEE 1394 (FireWire)* and both checkboxes are selected by default. This ensures that the USB or IEEE 1394 (FireWire) hard drives are always Thawed. If the USB and/or IEEE 1394 (FireWire) external hard drives checkboxes are cleared, the drive is *Frozen* or *Thawed* according to the letter each drive mounts to in the Frozen Drives screen. Network drives and removable media drives (floppy, memory keys, CD-RW, etc.) are not affected by Deep Freeze and therefore cannot be Frozen.

When installing Deep Freeze, the option *Always Thaw External Hard Drives* (USB and IEEE 1394/FireWire) is selected by default.

5. ThawSpace is a virtual partition that can be used to store programs, save files, or make permanent changes. All files stored in the ThawSpace are retained after a restart, even if the computer is Frozen. A ThawSpace can be created on a drive that is configured to be *Frozen* or *Thawed*. Select the *Create ThawSpace checkbox*.




To create a ThawSpace or multiple ThawSpaces, complete the following steps:

- Select the *Drive Letter*. The next available letter is automatically used if the selected drive letter already exists on a computer when Deep Freeze is installed.
  - > The *Drive Letter* cannot be same as the *Host Drive*.
- Enter the *Size*. This is the size of the ThawSpace. The maximum size is 1024 GB and the minimum size is 16 MB.
  - > If you select the Size less than 16 MB, the ThawSpace is set to 16 MB.
  - > If you select the Size more than 1024 GB (1 TB), the ThawSpace is set to 1024 GB (1 TB).
- Select the ThawSpace storage unit in *MB* or *GB*.
- Select the *Host Drive*.
  - > The *Host Drive* is the drive where the ThawSpace is created.
  - > The storage required for the ThawSpace is used from the total storage available on the *Host Drive*.

When installing Deep Freeze, the existing ThawSpaces are retained by default.

- Select *Visible* or *Hidden* from the *Visibility* drop-down.
  - > If you select *Visible*, the drive will be visible in Windows Explorer.
  - > If you select *Hidden*, the drive will not be visible in Windows Explorer.
  - > However, the hidden drive can be accessed by typing the drive letter in *Start* > *Run*, Windows Explorer or Windows Command Line interface.

6. Click *Install* to begin the installation.

The computer restarts immediately after the installation is complete.

# Upgrading Deep Freeze

All existing Deep Freeze versions must be uninstalled prior to upgrading Deep Freeze.

# Install Using Imaging

Deep Freeze has been designed to work with all major imaging and desktop management software. Use either an Attended Install or the Silent Install to install Deep Freeze on a master image.

Deep Freeze must be prepared for deployment before finalizing a master image. To prepare the master image for deployment complete the following steps:

1. Restart the computer into a *Thawed* state.
2. Launch Deep Freeze using the keyboard shortcut *CTRL+SHIFT+ALT+F6*. Alternatively, press *Shift* and double-click the Deep Freeze icon in the System Tray.
3. Enter the password and click *OK*.
4. Click *Set Clone Flag* in the *Boot Control tab*.
5. The message *The flag has been set successfully. Do you want to reboot your computer now?* is displayed. Click *Yes* to reboot the computer immediately. Click *No* to reboot the computer later.

After imaging, the computers require an additional restart for Deep Freeze to correctly detect the changes in disk configuration. If the computers are imaged in an unattended mode, steps should be taken to ensure the computers are restarted to allow the configuration to update.

# Using Deep Freeze

## Topics

Deep Freeze Icons
Logon
Boot Control Tab
Password Tab
Command Line
Permanent Software Installations, Changes, or Removals

# Deep Freeze Icons

The Frozen or Thawed Deep Freeze icon appears in the System Tray after installation and indicates whether the computer is currently protected by Deep Freeze (Frozen) or unprotected (Thawed).

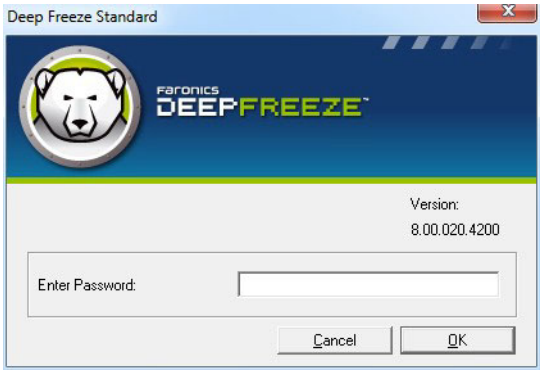
When the computer is Frozen, the following icon is displayed in the System Tray:

When the computer is Thawed, the following icon is displayed in the System Tray:

# Logon

Complete the following steps to logon to Deep Freeze:

1. Press *Shift* and double-click the Deep Freeze icon in the System Tray. Alternatively, use the keyboard shortcut *CTRL+SHIFT+ALT+F6*. The following dialog is displayed.

