

IBM Tivoli Continuous Data Protection for Files  
3.1.8.0



# Installation and User's Guide



IBM Tivoli Continuous Data Protection for Files  
3.1.8.0



# Installation and User's Guide

**Note**

Before using this information and the product it supports, read the information in “Notices” on page 115.

**Edition notice**

This edition applies to version 3, release 1, modification 8 of Tivoli Continuous Data Protection for Files and to all subsequent releases and modifications until otherwise indicated in new editions.

© Copyright IBM Corporation 2005, 2010.

US Government Users Restricted Rights – Use, duplication or disclosure restricted by GSA ADP Schedule Contract with IBM Corp.

---

# Contents

## Preface . . . . . v

Who should read this publication . . . . .	v
Accessing publications online. . . . .	v
Ordering publications . . . . .	v
Support information. . . . .	v
Getting technical training . . . . .	v
Searching knowledge bases . . . . .	vi

## Chapter 1. Product Overview. . . . . 1

Enhancements for version 3.1.8 . . . . .	1
Tivoli Continuous Data Protection for Files client:	
Introduction . . . . .	1
Types of protection . . . . .	2

## Chapter 2. Installing the Tivoli Continuous Data Protection for Files client . . . . . 5

Basic installation of the Tivoli Continuous Data Protection for Files client . . . . .	5
System requirements. . . . .	5
Installing the Tivoli Continuous Data Protection for Files client . . . . .	5
Uninstalling the Tivoli Continuous Data Protection for Files client . . . . .	18
Advanced installation of the Tivoli Continuous Data Protection for Files client . . . . .	19
Install the Tivoli Continuous Data Protection for Files client silently on a single local computer . . . . .	19
Upgrade the Tivoli Continuous Data Protection for Files client silently: pull upgrades and configurations . . . . .	21
Deploying the client to other computers . . . . .	23
Use the PC Edition or Server Edition of Tivoli Continuous Data Protection for Files to create a configuration file . . . . .	25
Windows installation folder . . . . .	26

## Chapter 3. Changing Protection Settings . . . . . 27

Settings Notebook of Tivoli Continuous Data Protection for Files . . . . .	27
General panel of client Settings Notebook . . . . .	28
Files to Protect panel of client Settings Notebook . . . . .	30
E-mail Protection panel of client Settings Notebook . . . . .	41
Remote Storage panel of client Settings Notebook . . . . .	42
Advanced panel of client Settings Notebook . . . . .	48
Changing protection settings for the Tivoli Continuous Data Protection for Files client . . . . .	53
Specifying which files and applications are protected by Tivoli Continuous Data Protection for Files . . . . .	54

Specifying storage for backup copies by Tivoli Continuous Data Protection for Files . . . . .	60
Forcing a backup by Tivoli Continuous Data Protection for Files . . . . .	62
Backing up all files that are protected by Tivoli Continuous Data Protection for Files . . . . .	63
Forcing a scheduled backup by Tivoli Continuous Data Protection for Files . . . . .	64
Stopping backup activity by Tivoli Continuous Data Protection for Files . . . . .	65

## Chapter 4. Starting and stopping protection activity of the Tivoli Continuous Data Protection for Files client . . . . . 67

Starting the client GUI. . . . .	67
Forcing a backup by Tivoli Continuous Data Protection for Files . . . . .	67
When to back up all files . . . . .	68
Backing up all files that are protected by Tivoli Continuous Data Protection for Files . . . . .	69
Forcing a scheduled backup by Tivoli Continuous Data Protection for Files . . . . .	70
Stopping backup activity by Tivoli Continuous Data Protection for Files . . . . .	71
Stopping backup or restore activity by Tivoli Continuous Data Protection for Files . . . . .	71
Managing Tivoli Continuous Data Protection for Files Clients . . . . .	73
Restarting the Tivoli Continuous Data Protection for Files client process . . . . .	74
Run the Tivoli Continuous Data Protection for Files client as a service . . . . .	74

## Chapter 5. Monitoring the protection of Tivoli Continuous Data Protection for Files. . . . . 75

Monitoring protection with the Tivoli Continuous Data Protection for Files client . . . . .	75
Status panel of Tivoli Continuous Data Protection for Files . . . . .	79
Viewing reports by Tivoli Continuous Data Protection for Files . . . . .	83
Viewing the continuous protection activity report of a Tivoli Continuous Data Protection for Files client . . . . .	83
Viewing the report of scheduled backups by a Tivoli Continuous Data Protection for Files client. . . . .	84

## Chapter 6. Restoring files with the Tivoli Continuous Data Protection for Files client . . . . . 85

Restore Wizard of Tivoli Continuous Data Protection for Files . . . . .	86
---	----

<b>Welcome</b> panel (Restore Wizard) of Tivoli Continuous Data Protection for Files . . . . .	86	Files are not backed up by Tivoli Continuous Data Protection for Files . . . . .	105
<b>Files to Restore</b> panel of Tivoli Continuous Data Protection for Files . . . . .	86	Storage for backup copies is not correctly configured in Tivoli Continuous Data Protection for Files . . . . .	105
<b>Restore Location</b> panel of Tivoli Continuous Data Protection for Files . . . . .	89	Files to protect are incorrectly configured in Tivoli Continuous Data Protection for Files . . . . .	105
<b>Summary</b> panel (Restore Wizard) of Tivoli Continuous Data Protection for Files . . . . .	90	Files in use are not backed up by Tivoli Continuous Data Protection for Files . . . . .	105
<b>Chapter 7. Storage areas of Tivoli</b>		Files are not backed up to Tivoli Storage Manager server. . . . .	106
<b>Continuous Data Protection for Files. . . . .</b>	91	Tivoli Continuous Data Protection for Files user interface replaces existing browser session. . . . .	107
Format of backup copies created by Tivoli		Tivoli Continuous Data Protection for Files user interface contains no file data . . . . .	108
Continuous Data Protection for Files . . . . .	91	Restarting the Tivoli Continuous Data Protection for Files client process . . . . .	108
Versioning of backup copies created by Tivoli		The number of backup copy versions is greater than configured in Tivoli Continuous Data Protection for Files . . . . .	109
Continuous Data Protection for Files . . . . .	91	Limit user access to files on a target file server . . . . .	109
Modifying backup copies. . . . .	92		
<b>Chapter 8. Tivoli Continuous Data</b>		<b>Appendix. Accessibility features for</b>	
<b>Protection for Files central</b>		<b>Tivoli Continuous Data Protection for</b>	
<b>management considerations . . . . .</b>	93	<b>Files . . . . .</b>	113
Administration folders. . . . .	97	<b>Notices . . . . .</b>	115
<b>Central Administration Settings</b> window of Tivoli		<b>Trademarks . . . . .</b>	119
Continuous Data Protection for Files . . . . .	99	<b>Index . . . . .</b>	121
Scheduled backup reports table of Tivoli			
Continuous Data Protection for Files . . . . .	101		
<b>Chapter 9. Protecting a server with</b>			
<b>Tivoli Continuous Data Protection for</b>			
<b>Files . . . . .</b>	103		
<b>Chapter 10. Troubleshooting the Tivoli</b>			
<b>Continuous Data Protection for Files</b>			
<b>client . . . . .</b>	105		

---

## Preface

This publication helps you install and use Tivoli® Continuous Data Protection for Files.

