

FARONICS

**DEEP FREEZE™**

ABSOLUTE Workstation Integrity

## **Deep Freeze Enterprise - BigFix Patch Manager**

### **TECHNICAL WHITEPAPER**

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## Introduction

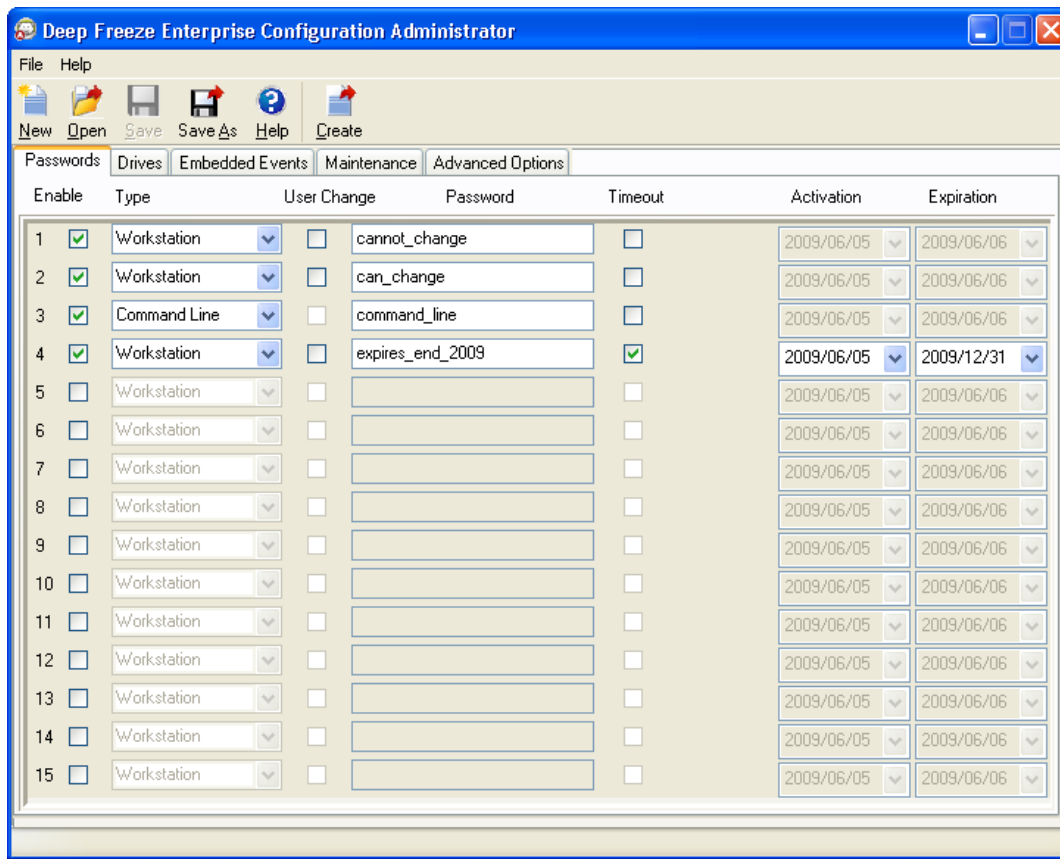
Deep Freeze Enterprise integrates seamlessly with most third-party software management solutions including BigFix, ZenWorks, Altiris, and others. This white paper addresses how to deploy and manage Deep Freeze Enterprise through BigFix Patch Manager.

This document assumes that Deep Freeze Enterprise is deployed over a large network with multiple remote sites that have an Enterprise Console for local administration. It also assumes the Central Office is able to reboot workstations into a Thawed state, make updates, and set the workstations back into a Frozen state from the BigFix Console.