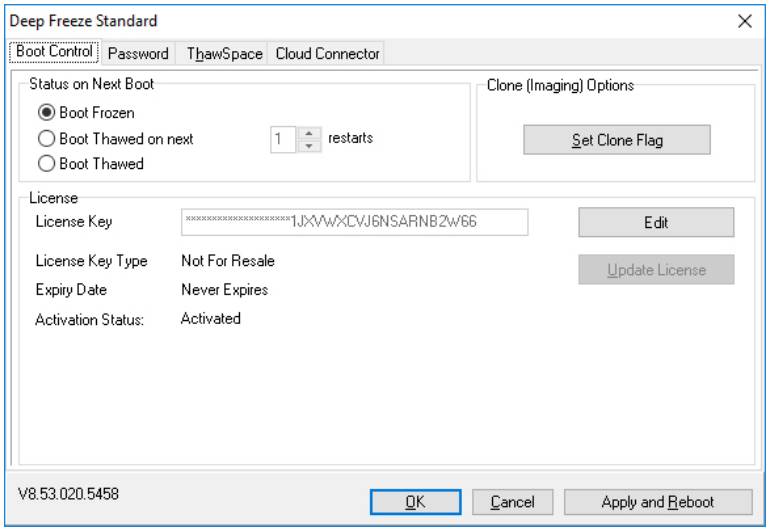



2. Enter the administrator password and click *OK* to logon to Deep Freeze. If no password has been set, leave the password field blank and click *OK*.

As an additional security feature, Deep Freeze prevents brute force attacks by automatically restarting the computer after 10 unsuccessful attempts.

# Boot Control Tab

The *Boot Control* tab is used to set the mode Deep Freeze will be in after the next restart, set the flag for installing using imaging, and update the License Key.




## Status on Next Boot

1. Choose one of the following options:
   - > *Boot Frozen* to ensure the computer is Frozen the next time it is restarted.
   - > *Boot Thawed on next* to ensure the computer is Thawed each time it is restarted for the next specified number of restarts.
   - > *Boot Thawed* to ensure that the computer is Thawed each time it is restarted.
2. Click *OK* for the changes to take effect during the next restart. Click *Apply and Reboot* to apply the changes immediately and reboot the computer.

## Clone Options

The *Clone Options* are used to prepare master images for the deployment process. For more information refer to the Install Using Imaging section.

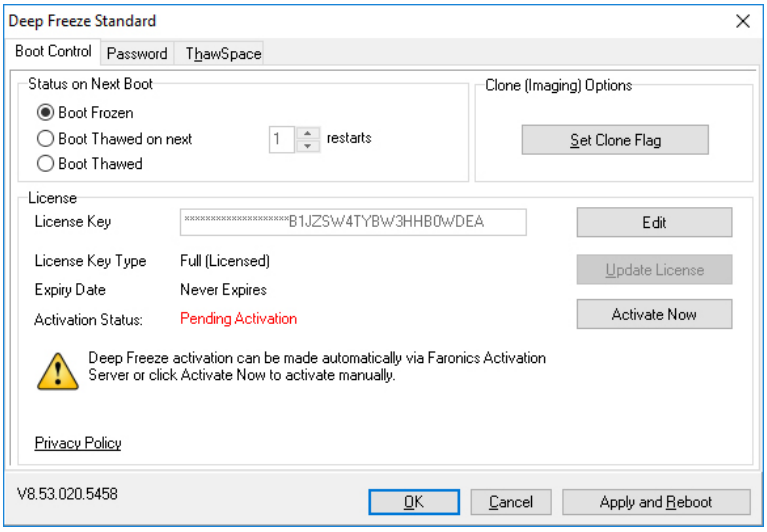
## License

The Deep Freeze License must be activated within 30 days of installation failing which Deep Freeze will stop functioning. During activation, the Deep Freeze License is authenticated with Faronics.