---

## Who should read this publication

This publication is intended for users of Tivoli Continuous Data Protection for Files clients.

---

## Accessing publications online

IBM® posts publications for this and other products, as they become available and when they are updated, to the product information center.

See the <http://publib.boulder.ibm.com/infocenter/tivihelp/v12r1/index.jsp> Tivoli Continuous Data Protection for Files information center at <http://publib.boulder.ibm.com/infocenter/tivihelp/v12r1/index.jsp?toc=/com.ibm.itstorage.doc/toc.xml>.

**Note:** If you print PDF documents on other than letter-sized paper, set the option in the **File → Print** window that allows Adobe Reader to print letter-sized pages on your local paper.

---

## Ordering publications

You can order or download PDF files and HTML versions of some IBM publications online.

To order or download IBM publications online go to the following Web site: IBM Publications Center at <http://www.elink.ibm.link.ibm.com/publications/servlet/pbi.wss>. The publications are available in PDF or HTML formats, or both.

The Web site also provides information for ordering publications from countries other than the United States. In the United States, you can also order publications by calling: 800-879-2755.

---

## Support information

You can find support information for IBM products from a number of different sources.

- “Searching knowledge bases” on page vi
- “Finding product fixes” on page vi

## Getting technical training

Information about Tivoli technical training courses is available online.

Go to Tivoli software training & certification at <http://www.ibm.com/software/tivoli/education/>.

## Searching knowledge bases

If you have a problem with your IBM software, begin by searching the available knowledge bases to determine whether the resolution to your problem is already documented.

### Search the internet

If you cannot find an answer to your question in the information center, search the Internet for the latest, most complete information that might help you resolve your problem.

To search multiple Internet resources for your product, go to the Tivoli Continuous Data Protection for Files support Web site at [http://www.ibm.com/software/sysmgmt/products/support/ITCDP\\_Support\\_Options.html](http://www.ibm.com/software/sysmgmt/products/support/ITCDP_Support_Options.html) and search support for the product. From this section, you can search a variety of resources including:

- IBM technotes
- IBM downloads
- IBM Redbooks®
- Forums and newsgroups

### Using IBM Support Assistant

At no additional cost, you can install on any workstation the IBM Support Assistant, a stand-alone application. You can then enhance the application by installing product-specific plug-in modules for the IBM products that you use.

The IBM Support Assistant helps you gather support information when you need to open a problem management record (PMR), which you can then use to track the problem. The product-specific plug-in modules provide you with the following resources:

- Support links
- Education links
- Ability to submit problem management reports

For more information, see the IBM Support Assistant Web site at <http://www.ibm.com/software/support/isa/>.

### Finding product fixes

This topic describes where and how to find a fix for your problem.

#### About this task

A product fix might be available to resolve your problem. You can determine what fixes are available for your IBM software product by checking the product support Web site:

#### Procedure

1. Go to the IBM Software Support Web site at <http://www.ibm.com/software/support/>.
2. Select the Tivoli brand. This opens a product-specific support site.
3. Under **Support for all Tivoli products** you will find a list of fixes, fix packs, and other service updates for your product.
4. Click the name of a fix to read the description and optionally download the fix.



## What to do next

To receive weekly e-mail notifications about fixes and other news about IBM products, follow these steps:

1. From the support page for any IBM product, click **My support** in the upper-right corner of the page.
2. If you have already registered, skip to the next step. If you have not registered, click **register** in the upper-right corner of the support page to establish your user ID and password.
3. Sign in to **My support**.
4. On the My support page, click **Edit profiles** in the left navigation pane, and scroll to **Select Mail Preferences**. Select a product family and check the appropriate boxes for the type of information you want.
5. Click **Submit**.
6. For e-mail notification for other products, repeat steps 4 and 5.

## Getting e-mail notification of product fixes

You can get notifications about fixes and other news about IBM products.

### About this task

To receive weekly e-mail notifications about fixes and other news about IBM products, follow these steps:

#### Procedure

1. From the support page for any IBM product, click **My support** in the upper-right corner of the page.
2. If you have already registered, skip to the next step. If you have not registered, click **Register** in the upper-right corner of the support page to establish your user ID and password.
3. Sign in to **My support**.
4. On the My support page, click **Edit profiles** in the left navigation pane, and scroll to **Select Mail Preferences**. Select a product family and check the appropriate boxes for the type of information you want.
5. Click **Submit**.
6. For e-mail notification for other products, repeat steps 4 and 5.



---

## Chapter 1. Product Overview

This chapter provides an introduction to the Tivoli Continuous Data Protection for Files client and briefly describes enhancements for this version of the product.

---

### Enhancements for version 3.1.8

Tivoli Continuous Data Protection for Files is updated for version 3.1.8.

The Tivoli Continuous Data Protection for Files client is updated with the following enhancements:

#### **Set throttle speed and network rules**

Manage bandwidth usage and define throttle speed for each network with the new Network Rules dialog. Each rule is retained so that a manual rule update is no longer required every time Tivoli Continuous Data Protection for Files accesses a new or different network.

See “Specifying throttle settings and network rules for Tivoli Continuous Data Protection for Files” on page 52 for detailed information.

#### **Additional status provided in the system tray icon**

The Tivoli Continuous Data Protection for Files system tray icon (visible in your desktop system tray) now displays disconnected, paused, and error status.

See “Status panel of Tivoli Continuous Data Protection for Files” on page 79 for detailed information.

#### **Support for Microsoft Windows 7**

Tivoli Continuous Data Protection for Files provides continuous file protection for Microsoft Windows 7 systems.

See “Program data folder” on page 46 for detailed information.