## Deploying Deep Freeze Enterprise with BigFix

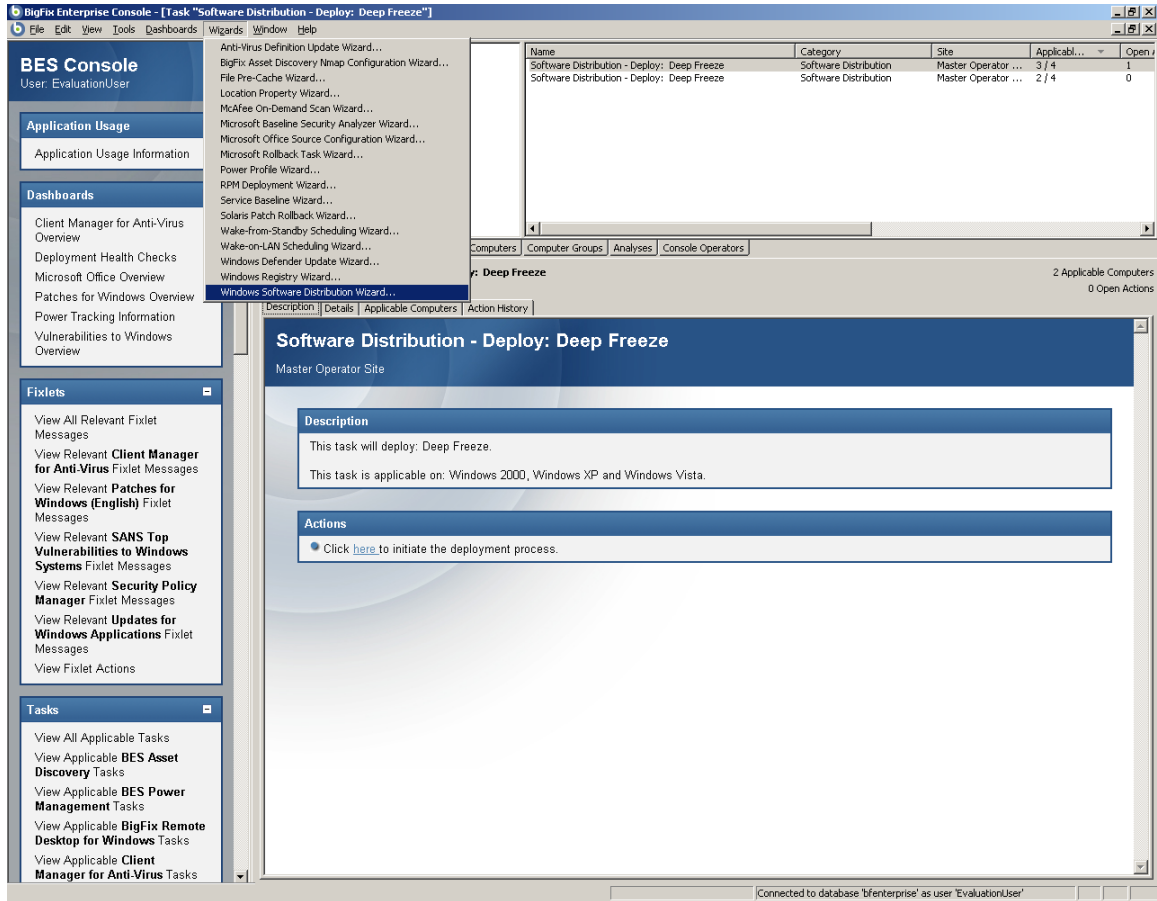
Install the Deep Freeze Configuration Administrator on the same computer as the BigFix Console and create a set of installation files (Enterprise Console, Workstation installation file, and, if necessary, the Workstation Seed) configured accordingly to your needs. Those installation files should already have configured passwords, Maintenance Periods, and any other settings the central administration wants modified.

Since we are not using the Deep Freeze Enterprise Console to manage the workstations, at least one password with Command Line privileges (CMD) must be set, because CMD passwords are used to set the workstations into a Thawed state before making updates. Another workstation (WKS) password should be created to allow local administration to make changes in the workstations. Once Deep Freeze has been deployed, the workstation password(s) must be changed by the local administration so every site has a unique password.



