

## Deep Freeze Enterprise - BigFix Patch Manager

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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.

🗟 Deep Freeze Enterprise Configuration Administrator										
File Help										
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_	New Open Save As Help Create									
Passwords Drives Embedded Events Maintenance Advanced Options Enable Type User Change Password Timeout Activation Expiration							Funitation			
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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.

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

Click *Next*.

🛦 Windows Software Distribution Wizard 🔀							
BES Software Distribution Wizard for Windows							
Welcome to the BES Software Distribution Wizard for Windows.							
This Wizard will assist you in deploying software applications to Windows computers which have the BES Client installed. Upon completion of this Wizard, a new Task will appear in the BES Console that will allow you to deploy your application to BES Clients using the standard "Take Action" dialog.							
Note: This wizard will only provide deployment and very basic packaging of software. It is assumed that the application you deploy will have an installer that can be executed silently (if applicable) on local BES Client computers.							
Specify the name of the application you wish to deploy. This is the name that will appear in the Task tab in the BES Server (e.g. Adobe Acrobat Reader 5.0):							
Deep Freeze							
Next Cancel							

3. In the dialog shown below, specify the location of the workstation installation file. Click *Next*.

Windows Software Distribution Wizard							
Choose the source of the package to be deployed to the BES Client computers.							
Download from URL- Retrieve the package from the URL.  http://							
<ul> <li>File - Select the package on this computer.</li> </ul>							
C:\Temp\DF6Wks.exe Browse							
Folder - Select a folder on this computer (a compressed archive will be created).							
C:\ Browse							
Include Subfolders							
<b>Note:</b> The file(s) you select will be placed on the BES Server and a SHA1 checksum will be calculated and stored in the action for security and caching purposes. If you would like to change the file(s) later, you will need to run this wizard again.							
Back Next Cancel							

4. 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*.

🛦 Windows Software Distribution Wizard 🔀 🔀									
BES Software Distribution Wizard - Platform Choice									
Select all platforms for which this package is applicable.									
Windows 95									
Windows 98									
Windows ME									
Uindows NT									
☑ Windows 2000									
☑ Windows XP									
Windows Server 2003									
✓ Windows Vista									
Windows 2008									
Back	ancel								

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

🛦 Windows Software Distribution Wizard	×
BES Software Distribution Wizard - Installation Parameters	
Specify how to target relevant computers.	
Note that if the first radio button under the "Applicability" tab of the "Take Action" dialog box is selected at the time the Task is deployed, the selected criteria will also be used to determine the success of installation.	
None - Target by OS only.	
C Registered Application- Enter the name of the registered application.	
○ Service- Enter the service name (Windows NT, 2000, XP and 2003 only).	
○ File - Enter the complete pathname of the file.	
C:\ Browse	
O Registry key- Enter the complete pathname of the registry key.	
HKLM	
Optional: Specify a key value. Enter DWORD values in hexadecimal form	
OR	
Back Next Cancel	

6. Enter the full command line used to perform the Silent Install: DFWks.exe /Install.



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

🛦 Windows Software	Distribution Wizard	×						
BES Softwar	e Distribution Wizard - Summary							
The parameters be	elow will be used to create a Software Distribution Task in BES.							
Please ensure the accuracy of this information before clicking the 'Create' button to create this task in BES. Select the 'Back' button to return to the Wizard and continue editing your entries. Click 'Cancel' to exit this Wizard entirely.								
Application Name:	Deep Freeze							
Source:	C:\Temp\DF6Wks.exe							
Target Platforms:	Win2000, WinXP and WinVista							
Successful Installation Check:	No Detection							
Command Line:	DF6Wks.exe /Install							
Create a one-time action. Leave this unchecked to create a Fixlet you can reuse.								
	Back Finish Cancel							

8. 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.

Bighin Enterprise Console - Llask Software Elle Edit View Jook Danhoards Wigards							외 즈 키 ×
BES Console Use: ErstuationUser Application Usage Information		Al Applicable Teslis (87) All Taslis (283) BES Glent: Settings Teslis (22) BES Server/Indey Settings Teslis (14) My Catalon Taslis (0) Cachel Holden Taslis (0) Globaly Holden Taslis (0) Non-Hisster Operator Custom Taslis (0)	Tendi Saharan Databatan - Daglay: Desp Presen Saharan Databatan - Daglay: Desp Presen Saharan Databatan - Daglay: Desp Presen	Cotegory Software Distribution Software Distribution Software Distribution	Site Naster Operator Naster Operator Naster Operator		ipen i
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Windows English) Field Messages View Polivant SANS Top Veherachillers to Windows Systems Field Messages View Rolevant Suraship Policy Manager Field Messages View Rolevant Updates for Windows Agglications Field Messages View Field Actions		Actions Cick Inter to initiate the deployment of the second seco	procesa.				
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Manager for Anti-Virus Tasks	•		Cos	nnexted to database 'bfenterprise	'an uner 'Evaluation/Jeer'		1

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*.

ake Actio	n										
Name:	Name: Deploy Deep Freeze										
Preset: Default   Preset: Default  Preset: Save Preset.  Delete Preset.  Delet											
Target Message Constraints Execution Post-Action Relevance Action Script											
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_	Applicable Computers (2)	Computer	05	CPU	Last Report Time	BE:					
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		<b>a</b> ]				Þ					
		OK	Cancel								

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:\PERSI0.SYS GOTO INSTALLED
GOTO END
: INSTALLED
DFC.EXE get /ISFROZEN
IF ERRORLEVEL 1 GOTO ERROR1
IF ERRORLEVEL 0 Goto ERRORO
:ERROR1
ECHO ERRORLEVEL 1
NET STOP BESCLIENT
GOTO END
:ERRORO
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.

🛦 Windows Software Distribution Wizard	×
BES Software Distribution Wizard - Source Files	
Choose the source of the package to be deployed to the BES Client computers.	
	-
C Download from URL- Retrieve the package from the URL.	
http://	
File - Select the package on this computer.	
C:\Temp\DF6Wks.exe Browse.	
O Folder - Select a folder on this computer (a compressed archive will be created).	
C() Browse	
Include Subfolders	
Note: The file(s) you select will be placed on the BES Server and a SHA1 checksum will be calculated and stored in the action for security and caching purposes. If you would like to change the file(s) lat	
you will need to run this wizard again.	,
Back Next Cance	1

- 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.