



FARONICS  
**DEEP FREEZE**™  
ENTERPRISE

ABSOLUTE System Integrity

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# User Guide

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**Faronics**™  
Intelligent Solutions for ABSOLUTE Control

[www.faronics.com](http://www.faronics.com)



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# Preface

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

## Topics

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***Important Information***

***Technical Support***



## Important Information

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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 Enterprise documentation set:

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





## Technical Support

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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.

Email: [support@faronics.com](mailto:support@faronics.com)

Phone: 800-943-6422 or +1-604-637-3333

Hours: 7:00am to 5:00pm (Pacific Time)

## Contact Information

- Web: [www.faronics.com](http://www.faronics.com)
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# 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

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***Deep Freeze Overview***

***System Requirements***



# Deep Freeze Overview

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## System Requirements





- Deep Freeze is supported on:
  - XP, Vista and Windows 7
  - Deep Freeze requires 10% of the hard drive to be left as free space
  - Both 32 and 64 bit versions of Windows are supported
  - Windows XP x64 must have Service Pack 2 or later installed
- Faronics recommends a minimum of 256 MB of system memory in the protected systems
- The Deep Freeze Configuration Administrator and Enterprise Console are supported on:
  - XP, Vista, Windows 7, Server 2003 and 2008
  - 32 and 64 bit versions are supported



## Deep Freeze Enterprise Files

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Deep Freeze uses different colored icons to represent its components. Files identified by a red icon should generally only be installed on an administrative computer.

Icon	Definition
	Deep Freeze Enterprise Configuration Administrator and Enterprise Console installation file.
	The Configuration Administrator application is used to create customized, pre-configured, computer installation program files and Workstation Seeds.
	The Enterprise Console application is used to centrally deploy, monitor, manage, and maintain Deep Freeze installations.
	A customized Deep Freeze workstation installation file is created in the Configuration Administrator and deployed to workstations within the enterprise. This file includes the Workstation Seed. If the Deep Freeze workstation installation file is installed, the Workstation Seed is not required to be installed separately.
	A Workstation Seed enables seamless communication between the Enterprise Console and computers on a network. When the Workstation Seed is installed on a computer, the computer becomes visible on the Enterprise Console. Once a computer is visible on the Enterprise Console, various actions such as Restart, Shutdown and Wake-on-LAN can be performed on the computer remotely. Deep Freeze can also be installed remotely on visible computer thereby allowing Deep Freeze related actions on remote computers.





# Installing Deep Freeze

This chapter describes the installation process of Deep Freeze.

## Topics

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***Installation Overview***

***Customization Code***

***One Time Passwords***



## Installation Overview

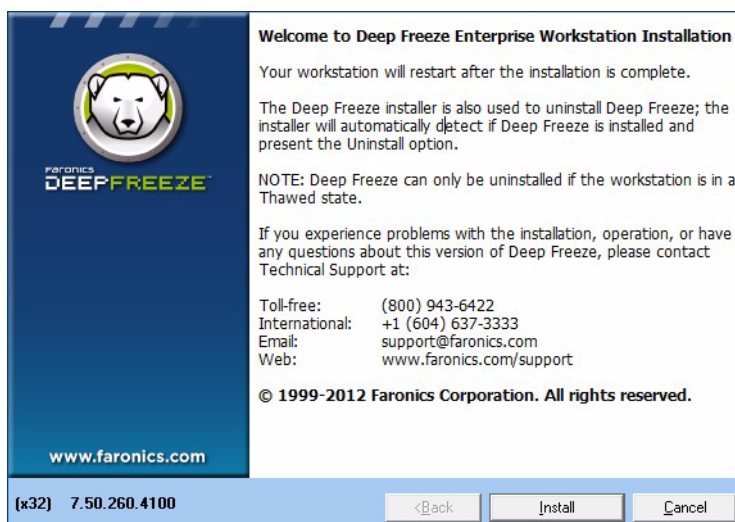
### Installing Deep Freeze Configuration Administrator and Enterprise Console

The Configuration Administrator is intended to be installed only on the computer used to administrate Deep Freeze. The Configuration Administrator is used to create customized Deep Freeze installation files and Workstation Seeds.

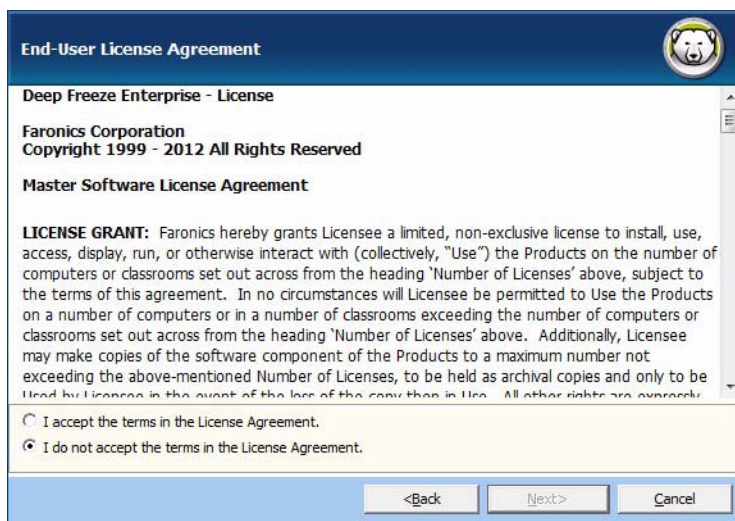
The Deep Freeze Enterprise Console installs automatically with the Deep Freeze Configuration Administrator.

Complete the following steps to install the Configuration Administrator:

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



2. Click *Next*.







3. Read and accept the license agreement. Click *Next*.

Deep Freeze Enterprise License Key

License Key

☐ Use Evaluation

<Back Install Cancel

4. Enter the License Key in the *License Key* field or select the *Use Evaluation* check box to install in Evaluation mode. Click *Next*.



The Evaluation version of Deep Freeze is valid for 30 days. After 30 days, all Deep Freeze functionality will be disabled on the Enterprise Console. All other features will continue to work even after the 30 day period.

Installing Deep Freeze Enterprise

Thank you for choosing Deep Freeze Enterprise

If you experience problems with the installation, operation, or have any questions about this version of Deep Freeze, please contact Technical Support at:

Toll-free: (800) 943-6422  
International: +1 (604) 637-3333  
Email: support@faronics.com  
Web: www.faronics.com/support

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<Back Next> Cancel

5. Once the installation process is completed, the *Customization Code* screen appears.



The screenshot shows the Deep Freeze installation window. On the left is a blue sidebar with the Faronics Deep Freeze logo and the website [www.faronics.com](http://www.faronics.com). The main area has a white background with the following text:

A Customization Code is a unique identifier that completely encrypts the Configuration Administrator, the Enterprise Console, the Workstation Installation files, the One Time Password Generation System, and the Deep Freeze Command Line Control.

Your Customization Code, if lost or forgotten, cannot be recovered by Faronics or any other third party. It is recommended that you record and safely store your Customization Code.

Enter a Customization Code in the field below. The code must be at least eight characters long and can consist of any combination of alphanumeric characters, including spaces.

Below the text is a label "Enter a Customization Code:" followed by a text input field. At the bottom right is a "Next>" button.

6. Specify the *Customization Code* and click *Next*. The *Customization Code* must be a minimum of eight characters. The installation is completed.



## Customization Code

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The Customization Code is a unique identifier that encrypts the Configuration Administrator, the Enterprise Console, the computer installation files, the One Time Password Generation System, and Deep Freeze Command Line Control. This code is not a password that can be used to access Deep Freeze.

The Customization Code ensures that unauthorized administrators are prevented from accessing or controlling a computer. Multiple Deep Freeze administrators controlling the same group of computers must use a matching Customization Code.



The Customization Code must be recorded and guarded with care. Faronics is unable to recover a lost or forgotten Customization Code.

## Re-Initializing the Customization Code

If another administrator wants to create installation files with the same Configuration Administrator using a different Customization Code, complete the following steps:

1. Run *DFInit.exe*.
2. This resets the existing Customization Code for the Configuration Administrator.
3. Enter a new Customization Code.
4. Click *OK* for the new Customization Code to become active.

## Update Mode

Update Mode can be used to automatically create updated versions of existing files of Deep Freeze Enterprise by executing a special *Update* command. This command completes two tasks:

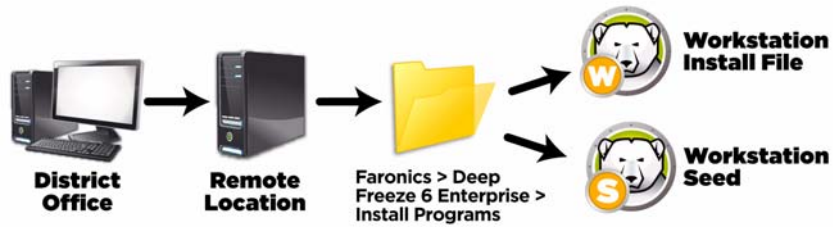
- Updates previous versions of the Deep Freeze Enterprise Console and the Deep Freeze Configuration Administrator. (Found in *Faronics > Deep Freeze 7 Enterprise*.)
- Updates any user created files stored in the *Faronics > Deep Freeze 7 Enterprise > Install Programs* folder.

The benefit of these updates is that a number of files can be updated to the latest version while retaining their configuration data (created with an older version of Deep Freeze Enterprise).

The command automatically updates files created by an administrator (*.exe*, *.rdx*) that are present in the *Faronics > Deep Freeze 7 Enterprise > Install Programs* directory, including the following sub-directories:

- *Workstation install files*
- *Workstation Seed files*

In the example below, the district office has received a new version of Deep Freeze Configuration Administrator and can automatically update any existing Deep Freeze Workstation Install files and Workstation Seeds at a remote location.



The update command does not require a password, but does require a Customization Code. Use the following command syntax:

```
\PathToFile\DFEnt.exe /update="Customization Code" c:\dfupdate.log
```

- *PathToFile* must be replaced with the actual path to the installation file (*DFEnt.exe*)
- *DFEnt.exe* must be the actual name of the installation file (it may differ if it was downloaded)
- Customization Code must be in quotes if there is a space in it
- Customization Code must match the old installation files' Customization Code

The log file provides full details of exactly which files were updated.

The update process may take a few minutes to complete.

Update Mode does not update the existing version of Deep Freeze on computers. Computers must be updated using the Enterprise Console.



## One Time Passwords

The One Time Passwords Generation System is used to generate temporary passwords for Deep Freeze that expire at midnight on the day they were generated.

One Time Passwords dialog can be accessed from

- *Tools>One Time Passwords* in the Enterprise Console. For more information refer to [Using Deep Freeze Enterprise Console](#).
- *File>One Time Passwords* in the Configuration Administrator. For more information refer to [Using Deep Freeze Configuration Administrator](#).

A One Time Password (OTP) can be useful if, for example, a Deep Freeze password is forgotten or if a configuration file was created without any passwords defined. An OTP can also be used to provide access to a computer for an individual performing maintenance duties without requiring that individual to know the permanent Deep Freeze password.

To create an OTP, complete the following steps:

1. Select either *Password valid for one use only* or *Password valid for multiple uses*. All OTPs expire at midnight on the day they were created, regardless of type.
2. Enter the OTP Token from the computer that requires the OTP into the *Token* field. The OTP Token for the computer is located in the logon dialog, as shown below.

3. Click *Generate*.



The Deep Freeze Command Line interface does not support the use of One Time Passwords.





# Using Deep Freeze Configuration Administrator

## Topics

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***Accessing the Configuration Administrator***

***Passwords Tab***

***Drives Tab***

***Workstation Tasks Tab***

***Windows Update Tab***

***Batch File Tab***

***Advanced Options Tab***

***Creating Workstation Install Program and Workstation Seed***



## Accessing the Configuration Administrator

Open the Configuration Administrator by selecting the following path from the Start menu:

*Start > All Programs > Faronics > Deep Freeze 7 Enterprise > Deep Freeze Administrator*

The Configuration Administrator provides various tabs to configure passwords, Frozen drives, Workstation Tasks, Windows Updates, Batch Files, and Advanced Options. Once the settings have been configured, a Workstation Install file can be created. The Workstation Install file can be installed on the computers that need to be protected by Deep Freeze. Deep Freeze Administrator can also be accessed from within the Deep Freeze Console.

### Toolbar and Menus

#### Toolbar

The Toolbar is available at the top of every tab in the Configuration Administrator.



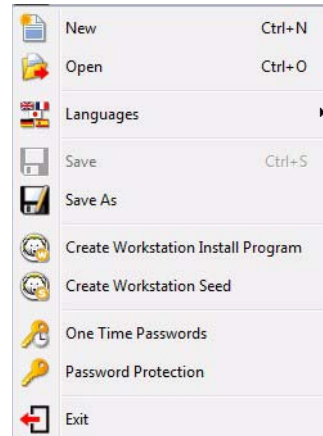
Icon	Function
New	Blanks out all existing configuration settings. Opens with default configuration settings.
Open	Open any saved .rdx, Workstation Installation file or Workstation Seed file.
Save	Save a .rdx, Workstation Installation file or Workstation Seed file. File name and path is listed at the bottom of the Configuration Administrator in the status section.
Save As	Save the configuration settings as a .rdx file.
Help	Access the Deep Freeze Help file.
Create	<p><i>Create Workstation Installation File</i> creates a customized installer for installing on workstations. The workstations can then be managed from the Deep Freeze Enterprise Console.</p> <p><i>Create Workstation Seed File</i> creates a seed that allows Deep Freeze Console to communicate with workstations across the network. Once the seed is installed on workstations, Deep Freeze Workstation Installation File can then be deployed remotely.</p>





## File Menu

The *File* menu contains the same options as those available on the Toolbar, with the additions of the option to choose from the available languages and *Password Protection*.



## Password Protection

Password Protection offers an additional layer of security for the administrator.

To password protect access to the Configuration Administrator, complete the following steps:

1. Open the *File* menu and select *Password Protection*.
2. Select the *Protect with password* check box.
3. Enter and confirm the password.
4. Click *OK* to set the password or *Cancel* to exit the dialog without setting a password.



Store the password in a safe location. If the password is lost, you cannot recover it. You will have to reinstall Deep Freeze.



## Passwords Tab

Deep Freeze Enterprise allows the administrator to choose up to 15 fixed passwords.

	Enable	Type	User Change	Password	Timeout	Activation	Expiration
1	<input checked="" type="checkbox"/>	Workstation	<input type="checkbox"/>		<input type="checkbox"/>	7/12/2012	7/13/2012
2	<input checked="" type="checkbox"/>	Command Line	<input type="checkbox"/>		<input type="checkbox"/>	7/12/2012	7/13/2012
3	<input type="checkbox"/>	Workstation	<input type="checkbox"/>		<input type="checkbox"/>	7/12/2012	7/13/2012
4	<input type="checkbox"/>	Workstation	<input type="checkbox"/>		<input type="checkbox"/>	7/12/2012	7/13/2012
5	<input type="checkbox"/>	Workstation	<input type="checkbox"/>		<input type="checkbox"/>	7/12/2012	7/13/2012
6	<input type="checkbox"/>	Workstation	<input type="checkbox"/>		<input type="checkbox"/>	7/12/2012	7/13/2012
7	<input type="checkbox"/>	Workstation	<input type="checkbox"/>		<input type="checkbox"/>	7/12/2012	7/13/2012
8	<input type="checkbox"/>	Workstation	<input type="checkbox"/>		<input type="checkbox"/>	7/12/2012	7/13/2012
9	<input type="checkbox"/>	Workstation	<input type="checkbox"/>		<input type="checkbox"/>	7/12/2012	7/13/2012
10	<input type="checkbox"/>	Workstation	<input type="checkbox"/>		<input type="checkbox"/>	7/12/2012	7/13/2012
11	<input type="checkbox"/>	Workstation	<input type="checkbox"/>		<input type="checkbox"/>	7/12/2012	7/13/2012
12	<input type="checkbox"/>	Workstation	<input type="checkbox"/>		<input type="checkbox"/>	7/12/2012	7/13/2012
13	<input type="checkbox"/>	Workstation	<input type="checkbox"/>		<input type="checkbox"/>	7/12/2012	7/13/2012
14	<input type="checkbox"/>	Workstation	<input type="checkbox"/>		<input type="checkbox"/>	7/12/2012	7/13/2012
15	<input type="checkbox"/>	Workstation	<input type="checkbox"/>		<input type="checkbox"/>	7/12/2012	7/13/2012

To create a password, complete the following steps:

1. Select *Enable* on the appropriate row.
2. From the *Type* drop-down list, choose the preferred kind of password. The following options are available:
  - *Workstation*: designated for use at the workstation when the *Login Screen* is launched.
  - *Command Line*: for use with Command Line Controls. The Command Line Control tool (*DFC.exe*) does not function unless at least one Command Line password is defined.
3. Optional: For passwords, select the *User Change* check box to allow a user to change the password at the computer.
4. Enter the password.



The password entered in the *Password* field is not hidden.

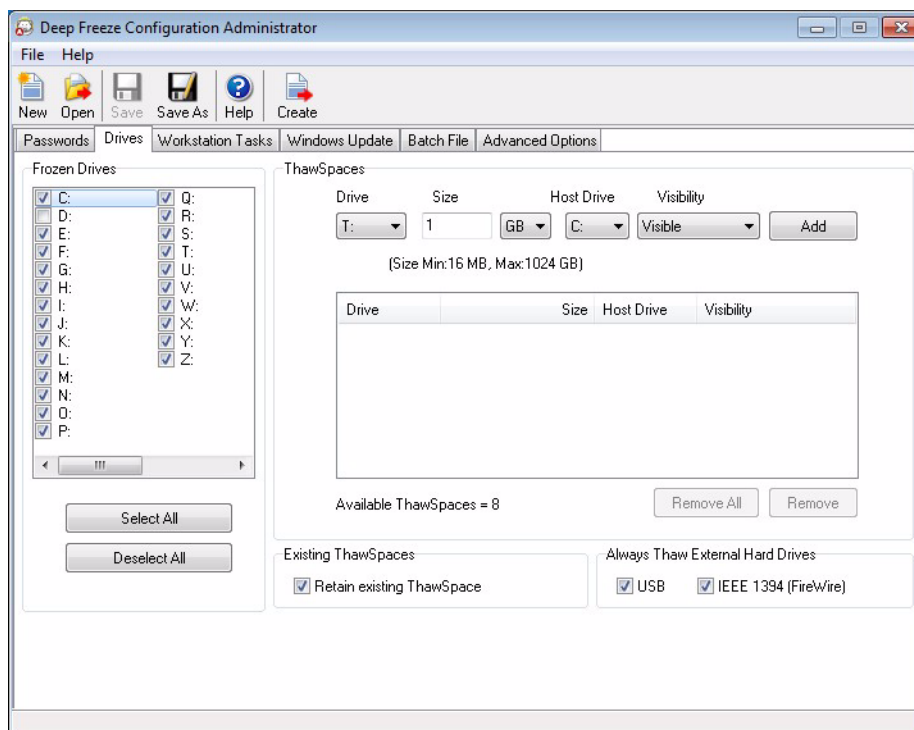
Do not use the same password for Command Line and the GUI.

5. To set a password to become active and expire on specified dates, select the *Timeout* check box and use the drop-down calendars to specify an *Activation date* and *Expiration date*.



## Drives Tab

The Drives tab is used to select which drives are to be Frozen (protected by Deep Freeze) or Thawed (unprotected). You can also create a ThawSpace — a virtual partition hosted on a local Frozen or Thawed drive where data can be saved permanently without being deleted by Deep Freeze during a reboot.



### Frozen Drives

By default, all drives are Frozen. To put a drive in a Thawed state, clear the check box of the preferred drive.

While only local drives (partitions or physical drives) can be Frozen, all drive letters are shown because the pre-configured installation file may be installed on many computers with various hardware and software setups.