---

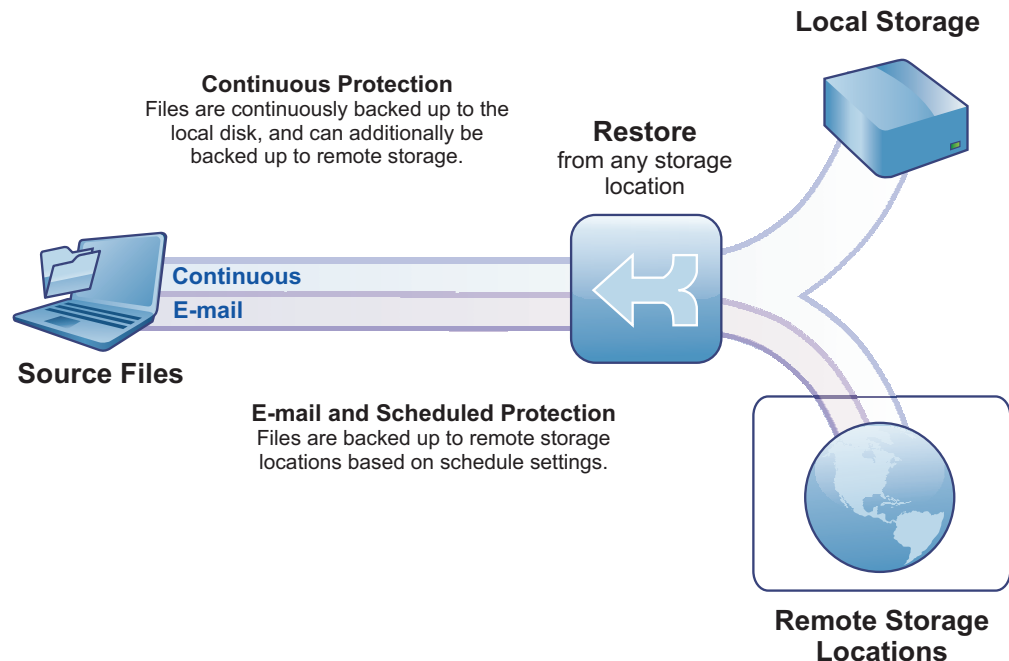
### Tivoli Continuous Data Protection for Files client: Introduction

The Tivoli Continuous Data Protection for Files client provides a flexible, easy to use file protection system. Your most important files can be continuously protected. Your less important files can be protected at scheduled intervals to save time and storage space. E-mail files can also be protected. And you can prevent any changes (including deletions) to files in folders that you designate as vaults.

Continuously protected files are backed up to a local drive, so that backup copies are created even when network conditions prevent storing backup copies on remote storage locations. Continuously protected files can also be stored on remote storage locations, when network connections allow. If a remote location is not available when you change a continuously protected file, the Tivoli Continuous Data Protection for Files client makes a backup copy on that device as soon as the device becomes available. Scheduled backup copies are created on the interval that you configure (hourly, weekly, daily, or monthly). If the remote device for scheduled backups is not available at the time of the backup, the Tivoli Continuous Data Protection for Files client makes backup copies on the remote location as soon as that device becomes available.

Every time you change a file, a backup copy is created. This allows you to choose which version of a protected file you want to restore. You configure how many backup copies to save.

The diagram below provides an overview of how the Tivoli Continuous Data Protection for Files client protects your data.



After installation of a Tivoli Continuous Data Protection for Files client, the client immediately provides continuous protection for a pre-configured list of files. You can see the backup copies in the \RealTimeBackup\ folder in the root of your primary drive, and in the list of files that you can restore with the Restore Wizard of the client. The default space allocated for your backup copies is 500 MB.

Tivoli Continuous Data Protection for Files can store backup copies on a Tivoli Storage Manager server, but there is no requirement to use Tivoli Storage Manager. Tivoli Continuous Data Protection for Files is a stand-alone product and has no dependencies on Tivoli Storage Manager or Tivoli Storage Manager FastBack.

---

## Types of protection

The Tivoli Continuous Data Protection for Files client offers three types of protection for your files: continuous protection, scheduled protection, and vaulting.

Continuous protection means that every time a file is saved, a backup copy is created. Hence, the backup copy exactly matches the original file as you last saved it. If you choose to save more than one version of a backup copy, the previous backup copies match the previous versions of your file.

Files that are protected by schedule are copied to the remote storage area on a regular schedule. They are not backed up every time you save them, as are continuously protected files. Hence, scheduled protection yields fewer backup copies. If a file is lost between the time it is saved and the time it is backed up, you are able to restore only a previous version of the file.

Email files are protected on a schedule.

If the storage area is unavailable when a protected file is saved, the client notes that the file has changed. When the storage area becomes available, the client makes a backup copy of the most recent version of the file.

*Table 1. Comparison of the three types of protection*

	<b>Continuous Protection</b>	<b>Scheduled Protection (includes email)</b>	<b>Vaulting</b>
Recommended for what files	Recommended for your most important files. Not recommended for large dynamic files like email files.	Recommended for large, dynamic files like email.	Recommended for files that you do not want to be changed nor deleted.
How protected	Backup copies are created on storage areas.	Backup copies are created on a storage area.	Vaulted files and folders cannot be modified nor deleted.
Frequency of backups	File is backed up whenever it is saved.	File is backed up only at the scheduled time, and only if it has been saved since the previous schedule.	No backups
Backup copy storage area	Local or remote	Remote only	Not applicable
Files protected	Files selected in the <b>Folders and Files</b> and <b>Applications</b> boxes in the <b>Files to Protect</b> panel in the Settings Notebook of the client.	Files selected in the <b>E-mail Protection</b> panel and by the <b>Scheduled Backup Settings</b> link in the <b>Advanced</b> panel in the Settings Notebook of the client.	Files selected in the <b>Vault</b> box in the <b>Files to Protect</b> panel of the Settings Notebook of the client.

For more information about scheduled backup, see “Considerations for scheduled backups” on page 50.



---

## Chapter 2. Installing the Tivoli Continuous Data Protection for Files client

This chapter contains information for installing and initially configuring the Tivoli Continuous Data Protection for Files client.

---

### Basic installation of the Tivoli Continuous Data Protection for Files client

Basic installation of the client includes a wizard-guided configuration, and is suitable for installation on a single local computer. You can also upgrade and uninstall on a single computer.

For installing the client to a remote computer, installing without user interaction, or installing to many computers, see “Advanced installation of the Tivoli Continuous Data Protection for Files client” on page 19.

### System requirements

Tivoli Continuous Data Protection for Files client requires a Windows server or workstation with minimum levels of hardware and software.

For current software and hardware requirements, see CDP v3.1 Hardware and Software Requirements.

### Installing the Tivoli Continuous Data Protection for Files client

You can install the Tivoli Continuous Data Protection for Files client on a single computer and follow a wizard to configure your protection settings.

#### Before you begin

This section describes interactive client installation on a single computer and configuration using a wizard. To do a silent client installation (without user interaction) and to push Tivoli Continuous Data Protection for Files clients to other computers, see “Advanced installation of the Tivoli Continuous Data Protection for Files client” on page 19.

If you are upgrading from a previous version of the client, see “Considerations for upgrading a client” on page 21.

- You must have administrator authority to install the client.
- Your computer must have the necessary hardware and software. See “System requirements.”
- If you are reinstalling or upgrading from a previous version of the client, close all other applications (especially e-mail programs) before you install. You must reboot immediately after the installation is complete.

#### About this task

Follow the steps below to interactively install the client on a single computer.