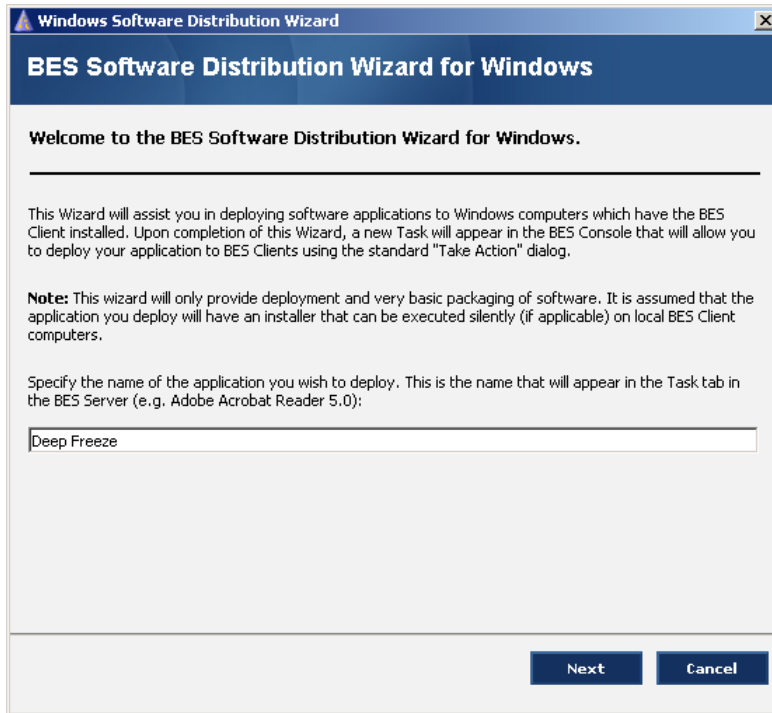
Once the installation files are created, BigFix can be used to deploy them to every remote site.  
To deploy Deep Freeze using BigFix, complete the following steps:

1. In the BigFix Enterprise Console, go to *Wizards > Windows Software Distribution*, as shown.



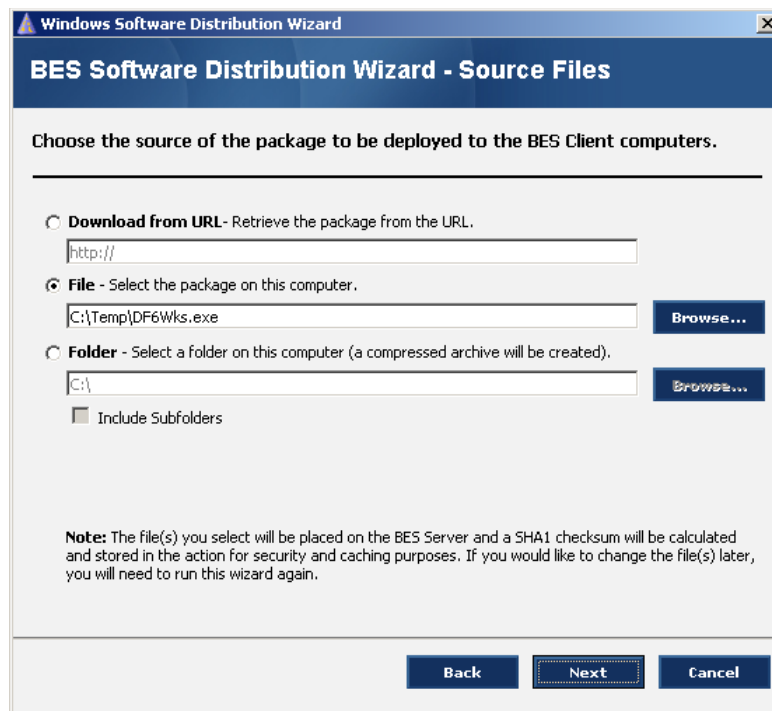
- The Windows Software Distribution Wizard appears, as shown below. Specify a name for the task.

Click *Next*.