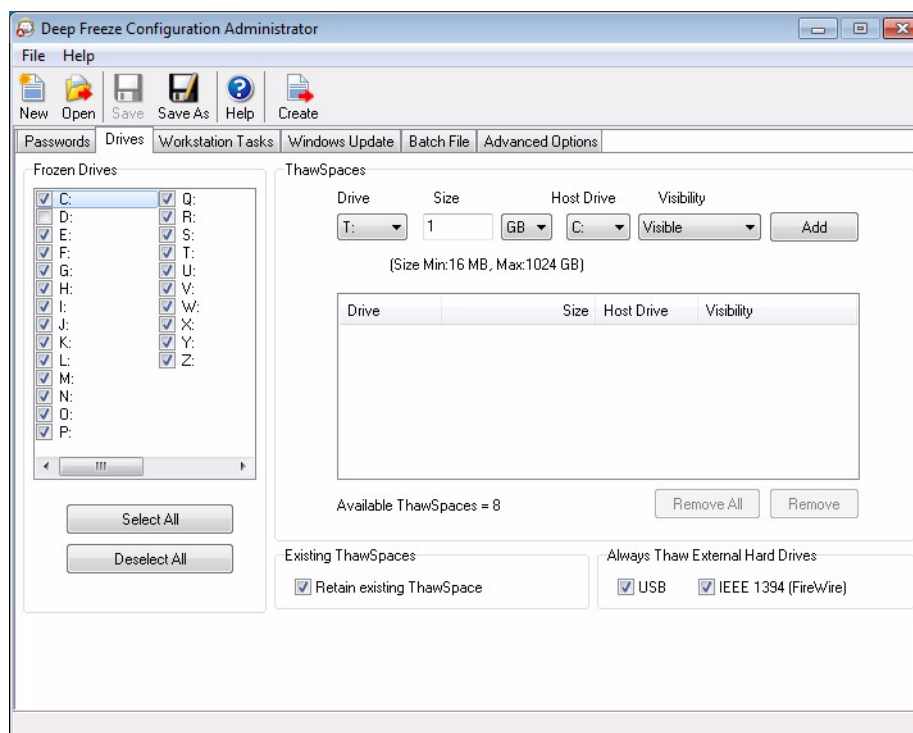
#### Example

In the above screen, the *D:* is not selected from the Frozen Drives list. Therefore, all drives except *D:* are Frozen.



## ThawSpace

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.



To create a single ThawSpace or multiple ThawSpaces using the Configuration Administrator, complete the following steps:

1. Select the *Drive Letter*. The default letter is *T:*. However, it can be changed to any available letter. The next available letter is automatically used if the selected drive letter already exists on a computer when Deep Freeze is installed.
  - When a *Drive Letter* is selected from the drop-down and used to create a ThawSpace, it is removed from the drop-down.
  - When a ThawSpace is removed, the corresponding *Drive Letter* is added back to the drop-down.
  - The *Drive Letter* cannot be same as the *Host Drive*.
2. Enter the *Size*. This is the size of the ThawSpace. The maximum size is 1024 GB and the minimum size is 16MB.
  - If the computer does not have enough free space to accommodate the selected ThawSpace size, the size of the ThawSpace is adjusted downward to ensure proper operation of the computer.
  - If you select the Size less than 16MB, the ThawSpace is set to 16MB.
  - If you select the Size more than 1024GB (1TB), the ThawSpace is set to 1024GB (1TB).



3. Select the ThawSpace storage unit in *MB* or *GB*.
4. 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*.
5. 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*.
6. Click *Add* to add the ThawSpace.

## Removing a ThawSpace

To remove a ThawSpace, select the ThawSpace and click *Remove*. The ThawSpace is removed and the drive letter is now added back to the *Drive Letter* drop-down. Click *Remove All* to remove all the ThawSpaces.



Before removing a ThawSpace, remove any profile redirections or Symbolic Links. Removing a ThawSpace will also remove the data stored in it. A ThawSpace is not protected by Deep Freeze. Deploy standard data protection options such as, Anti-Virus and backup procedures.

## Example

In the above screen, a *ThawSpace* of 16 MB is created on the *Host Drive C:* and the ThawSpace is designated with the drive letter *T:*. The ThawSpace *T:* is set to *Visible* and can be accessed via the Windows Explorer.



It is recommended to assign Drive Letters towards the end of the alphabet (X, Y, Z) in order to avoid automatic reassignment when a removable drive is unplugged.

## Existing ThawSpace

The *Retain existing Thawspace* check box is selected by default to prevent ThawSpaces created during previous installations from being deleted.

A dialog is always displayed asking if the ThawSpace should be retained or deleted during an Attended Uninstall, regardless of whether *Retain existing ThawSpace* has been selected. This option is not displayed if the uninstall is performed through the Enterprise Console.

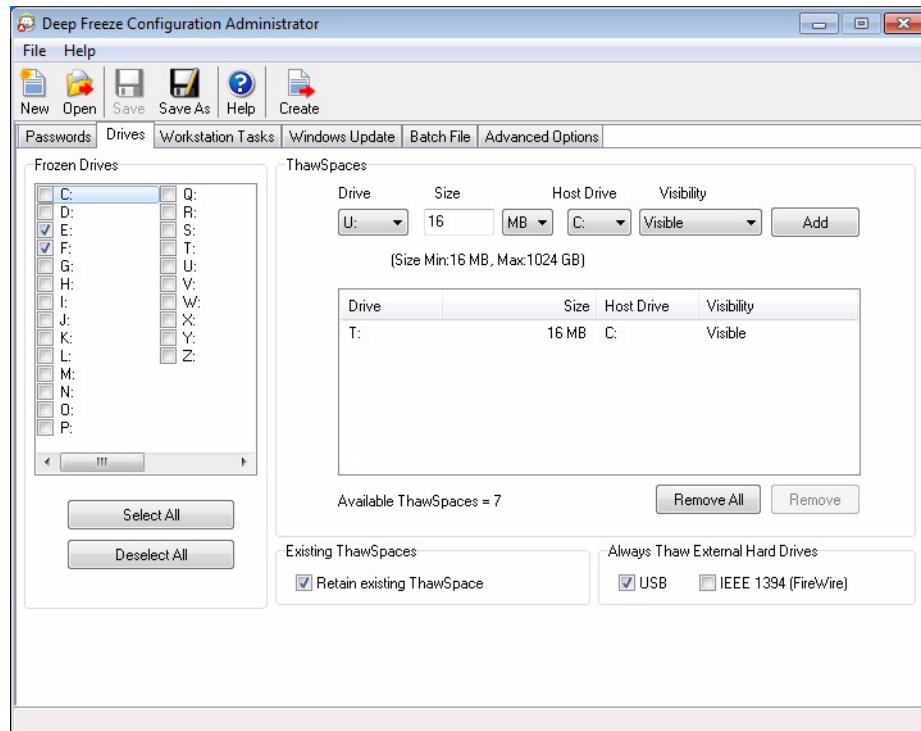
## Always Thaw External Hard Drives

The *Always Thaw External Hard Drives* pane has two check boxes, *USB* and *IEEE 1394 (FireWire)* and both check boxes 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 check boxes are cleared, the drive is *Frozen* or *Thawed* according to the letter each drive mounts to in the Frozen Drives section.



Network drives and removable media drives (floppy, memory keys, CD-RW, etc.) are not affected by Deep Freeze and therefore cannot be Frozen.



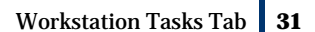
### Example

In the above screen, drives *E:* and *F:* are selected in the *Frozen Drives* pane.

Let us assume that *E:* corresponds to a USB hard drive and *F:* corresponds to an IEEE 1394 (FireWire) hard drive.

The *USB* and *IEEE 1394 (FireWire)* check boxes are selected in the *Always Thaw External Hard Drives* pane, the external hard drives would be *Thawed*.

The *USB* check box is selected. The *IEEE 1394 (FireWire)* check box is cleared. In this example, the *USB* drive (*D:*) would be Thawed and the *IEEE 1394 (FireWire)* drive (*F:*) would be Frozen.

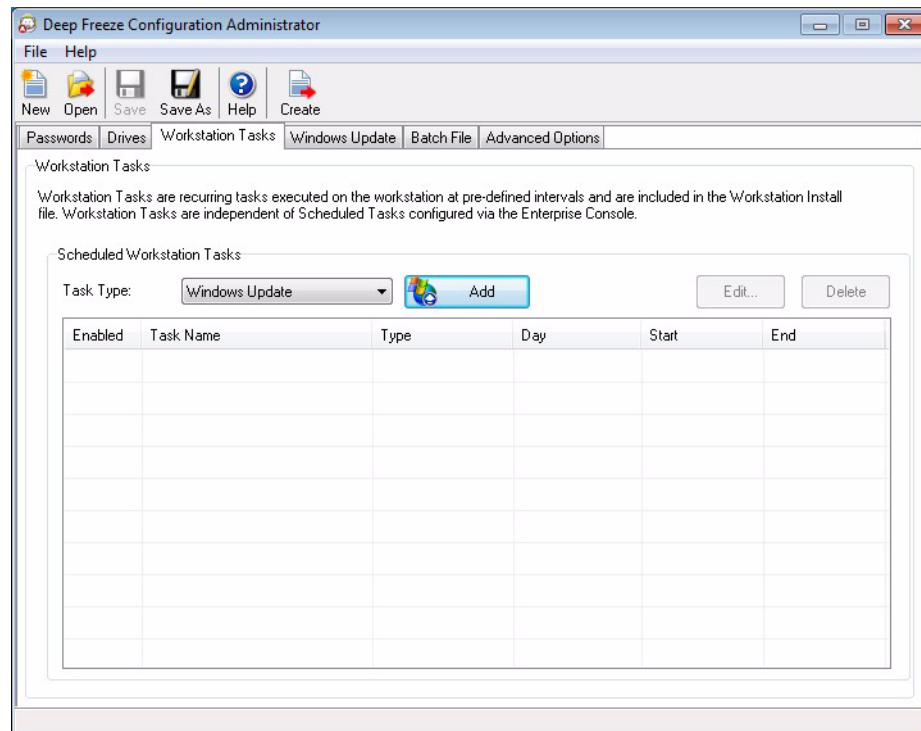


## Workstation Tasks Tab

The Workstation Tasks tab allows you to schedule various tasks that run at the workstation. The Workstation Tasks reside at the workstation and will run even if the workstations lose their network connectivity or if they are unable to communicate with the Deep Freeze Console. The Workstation Tasks are part of the Workstation Install File or Deep Freeze Configuration (.rdx) file. The following Workstation Tasks are available:

- *Windows Update* - schedule Windows updates. You can configure additional settings in the Windows Update tab.
- *Restart* - periodically restart workstations to bring them to the original configuration or erase unwanted data.
- *Shutdown* - shut down the workstations at a specified time every day to save power.
- *Idle Time* - shut down or restart the workstations if they are idle for a specified period of time.
- *Batch File* - run a batch file on the target workstation. You can configure additional settings in the Batch File tab.
- *Thawed Period* - reboot Thawed for a specified period to perform manual software installs, automated software installs via third party tools or other permanent configuration changes.

Each task is covered in detail in the following sections.





**Workstation Tasks vs. Scheduled Tasks:** If communication between the Enterprise Console and the target computer fails, the Workstation Tasks are still executed since they exist on the target computer.

Tasks scheduled through the Scheduled Tasks Wizard in the Deep Freeze Enterprise Console exist on the Enterprise Console and not on the target computers. Therefore, a continuous connectivity between the Enterprise Console and the target computer is required for the Scheduled Tasks to be executed. For more information, refer to the [Scheduling Deep Freeze Tasks](#) section.



Overlapping tasks cannot be created in the Workstation Tasks tab. If a newly created task overlaps with an existing task, a message is displayed.



A message can be displayed to the user for a maximum of 5 minutes. There must be a gap of a minimum of 5 minutes between any two tasks.

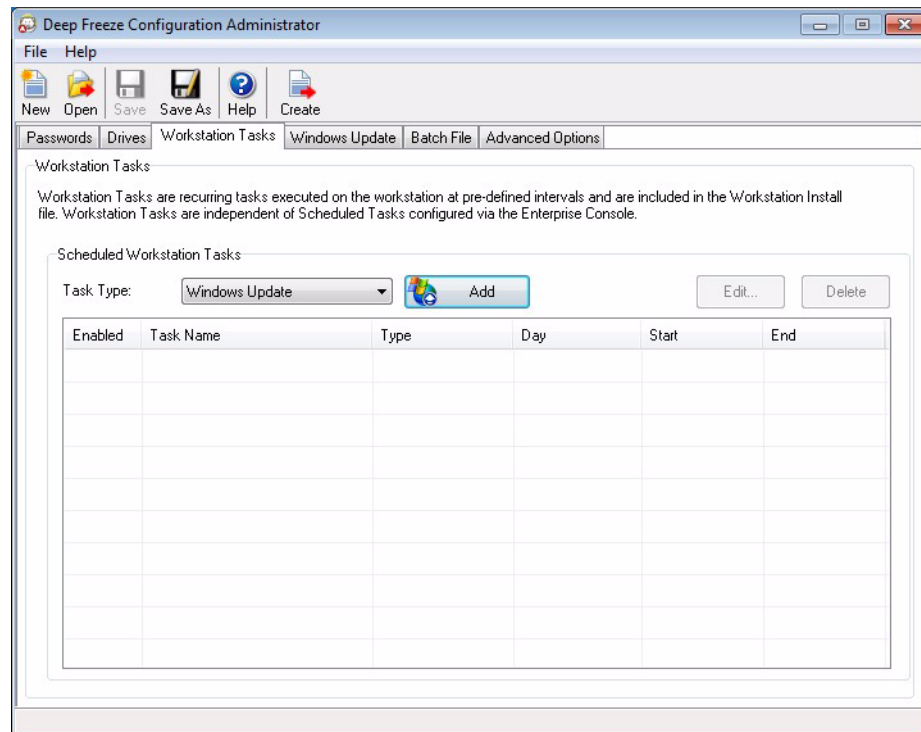


A Workstation Task is triggered only when Deep Freeze is in a Frozen state.

## Windows Update

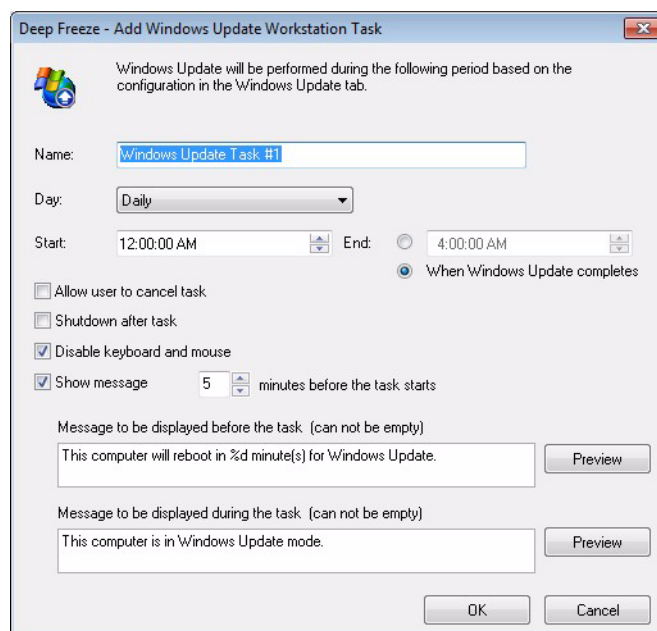
Windows Update tasks are scheduled for downloading Windows Updates on the workstation. Windows Updates can be downloaded even when the workstation is in a Frozen state. A Windows Update task has a Start Time and an End Time. After downloading Windows Updates, the workstation reboots in a Thawed state to apply.





The Windows Update task can be scheduled by completing the following steps:

1. Select *Windows Update* from the *Task Type* drop-down and click *Add*.
2. The following options are displayed:



- *Name* - Specify a name for the task.
- *Day* - Select the day, or specify if the task will occur on Weekdays or Weekends.
- *Start* - Select the Start Time.



- *End* - Select the End Time. The minimum interval is 15 minutes. Alternatively, you can select *When Windows Update completes*. If the Windows Update Task is not completed in 6 hours, Deep Freeze will end the task gracefully.
  - *Allow user to cancel task*- Select the check box if the user is allowed to cancel the task before it starts.
  - *Shutdown after task* - Select the check box to shutdown the computer after the task.
  - *Disable Keyboard and Mouse* - Select the check box to disable keyboard and mouse during the task.
  - *Show message* - Select the check box to display a message on the computer *Before* and *During* the task. Specify the time interval in minutes and enter a brief message to be displayed before the task starts.
3. Click OK. You will be taken to the **Windows Update Tab** to configure additional settings if it has not been configured earlier.



The message *This computer will reboot in %d for Windows Update* is displayed in the *Message to be displayed before the task* field. This message can be edited. Add the word *minutes* in the message after *%d* to include the word minutes as part of the message.



When scheduling the Windows Update task select the *When Windows Update completes* option or ensure that you allow a sufficient time frame to permit all required update activities. Review of Microsoft Security Bulletins from the Technet web site (<http://technet.microsoft.com/en-us/security/bulletin>) to consider the appropriate time frame based upon the Critical and Security updates being released.



If you are not using WSUS, Deep Freeze Windows Update process will only apply non user-intervention Critical and Security updates. If you are using WSUS, all WSUS approved updates will be applied.

Alternatively, to apply other available updates visit the Microsoft Update Catalog site (<http://catalog.update.microsoft.com>) to obtain KB downloads which can then be applied using a Deep Freeze Batch File Workstation Task. Batch File tasks can also be used to apply other third party software updates.



The Deep Freeze Windows Update tab settings override the Windows Update settings on the workstation.

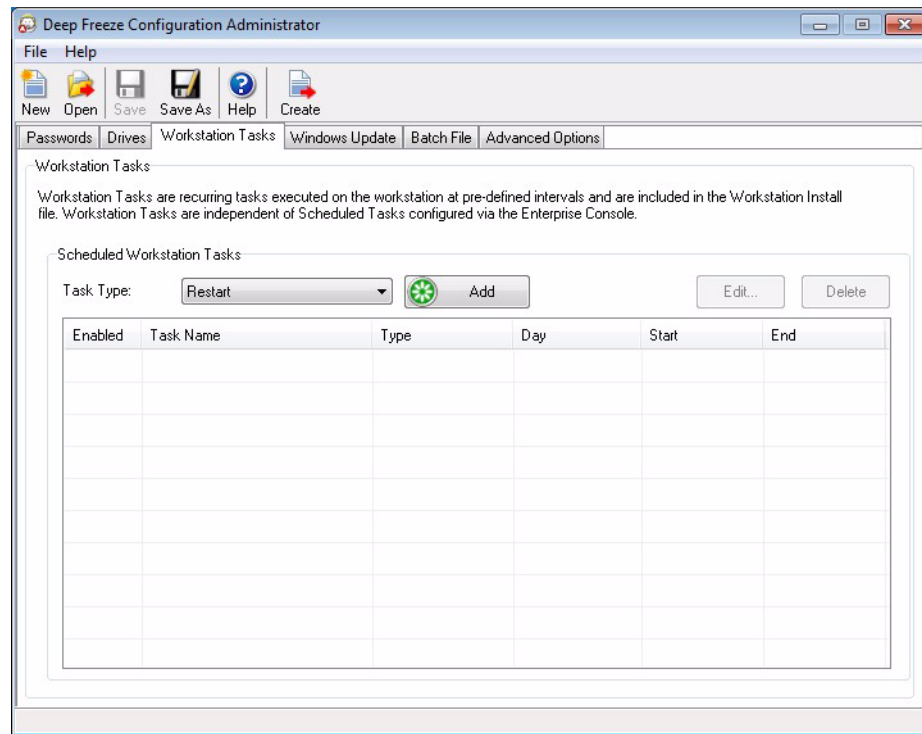
### Example

In the above screen, a Windows Update task has been created to perform Windows Updates at the computer daily at 12:00 AM and end when *Windows Update* completes. The task is configured to display a message to the user before Windows Update. The keyboard and mouse are disabled.

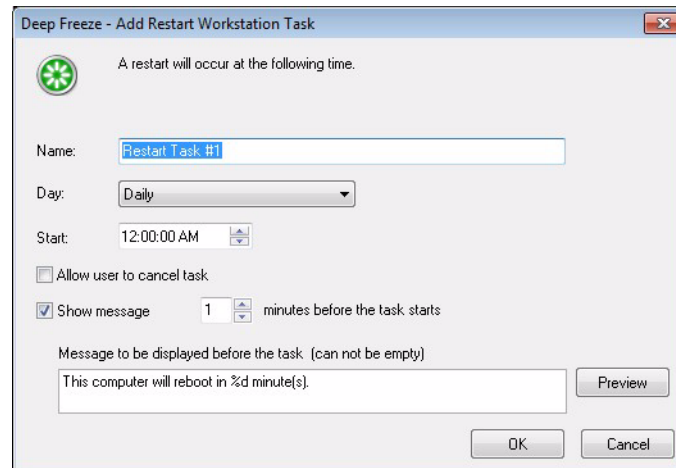


## Restart

The Restart task can be scheduled by completing the following steps:



1. Select *Restart* from the *Task Type* drop-down and click *Add*.
2. The following options are displayed:



- *Name* - Specify a name for the task.
- *Day* - Select the day, or specify if the task will occur on Weekdays or Weekends.
- *Start* - Select the Start Time.
- *Allow user to cancel the task*- Select the check box if the user is allowed to cancel the task before it starts.