## Procedure

1. Double-click on the Tivoli Continuous Data Protection for Files client installer icon. The installer displays the language selection dialog. The default is English.
2. Choose your preferred language and click **OK**. The Tivoli Continuous Data Protection for Files information window displays the build number.
3. Click **Next**. The **License Agreement** window displays.
4. Read the License Agreement, then select the radio button if you accept the terms of the agreement. Click **Next**. The **Destination Folder** window displays.
5. Accept the default install location, or click **Change** to specify another location. Click **Next**. The **Ready to Install the Program** window displays.
6. Confirm that the information is correct and click **Next**.  
The installation window displays a progress bar indicating that the necessary files are being installed on your computer. You will also see a command prompt window open as the installer runs several scripts.  
The Installation Complete window displays.
7. If you are installing on Windows Vista, and there is an existing Tivoli Continuous Data Protection for Files client, you will see the Files in Use window. Click **OK**. You will also see a warning that the setup was unable to automatically close all requested applications. Click **OK**.
8. If this is your first installation of the Tivoli Continuous Data Protection for Files client on this computer, a configuration wizard will help you choose your protection settings. See “Initial Configuration Wizard of Tivoli Continuous Data Protection for Files.”
9. Click **Finish**. The installer indicates that you must reboot in the following situations:
  - You are reinstalling or upgrading Tivoli Continuous Data Protection for Files.
  - A product that uses the Tivoli Storage Manager API is installed and running. Tivoli Storage Manager Backup-Archive client is such a product.

## What to do next

**Note:** If you are upgrading from version 2.1.x on a non-English operating system, you will not see all national language text until you restart the computer.

If you upgrade over a previous version of Tivoli Continuous Data Protection for Files, you must restart the computer for the new settings to become active and for your protection to continue.

After installation (and restart, if required), the client immediately starts protecting your files.

If you want to change your protection settings, see “Settings Notebook of Tivoli Continuous Data Protection for Files” on page 27.

## Configuring clients with the configuration wizard

Use the client configuration wizard to configure the client at the first installation.

### Initial Configuration Wizard of Tivoli Continuous Data Protection for Files:

The first time you install, a wizard will help you choose your protection settings.

Use the control buttons at the bottom of each wizard page to navigate to all pages. When you have chosen all settings, click the **Finish** button.



If you cancel the wizard before finishing, any changes you made in the wizard will be cancelled. Tivoli Continuous Data Protection for Files will protect your files according to the configuration settings that were defined for installation. You can view and change your settings at a later time with the Settings Notebook.

The wizard has 6 screens:

- “**Welcome** panel (Initial Configuration Wizard) of Tivoli Continuous Data Protection for Files”
- “**What is Critical** panel (Initial Configuration Wizard) of Tivoli Continuous Data Protection for Files”
- “**E-mail Protection** panel (Initial Configuration Wizard) of Tivoli Continuous Data Protection for Files” on page 12
- “**Remote Storage** panel (Initial Configuration Wizard) of Tivoli Continuous Data Protection for Files” on page 13
- “**Initial Backup** panel (Initial Configuration Wizard) of Tivoli Continuous Data Protection for Files” on page 17
- “**Summary** panel (Initial Configuration Wizard) of Tivoli Continuous Data Protection for Files” on page 18

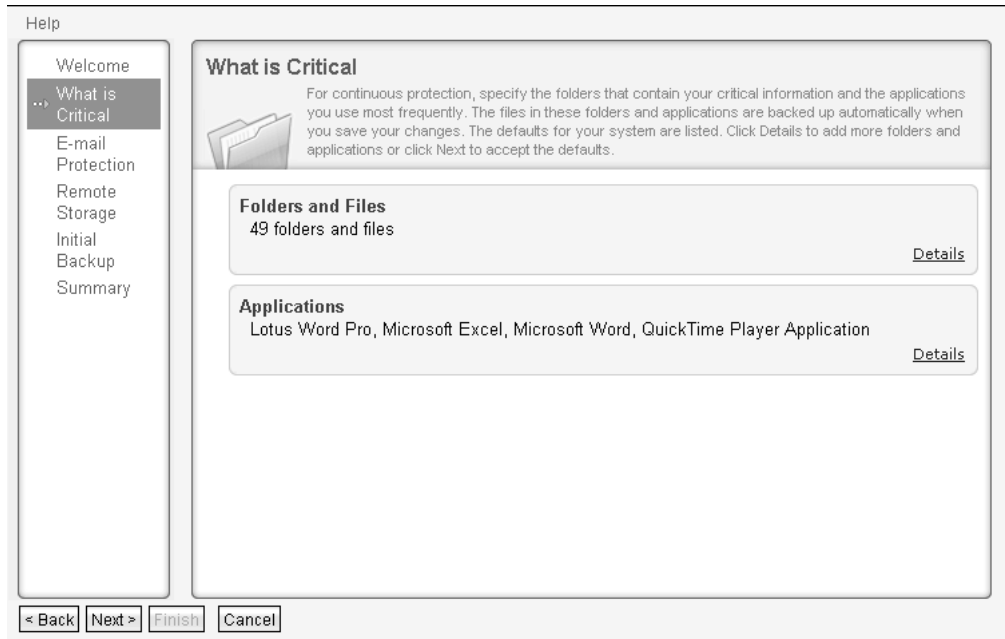
***Welcome** panel (Initial Configuration Wizard) of Tivoli Continuous Data Protection for Files:*

The **Welcome** panel lists the steps to initially set your protection settings.

Click the **Next** button to advance to the next page of the wizard. Click the **Cancel** button to exit the wizard without changing the initial protection settings.

***What is Critical** panel (Initial Configuration Wizard) of Tivoli Continuous Data Protection for Files:*

Use the **What is Critical** panel to specify the files and folders that you want to protect. The specified files and folders and applications will be continuously protected, which means Tivoli Continuous Data Protection for Files will create backup copies on a storage area as soon as the files are changed.



When Tivoli Continuous Data Protection for Files is installed, it is pre-configured with a list of files and folders to continuously protect. Use this panel to confirm that the initial protection settings are correct for your needs, or change the settings as appropriate.

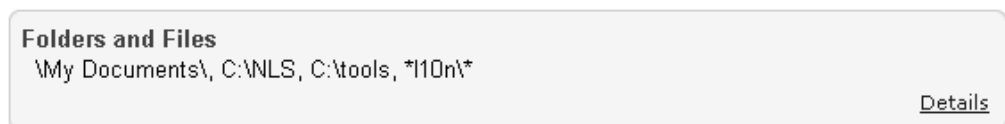
The protected files are listed by **Folders and Files** and by **Applications**. These lists are not exclusive of one another, but offer two views of what is protected.

If you prefer viewing the file paths, names, and extensions that are protected, use the **Folders and Files** box. This option allows you to use a file tree to specify what to protect.

If you prefer viewing the applications that are protected, use the **Applications** box. This option allows you to specify applications from a list. Files that are created by the listed applications are protected. The file extensions associated with the application will automatically be added to the **Folders and Files** list.

**Note:** Email applications are specified in the **E-mail Protection** panel. Because these files are often very large, their protection settings are configured separately.