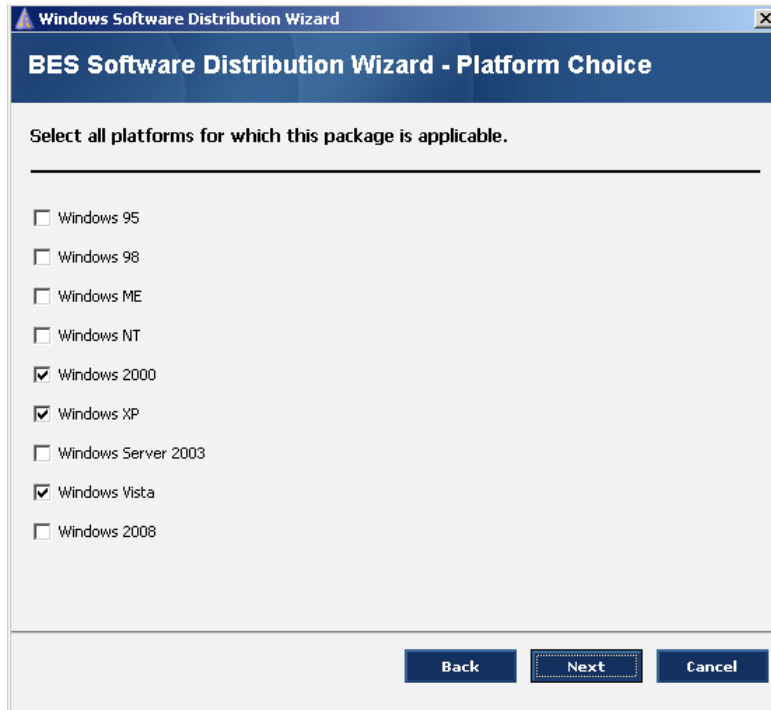


- In the dialog shown below, specify the location of the workstation installation file.

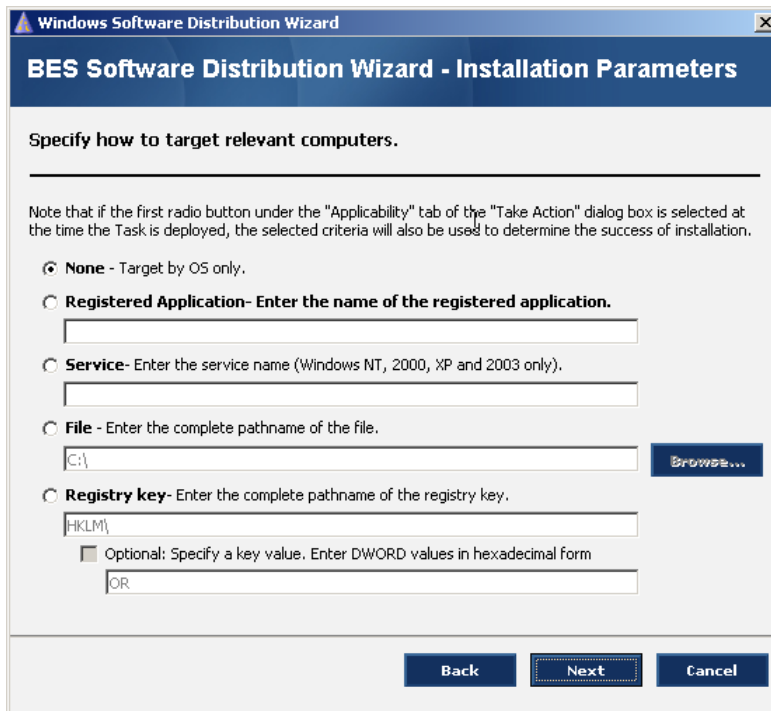
Click *Next*.