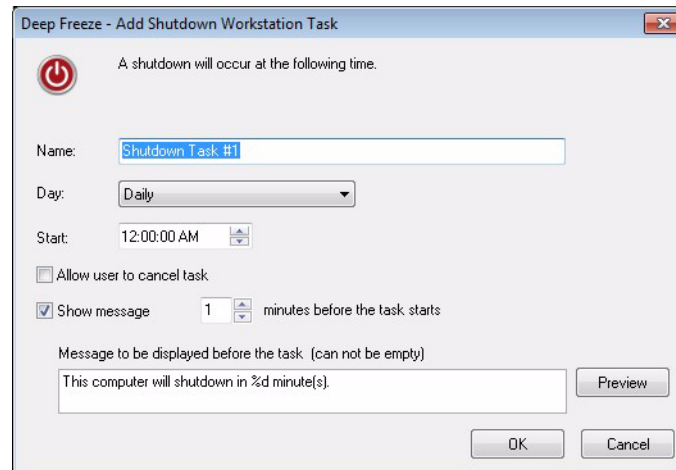
- 

### Example

## Shutdown

[illegible]

- # Deep Freeze Enterprise User Guide



- *Name* - Specify a name for the task.
  - *Day* - Select the day, or specify if the task will occur on Weekdays or Weekends.
  - *Start* - Select the *Start Time*.
  - *Allow user to cancel the task* - Select the check box if the user is allowed to cancel the task before it starts.
  - *Show message* - Select the check box to display a message on the computer before the task starts. Specify the time interval in minutes and enter a brief message to be displayed before the task occurs.
3. Click OK.



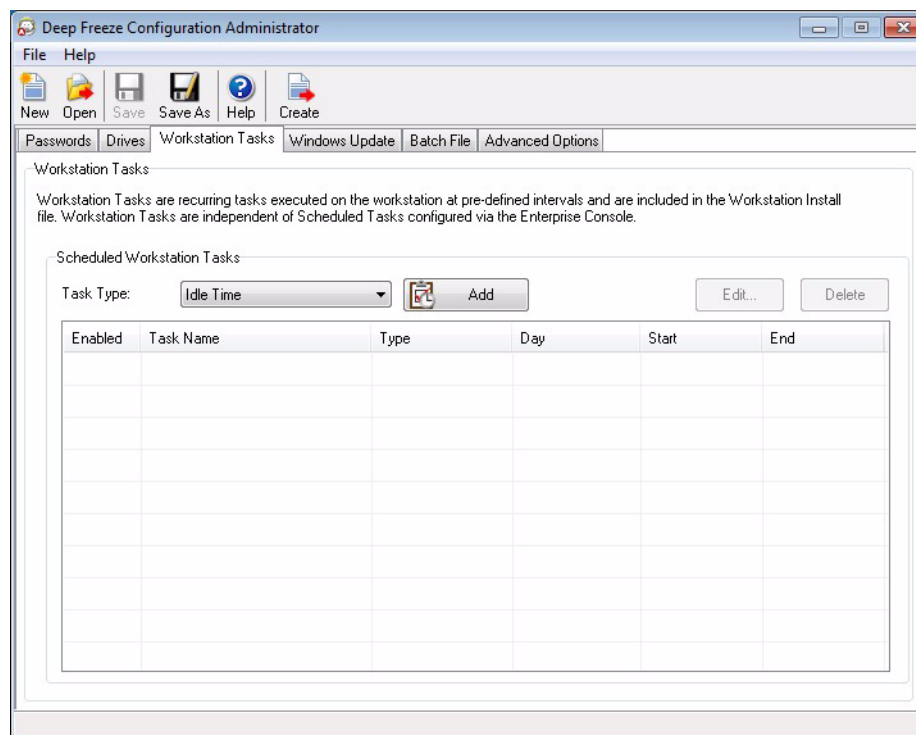
The message *This computer will shutdown in %d seconds* is displayed in the *Message to be displayed before the task* field. This message can be edited. Add the word *minutes* in the message after *%d* to include the word minutes as part of the message.

### Example

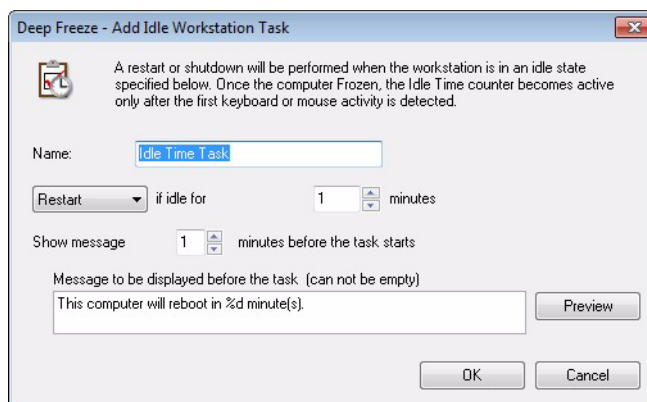
In the above screen, a Shutdown task has been created to shutdown the computer daily at 12:00 AM. The task is configured to display a message to the user 1 minute before the Shutdown task.

## Idle Time

The Idle Time task can be scheduled by completing the following steps:



1. Select *Idle Time* from the *Task Type* drop-down and click *Add*.
2. The following options are displayed:



- *Name* - Specify a name for the task.
- *Restart* or *Shutdown* - Select *Restart* or *Shutdown* and specify the idle time in minutes after which the task must take place.
- *Show message* - Select the check box to display a message. Specify the time interval in minutes and enter a brief message.



After the computer is started, the Idle Time counter becomes active only after the first keyboard or mouse activity has been initiated. During a Remote Desktop session, the Idle Time of the controlling computer is used to activate the task.



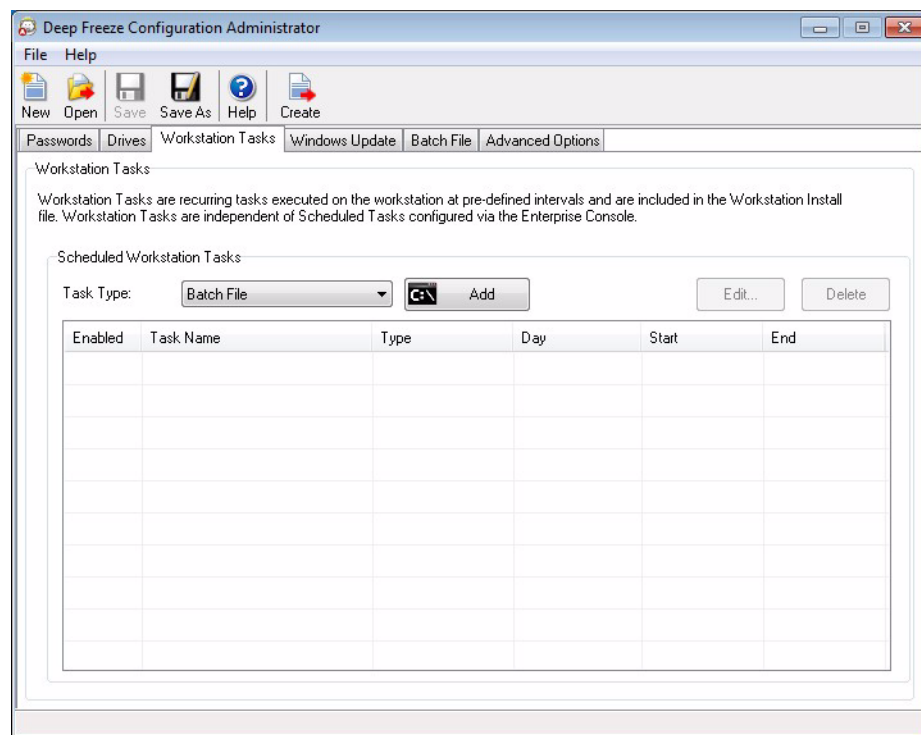
3. Click OK.

### Example

In the above screen, the Idle Time task is set to *Restart* when the computer is idle for 1 minute. A message is displayed to the user for 1 minute after the idle time has elapsed. The computer will restart unless the user cancels the task in the message dialog displayed.

## Batch File

Batch File tasks are scheduled for executing batch files on the workstation. A Batch File task has a Start Time and an End Time. During this period, the batch file is executed on the workstation. You must configure additional settings in the Batch File tab for the Batch File Task to work. You can configure to shutdown the workstation after the Batch File Task is completed. Workstations will reboot *Frozen* after the batch file has been executed.



The Batch File task can be scheduled by completing the following steps:

1. Select *Batch File* from the *Task Type* drop-down and click *Add*.
2. The following options are displayed:



Deep Freeze - Add Batch File Workstation Task

The Batch File Task will be performed during the following period based on the configuration in the Batch File tab.

Name:

Day:

Start:  End:

☐ Allow user to cancel task

☐ Shutdown after task

☒ Disable keyboard and mouse

☒ Show message  minutes before the task starts

Message to be displayed before the task (can not be empty)

Message to be displayed during the task (can not be empty)

- *Name* - Specify a name for the task.
  - *Day* - Select the day, or specify if the task will occur on Weekdays or Weekends.
  - *Start* - Select the Start Time.
  - *End* - Select the End Time. The minimum interval is 15 minutes.
  - *Allow user to cancel the task* - Select the check box if the user is allowed to cancel the task before it starts.
  - *Shutdown after task* - Select the check box to shutdown the computer after the task.
  - *Disable Keyboard and Mouse* - Select the check box to disable keyboard and mouse during the task.
  - *Show message* - Select the check box to display a message on the computer *Before* and *During* the task. Specify the time interval in minutes and enter a brief message to be displayed before the task starts.
3. Click OK.
  4. Go to **Batch File Tab** to configure additional settings.



The message *This computer will reboot in %d for Batch File* is displayed in the *Message to be displayed before the task* field. This message can be edited. Add the word *minutes* in the message after *%d* to include the word minutes as part of the message.

### Example

In the above screen, a Batch File task has been created to execute a Batch File at the computer daily at 12:00 AM and end at 12.15 AM. The task is configured to display a message to the user before the Batch File is executed. The keyboard and mouse are disabled.







- *Name* - Specify a name for the task.
  - *Day* - Select the day, or specify if the task will occur on Weekdays or Weekends.
  - *Start* - Select the Start Time.
  - *End* - Select the End Time. The minimum interval is 15 minutes.
  - *Allow user to cancel task* - Select the check box if the user is allowed to cancel the task before it starts.
  - *Shutdown after task* - Select the check box to shutdown the computer after the task.
  - *Disable Keyboard and Mouse* - Select the check box to disable keyboard and mouse during the task.
  - *Show message* - Select the check box to display a message on the computer *Before* and *During* the task. Specify the time interval in minutes and enter a brief message to be displayed before the task starts.
3. Click OK.



The message *This computer will reboot in %d for Maintenance* is displayed in the *Message to be displayed before the task* field. This message can be edited. Add the word *minutes* in the message after *%d* to include the word minutes as part of the message.

### Example

Anti-Virus programs require regular virus definition updates to protect the system. Virus definitions can be updated during a Thawed Period.



In the above screen, a Thawed Period task has been created daily between 12:00 AM and 12:15 AM. The user is not allowed to cancel the task before it starts. The computer will shut down after the maintenance period. The keyboard and mouse are disabled during the maintenance period. The task is configured to display a message to the user 5 minutes before the task starts. The following message will be displayed on the computer at 11:55 AM *The computer will reboot in 5 minutes to enter into a Thawed Period.*

To ensure that the virus definitions are applied permanently, schedule the virus definition update for your Anti-Virus program so that it starts *after* Deep Freeze successfully starts the Thawed Period task and *ends* before Deep Freeze ends the Thawed Period task. This ensures that the virus definitions downloaded and updated by the Anti-Virus program stay permanently on the system. Hence the system is fully protected by Anti-Virus and Deep Freeze.



**Faronics Anti-Virus:** Faronics Anti-Virus works with Deep Freeze and does not require a Thawed Period task for updating virus definitions. Faronics Anti-Virus can update virus definitions even when the computers managed by Deep Freeze are in a *Frozen* state.

**Other Anti-Virus Programs:** All other Anti-Virus programs require scheduling a Thawed Period task to update virus definitions. Refer to your Anti-Virus program user guide for information on how the virus definitions are downloaded. Alternatively, virus definitions can be applied manually when the computers managed by Deep Freeze are in a *Thawed* state. You can also schedule a *no user intervention* install of your virus definitions through a Batch File Task.

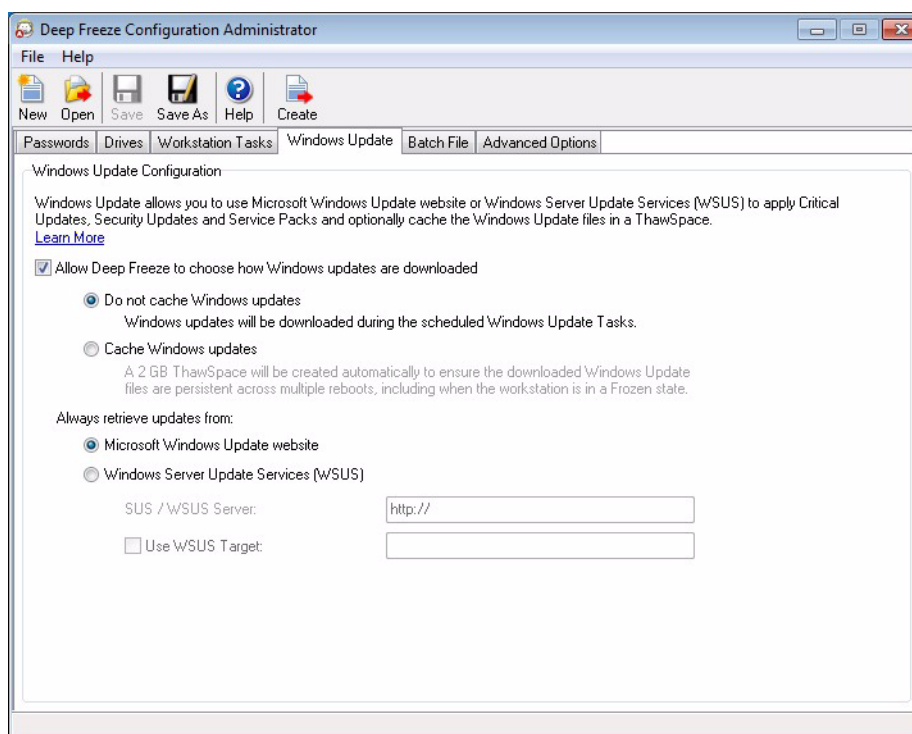


## Windows Update Tab

The Windows Update tab allows you to customize settings for Windows Update. When you first create a Windows Update Task, you will be given an option to modify the default settings in the Windows Update tab. Modifying the default settings is not mandatory. Windows Update will be performed even with the default settings. The settings in the Windows Update tab will apply to all Windows Update tasks.



The Deep Freeze Windows Update tab settings override the Windows Update settings on the workstation.



The settings in the Windows Update tab can be customized as follows:

*Allow Deep Freeze to choose how Windows updates are downloaded:* —select this check box to allow Deep Freeze to choose how Windows updates are downloaded. The following options are available:

- Select the Windows Updates download options:
  - *Do not cache Windows updates* — select this option to download Windows updates only during the Windows Update task.
  - *Cache Windows updates* —select this option to download when the workstation is in a Frozen or Thawed state and install during the Windows Update Task. This option creates a 2 GB ThawSpace and the Windows Updates are stored in the ThawSpace to ensure that Windows Update files are persistent across multiple reboots.



- Always retrieve updates from:
  - *Microsoft Windows Update website*—select this option to download updates directly from the Microsoft Windows Update web site.
  - *Windows Server Update Services (WSUS)* — select this option to download from WSUS server. Specify the *SUS/WSUS Server*. Optionally, select *Use WSUS Target* and specify the target. Microsoft SUS client and SUS/WSUS server can be downloaded at: <http://www.microsoft.com/wsus>.



A log file is created for each individual workstation and is stored locally on the workstation.

The default name for the Deep Freeze Windows Update Log file is *DFWuLogfile.log* and can be found at:

C:\Program Files\Faronics\Deep Freeze\Install C-[X]\DFWuLogfile.log (32-bit systems) and C:\Program Files (x86)\Faronics\Deep Freeze\Install C-[X]\DFWuLogfile.log (64-bit systems).

- You cannot change the name or location of the log file.
- The Deep Freeze Log file and the Windows Update log file (at c:\windows\windowsupdate.log) are very useful for troubleshooting your Windows updates.
- X is an incremental value depending on how many times you have installed Deep Freeze on the workstation.

Contact Faronics Support for help troubleshooting the DFWuLogfile.log (at <http://support.faronics.com>).

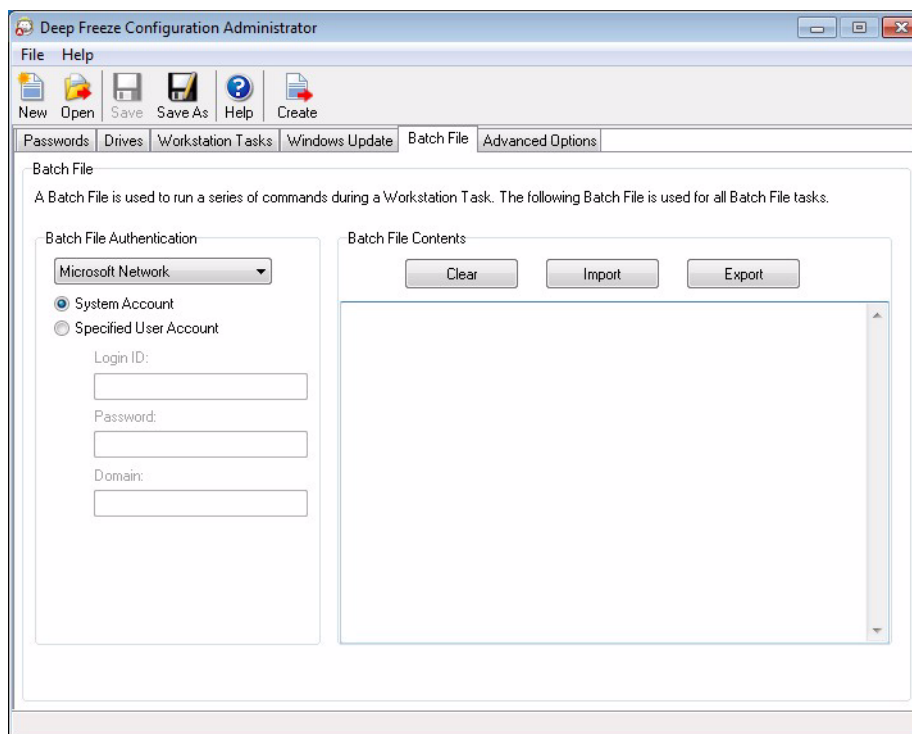
Contact Microsoft Support for troubleshooting Windows Update Errors. (See <http://support.microsoft.com/kb/906602>)

Also see Microsoft KB 902093 *How to read the Windows Update log file* found at: <http://support.microsoft.com/kb/902093/> or visit <http://support.microsoft.com>.



## Batch File Tab

The Batch File tab allows you to customize settings for the Batch File task. When you schedule a Batch File task from the Workstation Tasks tab, you must configure the settings in the Batch File tab.



Configure the following options:

- **Batch File Authentication**

Select Microsoft Network and select if the account to be used is a System account or a Specified user account. If you select Specified user account, specify the Login ID, Password, and Domain. For Novell Network, select Novell, specify the Login ID, Password, Tree, Context, and Server.



The default configuration using the Microsoft Network/System Account authentication must be tested prior to using alternative credentials. Using this machine level account often is sufficient to complete the task. Use of a specified user account may be required if the batch file requires network access to secure resources.

- **Batch File Contents**



Enter a custom batch file to run during the Batch File task. The same batch file applies to all Batch File tasks. The following options are available when running custom batch files:

- To clear the current batch file, click *Clear*.
- To load an existing file, click *Import* and browse to the location of the file.
- To save the contents of the field, click *Export* and browse to the preferred save location.