**Folders and Files** box (Initial Configuration Wizard) of Tivoli Continuous Data Protection for Files:

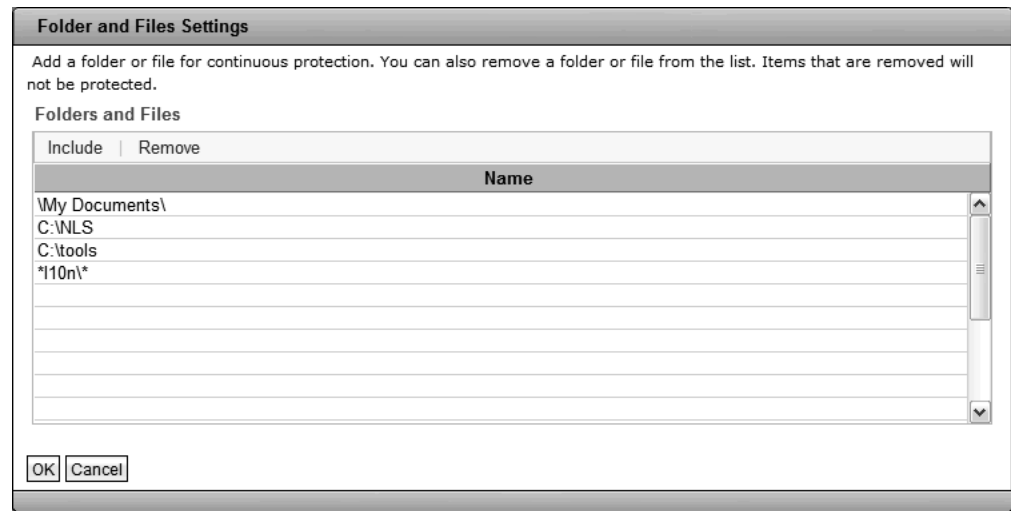


This box gives a summary of the folders and files that are continuously protected. The number of items protected refers to the items in the list of folders and files. A single list item can specify more than one file. Click the **Details** link to view all items in the list and modify the list. The **Folders and Files Settings** dialog will display.

**Folders and Files Settings** dialog (Initial Configuration Wizard) of Tivoli Continuous Data Protection for Files:

Specify folders and files to protect by adding or removing items from the list.

### List of protected folders and files



The top of the list box has two menu buttons. Click the buttons to include or remove items from the list.

#### Include

Click **Include** to add files and folders that you want to protect. The **Select folders** dialog will open.

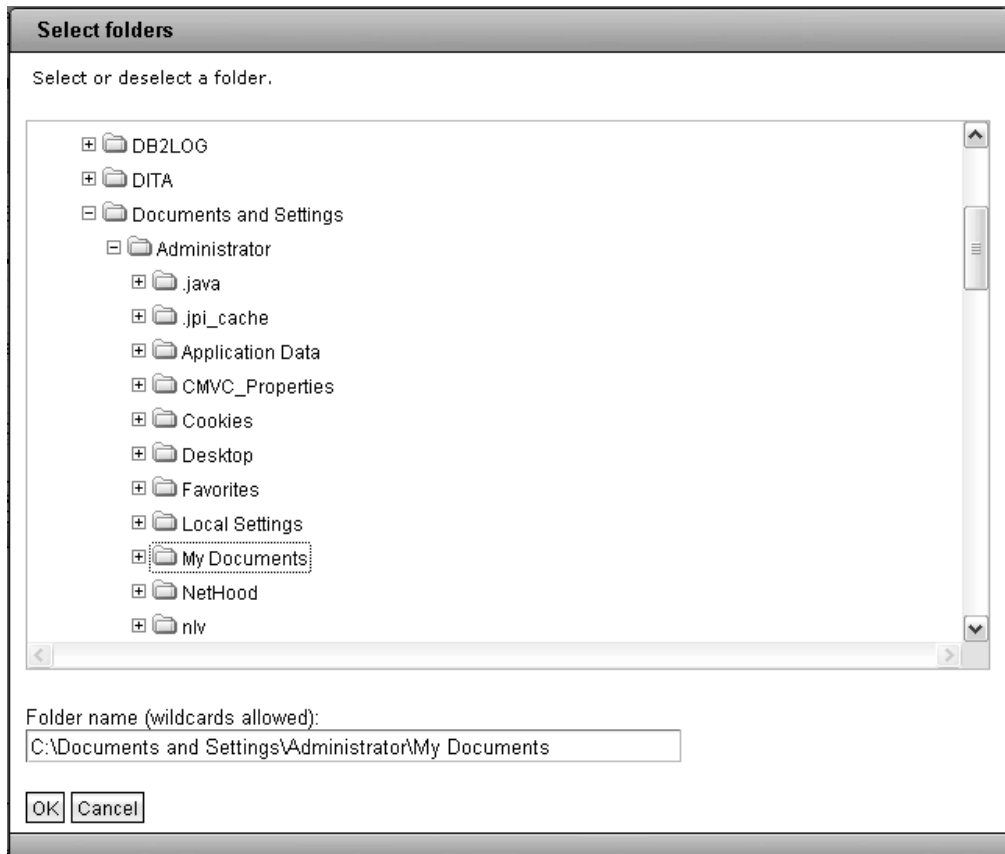
#### Remove

Select one or more list items, then click **Remove** to remove those items.

Each row in the list has one column:

**Name** Patterns in the **Name** column specify one or more files or folders. See “Wildcards in file specifications” on page 10 to determine what files and folders will match a **Name** pattern with blanks or asterisks. When a folder is protected, all of its files and sub-folders are protected.

**Select folders** dialog of Tivoli Continuous Data Protection for Files:



The **Select folders** dialog allows you to specify files and folders. You can browse to choose a folder, or type the name of a file or folder in the **Folder name** text field. If you browse and choose a file or folder, you can modify its path in the **Folder name** text field.

**Note:** Only your internal drives can be protected. Any external storage devices are considered remote storage devices.

*Wildcards in file specifications:*

You can use wildcards to specify the files to protect.

You can enter the complete path of a file that you want to protect. For example, C:\Documents and Settings\Administrator\My Documents\Soccer\2005AYS0\Parent Info U8B.doc. The complete path unambiguously matches a single file. But to specify all files this way requires many file paths. Use asterisks and blanks as wildcards to specify several files.

An asterisk matches any number of characters in a file path. If there are no asterisks, then Tivoli Continuous Data Protection for Files matches any file whose fully expanded path name has that exact pattern anywhere in the path or filename. The pattern is not case-sensitive.

If there are no asterisks in the pattern, then blank spaces before and after the pattern are interpreted as asterisks. Hence, \myDocs\ and \*\myDocs\\* yield the same matches. If there are asterisks in the pattern, then blank spaces before or after the pattern match no characters. Hence, \myDir\, \*\myDir\, and \myDir\\* could yield three different matches, as in the table of examples pictured.

As an example, assume a pattern `fish`. This pattern matches: `C:\dir\fish.doc` and `C:\fish\anyfile.doc` and `c:\Dirfishfood\something`.