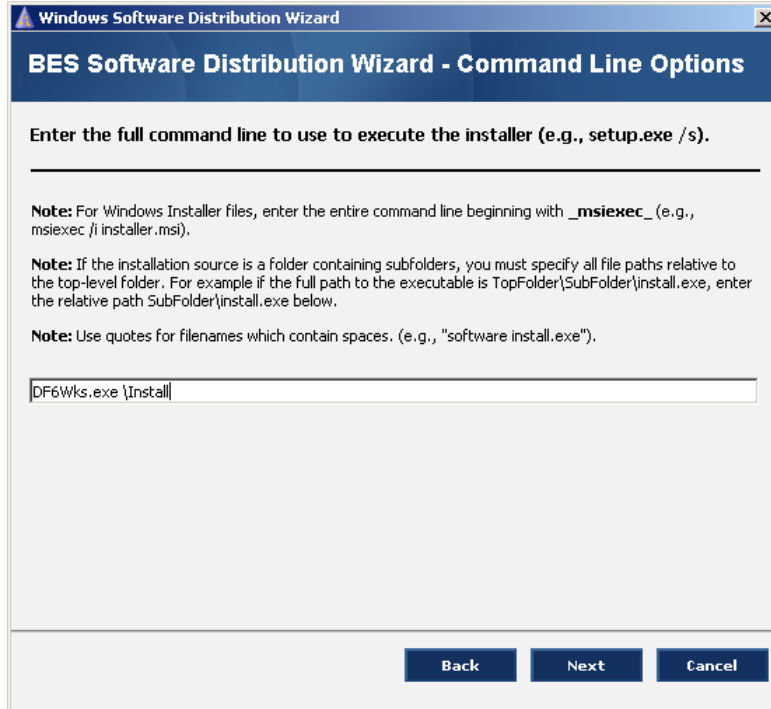
- Select all platforms that you want to install Deep Freeze on. Since Deep Freeze is not supported by Windows NT and Windows Server 2003, clear the check boxes. Click *Next*. If the Deep Freeze Server version is to be deployed, select *Windows Server 2003*.



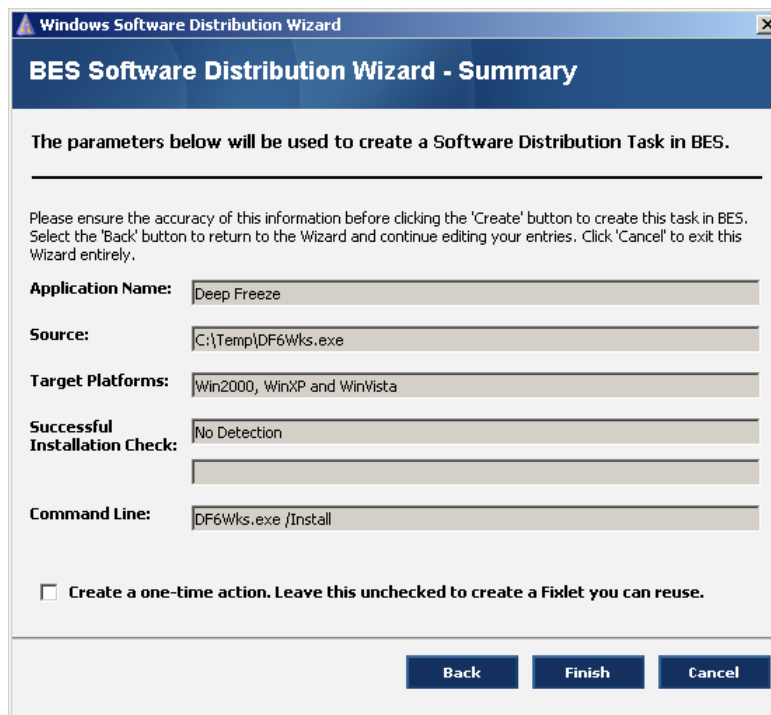
- Select how to target relevant computers. For this example, *None-Target by OS only* has been selected.



- Enter the full command line used to perform the Silent Install: `DF6Wks.exe /Install`.