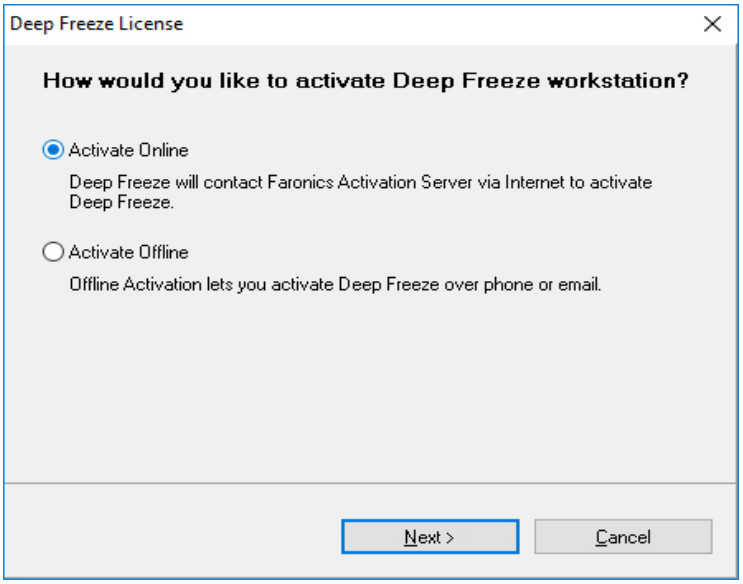
1. To update the License Key, click *Edit* and enter the License Key in the *License Key* field.
2. Click *Update License*. This converts Deep Freeze from the *Evaluation* version to a *Licensed* version. The *License Key Type* field displays the *License Key*. The *Expiry Date* displays the date and time when the license expires.



The computer must be connected to the Internet to activate the license.




3. Click *Activate Now*. Two options are available:

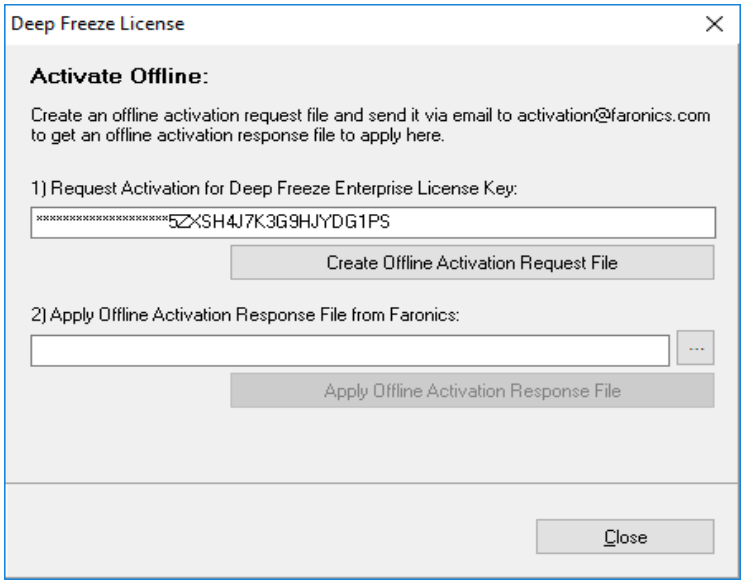


> Select *Activate Online* to activate Deep Freeze License online. Click *Next* after selecting this option. Deep Freeze is activated online on clicking *Next*.

The computer must be connected to the Internet to Activate Online..

> Select *Activate Offline* to activate Deep Freeze license by email or phone. Click *Next* after selecting this option. The Activate Offline screen is displayed.

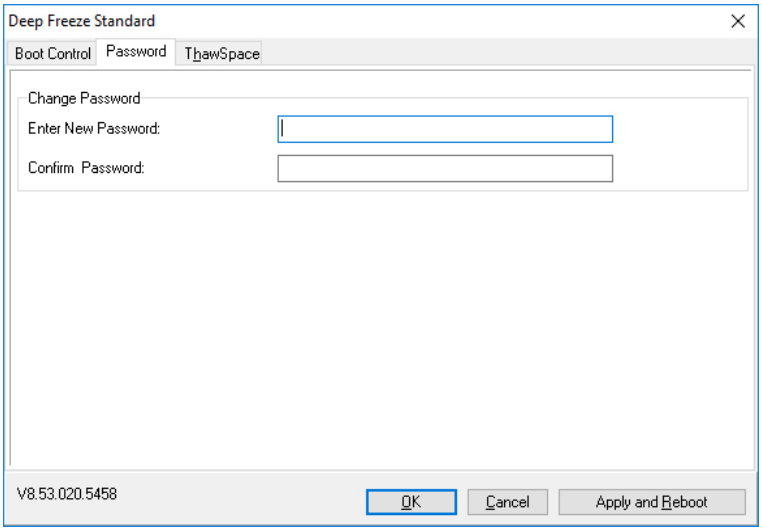
4. Click *Create Offline Activation Request File* to create a request file. Send the details to Faronics Activation Support via phone or email to receive an Activation Response File. Browse to select the Activation Response File received from Faronics.