If the pattern has slashes around it (`\fish\`), it matches any object with `\fish\` somewhere in the path. This pattern matches `C:\fish\anyfile.doc` but not `C:\dir\fish.doc` and not `c:\Dirfishfood\something`

*Table 2. File and folder pattern matches*

This pattern ...	... matches these folders and files on your computer:
<code>\myDir\</code> or <code>\mYdiR\</code> or <code>*\myDir\*</code> or <code>*\mydir\*</code>	<code>c:\myDir\</code> <code>c:\myDir\Contacts\</code> <code>c:\myDir\Contacts\contacts.txt</code> <code>c:\Projects\myDir\</code> <code>c:\Projects\myDir\myThings\</code> <code>c:\Projects\myDir\myThings\things.doc</code> <code>c:\Projects\myDir\myThings\myPhoto.jpg</code> <code>d:\Notes\myDir\</code>
<code>*\myDir\</code>	<code>c:\myDir\</code> <code>c:\Projects\myDir\</code> <code>d:\Notes\myDir\</code>
<code>\myDir\*</code>	
<code>d:*\mydir\*</code>	<code>d:\Notes\myDir\</code>
<code>\my best</code>	<code>c:\Books\My Best.doc</code> <code>c:\Photos.jpg\My Best Photo\</code> <code>c:\Photos.jpg\My Best Photo\Best.jpg</code> <code>f:\Projects\My Best Project\</code> <code>f:\Projects\My Best Project\Dream.xls</code>
<code>.jpg</code>	<code>c:\Photos.jpg\</code> <code>c:\Photos.jpg\myHouse.bmp</code> <code>c:\Photos.jpg\My Best Photo\Best.jpg</code> <code>c:\Projects\myDir\myThings\myPhoto.jpg</code>
<code>*.jpg</code>	<code>c:\Photos.jpg\</code> <code>c:\Photos.jpg\My Best Photo\Best.jpg</code> <code>c:\Projects\myDir\myThings\myPhoto.jpg</code>
<code>E:\</code> <code>E:*\*</code>	All files and folders on the E: drive.

**Applications** box (Initial Configuration Wizard) of Tivoli Continuous Data Protection for Files:

This box gives a short list of the applications that are protected.

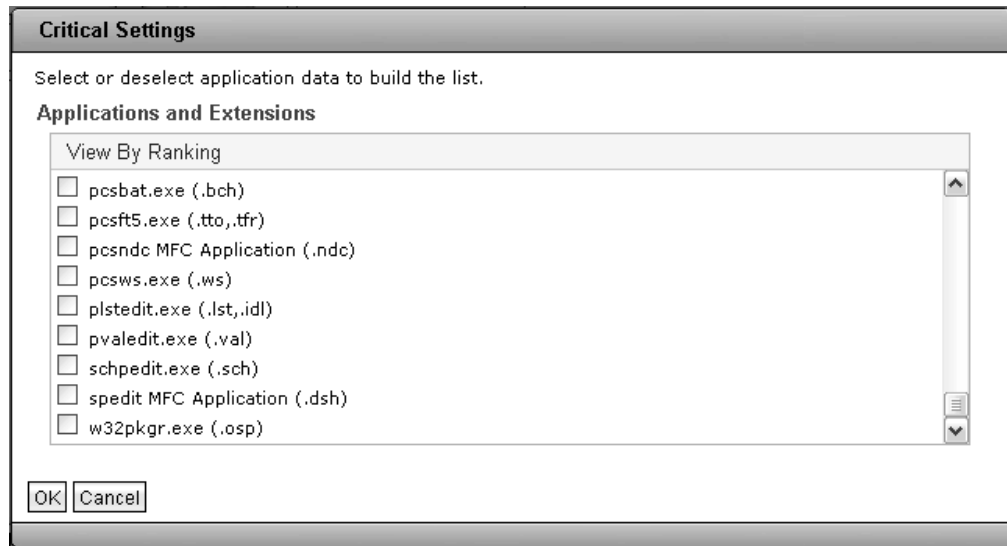
**Applications**  
 Lotus Organizer, Microsoft Excel, Microsoft PowerPoint, Microsoft Word, Software DVD Player

Details

To see the complete list of the applications that are protected, click **Details**. The **Application Settings** dialog will display.

**Critical Settings** dialog of Tivoli Continuous Data Protection for Files:

Specify a list of critical applications to protect.



The **Applications and Extensions** box presents a list of applications and their associated file extensions. Applications that are checked will be continuously protected. You can check and uncheck applications to suit your protection needs.

The list of applications has two views. Each view orders the applications in a different way. Click the menu item at the top of the box to change the view.

#### **View by Ranking**

The applications that have the greatest quantity of files on your computer are presented at the top of the list. The applications that have the least quantity of files on your computer are presented at the bottom of the list.

#### **View Alphabetically**

The applications are presented in alphabetical order.

If you check a box, all file extensions associated with that application will be added to the list of protected files.

If you uncheck a box, all files with that extension will be removed from the list of protected files. Note that removing file extensions from the list of protected files does not mean adding those files to the list of files that are explicitly excluded from protection.

Click **OK** in any of the views to update the list of protected files. Click **Cancel** to leave the dialog without changing the list of protected files.

You can add files to be protected in the **Critical Settings** dialog, but these applications will be protected only if the files are not explicitly excluded. See "Including and excluding files from protection" on page 33 for more information.

**E-mail Protection** panel (*Initial Configuration Wizard*) of *Tivoli Continuous Data Protection for Files*:

Select the e-mail applications that you want to protect. Select a schedule for protecting the e-mail applications.

Because email files typically are very large, they are not backed up continuously, but only on the schedule that you select.

Email files are backed up only to remote storage. If the remote storage is not available at the scheduled backup time, Tivoli Continuous Data Protection for Files will back up the email files when the remote storage area becomes available.

### E-mail Application list

Select one of the popular email applications in the list.

If your application is not listed, select **Other**.

### E-mail Application Data Folder text field

If you choose your email application from the **E-mail Application** list, the default file type for that application will appear in this box, and you will not be able to update the file specification. You can update this field only if you select **Other** in the **E-mail Application** list.

### How often to protect your e-mail list

You can schedule email protection at one of several intervals:

- **Never:** Email will not be protected.
- **Hourly:** Email files will be backed up every hour, just after the hour.
- **Daily:** If you choose this interval, also select the time for the backup.
- **Weekly:** If you choose this interval, also select the day and time for the backup.
- **Monthly:** If you choose this interval, also select the day of the month and time for the backup.

**Remote Storage** panel (*Initial Configuration Wizard*) of *Tivoli Continuous Data Protection for Files*:

Specify the remote storage for the backups of your protected files.

The screenshot shows a software window titled "Remote Storage" with a sidebar on the left and a main configuration area on the right. The sidebar contains a "Help" menu and a list of navigation options: "Welcome", "What is Critical", "E-mail Protection", "Remote Storage" (which is highlighted with a dark background and white text), "Initial Backup", and "Summary". The main area has a title "Remote Storage" and a descriptive paragraph: "Your files can be backed up to a remote location such as a file server. Specify the type of remote storage, the location for storing your backups, and the amount of space available for backups. If the remote location cannot be reached, the system will wait until a connection can be established." Below this text are three fields: "Back up to:" with a dropdown menu showing "External Device"; "Location:" with a text box containing "D:\CDPstorage\" and a "Browse" button to its right; and "Maximum space for backups:" with a text box containing "4" and a dropdown menu showing "GB". At the bottom of the window are four buttons: "< Back", "Next >", "Finish", and "Cancel".