The batch file can be any command or series of commands that the command processor can run. You can run custom scripts that require the use of a third-party scripting engine by calling the script from the batch file as if it was being run from the command line.

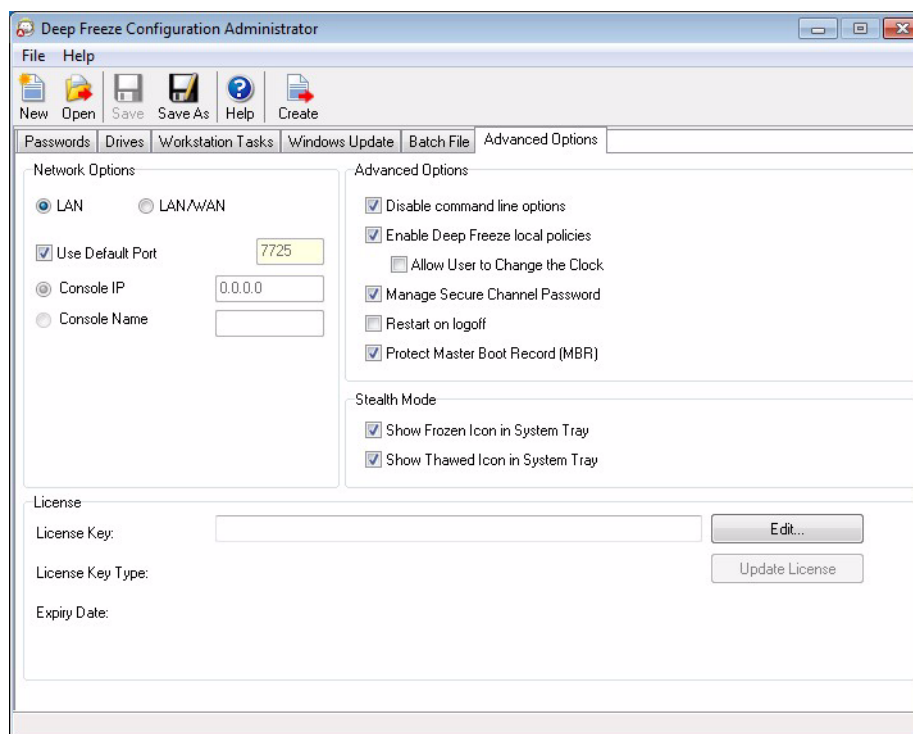


Batch Files allow you to use VB Scripts, PowerShell scripts, Ninite and other third party solutions. Contact your software vendor or refer to your third party solution user guide to know more about scripting solutions that include *no user intervention* options.



## Advanced Options Tab

The Advanced Options tab is used to configure the network settings used by the computers to communicate with the Console, configure various security options, and administer License Keys.



## Network

Communication between the Deep Freeze Enterprise Console and computers with Deep Freeze installed can use two different modes: LAN Mode or LAN/WAN Mode.

- **LAN:** Select LAN to configure Deep Freeze to communicate within a Local Area Network (LAN). LAN mode is a self-configuring mode that requires only a port number. The default port is 7725. The port number can be changed if it is in conflict with other programs on the LAN. In LAN mode, the Deep Freeze target computer and the Enterprise Console find each other through UDP broadcasts. These broadcasts only occur when computer or the Enterprise Console is started, ensuring that there is little network traffic associated with target computer and Console communication.
- **LAN/WAN:** Select LAN/WAN to configure Deep Freeze to communicate in both a LAN and a WAN (wide area network). LAN/WAN can be used in either a LAN or WAN environment and over the Internet. This mode uses an IP address or the computer name, along with a port number, to allow communication between the Enterprise Console and the managed computers.

The following two methods are available to identify the Console:

- specify the Console IP, which must be static





- specify the Console Name, in which case the IP can be dynamic (if valid DNS name resolution is available as part of the domain infrastructure).

When the Enterprise Console is behind a firewall or a NAT (network address translation) router, the firewall or router must be configured to allow traffic to pass through to the Enterprise Console. Depending on the firewall or router, computers may need to be configured with the IP address of the firewall so that traffic can be forwarded.



Deep Freeze automatically configures the required exceptions in the Windows Firewall. It is not required to configure the Windows Firewall manually.

For more information on configuring and using Deep Freeze in a specific network environment, refer to [Appendix B](#) or contact Technical Support.

If a port number other than the default of 7725 (registered to Deep Freeze) is used, care should be taken to ensure that there are no conflicts with applications already running on the network. Well-known ports (0–1023) should be avoided and any Registered Ports (1024–49151) should be checked for conflicts before deployment.



It is recommended to use ports in the unallocated range above 49152. Using Port Segmentation, you can isolate a lab or building by port number by configuring the Port Number on the workstations and in the Deep Freeze Enterprise Console. Using this method, you can provide management functions for a specific set of workstations and not your entire organization. UDP and TCP port exceptions for these ports will be required. For more information, refer to [Example 3 - Multiple Ports, Console Accessed Remotely](#).

A complete listing of the ports assigned to various applications can be found on the Internet Assigned Numbers Authority web site at <http://www.iana.org/assignments/port-numbers>.

## Advanced Options

- *Disable Command Line options* - This option is selected by default. Clearing this check box allows for further customization of the Deep Freeze installation program when using the Silent Install System. Selecting this option prevents the pre-existing configuration choices from being changed during installation.
- *Enable Deep Freeze local policies* - For enhanced security, Deep Freeze removes the following local privileges: debugging programs, modifying firmware, and changing the system time; clear this option to use existing privileges.
- *Allow user to change the clock* - Select this option to allow Frozen users to adjust the system clock. Enable this feature during Daylight Savings to allow Windows to update the time automatically each season.
- *Manage Secure Channel Password* — Secure Channel Password is a feature of all Windows operating systems and only applicable if the system is running in Windows Server Domain Environment. Secure Channel Password is used for secure communication between the server and workstations. The Secure Channel Password is automatically changed based on the operating system settings. While using Deep Freeze, the newly changed Secure Channel Password is lost on reboot. The *Manage Secure Channel Password* option avoids this situation. The Manage Secure Channel Password feature of Deep Freeze changes the value of



the Group Policy *Maximum machine account password age* based on the Deep Freeze state (*Frozen* or *Thawed*).

- Select the *Manage Secure Channel Password* option if you want Deep Freeze to manage Secure Channel Password.

*When the workstation is Frozen:* The workstation will not change the Secure Channel Password. This ensures that the secure communication between the server and the workstation is always maintained.

*When the workstation is Thawed:* The workstation will change the Secure Channel Password and sync the password with the server.

- Do not select the *Manage Secure Channel Password* option if you do not want Deep Freeze to manage the Secure Channel Password.

*When the workstation is Frozen:* When the Secure Channel Password is changed and synced with the server, it resets to the old password on reboot.

*When the workstation is Thawed:* If the workstation is *Thawed* on the day the Secure Channel Password is changed, the new password takes affect and the workstation is synced with the server.

- *Restart on Logoff* - Select this check box to *Restart* the computer automatically when it is logged off. If this option is selected, the computer is restarted when a user logs off in a *Frozen* state.
- *Protect Master Boot Record (MBR)* - Select this check box if you want Deep Freeze to protect the Master Boot Record. If this option is selected, changes to the Master Boot Record are reversed on reboot when the computer is in a *Frozen* state.



The Manage Secure Channel Password feature of Deep Freeze always overrides the Group Policy *Maximum machine account password age*.

Set the following in the Group Policy for the Manage Secure Channel Password feature to work:

*Domain Controller:* Refuse machine account password changes to *Not Defined*

*Domain Member:* Disable machine account password changes to *Disabled*

## Example

On a Windows Domain Environment using Windows Server 2008 R2 that manages multiple workstations, Secure Channel Password is used for secure communication between the server and workstations.

In Deep Freeze Configuration Administrator, go to the *Advanced Options* tab and select *Manage Secure Channel Password*. Create the Workstation Install file and deploy it to the workstation.

Set the following in the Group Policy for the Manage Secure Channel Password feature to work:

*Domain Controller:* Refuse machine account password changes to *Not Defined*

*Domain Member:* Disable machine account password changes to *Disabled*

When the workstation is *Frozen*, the Secure Channel Password does not change. When the workstation is *Thawed*, the Secure Channel Password is changed at the workstation and synced with the server.



## Stealth Mode

- *Show Frozen icon in system tray* - Select this option to display the icon to indicate that Deep Freeze is installed and the computer is Frozen.
- *Show Thawed icon in system tray* - Select this option to display the icon to indicate that Deep Freeze is installed but the computer is Thawed.

If the options to show a Deep Freeze icon in the System Tray are unchecked, the keyboard shortcut CTRL+ALT+SHIFT+F6 must be used to access the logon dialog.

## License

- *License Key* - Click *Edit* and enter the License Key.
- *License Key Type* - The License Key type is displayed. This field displays if this is an Evaluation version or a full version.
- *Expiry Date* - The *Expiry Date* for Deep Freeze is displayed.

The License Key can be updated in the following ways:

- Through the Workstation Install file - The License Key is updated in the Configuration Administrator and a Workstation Install file is created. The License Key is now part of the Workstation Install file.
- Through the Enterprise Console - The License Key can be updated directly on the Enterprise Console. When the License Key is updated in the Enterprise Console, it is automatically updated on all connected computers. For more information on updating directly through the Enterprise Console, refer to the [Licensing](#) section.
- Manually on each computer - The License Key can be updated manually on each computer. For more information, refer to the [Status Tab](#) section.



When downloading version updates for Deep Freeze Enterprise from [www.faronicslabs.com](http://www.faronicslabs.com) remember that you will need to copy and paste the newest license key from your account for use in the installation. Faronics updates the license key with every revision of the software. Your Faronics Labs account will be updated with the new license key upon each release.



## Creating Workstation Install Program and Workstation Seed

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To create customized Deep Freeze installation program files with all of the options that were configured in the previous sections, click the *Create* button in the Configuration Administrator toolbar and select *Create Workstation Install Program*.



The default file name for this program is *DFWks.exe*. We recommend that you keep the default name, but in larger deployments you may want to suffix it with information related to its configuration such as: *DFwks\_10gbThawSpace.exe* or *DFWks\_NoMaintenance.exe* or *DFwks\_Wed-5pmUpdates.exe* to assist in organization and identification of the installer functions. The same recommendation applies for *Deep Freeze Configuration* files (.rdx) as well.

This file can then be used to install Deep Freeze on computers using:

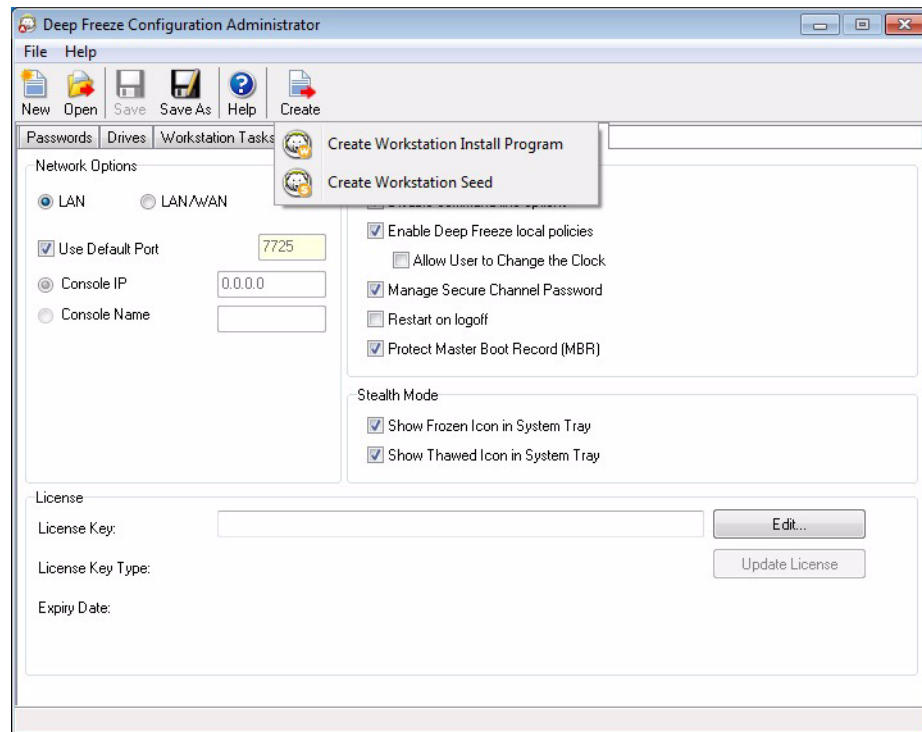
- Attended Install (install based on user input)
- Silent Install system — install that does not inform user of progress or provide messages during installation). For more information on the Silent Install command, refer to Silent Install or Uninstall, page 83.
- Target Install — Through the Deep Freeze Enterprise Console for workstations that already contain a Seed or previous version of Deep Freeze that has been created with the same Customization Code.

To create a Workstation Seed, click the *Create* button in the Configuration Administrator toolbar and select *Create Workstation Seed*. The Workstation Seed is a lightweight program that allows administrators to remotely install and control computers from the Enterprise Console. The Workstation Seed can be installed as part of a master image and then deployed via imaging software. All computers on the LAN with the Workstation Seed installed are displayed in the Enterprise Console. The default file name for this program is *DFWksSeed.exe*.

All files are saved to *Deep Freeze Enterprise/Install Programs* folder by default. A different location can be chosen and the file name can be changed if required. It is recommended that a naming convention is used if you are creating multiple customized installation files.



*DFwks.exe*, *DFwksseed.exe*, and *depfrz.rdx* files can be created and deployed interchangeably to any Deep Freeze computer that uses the same Customization Code. The Deep Freeze Seed can be used as a template/place holder to ensure your basic elements such as passwords, Network Configuration or standardized workstation tasks are all consistent. The seed will not utilize any of the configuration settings but will hold them in the file. To use the file as a template simply open the *DFwksseed.exe* file using the Configuration Administrator and make any required changes. Then, to create workstation installation click *Create> Create Workstation Installation File*.



It is recommended to restrict the use of the Configuration Administrator in larger environments for security reasons. This can be done by password protecting the Deep Freeze Administrator or alternatively, making it unavailable by removing the DFadmin.exe file from the *c:\program files\farionics\Deep Freeze 7 Enterprise* folder. This file can be moved to the Domain Administrator's workstation and deleted from the Common Deep Freeze Enterprise Console. It can be restored by copying it from another installation of the same version and authorizing using the OTP password or by reinstallation or upgrade of Deep Freeze Enterprise using the same Customization Code.





# Using Deep Freeze Enterprise Console

This chapter describes using the Deep Freeze Enterprise Console.

## Topics

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***Deep Freeze Enterprise Console***

***Managing Communication Between the Console and Workstations***

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***Uninstalling Deep Freeze on the Workstation via the Console***

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## Deep Freeze Enterprise Console

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The Deep Freeze Enterprise Console displays the status of all Frozen, Thawed, and Target computers on the network and allows the administrator to perform specific tasks on those computers. Detailed status information is available with selective or group reporting.

The Enterprise Console allows administrators to remotely perform the following tasks:

- Immediately Target Install computers
- Selectively Freeze, Thaw, or Thaw Lock one or more computers
- Lock or Unlock selected computers
- Restart or shutdown computers
- Stop scheduled maintenance
- Power on computers equipped with a Wake-on-LAN network card
- Update Deep Freeze software
- Schedule tasks directly from the Console
- Send messages to computers
- Import groups and containers from Active Directory
- Generate One Time Passwords
- Schedule Actions
- Customize the Enterprise Console
- Update the License Key

The Enterprise Console can only wake a computer from a powered-down state if the computer is properly configured to power on when a Wake-on-LAN packet is received.

### Launching the Enterprise Console

The Enterprise Console is installed with the Deep Freeze Configuration Administrator. Open the Console by selecting the following path from the Start menu:

*Start > All Programs > Faronics > Deep Freeze 7 Enterprise > Deep Freeze Console*

### Activating the Enterprise Console

As a security feature of Deep Freeze Enterprise the OTP feature prevents unauthorized Deep Freeze Enterprise Console use. When the *DFConsole.exe* file is copied to a new computer, the Console must be activated. When it is run for the first time on the new computer, a dialog displays with an OTP Token.

The network administrator enters this token in the Configuration Administrator's OTP Generation System. An OTP is generated. Enter it in the dialog and the Console will run.













The Enterprise Console runs on Windows 2000/XP/Vista, and 2000, 2003 and 2008 Server. The computer on which the Enterprise Console is installed must not have an installation of the Workstation Seed (using the same port) or a full Deep Freeze installation.

## Status Icons

The Enterprise Console displays the status of the computers on the local area network with the following icons beside or above the computer name, depending on the view selected:

Icon	Definition
	Target: Computers that have the Deep Freeze Workstation Seed installed but do not have Deep Freeze installed; Deep Freeze can only be remotely installed on computers with this icon
	Computers with Deep Freeze installed in a Frozen state
	Computers with Deep Freeze installed in a Thawed state
	Computers with Deep Freeze installed in a Thawed Locked state
	Computers that are currently powered down
	Computers that are currently in Maintenance Mode
	Computers whose communication with the Console has been interrupted
	Computers that are Locked



## Managing Communication Between the Console and Workstations

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There are two types of connections from Console to workstation and Console to Console:

1. Local connections — connections that can only be accessed by the Enterprise Console that hosts those connections.
2. Remote control enabled connections — connections that can be accessed by the Console that hosts as well as other Consoles connected remotely.



The Server Service for Deep Freeze 6.5 will not automatically update the Server Service for Deep Freeze 6.4 or lower. Both services can be installed on the same computer, but only one service can run at a time.

A computer can lose communication with the Console for any of the following reasons:

- The computer is powered off manually or is shut down without warning
- The network is experiencing heavy traffic or outages
- The computer's network settings are changed to point to a new Console

In most cases, communication with the computer is re-established when the computer is powered on or when the conditions causing the communications breakdown are rectified. It may take several minutes for the computer to report back to the Console and re-establish communication. If communication cannot be re-established, contact [Technical Support](#) for troubleshooting steps.

### Configuring the local service

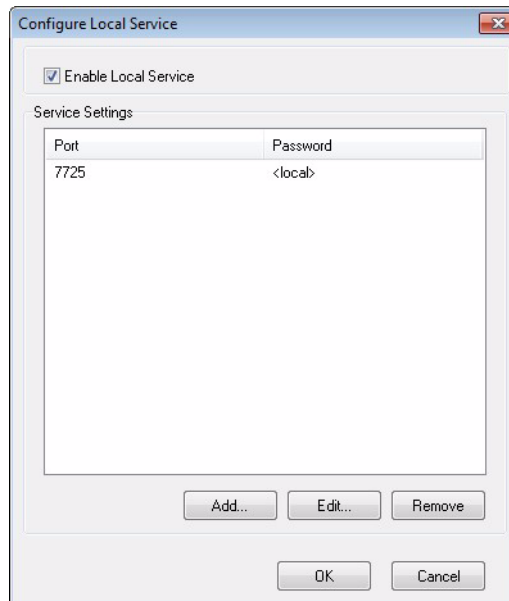
The local service is a service that sets up and maintains connections to computers.

#### Enabling the local service

By default the local service will be installed and enabled when the Console is first run.

To enable the local service again if it has been disabled (and/or uninstalled)

1. Select *Tools > Network Configuration*.
2. Select the *Enable local service* check box to enable it.



### Disabling the local service

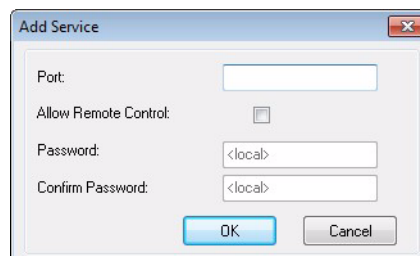
Clearing the *Enable local service* check box and clicking *OK* displays the option to either disable the local service or uninstall the local service.



### Adding a local service Connection

1. To add local service connection, select *Tools > Network Configuration*.
2. To add a connection select *Add* and specify the port number (7725 in this case).
3. To enable the Console to be controlled remotely, select *Allow Remote Control* check box and specify a password.

After selecting *Add*, a connection that serves port 7725 will be created in the connections list of the local service as well as the in the network pane of the Console.





## Editing or Removing a local service Connection

Once a Local Service connection has been added to it can be edited or removed through the *Tools > Network Configuration*.