5. Click *Apply Offline Activation Request File*. Deep Freeze License is now activated.

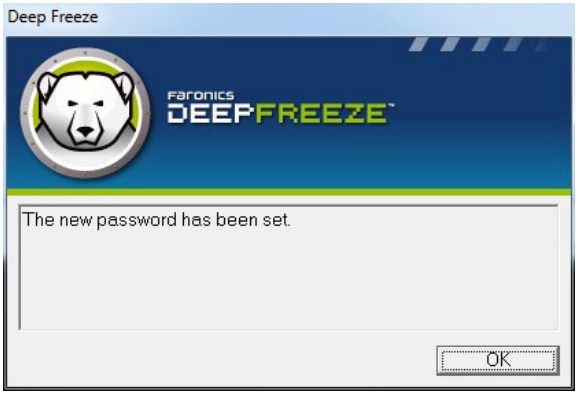
# Password Tab

The *Password* tab is used to set a new password or change the password that was used to log on to Deep Freeze.




Complete the following steps to change the password:

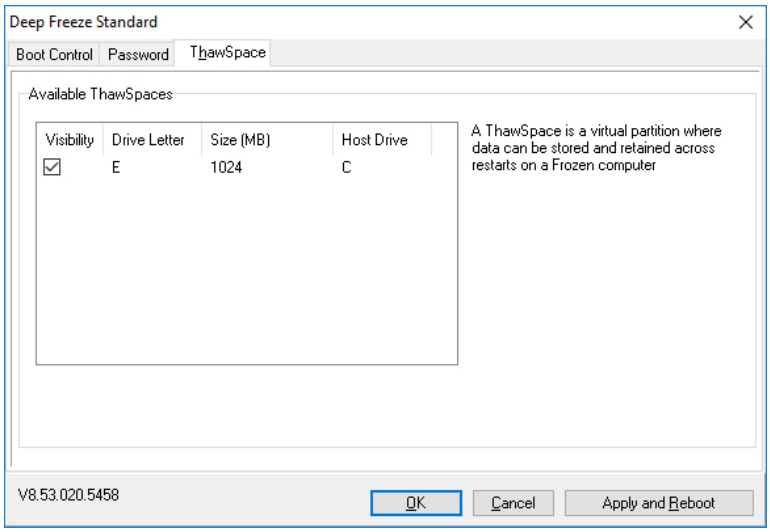
1. Enter a new password, confirm the new password, and click *OK* to set the password.
2. The following message is displayed.




3. Click *OK*.

# ThawSpace Tab

ThawSpace is a virtual partition that can be used to store programs, save files, or make permanent changes. All files stored in the ThawSpace are retained after a restart, even if the computer is Frozen.




The following option is available in the ThawSpace tab:

- Visibility — select the checkbox to make the ThawSpace visible.

# Command Line

Deep Freeze can be rapidly installed on multiple computers over a network using the Silent Install feature. Deep Freeze can also be uninstalled in the same manner. Any deployment utility that allows execution of a command line on a remote computer can implement Silent Install or Uninstall. After the Silent Install or Uninstall is complete, the system restarts immediately.

The command line has the following options:

| Syntax | Description |
|---|---|
| `[/Install]` | Install Deep Freeze using installation file |
| `[/Uninstall]` | Uninstall Deep Freeze |
| `[/PW=password]` | Set a password during installation |
| `[/AllowTimeChange]` | Allow system clock to be changed |
| `[/Freeze=C,D,...]` | Freeze only drives listed (Thaw all others) |
| `[/Thaw=C,D,...]` | Thaw only drives listed (Freeze all others) |
| `[/manageVM]` | Install Deep Freeze with *Manage Virtual Memory* enabled |

Example Command Line:

```
DFStd.exe /Install /Freeze=C /PW=password
```

In the above example, only the *C:* drive is Frozen. Any other drives on the computer are Thawed. If the computer only has a C: drive, the `[/Freeze]` switch can be omitted. A password (password) is created. All existing ThawSpaces are retained. After executing the command, Deep Freeze installs and the computer restarts Frozen.