Storing files in a remote storage area will protect the files in case local copies are lost. Backups of continuously protected files, and files protected on a schedule, are stored in the same remote area. Tivoli Continuous Data Protection for Files is very tolerant of intermittently available networks. If remote storage area is temporarily unavailable, Tivoli Continuous Data Protection for Files will queue backup copies until the remote storage becomes available.

**Back up to:** *list* and **Location:** *text field*:

Specify the remote storage device for your backup copies.

Specify the type of storage in the **Back up to:** list, and the location of your storage device in the **Location:** field. What you select from the **Back up to:** list affects what you enter in the **Location:** field.

#### External Device or File Server storage location

You can specify a file server or removable disk to store the backup copies. The remote device can be another computer (such as a NAS or file server), or a remote disk, or a removable disk.

In the **Location:** field, if you choose a remote server, it is recommended that you use Universal Naming Convention (UNC) specification for the file server instead of drive letters. Drive letters can change after rebooting and often do not reconnect automatically.

If you choose a USB external device, you can select the driver letter. However, removable external device drive letters can change. Recommendations and detailed procedure for configuring USB drives as remote storage is in technical note 1245761 at the Tivoli Continuous Data Protection for Files collection of technical notes: <http://www-1.ibm.com/support/search.wss?rs=2339&tc=SS3PE6&rank=8&dc=DB520+D800+D900+DA900+DA800&dtm>



Click the **Browse** button to view a **Browse for folder** dialog box. Use this dialog box to navigate to the location for your remote storage area. If this dialog becomes hidden behind other windows, click the task bar to bring it to the front.

Tivoli Continuous Data Protection for Files creates backup copies in a subfolder named `\RealTimeBackup\computer name`. For example, if a computer name is `Computer1`, and the remote storage location is configured with the value `\\remote\share`, backup copies are stored in `\\remote\share\RealTimeBackup\Computer1\`.

If you log in to your computer with a user name and password that is valid also on your remote storage location, Tivoli Continuous Data Protection for Files authenticates transparently into that network location. If you do not log in to your computer with a user name and password that is valid also on your remote storage location, you must log in to the network interactively using another account with regular privileges. You can log in interactively by using the Net Use command.

Some versions of Windows have a concept of simplified file sharing, which allows one computer to easily connect to another computer over the network. The resulting connection allows only limited file system capabilities, and inhibits the creation of backup copies. Some information such as access control lists or file streams can be lost. It is recommended to disable simplified file sharing on the remote storage area.

### **WebDAV Server storage location**

Some Internet Service Providers (ISPs) provide Web-based Distributed Authoring and Versioning, or WebDAV. The WebDAV protocol provides the functionality to create, change, and move documents on a remote server. The WebDAV protocol is useful for authoring the documents which a Web server serves, but can also be used for general Web-based file storage. If your ISP provides WebDAV functionality, Tivoli Continuous Data Protection for Files can store backups on a Web-based server.

In the **Location:** field. Enter your WebDAV server location using the following format: `https://MyISP.com/MyAcct`.

When using WebDAV, Tivoli Continuous Data Protection for Files only supports the Basic Authentication method described in the HTTP 1.0 RFC. Because this authentication method sends the password as clear text over the network, it is also recommended that the Web server be configured to use secure sockets.

### **Tivoli Storage Manager storage location**

Tivoli Continuous Data Protection for Files can store backup copies on a Tivoli Storage Manager server. You do not need to install the Tivoli Storage Manager backup-archive client. If you install the Tivoli Storage Manager backup-archive client, it functions independently from Tivoli Continuous Data Protection for Files.

In the **Location:** field, specify the Tivoli Storage Manager server location, using the following format: `tsm://Host.com`. You can also use an IP address for the server address.

Tivoli Continuous Data Protection for Files supports Tivoli Storage Manager server version 5.5 or later.

Configure your Tivoli Storage Manager server before trying to connect from Tivoli Continuous Data Protection for Files. Register your computer as a Tivoli Storage Manager node. Tivoli Continuous Data Protection for Files will prompt for the password assigned at registration to connect to the Tivoli Storage Manager server. For more information about registering a Tivoli Storage Manager node for your computer, see *IBM Tivoli Storage Manager for Windows Administrator's Guide*.

If you specify a Tivoli Storage Manager server as the backup target, do not check any of the Advanced Settings on this page. If you want to use encryption or compression, you must specify these options in the `dsm.opt` file in the Tivoli Continuous Data Protection for Files subfolder of the "Program data folder" on page 46. Subfile backup is not supported when Tivoli Storage Manager server is the backup target.

As an alternative to backing up directly to a Tivoli Storage Manager server, consider backing up in two stages. First, use Tivoli Continuous Data Protection for Files to create remote backups on a file server. Second, schedule a Tivoli Storage Manager backup-archive client on that file server to back up the files to a Tivoli Storage Manager server. In this scenario, the only restriction is that if you use Tivoli Continuous Data Protection for Files encryption, then you cannot use Tivoli Storage Manager compression.

In order to manage storage space, the Tivoli Storage Manager administrator must grant authority to the Tivoli Storage Manager client node to delete backup copies. For steps to assign authority to delete backup copies, see the topic in the problem determination section: "Tivoli Storage Manager client node lacks authority to delete backup copies" on page 106.

To avoid problems when using the Tivoli Storage Manager server, see the topic in the problem determination section: "Files are not backed up to Tivoli Storage Manager server" on page 106.

You can restore backup copies from the Tivoli Storage Manager server only with the Tivoli Continuous Data Protection for Files GUI. You cannot use the Tivoli Storage Manager Backup-Archive client to restore backup copies created by Tivoli Continuous Data Protection for Files.

When storing data on a Tivoli Storage Manager server, the following features must be turned off:

- Encrypt backups
- Compress backups
- Use sub-file copy

If encryption or compression is required for your data, then use the Tivoli Storage Manager compression or encryption features. Detailed information is available in the Usage recommendation for encryption, compression, and subfile backup document.

#### **Maximum space for backups:** *field:*

Specify how much space to use for all backup copies on remote storage.