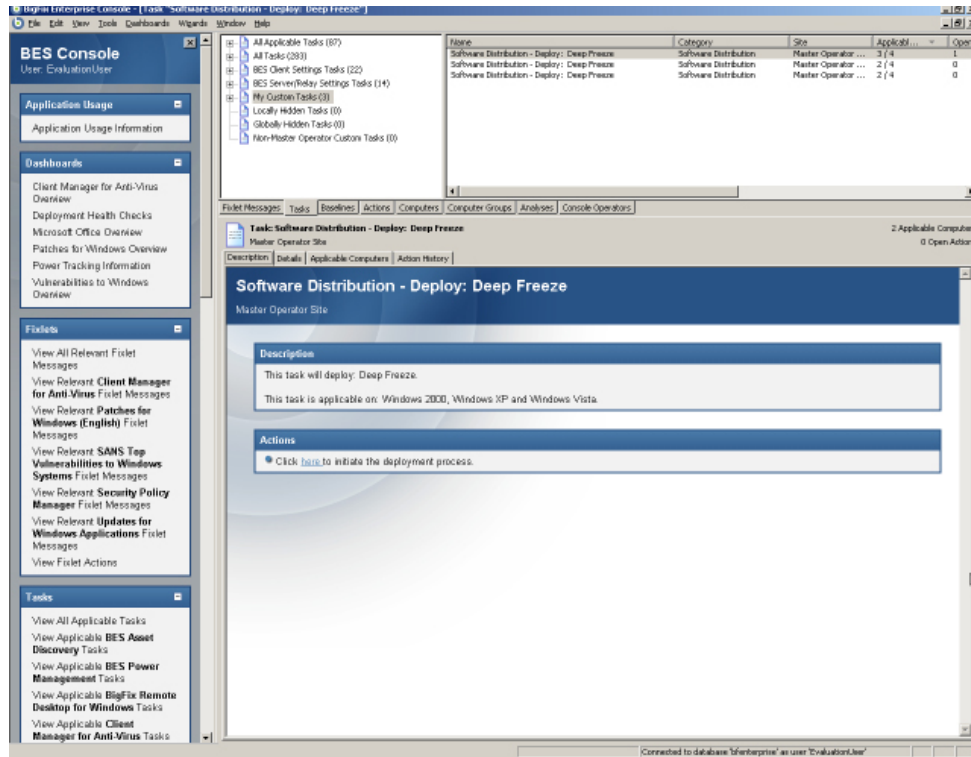


- On the next screen, the text fields for this task can be customized. If needed, edit the text fields and click *Next*.

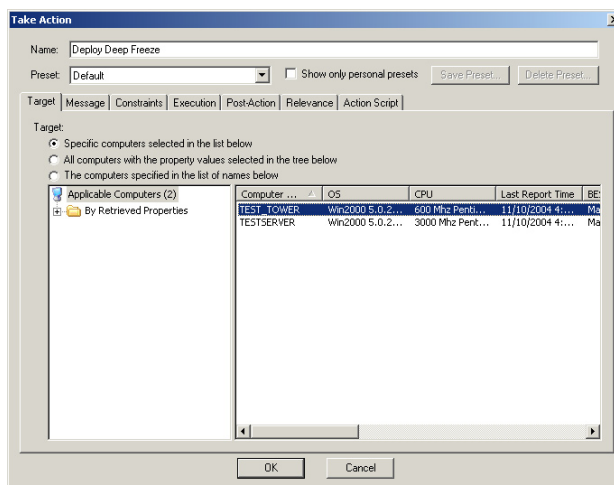


- Click *Finish*. A password screen is displayed. Enter the password and click *OK*.

9. The next screen is used to create a customized Task message. Click *OK* to continue. The BigFix Enterprise Console main screen appears, showing the new task.
10. Double-click the *Deploy Deep Freeze* task. The details are shown on the bottom half of the screen. Click on the indicated link to start deployment.



11. The *Take Action* window appears. Select the workstations to install Deep Freeze on. Although Deep Freeze will not be deployed on any Windows NT or Windows Server 2003, BigFix can install it on any Windows 2000 Server present on the network.
12. Ensure that any Windows 2000 Servers and remote site administrative workstations are deselected from the list. Click *OK*.



Deep Freeze Enterprise is then deployed to the specified workstations. These workstations will later reboot into a Frozen state.

The workstations must then be configured to prevent BigFix from generating a different entry into its database every time a Frozen workstation starts up. To do this, complete the following steps:

1. Set BigFix service to start manually in the workstations.
2. From the workstation where the Deep Freeze Enterprise Configuration Administrator is located, copy the Command Line Control tool (DFC.exe) to all the workstations.

This program is located in *C:\WINDOWS\system32*.

3. A few lines must be added to the login script to guarantee that the BigFix service doesn't start up unless the workstation is in a Thawed state.