To edit a local service connection perform the following steps:

1. Ensure the *Enable Local Service* option is selected.
2. Select a port from the Local Service connections list and click *Edit*.
3. The edit dialog appears that allows for the port to be controlled remotely and password protected.
4. To remove a port from the Local Service, highlight the port and click *Remove*. This does not delete the entry from the *Network and Groups* pane in the Enterprise Console. It simply removes it from the Local Service connections list.
5. To remove the entry from the network pane in the Console, select it and click the *Remove* icon located in the sidebar.



## Remote Consoles

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A Remote Console is a Console that hosts one or more connections that allow other Consoles to connect through. Existing connections must be edited to allow them to be accessed remotely.

### Setting up Remote Control Enabled Connections

To allow a connection to be accessed remotely perform the following steps:

1. Open *Tools > Network Configurations*.
2. Select the *Enable local service* check box.
3. Select a port from the list and click *Edit*.
4. Ensure *Allow Remote Control* is selected.
5. Specify a password.
6. Click *OK*.



## Connecting to a Remote Console

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Once a Remote Console has been established by the hosting Console it can be accessed by other Consoles from a different machine.

1. Select the *Connect to Remote Console* icon in the side bar or by right-clicking on the network item. Upon selection the *Connect to Remote Console* dialog appears:

The screenshot shows a dialog box titled "Connect to Remote Console". It has a close button (X) in the top right corner. The dialog contains the following fields and controls:

- Remote Console Name:** A text input field.
- Remote Console IP:** A text input field containing "0.0.0.0".
- Port #:** A text input field containing "0".
- Password:** A text input field.
- Buttons:** "Connect" and "Cancel" buttons at the bottom.

2. In the *Connect to Remote Console* dialog, specify the connection details such as *Remote Console Name*, *Remote Console IP*, *Port number*, and *Password*. This information is provided by the administrator of the host Console. Once entered, this information can be retrieved by right-clicking a port in the *Network and Groups Pane* and selecting *Properties*.



If the connection to a Remote Console has been severed, it can be reconnected by clicking the *Reconnect to Remote Console* icon in the sidebar or by right-clicking on an entry in the *Network and Groups* pane.

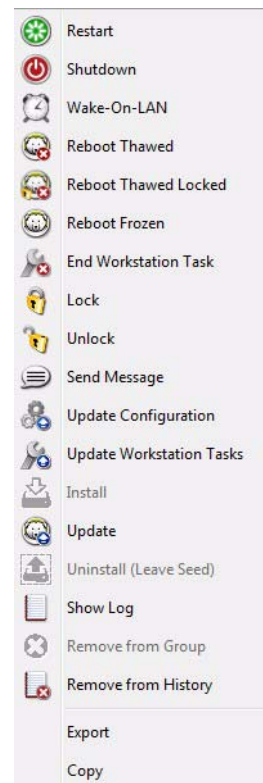


## Managing Deep Freeze with the Console

The Enterprise Console contains a toolbar at the top of the screen that allows quick access to the functions of the Console.



These commands can also be accessed using the contextual menu, as shown below, that appears by right-clicking on one or more computers. When a particular action is chosen, the selected computer performs the action and the status icons update accordingly.



Specific icons are disabled if the selected computer does not support that action. For example, a computer that has a *Target* icon, will not show the option to be Thawed or Frozen, because the program has not been installed yet.

## Updating Deep Freeze Software

To update Deep Freeze computers (where Deep Freeze 6.3 or higher is installed) with a new version of Deep Freeze, complete the following steps:

1. In the Configuration Administrator of the new version of Deep Freeze, create a blank workstation installation file.
2. In the Enterprise Console, select the computers to be updated. These computers can be in either a Frozen or Thawed state.
3. Right-click, and select *Update Deep Freeze* from the contextual menu.



4. A standard *Open* file window appears. Select the blank computer file and click *Open*.
5. The selected computers update to the new version of Deep Freeze software, but retain all settings from the current version. The computers reboot twice to complete the update.

This feature works only on computers with Deep Freeze 6.3 and higher currently installed.

## Sending Messages to Computers

To send a message to one or more computers, complete the following steps:

1. Select the computer(s) to send a message.
2. Right-click and select *Send Message* from the contextual menu.
3. Type the message in the dialog that appears and click *Send*. A dialog appears asking for confirmation to send the message to the selected computers.
4. Click *OK* to send or *Cancel* to close the dialog without sending the message.

## Target Installing Deep Freeze

Complete the following steps to remotely install a Full Workstation Installation on any computer that has the Workstation Seed installed.

1. Right-click on one or multiple computers and select *Install*. A dialog is displayed, asking if the installation should proceed. Click *OK*.
2. A dialog box appears to select the file to be installed on the remote computer.
3. Select the installation file to use and click *Open*.
4. The computer installs Deep Freeze and restarts.
5. Once the installation is complete, the Enterprise Console reflects the change in the computer's status, and displays it as *Frozen*.

## Updating a Deep Freeze Configuration File

Complete the following steps to update the configuration on one or many computer(s) with the settings of an existing *.rdx* file. (An *.rdx* file is a file containing the conditions specified in the Deep Freeze Configuration Administrator).

1. Right-click on the computer(s) and select *Update Configuration*, as shown below.
2. A message appears asking for an existing *.rdx* file to be located.
3. Click *OK*. A standard *Open File* dialog appears to select an *.rdx* file.
4. Locate a file and click *Open* to update the configuration on the selected computer(s) with the settings in the *.rdx* file. Click *Cancel* to cancel the configuration update.





If the Network options in the new configuration have changed, the computer(s) may lose communication with the existing Enterprise Console. If communication with the computers is lost, check the Network settings on the updated computers to ensure that the port numbers and/or IP address of the Console have not been changed.



Changes to passwords take effect immediately. All other changes take effect after each computer is restarted. ThawSpace and/or Frozen Drives cannot be changed through updating the configuration file.



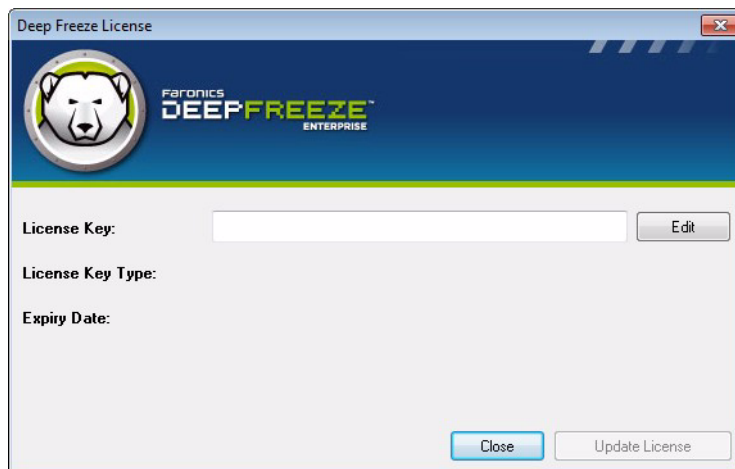
## Licensing

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The License Key can be updated via the Enterprise Console.

To update the License Key, complete the following steps:

1. Launch the *Enterprise Console*.
2. Go to *Tools > Licensing*.
3. The *Deep Freeze License* dialog is displayed.



4. Click *Edit* and enter the License Key in the *License Key* field.
5. Click *Update License*.

The License Key is automatically updated on all computers communicating with the Enterprise Console. If a computer is offline (shut down or disconnected from the network), the License Key is updated when the computer communicates with the Enterprise Console the next time.



## Scheduling Deep Freeze Tasks

To schedule a Deep Freeze task in the Enterprise Console using the Scheduled Task Wizard, complete the following steps:

1. Open the *Scheduled Task Wizard* in one of the following ways:
  - click *Scheduler* in the *Network and Groups* pane and click the *Add Task* icon
  - right-click on *Scheduler* in the *Network and Groups* pane, and choose *Add Task*

The following screen is displayed:



2. Double-click the preferred task or select the task and click *Next*.
3. In the following screen, enter a name for the task and choose the preferred task execution schedule: Daily, Weekly, Monthly, or One time only. Task names must be unique. No two tasks can have the same name. Click *Next*.





- Depending on the choice of task execution, the time and date configuration options that follow will vary. Click *Next*.



- Click *Finish* once the configuration is completed.

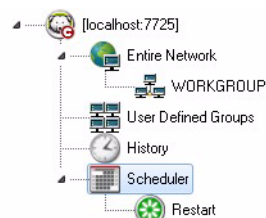


The default start time for a task is five minutes from the current time.

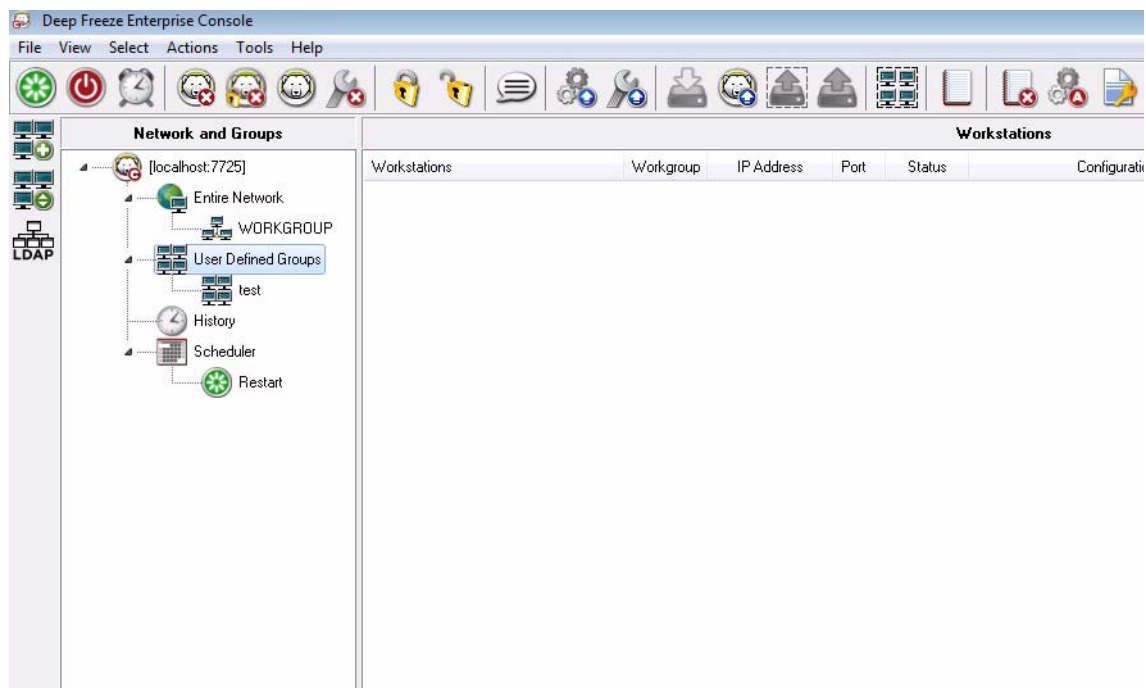


## Assigning Computers to Scheduled Tasks

After a task has been scheduled, it appears under the *Scheduler* in the *Network and Groups* pane of the Console.



To assign computers to a task, select the preferred computers from the *Workstations* pane in the Console and drag them onto the preferred task. Or, drag a group onto the task.



To see which computers are assigned to a specific task, click on the task. The assigned computers appear in the *Workstations* pane.

To delete a computer from a task, click on the computer and press *Delete*.



## Executing a Task Immediately

To execute a task immediately, right-click the task and select *Execute Task*.

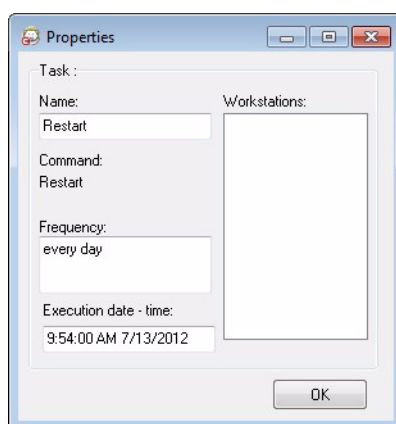
## Deleting a Task

To delete a task, click on the task and press *Delete*.

## Scheduled Task Properties

To see the properties of a task, right-click the task name and select *View Properties*.

The following screen displays:



The properties of a task cannot be changed after it has been created. Only the computers that will execute the task can be changed by adding or deleting computers.



Scheduled tasks will still execute even if the Enterprise Console is closed provided the local service is enabled and the network connections are not shutdown upon exiting the Enterprise Console.



## Managing Network and Groups

The Enterprise Console automatically arranges computers by their workgroup or domain. Click the appropriate workgroup or domain to view the computers in that workgroup or domain.

The Enterprise Console can be used to define specific groups in order to arrange computers.

### Adding a New Group

To add a new group, complete the following steps:

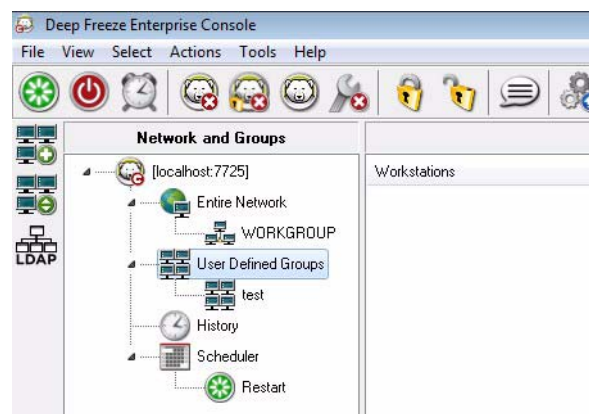
1. In the *Network and Groups* pane, right-click on *User Defined Groups* and choose *Add Group*.
2. The *Add Group* dialog appears:



3. Enter the name of the group to be added and click *Add*. The group appears under *User Defined Groups* in the *Network and Groups* pane.

### Building a User Defined Group Structure

After a group has been added, one or more sub-groups can be added below it, and further sub-groups can be added indefinitely as a way to differentiate between environments, as in the example shown below:





## Importing Groups from Active Directory

If the group structure has already been designed within Active Directory, that structure can be imported directly into the Enterprise Console. Complete the following steps to import from the Active Directory:

1. Select *Tools > Import Groups from Active Directory*, or click the *LDAP* icon located in the sidebar.
2. The following dialog appears. Select either the *Microsoft* tab or the *Novell* tab.

LDAP Server Parameters

Microsoft Novell

LDAP Server

Domain

Login ID

Password

☒ Anonymous Login

Connect Cancel

3. Enter the LDAP server information of the import location. The option to login anonymously is also available. If this check box is not selected, a user name and password is required.
4. Click *Connect*. The *Active Directory* hierarchy appears. Select the required entries and click *Import*.





## History

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The Enterprise Console stores the history of the target computers.

If a computer is disconnected from a network, shutdown or is restarting, an exclamation sign (!) appears in the Enterprise Console for the particular computer. If the computer comes back online, the exclamation sign disappears.

If the computer goes offline permanently (for example, if the computer was permanently unplugged from the network), or if the computer is shutdown, the exclamation sign stays on.

In the Enterprise Console, go to *File > Exit*. Select the option *Close Deep Freeze Console and shutdown network connections option* and click *OK*. Once you reopen the Enterprise Console, the computers with the exclamation sign (!) will appear in History. If the computer is shutdown and is equipped with Wake-On-LAN hardware, right-click on the computer in History and select *Wake-On-LAN* to wake the computer.

Options in History:

- To view history, click *History* in the *Networks and Groups* pane.
- To delete computer(s) from History, select the computer(s), right-click and select *Remove from History* in the context menu.
- To wake the computer using Wake-ON-LAN, select the computer(s), right-click and select *Wake-ON-LAN* in the context menu.



## Adding computers to a Group

Computers can be added to a group by dragging them from the *Workstations* pane to the preferred group, or by using an automatic filter set during the creation of the groups.

Automatic group filtering allows computers to be added to user-defined groups automatically. The computers are added based on their computer name.

Wildcards (\*, ?) can be used to add computers based on a specific segment of the name.

Example: *Lab1-\** adds all computers with names starting with Lab1- .

### Sorting Groups Alphabetically

To sort the Groups alphabetically, right-click *User Defined Groups* and select *Sort Groups Alphabetically*.

### Removing Workstations from User Defined Group

To remove a computer from a Group, right-click on the computer in *User Defined Groups* and select *Remove from Group*.

### Importing or Exporting Groups to File

To import groups from a file or export groups to a file, choose the preferred option from the *Tools* menu.

### Viewing the Console Log File

The Enterprise Console keeps a log of the status and activity history of all connected computers. The log stores information for the previous 48 hours. Information older than 48 hours is automatically deleted from the log.

- To view the log file for one or many computers, right-click on the computer(s) and select *Show Log*.
- To sort the log file, click on a preferred heading.
- To export the log file as a .csv file, right-click and select *Export to file*, as displayed:

Workstation	Domain	Time	Status	IP Address	MAC Address	Applying	Installation file
DFWORKSTATION	WORKGROUP	Friday July 13, 2012 10:...	Frozen	192.168.13.131	000c29d91a23		DFWks.exe

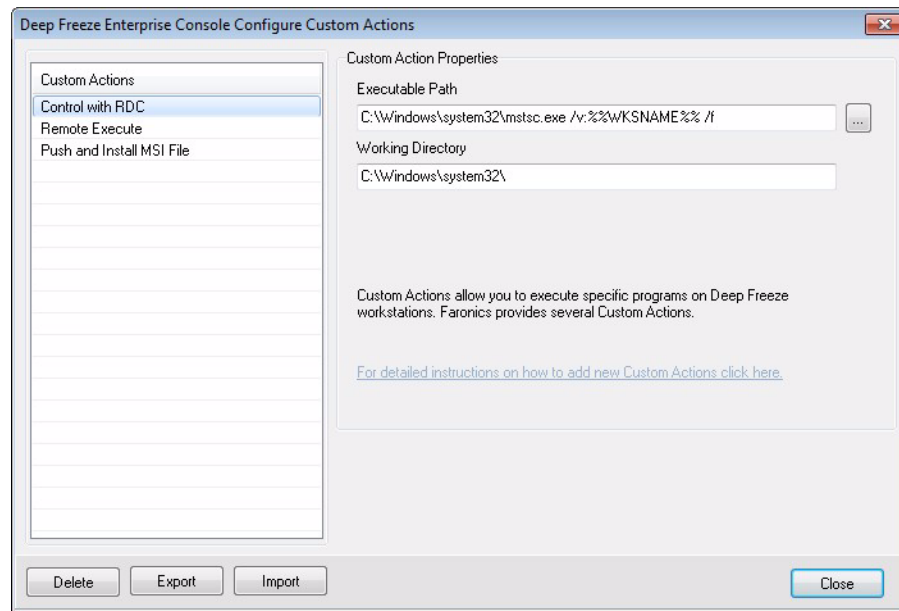


## Configure Custom Actions

Deep Freeze provides the following custom actions that can be accessed via the *Actions* menu. Additional actions can be created to suit specific needs. Deep Freeze provides three default actions. Additional Custom Actions can be configured by importing the appropriate *.xml* file in the Deep Freeze Console. For more information on Custom Actions, the structure of the custom action file and details about various parameters, refer to [Appendix E](#).

### Control with RDC

This allows connecting to the computer through Microsoft Remote Desktop Protocol. Remote Desktop Connection must already be enabled on the target machines.

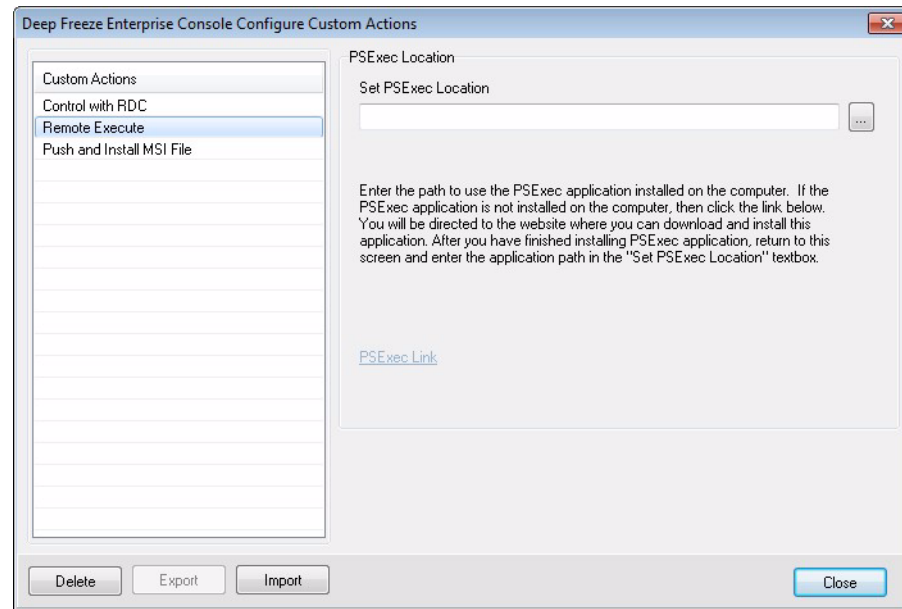


1. Go to *Action Menu > Custom Actions*.
2. Select *Control with RDC*.
3. Enter the *Executable Path* or browse to select the location.
4. Enter the *Working Directory*.
5. Click *Apply*.