The Silent Install or Uninstall does not work without the `[/Install]` or `[/Uninstall]` switch.

Deep Freeze must be in a Thawed state before `[/Uninstall]` can be used.

When installing Deep Freeze via Silent Install, the option *Always Thaw External Hard Drives* (USB and IEEE 1394/FireWire) is selected by default. Existing ThawSpaces are retained by default.

The `[/manageVM]` switch is used to install Deep Freeze with the *Manage Virtual Memory* feature enabled. This feature is used in rare cases where hardware with limited RAM may experience performance issues.

With *Manage Virtual Memory* enabled, the page file size will be adjusted to match the RAM size. This may result in more hard drive space being allocated to the page file.

# Permanent Software Installations, Changes, or Removals

Computers must be Thawed for any permanent changes to take effect. Installation of software often requires one or more restarts to complete the installation.

Deep Freeze helps administrators overcome challenges with maintaining the configuration of their computers in a production environment. Deep Freeze protects computers from unauthorized changes, viruses and malware, that can leave computers in a non-functional state. Deep Freeze also provides features to retain user data while protecting the computer.

For more information on how to implement Deep Freeze and ensure that the user data is retained, refer to *Deep Freeze – Retaining User Data available* at http://www.faronics.com/library.

# Uninstalling Deep Freeze

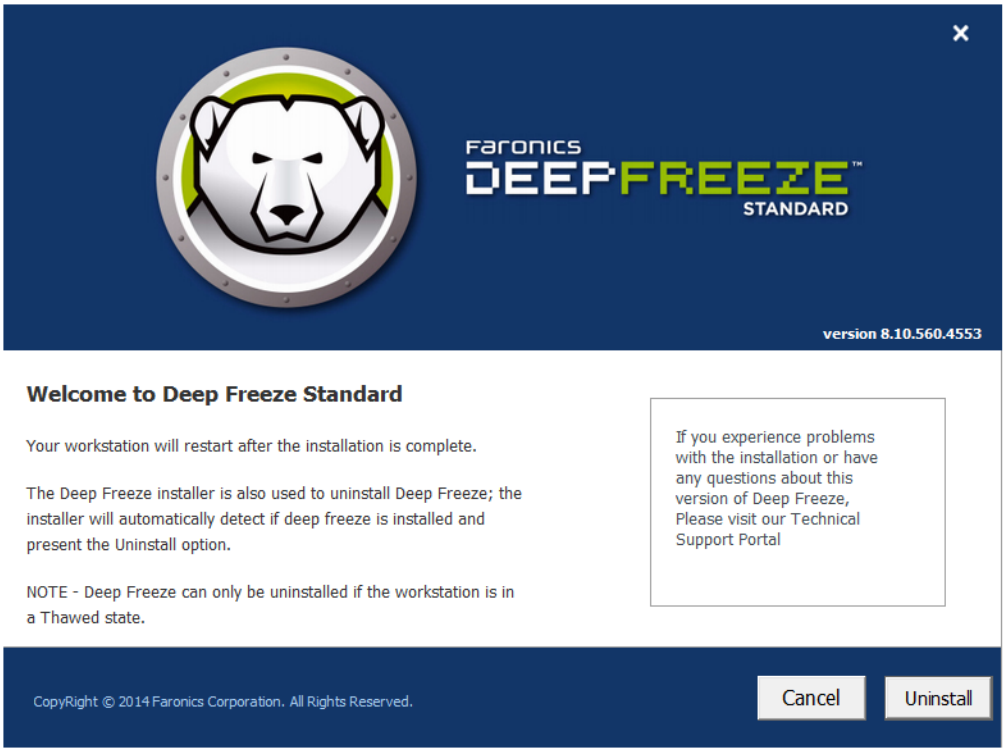
## Topics

Uninstalling Deep Freeze from the Installer

# Uninstalling Deep Freeze from the Installer

Complete the following steps to uninstall Deep Freeze using the installer:

1. Double-click *DFStd.exe* to begin the uninstall process. The following screen appears:




2. Click *Next*. Click *Uninstall*.
3. If there are ThawSpaces, the message *Do you want to delete the existing ThawSpace?* is displayed. Click *Yes* to delete the ThawSpaces. Click *No* to retain the ThawSpaces.

The computer restarts immediately after the uninstall is complete.