The following is a batch file to ensure that the BigFix service doesn't start up unless the workstation is in a Thawed state:

```
@ ECHO OFF
IF EXIST C:\PERSIO.SYS GOTO INSTALLED
GOTO END
:INSTALLED
DFC.EXE get /ISFROZEN
IF ERRORLEVEL 1 GOTO ERROR1
IF ERRORLEVEL 0 Goto ERROR0
:ERROR1
ECHO ERRORLEVEL 1
NET STOP BESCLIENT
GOTO END
:ERROR0
ECHO ERRORLEVEL 0
NET START BESCLIENT
GOTO END
:END
```

### **Deploying the Deep Freeze Enterprise Console**

Since the Enterprise Console is a stand-alone executable file, it can be deployed by copying it into every single remote site administrative workstation. The first time the local administrator runs the Console, a One Time Password (OTP) must be entered in order for the console to be activated. This OTP must be created using the Configuration Administrator, located in the same workstation as the BigFix Enterprise Console.

Once the Deep Freeze Enterprise Console is deployed to all administrative workstations throughout all remote sites, every local administrator should replace the default Deep Freeze workstation password with one of their own.



## Making Permanent Configuration Changes with BigFix

In order to make any permanent configuration changes in the workstations, such as updating critical patches and/or virus definitions, Deep Freeze must be disabled by rebooting the workstations into a Thawed state. The updates can then be deployed through BigFix or an Enterprise antivirus solution.

One method to accomplish this is by making updates and critical patches strictly during the Maintenance Period.

Another way is using BigFix to run a batch file to set the workstations into a Thawed state and, after the updates have been installed, another batch file to return them to a Frozen state.

The command used to reboot the workstations into a Thawed state is: `DFC password /BOOTTHAWED`.

The command used to reboot the workstations into a Frozen state is: `DFC password /BOOTFROZEN`.

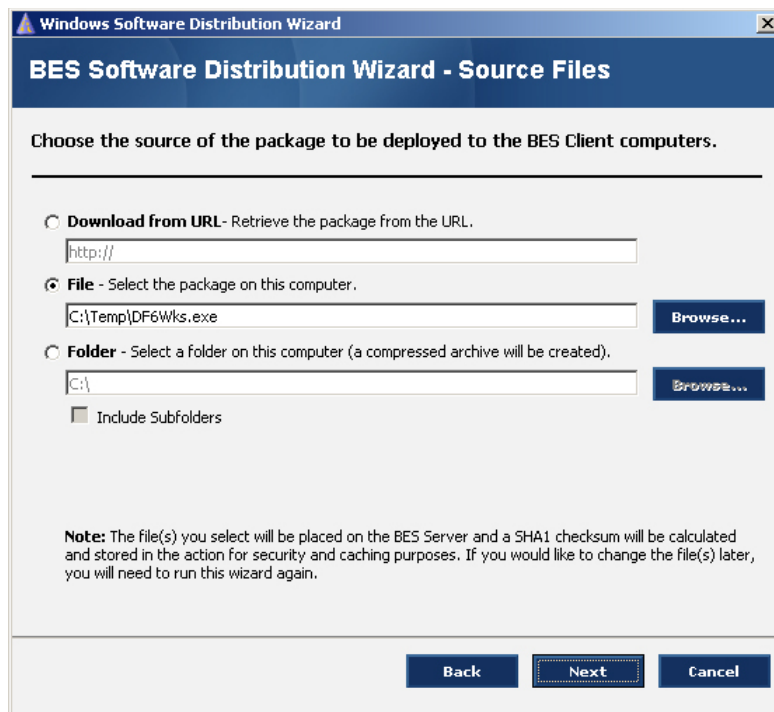
The Command Line Control tool (DFC.exe) must be in all workstations for the batch file to work.

If the Command Line Control was not copied to the workstations, then the steps to set workstations into a Thawed state are very similar to those in the deployment process.