## Remote Execute

Remote Execute allows you to remotely execute an executable file on a computer. PsExec is a tool that can be used to remotely execute an executable file on a computer. PsExec must be downloaded and installed on the computer. For more information on PsExec, visit <http://www.faronics.com/pstools>.



### Configure

1. Go to *Action > Custom Actions*.
2. Select *Remote Execute*.
3. Enter the *PSEXec Location* or browse to select the location.
4. The *Executable path* and the *Working Directory* are added automatically. The *Executable path* and *Working Directory* can be modified later.
5. Click *Close*.

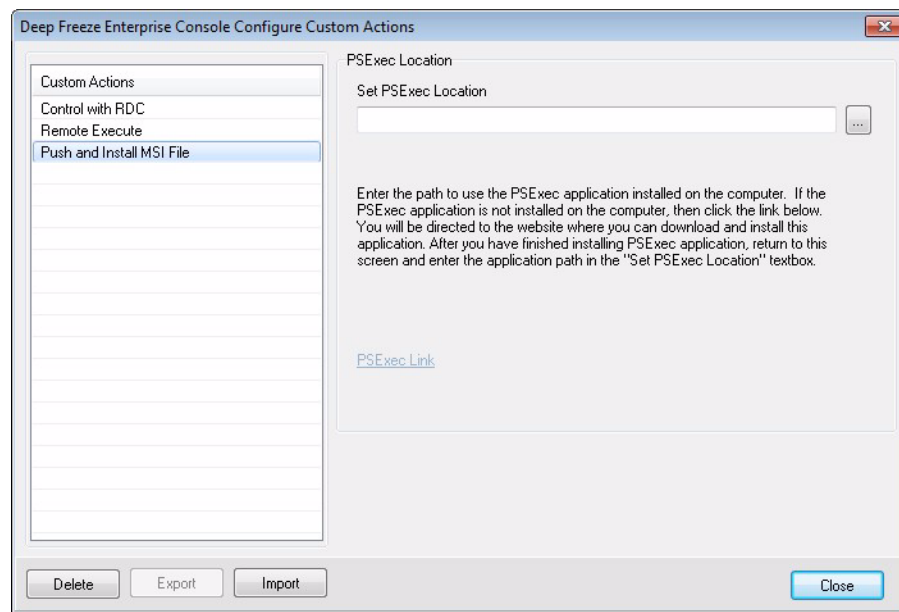
### Execute

1. Select the computers from the *Workstations* pane.
2. Select *Action > Remote Execute*.
3. The *Remote Execute* dialog is displayed.
4. Enter the *User Name*, *Password* and *Command*.
5. Click *OK*.



## Push and Install MSI file

The *Push and Install MSI file* option allows you to push and install a *.msi* file on a computer through the Enterprise Console.



### Configure

1. Go to *Action > Custom Actions*.
2. Select *Push and Install MSI file*.
3. Enter the *PSEXec Location* or browse to select the location.
4. The *Executable path* and the *Working Directory* are added automatically. The *Executable path* and *Working Directory* can be modified later.
5. Click *Close*.

### Execute

1. Select the computers from the *Workstations* pane.
2. Select *Action > Push and Install MSI file*.
3. The *Push and Install MSI file* dialog is displayed.
4. Enter the *User Name*, *Password*, *File Name* and *Drive Letter*.
5. Click *OK*.

## Deleting, Importing and Exporting Custom Actions

### Deleting Custom Actions

To delete Custom Actions, complete the following steps:

1. Go to *Action Menu > Custom Actions*.



2. Select the Custom Action to be deleted.
3. Click *Delete*.

### Importing Custom Actions

To import Custom Actions, complete the following steps:

1. Go to *Action Menu > Custom Actions*.
2. Click *Import*.
3. Browse to select the *.xml* file to be imported.
4. Click *Open* to import the file.

### Exporting Custom Actions

To export Custom Actions, complete the following steps:

1. Go to *Action Menu > Custom Actions*.
2. Select the Custom Action to be exported.
3. Click *Export*.
4. The Export Custom Action to File dialog is displayed.
5. Specify a *File name* and click *Save*.



## Console Customizer

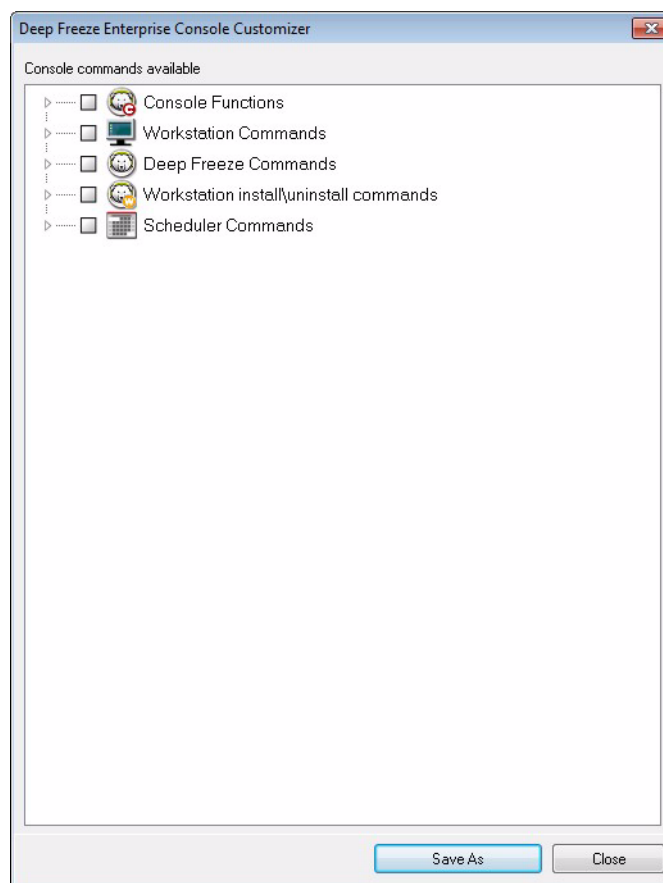
The Console Customizer lets you specify which features and commands you want to be available in the Console, and save the result as a new Console that can be distributed in your organization.

The available settings are grouped into categories (Console functions, Workstation commands, Deep Freeze commands, Workstation install/uninstall commands, and Scheduler commands). Click on the plus (+) icon to the far left of each category to disclose the full list of settings available in that category.

Select or clear the individual check boxes as required. Alternatively, select or clear the entire categories at once. Settings that are cleared will not be available in the new Enterprise Console you create. For an example on how to use the Console Customizer in a practical scenario, refer to [Appendix D](#).

Complete the following steps to create Consoles with limited functionality:

1. Select *Tools>Console Customizer*.
2. The Console Customizer is displayed.



3. Select the features to be displayed in the new Console.
4. Click *Save As* to save the Console. Specify a name for the file.
5. When you double-click the newly created .exe file, the Console with the limited functionality is launched.



## Deep Freeze Enterprise Console Shutdown

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To shutdown the Deep Freeze Console select *File > Exit* or click the close window button. Upon exit, you can choose to:

- Minimize the Console to the system tray.

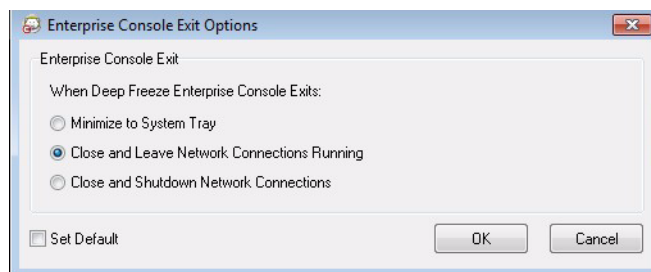
This does not stop the Console and keeps the connections active. The Deep Freeze Console icon appears in the system tray. Scheduled tasks will still execute. To reopen the Deep Freeze Enterprise Console, right-click its icon located in the taskbar and select *Restore DF6 Console*.

- Close Deep Freeze Console and leave the network connections running

This closes the Console but keeps the connections to the computers active. Scheduled tasks will still execute.

- Close Deep Freeze Console and shutdown network connections.

This stops Console processes, closes the connections (including local service), and scheduled tasks will not start to execute. However, scheduled tasks that have started executing will continue.



The dialog will not appear on future exits once the *Set Default* option has been selected. To edit these settings select *Tools > Exit Options*.





## Installing Deep Freeze on the Workstation

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After a customized installation program file has been created using the Configuration Administrator, Deep Freeze can be deployed to computers using an Attended Install, a Target Install, the Silent Install System, or as part of an imaging process.

All background utilities and antivirus 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.

The computer restarts after any type of installation is completed. Deep Freeze must be in a Thawed state for any type of uninstall to succeed.

Any existing ThawSpace will be deleted during an uninstall if:

- the option to retain existing ThawSpace was not checked in the Configuration Administrator
- the ThawSpace was not created with Deep Freeze Enterprise Version 5 or later

### Attended Install or Uninstall

To install or uninstall Deep Freeze, complete the following steps:

1. Run the installation program file (*DFWks.exe*) on the computer. The following screen appears:
2. Click *Install* to begin the installation. Follow the steps presented, then read and accept the license agreement. Deep Freeze installs and the computer restarts.



Click *Uninstall* to uninstall Deep Freeze. Uninstall can only be clicked if Deep Freeze has previously been installed and the computer is currently Thawed. If there is an existing ThawSpace, Deep Freeze displays a dialog asking if it should be retained or deleted.

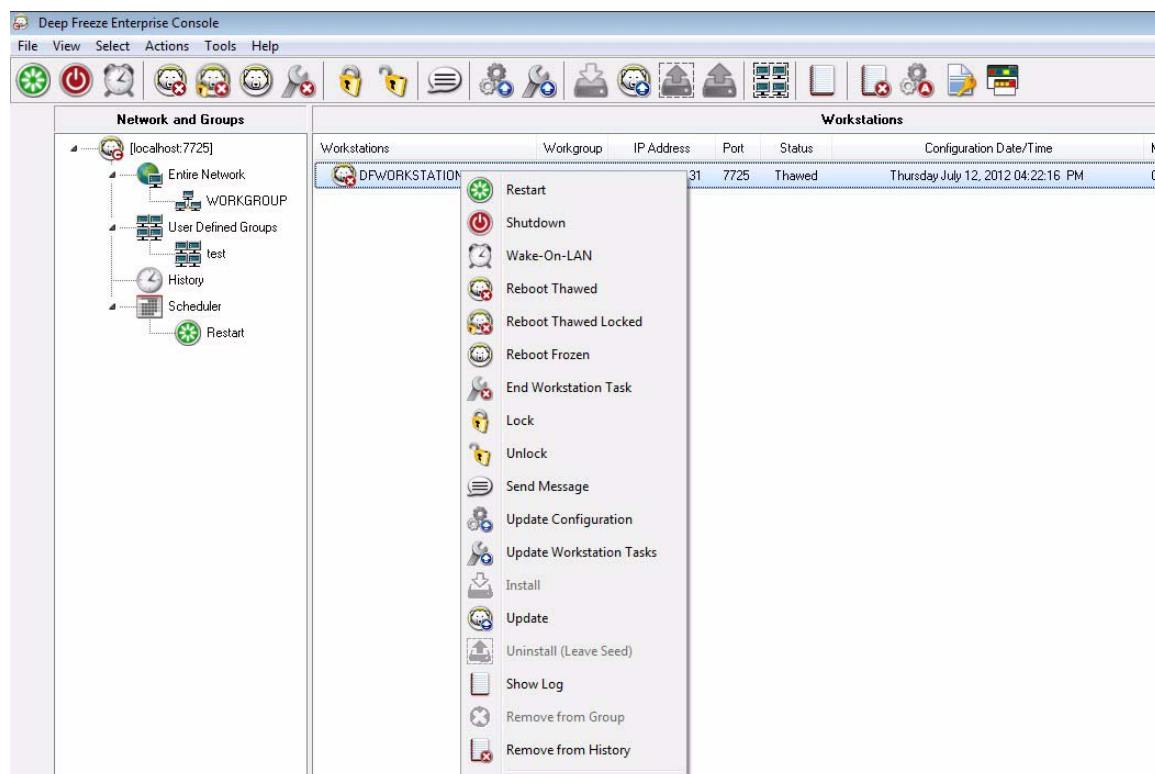


If the hard drive is too fragmented, it is not possible to create ThawSpace(s). A message is displayed prompting you to abort installation, or install Deep Freeze without ThawSpace(s).



## Uninstalling Deep Freeze on the Workstation via the Console

The Enterprise Console can be used to uninstall Deep Freeze completely or to uninstall Deep Freeze but leave the Workstation Seed. A computer must be in a Thawed state in order to uninstall the program.



To uninstall Deep Freeze on a computer and leave the Workstation Seed, right-click on the Thawed workstation(s) and select *Uninstall (Leave Seed)*, as shown above. Or click the icon on the toolbar.

To completely uninstall Deep Freeze and the Workstation Seed, select the computer(s) to be uninstalled and click the *Uninstall* icon on the toolbar.



The computer must be Thawed before Deep Freeze can be uninstalled. The Enterprise Console prompts for confirmation. Once the uninstall is confirmed, Deep Freeze uninstalls and the computer restarts.



## Silent Install or Uninstall

Deep Freeze can be rapidly installed to many computers over a network using the Silent Install System. Any deployment utility that allows execution of a command line on a remote computer can implement the Silent Install System. After the Silent Install is complete, the computer immediately restarts. The command line has the following options:

Syntax	Description
[/Install]	Install Deep Freeze using installation file
[/Install /Seed]	Install only the specified Workstation Seed file
[/Uninstall]	Uninstall Deep Freeze
[/Uninstall /Seed]	Uninstall Deep Freeze and leave the Workstation Seed installed
[/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)*
[/USB]	Exempt external USB hard disks from protection
[/FireWire]	Exempt external FireWire hard disks from protection

### Example Command Line

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

In the above example, the Deep Freeze installation program file is named *DFWks.exe*. Only the C: drive will be Frozen. Any other drives on the computer will be Thawed. If the computer only has a C: drive, the [/Freeze] switch can be omitted. A password (password) will be created. After executing the command, Deep Freeze will install and the computer will restart Frozen and ready to use.

The Silent Install System does not work without the [/Install] or [/Uninstall] switch. Deep Freeze must be in a Thawed state before [/Uninstall] can be used.



To run the configuration command line options, Disable Command Line options on the Advanced Options tab must be cleared.



\* These options are disabled by default.



## Silent Install or Uninstall Using a Shortcut

Deep Freeze can be installed directly on a computer without having to use the installation dialog box by completing the following steps.

1. Locate the Deep Freeze installation program file (*DFWks.exe*) on the target computer.
2. Right-click on the icon and choose *Create Shortcut*.
3. Right-click on the shortcut and choose *Properties*.
4. Edit the path of the Target field by typing `/install` or `/uninstall` at the end of the path.

Example Shortcut Target:

`C:\Documents and Settings\DFWks.exe /install`

Double-clicking on the new shortcut results in the immediate installation or uninstallation of Deep Freeze, followed by a restart of the computer.

Deep Freeze must be in a Thawed state before `/uninstall` can be used.



If the hard drive is too fragmented, it is not possible to create ThawSpace(s). The installation is aborted.

## Network Install on Multiple computers

The Silent Install System can also be used to install Deep Freeze on multiple computers over a network. If the workstations on the network use logon scripts, the scripts can be used to install Deep Freeze on all networked workstations automatically. All workstations will restart Frozen and ready for use after installation has completed.

Use the following command line syntaxes to create an install error report log file:

`\\Server Name\Share Name\DFWks.exe /Install >> my.log`

## Installing Over Existing Deep Freeze Versions

Unless the Update Deep Freeze Software feature is used (for Deep Freeze 6.3 and higher), all existing Deep Freeze versions must be uninstalled prior to performing any new Deep Freeze installation.

## Installing 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 System 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, restart the computer into a Thawed state and log on to Deep Freeze using the keyboard shortcut CTRL+SHIFT+ALT+F6. Select the *Clone* tab, and click *Set Flag*.

Create an image of your computer immediately as per your process.



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.

To return to the Frozen state after imaging is complete, set Deep Freeze to Boot Thawed on next  $n$  number of restarts (in the master image) so that after  $n$  number of restarts, the computer is automatically Frozen. Alternatively, use Deep Freeze Command Line Control to Freeze selected computers.

## Target Install

Deep Freeze can also be deployed using a Target Install from the Enterprise Console.



## Check for Updates

---

Deep Freeze allows you to check if there are newer versions available.

Go to *Help > Check for updates*. This checks if there are newer versions of Deep Freeze available.



# Managing Deep Freeze Computers

This chapter describes managing computers where Deep Freeze is installed.

## Topics

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***Login Screen***

***Status Tab***

***Password Tab***

***Network Tab***

***ThawSpace Tab***

***Permanent Software Installations, Changes, or Removals***

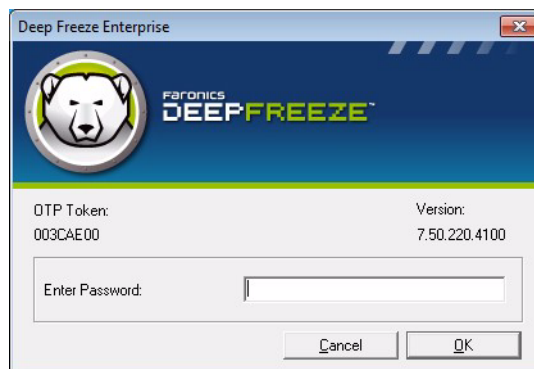


## Login Screen

---

Use one of the following ways to access Deep Freeze on a computer.

1. If the Deep Freeze icon is shown in the System Tray, hold down the SHIFT key and double-click the Deep Freeze icon. If the Deep Freeze is running in Stealth Mode and if the Deep Freeze icon is not displayed, the keyboard shortcut CTRL+ALT+SHIFT+F6 must be used to access the logon dialog.



2. Enter the administrator password and click *OK* to log on to Deep Freeze.

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



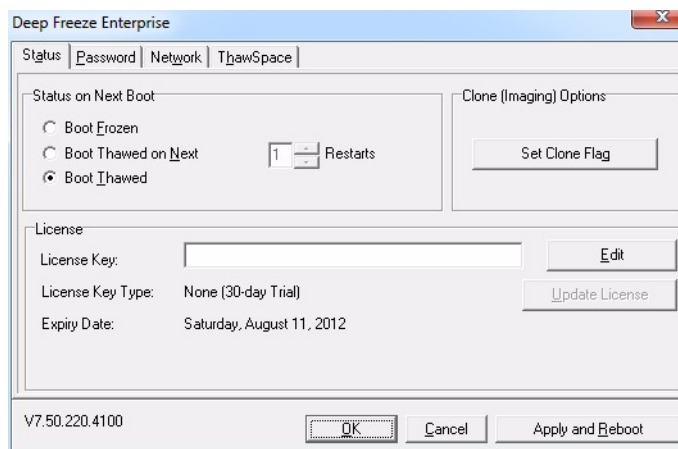


## Status Tab

The *Status* tab displays the following options:

### Status on Next Boot

The Status tab is used to set the mode Deep Freeze will be in after the next restart.



Choose one of the following options:

- *Boot Frozen*  
to ensure that the computer is Frozen the next time it is restarted
- *Boot Thawed on next*  
to ensure that the computer is Thawed each time it is restarted for the next specified number of restarts. When that number of restarts is exceeded, the computer will boot Frozen.
- *Boot Thawed*  
to ensure that the computer is Thawed each time it is restarted

Select the radio button next to the desired choice and click *OK* to save any changes. Clicking *Apply and Reboot* will save any changes and reboot the computer immediately.