## Creating Tasks in BigFix

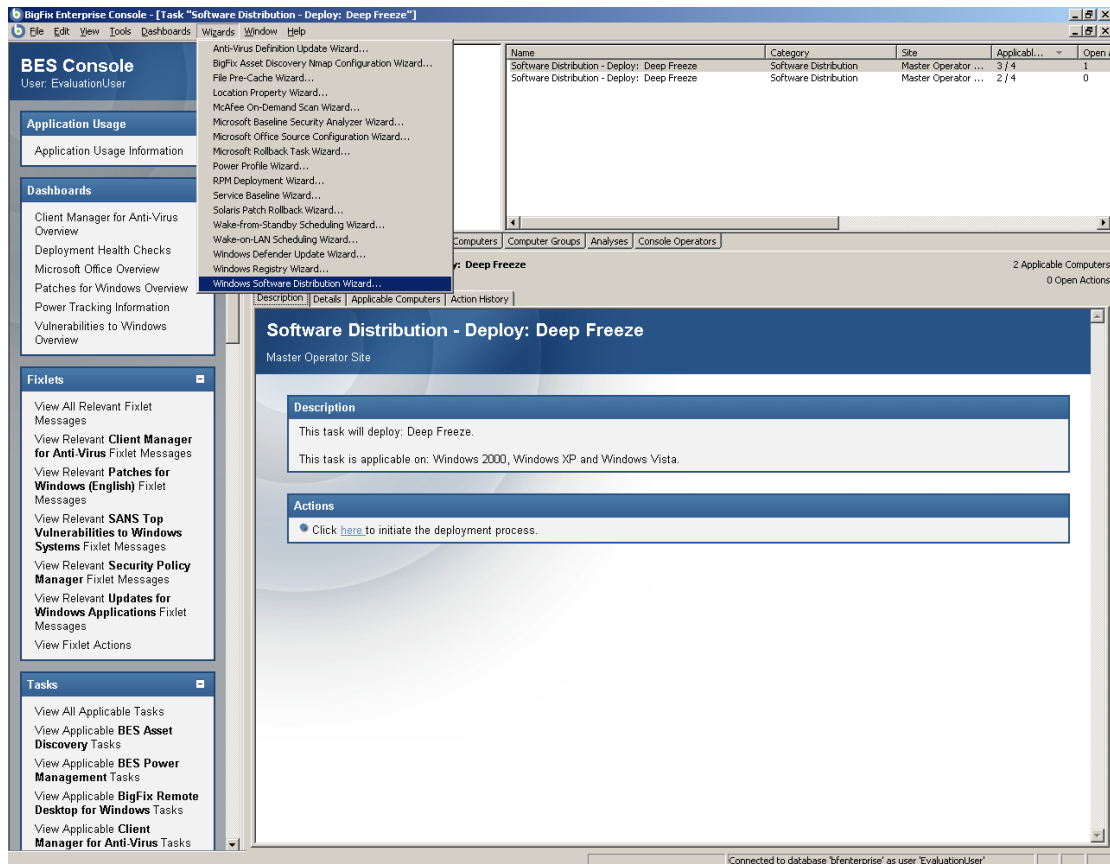
To create a task with BigFix, complete the following steps:

1. Open the BigFix Enterprise Suite and start the Windows Software Distribution Wizard. Name the task *Reboot Thawed*.
2. Follow the steps until the *Choose the source of the package to be deployed to the BES Client computers* window appears, as shown below.



3. Click *Browse* and locate the DFC.exe file. It is located on the same workstation where the Configuration Administrator was installed.
4. Continue to follow the prompts until the field *Enter the full command line to use to execute the installer*. Type in `DFC password /BOOTTHAWED`.

To create the task that sets the workstations into a *Frozen* state, the above steps must be completed again, using the command to restore Deep Freeze's protection, which is `DFC password /BOOTFROZEN`. Name that task *Reboot Frozen*. It is important to remember that the password used here is the one set up with Command Line rights.



The reason for using the BigFix Software Distribution Wizard, instead of running a regular batch file to set the workstations into a Thawed or Frozen state, is that the DFC.exe file is not present anywhere except the central office's administrative workstation. Therefore, the file has to be pushed and executed. Since BigFix is not actually installing it, no trace of the program is left behind.

## Deploying Critical Updates and Virus Definitions

All workstations are set up with the same Maintenance Period so updates can be performed during that time frame. To push down patches at a different time, complete the following steps:

1. Open the BigFix Enterprise Console.
2. Reboot the desired workstations into a Thawed state by performing the *Reboot Thawed* task.
3. Wait approximately 10 to 15 minutes to give all the workstations enough time to restart.
4. Perform the updates as usual.
5. Reboot the workstations into a Frozen state by performing the *Reboot Frozen* task.

The workstations are then updated and protected by Deep Freeze.