### Clone

The *Clone* pane is used to prepare master images for the deployment process. For more information, refer to the [Installing Using Imaging](#) section.

### License

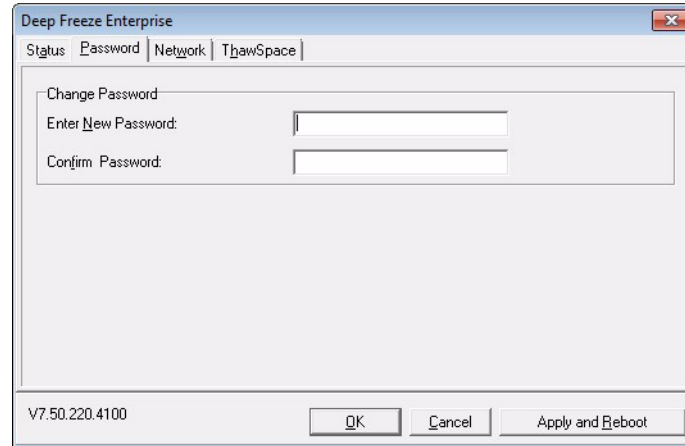
Enter the License Key in the *License Key* field. If no License Key is entered, Deep Freeze expires in 30 days after installation.



## Password Tab

---

The *Password* tab allows you to change the password.



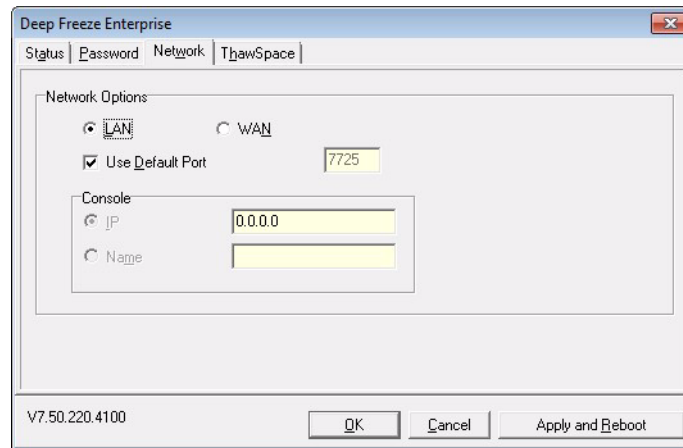
1. Specify a new password in the *Enter new password* field.
2. Confirm the new password by re-entering the same password in the *Confirm password* field.
3. Click OK.
4. The password is changed and a confirmation dialog is displayed.



## Network Tab

---

The *Network* tab can be used to configure the network options on a computer.



To choose either the *LAN* or the *WAN* method of communication, click the preferred option.

The default port number can be changed by clearing the *Use Default Port* check box and entering the required port number.

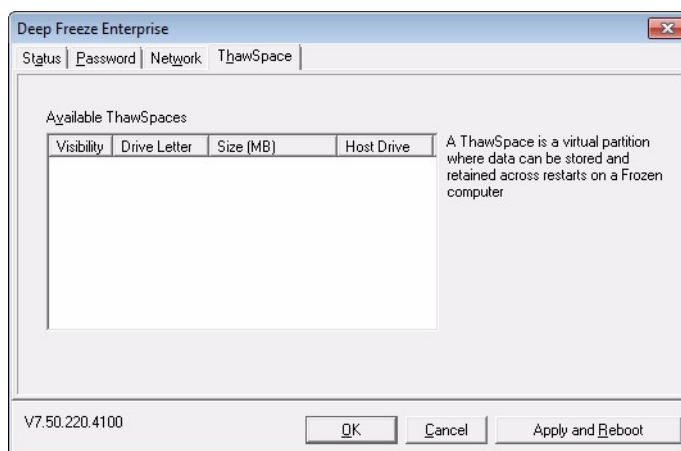
For more information on network configuration, refer to [Appendix B](#).



## ThawSpace Tab

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

ThawSpace is only available if it was set to be created in the Deep Freeze Configuration Administrator.



After uninstalling Deep Freeze, all the ThawSpaces become visible. When Deep Freeze is reinstalled, the ThawSpaces are *Visible* or *Hidden* as per the original settings in the ThawSpace tab.

Any existing ThawSpace is deleted during an uninstall if any of the following apply:

- the option to retain existing ThawSpace was not selected in the *Configuration Administrator*
- the ThawSpace was not created with Deep Freeze Version 5 or higher



## Permanent Software Installations, Changes, or Removals

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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>





# Deep Freeze Command Line Control

This chapter describes using the Deep Freeze Commands.

## Topics

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***Deep Freeze Command Line Control (DFC.EXE)***

***DFC Command Line Syntax***



## Deep Freeze Command Line Control (DFC.EXE)

---

Deep Freeze Command Line Control (DFC) offers network administrators increased flexibility in managing Deep Freeze computers. DFC works in combination with third-party enterprise management tools and/or central management solutions. This combination allows administrators to update computers on the fly and on demand.

It is important to note that DFC is not a stand-alone application. DFC integrates seamlessly with any solution that can run script files, including standard run-once login scripts.

DFC commands require a password with command line rights. OTPs cannot be used.

List all commands by calling DFC without parameters.

The files are copied to (32-bit)

```
<WINDOWS>\system32\DFC.exe
```

The files are copied to (64-bit)

```
<WINDOWS>\syswow64\DFC.exe
```

### DFC Return Values

On completion of any DFC command, the DFC returns the following values:

Syntax	Description
0	SUCCESS or Boolean FALSE, for commands returning a Boolean result
1	Boolean TRUE
2 ERROR	User does not have administrator rights
3 ERROR	DFC command not valid on this installation
4 ERROR	Invalid command
5 - * ERROR	Internal error executing command





## DFC Command Line Syntax



Deep Freeze has a maximum password limit of 63 characters. If a longer password is entered, the command will not be successful.

Syntax	Description
DFC password /BOOTTHAWED	Restarts computer in a Thawed state; only works on Frozen computers.
DFC password /THAWNEXBOOT	Sets computer to restart Thawed the next time it restarts; only works on Frozen computers and does not force computer to restart.
DFC password /BOOTFROZEN	Restarts computer into a Frozen state; only works on Thawed computers.
DFC password /FREEZENEXBOOT	Sets up computer to restart Frozen the next time it restarts; only works on Thawed computers and does not force computer to restart.
DFC get /ISFROZEN	Queries computer if it is Frozen. Returns error level 0 if Thawed. Returns 1 if Frozen.
DFC password /CFG= [path] depfrz.rdx	Replaces Deep Freeze configuration information. Works on Thawed or Frozen computers. Password changes are effective immediately. Other changes require restart.
DFC get /version	Displays Deep Freeze version number.
DFC password /UPDATE= [path to installer file]	Sets up computer to restart in a Thawed state and install a Deep Freeze update
DFC password /LOCK	Disables keyboard and mouse on computer. Works on Frozen or Thawed computer and does not require a restart.
DFC password /UNLOCK	Enables keyboard and mouse on computer. Works on Frozen or Thawed computer and does not require a restart.
DFC password /THAWLOCKNEXBOOT	Sets up computer to restart in a Thawed state with keyboard and mouse disabled; only works on Frozen computers
DFC password /BOOTTHAWEDNOINPUT	Restarts computer in a Thawed state with keyboard and mouse disabled; only works on Frozen computers



Syntax	Description
DFC get /LICENSESTATUS	<p>Displays the status of the license and the expiry date of the license (if any). The different possible types of license and the associated return codes are:</p> <p>111: Unlicensed — Deep Freeze is not licensed and will operate in <i>Evaluation</i> mode for 30 days since installation.</p> <p>112: Evaluation — licensed for evaluation with a fixed expiry date.</p> <p>113: Licensed — licensed with no expiry date.</p> <p>114: Expired — The Evaluation period has expired.</p>
DFC get /LICENSETYPE	<p>Displays the status of the license and the expiry date of the license (if any). The different possible types of license and the associated return codes are:</p> <p>111: None (Unlicensed) — Deep Freeze is not licensed and will operate in <i>Evaluation</i> mode for 30 days since installation.</p> <p>112: Evaluation — licensed for evaluation with a fixed expiry date.</p> <p>113: Standard (Licensed) — licensed with no expiry date.</p> <p>114: Not for Resale — Licensed with no expiry date.</p>
DFC password /LICENSE=licensekey	<p>Changes the License Key.</p> <p><i>password</i> is the Deep Freeze Administrator password.</p> <p><i>licensekey</i> is the License Key for Deep Freeze.</p> <p>If there is an error, the following error codes are displayed:</p> <p>101: The License Key is not valid</p> <p>102: The License Key provided has already expired.</p>



## Appendix A Ports and Protocols

The key to setting up the Deep Freeze architecture is knowing which ports to use. The important factor is knowing which ports are in use on the network and using ports that will not conflict with those. The default port, 7725 has been officially registered to Deep Freeze.

The following three components make up the Deep Freeze architecture:

- Client (with seed installed)
- Remote Console (local service enabled)
- Console (connects to the Remote Console)

As long as the clients and Remote Console connection use the same port there should not be any port conflicts between the different components:



Ports can also be used to divide the clients. If the local service is setup to run three ports (7725, 7724 and 7723), Enterprise Consoles can connect to the three different ports to see a different set of clients under each port.

In the diagram above, the client(s) use both the TCP and UDP protocols to communicate with the Remote Console. The Console(s) that connects to the Remote Console uses only the TCP protocol to communicate with the Remote Console. It is important to remember the ports and protocols being used in order to prevent firewalls, switches or routers from blocking them.





## Network Examples

The following examples show different scenarios involving local service or Remote Console.

- Example 1 - Single Subnet
- Example 2 - Multiple Subnets One local service
- Example 3 - Multiple Ports, Console Accessed Remotely
- Example 4 - Multiple Subnets Multiple local services

Each example explains how different Deep Freeze components interact in different networking environments.



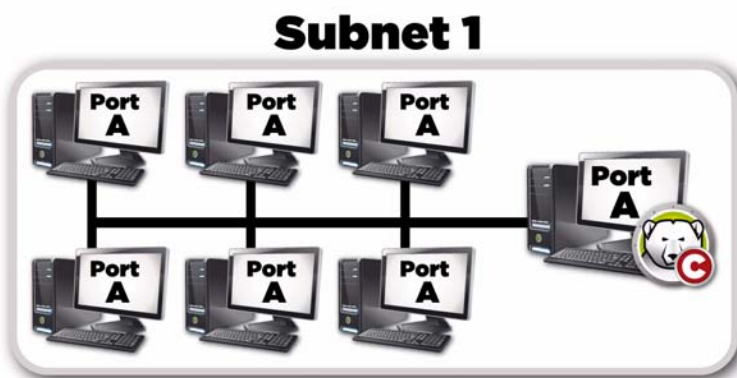
In the following examples, the client machines have either the Deep Freeze workstation installation or Workstation Seed installed. Both installs contain the communications component which talks to the Console/Remote Console. The difference between the workstation install and Workstation Seed is that the workstation install actually installs Deep Freeze while the Seed has only the communication component.



## Example 1 - Single Subnet

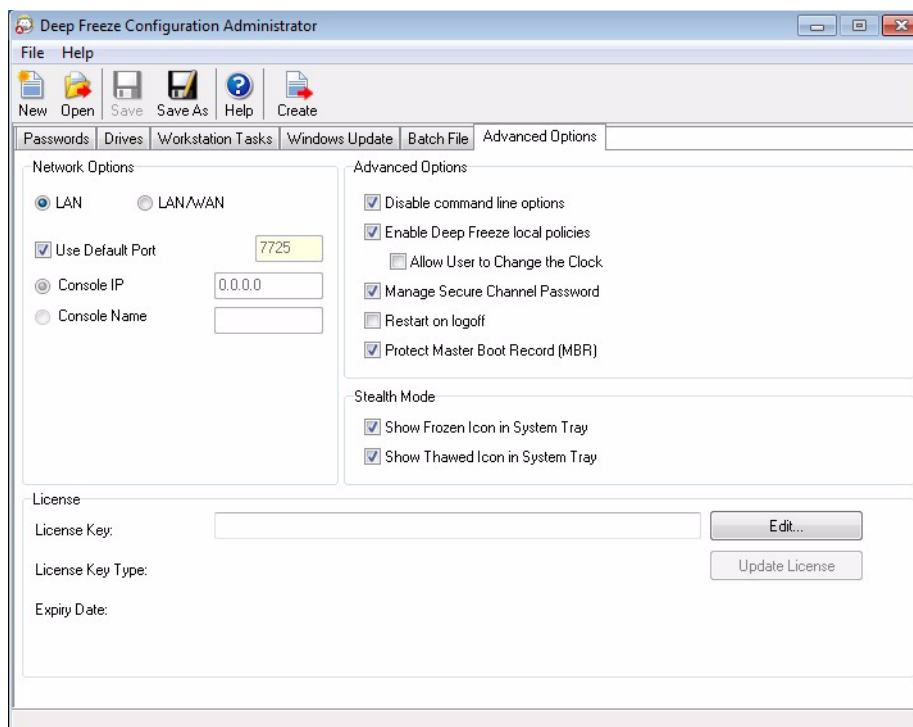
In this environment, all client machines are contained in the same subnet as the Console machine. This environment does not require a remote controlled Console, although one could be used. In this example, the Remote Console is not used. This is the simplest networking environment. It is also the easiest to configure.

The following diagram shows the network topology:



The client machines, represented by the computer icons, are located on the same subnet as the Deep Freeze Enterprise Console machine represented by the Deep Freeze Console icon.

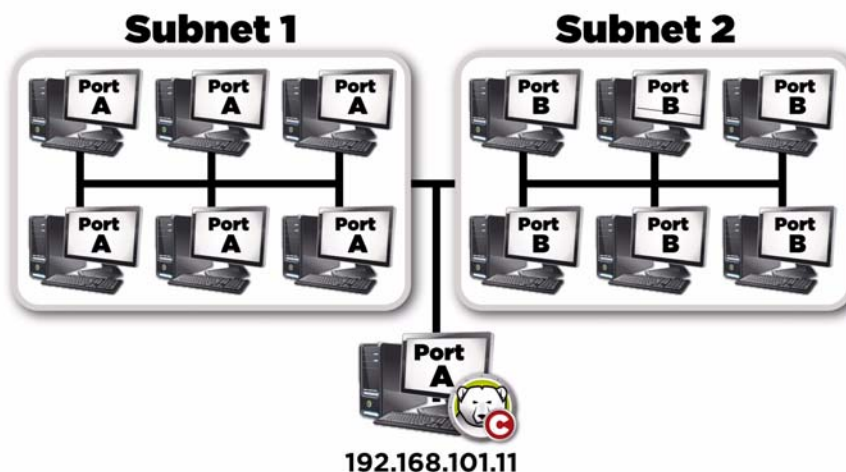
In this scenario, clients are using port A while the Console has set up a local service connection for the same port. This port is configured in the *Advanced Options* tab, before creating the Workstation Install file or Workstation Seed.





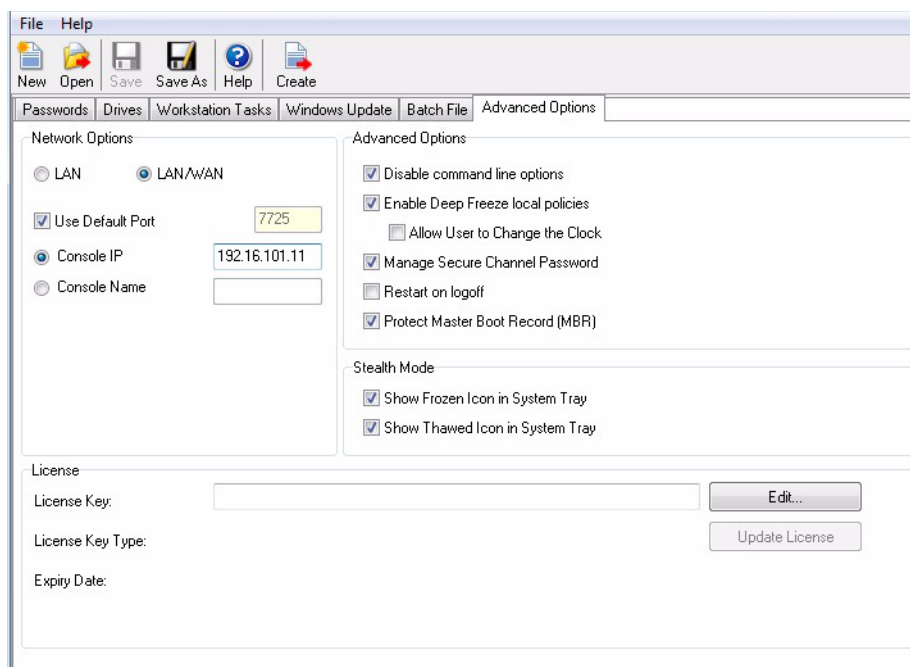
## Example 2 - Multiple Subnets One local service

In this environment, the clients are located across more than one subnet. There is still only one Console being used. This environment does not require a Remote Console, although one could be used. The following diagram shows the network topology:



In this scenario (similar to [Example 1 - Single Subnet](#)) both the clients and the connection hosted by the Console are using the same port. This port is configured in the Deep Freeze Configuration Administrator in the *Advanced Options* tab, before creating the Workstation Install file or Workstation Seed.

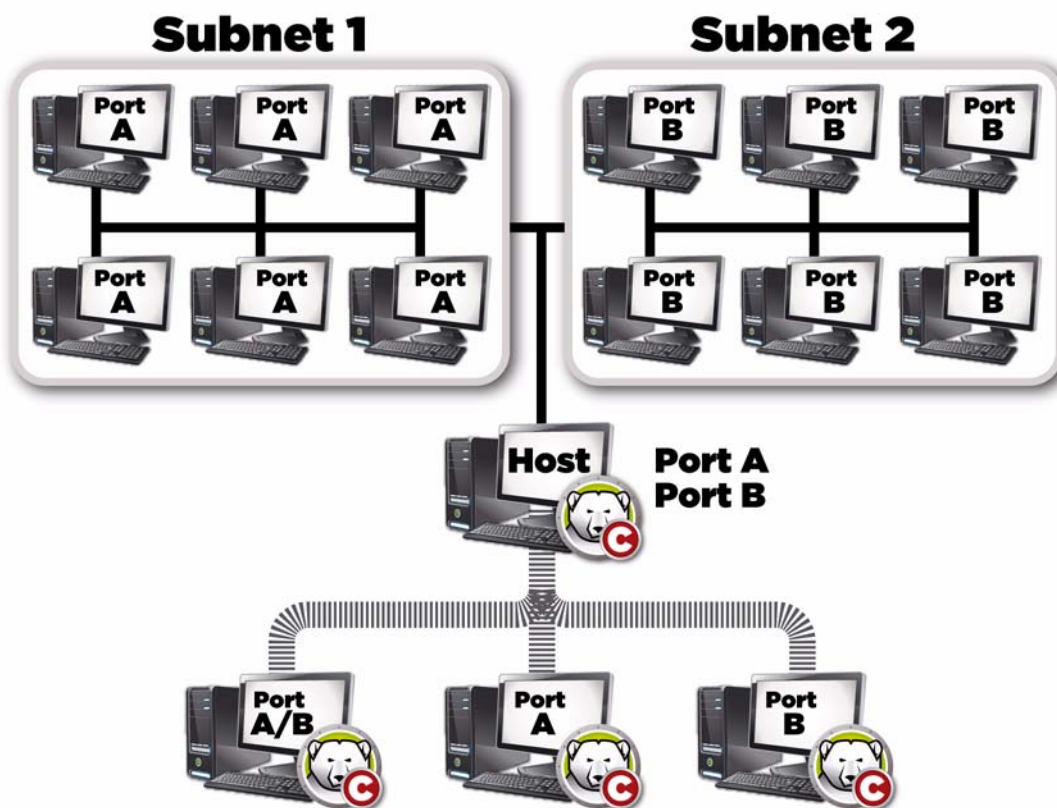
In order for the clients to be seen, they need to be configured to use a LAN/WAN connection. When the LAN/WAN option is selected, a *Console IP* field appears. Specify the IP of the machine that will run the Enterprise Console. An example of these settings are shown in the *Advanced Options* tab below:





## Example 3 - Multiple Ports, Console Accessed Remotely

In this environment the clients are again located across multiple ports. In this case, more than one Console is being used. Multiple Consoles are accessed using a local service whose administrator (host) has released the connection information. The following diagram shows the network topology:



In this scenario, the host has set up a connection using the local service. Looking at the above diagram, three other Consoles connect to the host in order to see the clients according to their ports. The Consoles do not have to be a part of individual subnets as long as they can see the host.

More specifically, The Console connected through port A/B can see the host Console as well as each individual computer assigned to ports A and B. The other Consoles connected through port B can see the host and only the computers assigned to port B.





## Example 4 - Multiple Subnets Multiple local services

In this example, there are two separate locations.

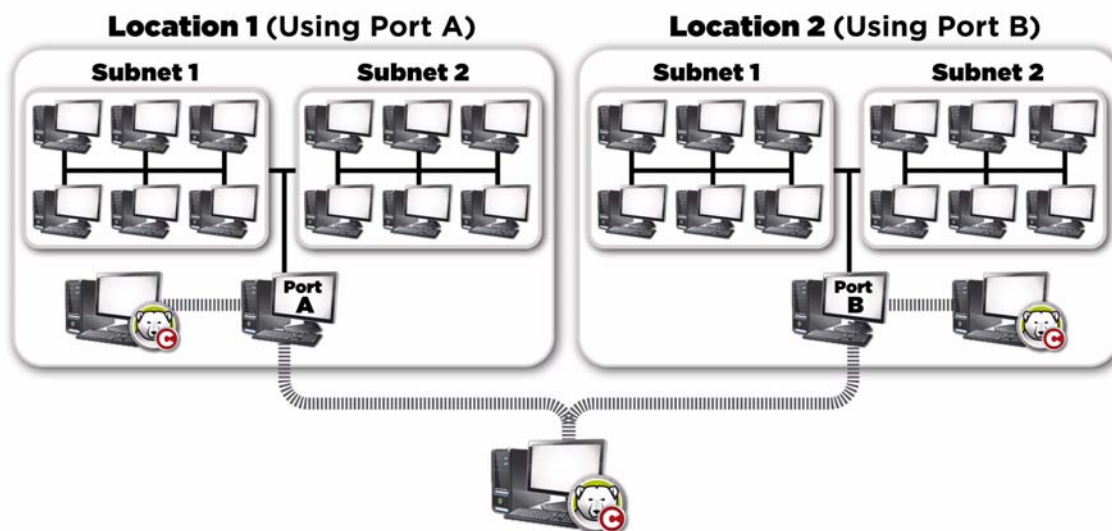
The following is a list of assumptions that are made regarding this particular example:

- the locations are spread apart and have only a minimal connection to each other
- there is a network administrator at each location who is responsible for looking after Deep Freeze at that location
- both locations need to be administered from a third location

In this example, the Remote Consoles are set up at each location and a local service is used:

- Location 1 (a computer lab on campus) uses port A to communicate with the clients and the connections hosted by the Console. The school library's computers use port B. The Console in the technical support department uses the connections hosted by both lab and library Consoles.
- Any console not directly communicating with a computer should have the local service turned off.

The following diagram shows the network topology:



The benefit of this setup is that it allows all the packets sent from the clients in Location 1 to be contained at that location. The less distance a packet must travel, the less chance there is of the packet failing.

The administrator in the lab can connect to the local service in the same location 1 but cannot connect to the local service in the library. The reason for this is that the lab administrator does not know the password to access the local service for the library. The same goes for the administrator in the library. If technical support knows the password to both local services (lab and library) the local service at both locations can be connected to, in order to administer all the clients.





## Appendix C Troubleshooting a Remote Console Connection

### No Clients In the Console

The following are some common reasons why clients fail to appear in the Console.

#### 1. The Console and clients do not contain the correct network settings.

If the Console is set up to run under one port and the clients are using another, they will not be able to see each other. Also, if the computers are configured for LAN/WAN, the IP must be equal to the IP of the machine where the Console is running.

The default LAN setup works as long as all the machines running the computer and Console exist on the same subnet. However, if a VLAN is being run, or if there are several subnets where the clients exist, the computer install must be configured to run under the LAN/WAN settings.

#### 2. Something on the network is blocking the port used between the Console and the clients.

Check for a connection using a ping. The clients are unable to send packets to the Console/Remote Console because there does not seem to be a route to the host. Attempting to ping the IP of the Console/Remote Console does not seem to work. To resolve this issue, make sure the two machines can connect to each other.

If a server, router, or switch on the network is not allowing the port to get through, the clients will not be seen. By default, 7725 is the port being used.

#### 3. The workstations were created under a different Customization Code than the Console.

When the Deep Freeze Configuration Administrator is first run, a prompt for a Customization Code appears. This code is very important as it encrypts the software. This means that any workstations created are encrypted with this Customization Code. If a Console was created using another administrator that was installed with a different Customization Code, it cannot see workstations created under the original code. The workstations and Console must be created under a Configuration Administrator installed using the same exact Customization Code.



## Port is in Use Error When Starting the Console

When attempting to start the Console, the error message *Unable to start Console: Port is in use* appears. There are several reasons why this error message may be appearing:

**1. There is a Deep Freeze Workstation Installation/Workstation Seed installed under the same port as the Console or on the same computer.**

It is possible that Deep Freeze was installed in stealth mode (the icon does not appear in the system tray). The seed does not show an icon. The best test is to run a Workstation Install file on the computer. If the uninstall option is displayed, the Workstation Install file or Workstation Seed is installed and can be uninstalled. If the uninstall option does not appear, the Workstation Install file or Workstation Seed is not installed.

The simplest solution would be to first turn off the local service and then connect to a Console that can be accessed remotely.

**2. Another program or service is using the port on this machine.**

This may involve running a port sniffer on the machine in question to see what ports are open. There are several tools available on the web to perform this action. The *netstat.exe* application found in Windows also should show whether the port Deep Freeze is using is already in use.

**3. The network cable is unplugged.**

This message can occur if there is no network connection on the machine.

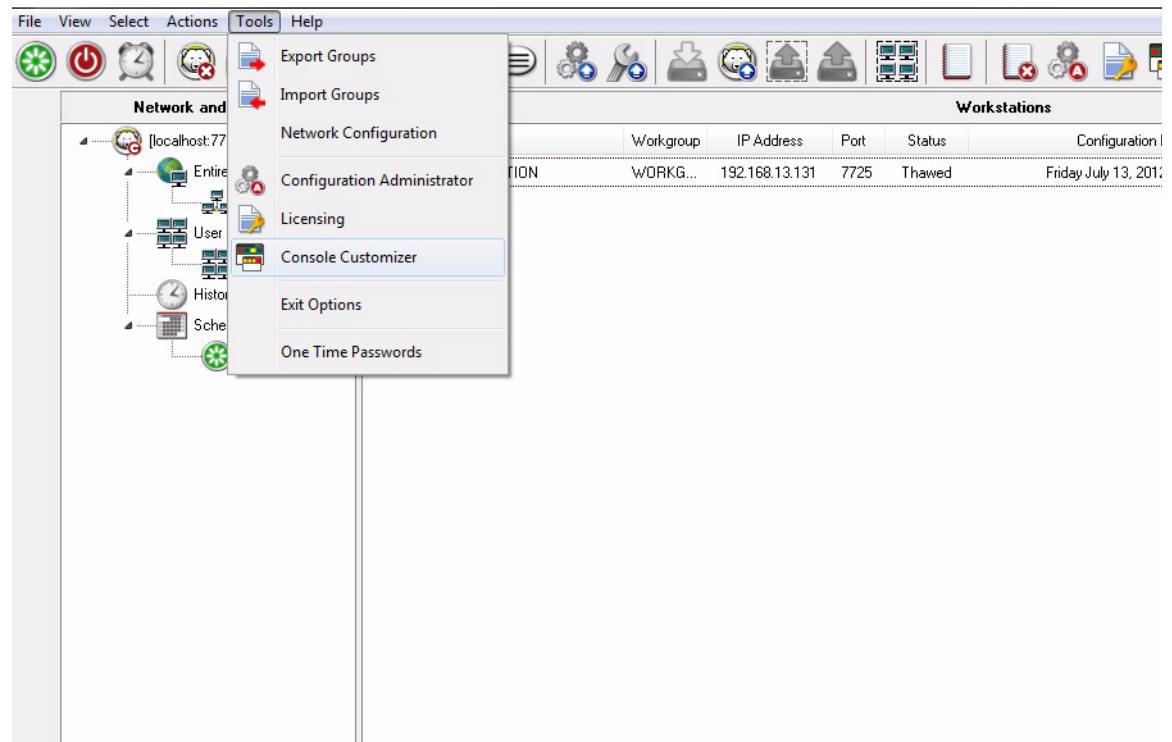


## Creating a Customized Deep Freeze Enterprise Console

The Deep Freeze Enterprise Console includes the ability to create a new Enterprise Console with limited capabilities. A customized, limited console can be distributed in your organization to allow certain users to perform desired tasks, while ensuring they do not have access to the full capabilities of the Enterprise Console.

In this example, we will create a limited Console suitable for distribution to a teacher or computer lab instructor. In this scenario, we want the teacher to be able to restart machines, lock the keyboard and mouse on demand, and send messages to the students. However, we do not want the teacher to be able to boot the machines into a Thawed state, uninstall Deep Freeze, or perform other IT-exclusive tasks.

The Console Customizer can be launched from *Tools > Console Customizer*.



We will leave *Console functions > Activation* selected. This will ensure that if the new Console is moved to a different computer, a One Time Password will need to be entered on the computer the new Console is moved to. If this security precaution is not a concern in your environment, do not select this option.

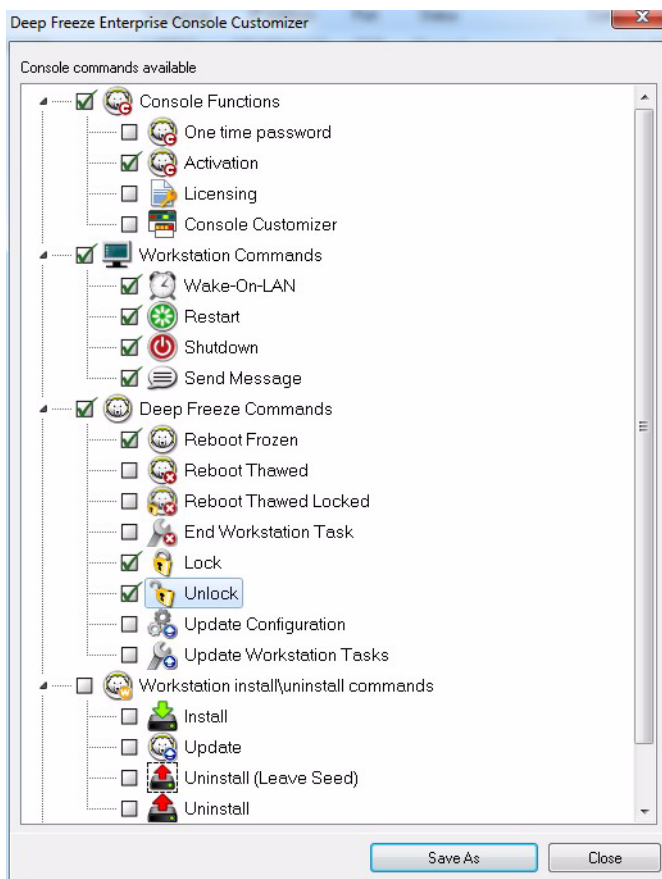
*Console functions > One Time Password* is not selected because we do not want a teacher to be able to reboot the computer in Thawed mode under any circumstances. If a teacher reboots the computer in Thawed mode, students might install unnecessary software on the computer which will be retained even after a reboot.

We will leave all options under *Workstation commands* selected because we want a teacher to be able to send messages to students, and to shutdown, restart, and wake computers as required.

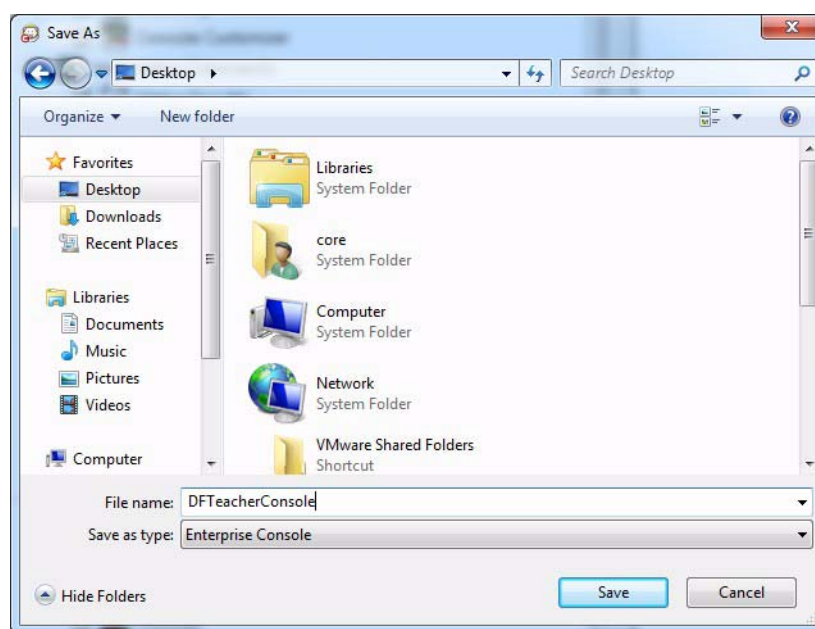


We will only leave three options under Deep Freeze commands selected: *Unlock*, *Lock*, and *Reboot in Frozen* state. This will allow a teacher to lock (and unlock) the keyboard and mouse on student computers as required, as well as to reboot computers *Frozen* (just in case a computer is ever accidentally left *Thawed* by IT staff). Leaving all other options cleared will ensure a teacher is unable to permanently modify a computer.

Finally, we will clear all *Workstation install/uninstall commands* and all *Scheduler commands* because we don't want our teacher to use any of these options.



Once all options have been selected, click *Save As* to save a new Enterprise Console. A standard *Save As* dialog is displayed:



Save the new limited Enterprise Console and distribute it to the required users.







## Appendix E Deep Freeze Action Files - RDC Example

### Deep Freeze Action Files

A Deep Freeze Action File is an XML file that allows administrators to define additional functionality into the Deep Freeze Enterprise Console. An Action File defines a method for calling an external batch file and passing some information (for example, machine IP addresses, computer names) to the batch file or script.

Action Files simply call an external program or script. Therefore, any scripting language that can be called from the command line can be used.

### Action File Example

The structure of the Deep Freeze Action file that we will be using is shown below. The *DFEntConsoleCustomActions.xml* is available at *C:\Program Files\Faronics\Deep Freeze 7 Enterprise*. The file can be edited to add additional actions like the one explained below:

```
<?xml version="1.0" encoding="UTF-8"?>
<!--Deep Freeze Default Custom Action file-->
<CUSTOMDEFINEDACTIONS>
  <ACTION1>
    <CAPTION>
      <ENGLISH>Control with RDC</ENGLISH>
      <GERMAN>Control with RDC German</GERMAN>
      <JAPANESE>Control with RDC Japanese</JAPANESE>
      <SPANISH>Control with RDC Spanish</SPANISH>
      <FRENCH>Control with RDC French</FRENCH>
      <CHINESE>Control with RDC Chinese</CHINESE>
    </CAPTION>
    <FILEMENU>Y</FILEMENU>
    <POPUPMENU>Y</POPUPMENU>
    <SILENT>Y</SILENT>
    <SUBITEMS/>
    <PARAMS/>
    <SYNC/>
    <LOG/>
    <EXECUTE>C:\Windows\system32\mstsc.exe /v:%%WKSNAME%% /f</EXECUTE>
    <WORKDIR>C:\Windows\system32\</WORKDIR>
```

In the above example, the custom action file contains the command for running Remote Desktop on the Console computer and connect the remote computer specified in the parameter %%WKSNAME%%.

The *DFEntConsoleCustomActions.xml* file contains 3 samples:

- Control with RDC
- Remote Execution
- Push and Install MSI file

For more information on using the above samples, refer to the [Configure Custom Actions](#) section. You can edit the *DFEntConsoleCustomActions.xml* file as per your needs.



## Deep Freeze Action File Structure

The following XML schema outlines the custom defined actions available to the user. Multiple XML files can be saved based on the number of commands required. Each file must be saved to the Console folder and the read only attribute must not be selected.

Any changes made must be accompanied by a restart of the Deep Freeze Console in order to take effect.

Parameter	Usage
<code>&lt;?xml version="1.0" encoding="UTF-8"?&gt;</code>	
<code>&lt;CUSTOMDEFINEDACTIONS&gt;</code>	
<code>&lt;CAPTION&gt;</code>	Text that appears in file menu or submenu
<code>&lt;ENGLISH&gt;Caption&lt;/ENGLISH&gt;</code>	Text in various languages
<code>&lt;GERMAN&gt;Caption&lt;/GERMAN&gt;</code>	Text in various languages
<code>&lt;JAPANESE&gt;Caption&lt;/JAPANESE&gt;</code>	Text in various languages
<code>&lt;SPANISH&gt;Caption&lt;/SPANISH&gt;</code>	Text in various languages
<code>&lt;FRENCH&gt;Caption&lt;/FRENCH&gt;</code>	Text in various languages
<code>&lt;CHINESE&gt;Caption&lt;/CHINESE&gt;</code>	Text in various languages
<code>&lt;FILEMENU&gt;y&lt;/FILEMENU&gt;</code>	Defines if this action will be in file menu
<code>&lt;POPUPMENU&gt;y&lt;/POPUPMENU&gt;</code>	Defines if this action will be in right-click popup menu
<code>&lt;SILENT&gt;y&lt;/SILENT&gt;</code>	Defines if user will be asked a confirmation message
<code>&lt;SUBITEMS&gt;</code>	In sub-items, the item that is a child to this item can be defined
<code>&lt;/SUBITEMS&gt;</code>	If the sub-items are defined then action for this items will be ignored
<code>&lt;SYNC&gt;y&lt;/SYNC&gt;</code>	Specifies if command will be executed synchronously or asynchronously
<code>&lt;PARAMS&gt;</code>	Choosing this action prompts user to enter custom parameters
<code>&lt;PASSWORD&gt;</code>	Name on parameter
<code>&lt;VAR&gt;%PARAM1%&lt;/VAR&gt;</code>	Name of variable which will be used in EXECUTE
<code>&lt;ENGLISH&gt;USERNAME Param (ENGLISH) &lt;/ENGLISH&gt;</code>	Text in various languages



Parameter	Usage
<code>&lt;GERMAN&gt;USERNAME Param (GERMAN) &lt;/GERMAN&gt;</code>	Text in various languages
<code>&lt;JAPANESE&gt;USERNAME Param (JAPANESE) &lt;/JAPANESE&gt;</code>	Text in various languages
<code>&lt;SPANISH&gt;USERNAME Param (SPANISH) &lt;/SPANISH&gt;</code>	Text in various languages
<code>&lt;FRENCH&gt;USERNAME Param (FRENCH) &lt;/FRENCH&gt;</code>	Text in various languages
<code>&lt;CHINESE&gt;USERNAME Param (CHINESE) &lt;/CHINESE&gt;</code>	Text in various languages
<code>&lt;/CAPTION&gt;</code>	
<code>&lt;/USERNAME&gt;</code>	
<code>&lt;/PARAMS&gt;</code>	
<code>&lt;LOG&gt;</code>	Defines behavior of the log file
<code>&lt;APPEND&gt;y&lt;/APPEND&gt;</code>	Defines if log file will be appended or created new
<code>&lt;FILENAME&gt;c:\alcom mand.log&lt;/FILENAME&gt;</code>	Defines filename
<code>&lt;EXECUTE&gt;c:\windows\vpn.exe %%IP%% %USERNAME% %PASSWORD% %%WKSNAME%%&lt;/EXECUTE&gt;</code>	Defines command which will be executed. Here, parameters and/or console items can be used
<code>&lt;WORKDIR&gt;c:\windows&lt;/WORKDIR&gt;</code>	Defines working directory



## Console Parameters

The following console parameters can be passed to the executed application or script through the Enterprise Console:

Parameter	Usage
%%WKSNAME%%	Workstation name
%%DOMAIN%%	Workstation domain
%%IP%%	Workstation IP
%%PORT%%	Workstation port
%%STATUS%%	Workstation status
%%CFGDATE%TIME%%	Workstation configuration date/time
%%MAC%%	Workstation MAC address
%%DFVERSION%%	Workstation Deep Freeze version