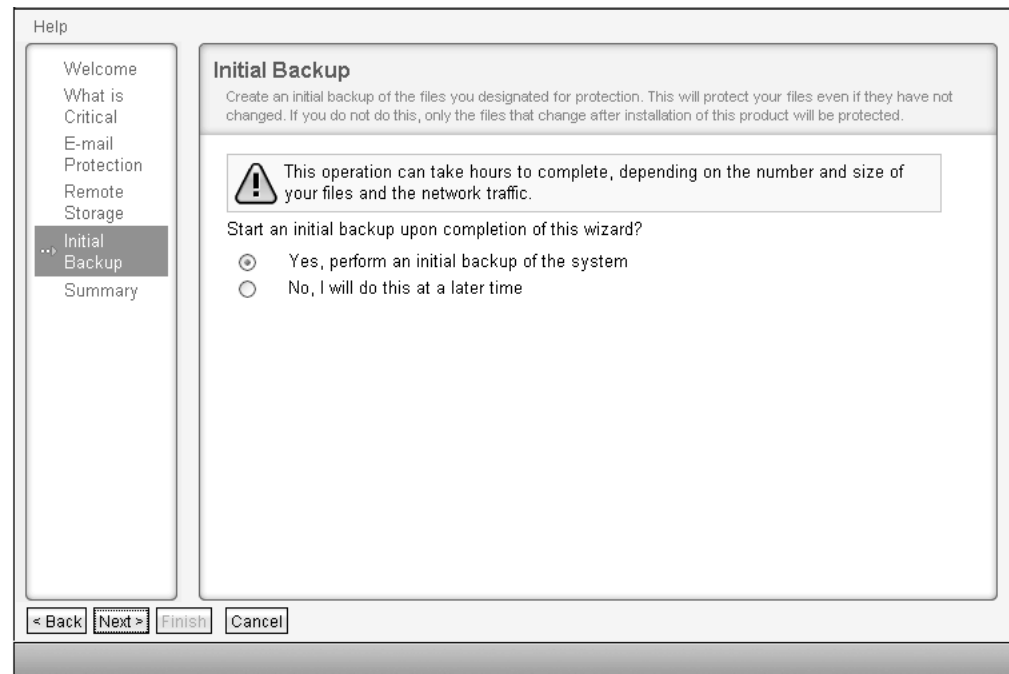
The default size for the remote storage area is 40 GB. If you increase the number of backup versions to keep, consider increasing your storage area size. If you are unsure of how much space to allocate, you can monitor your space usage on the Status panel and adjust the version and space settings accordingly.

When the storage space becomes full, Tivoli Continuous Data Protection for Files deletes older backup copy versions of files that have several backup copy versions. After deleting the versioned backup copies, if more space is needed for new backup copies, Tivoli Continuous Data Protection for Files deletes the last remaining backup copies of enough files to make room for the newest backup copy.

If you try to remotely back up a file which is larger than the space you have allocated for your remote storage area, Tivoli Continuous Data Protection for Files will purge all older versions of your files, and then may fail to back up the file. Make sure that the maximum space for your remote storage areas is greater than the maximum file size for remote backup in the **Advanced** page of the Settings Notebook. For example, if you decrease your maximum space for backups to 1 GB, you must decrease the maximum file size for remote backup from the default of 1 GB.

**Initial Backup** panel (*Initial Configuration Wizard*) of Tivoli Continuous Data Protection for Files:

Use the **Initial Backup** panel to choose if you want to back up all your files when you finish the wizard.



When you first install the Tivoli Continuous Data Protection for Files client, you can immediately back up all files that you configured for protection. Without the initial backup, only files that change will be protected. The initial backup will protect all of the existing files that you designated for protection.

The initial backup will scan all of your local drives, looking for files that you designated for protection. All files that meet your specifications will be backed up to local or remote or both storage areas. This process can take a long time and can slow down your computer. Start this initial backup when you will not be using your computer for other applications.

If you choose not to back up by the installation wizard, you can force a complete backup at a later time. At that time, use the **Files to Protect** panel of the Settings Notebook.

*Summary panel (Initial Configuration Wizard) of Tivoli Continuous Data Protection for Files:*

Use the **Summary** panel to view a summary of your configuration choices, and decide if you want to apply your configuration choices to Tivoli Continuous Data Protection for Files.

The **Summary** panel displays the configuration you specified in the previous panels of the wizard.

Choose **Back** to return to a previous panel to modify your configuration choices.

Choose **Finish** to apply your configuration choices. Tivoli Continuous Data Protection for Files will continue to run in the background and protect your files using the configuration choices you made.

Choose **Cancel** to exit the wizard without applying your configuration choices. Tivoli Continuous Data Protection for Files will continue to run in the background and protect your files using the pre-configured settings.

## Uninstalling the Tivoli Continuous Data Protection for Files client

Uninstall the Tivoli Continuous Data Protection for Files client with the following steps.

### Before you begin

You must close the Tivoli Continuous Data Protection for Files client GUI (graphical user interface) before uninstalling.

### Procedure

1. From the Windows **Start** menu, choose **Control Panel**.
2. Choose **Add or Remove Programs**. A list becomes populated with currently installed programs.
3. Scroll down and choose the product. The **Remove** button displays.
4. Click the **Remove** button. A dialog displays to confirm that you want to remove the product.
5. Click **Yes**. Several windows display, indicating the activities to uninstall the product.
6. If you are uninstalling on Windows Vista, you will see the Files in Use window. Click **OK**. You will also see a warning that the setup was unable to automatically close all requested applications. Click **OK**.
7. A window confirming successful removal displays, and asks if you want to reboot now. Click **Yes** to reboot your system to remove file system filters.
8. Click **Finish** to exit the uninstall wizard.

---

## Advanced installation of the Tivoli Continuous Data Protection for Files client

The “Basic installation of the Tivoli Continuous Data Protection for Files client” on page 5 describes an installation that requires user interaction, and installs the Tivoli Continuous Data Protection for Files client on a single machine. There are more options for installing, upgrading, and re-configuring the client.

There are several ways to install or upgrade the client without user interaction.

### **Silent installation on a local computer**

You can install the client on your local computer silently. This means that you will not see the installer wizard, nor the initial configuration wizard.

### **Silent product upgrades and configuration updates on a local or remote computer**

You can upgrade the product level and change protection settings on a local or remote computer silently. When you put a new client installer file or a new configuration file in the administration folder, the client pulls the information. The client adopts the new product level from the installer file or the new protection settings from the configuration file.

### **Silent installation pushed to a remote computer**

Using silent installation, an administrator can push the client to remote computers.

Once the client is installed, it will pull product upgrades and configuration information from the administration folder.

### **Silent local upgrade**

You can upgrade the product level on your local computer by putting the upgraded installer in the administration folder. The client pulls the new code. After a reboot, the product protects your files at the new level.

### **Silent installation pushed to another computer**

An administrator can push the client to other computers.

## **Install the Tivoli Continuous Data Protection for Files client silently on a single local computer**

You can install the Tivoli Continuous Data Protection for Files client on your local computer silently. In a silent installation, you do not interact with the installation wizard. If you provide a configuration file, you do not interact with the client initial configuration wizard.

Silent installation on a computer requires you to do the following:

- Invoke the installer with appropriate parameters.
- Optionally, you can provide a configuration file for the client. See “Use the PC Edition or Server Edition of Tivoli Continuous Data Protection for Files to create a configuration file” on page 25. If you do not provide a configuration file, the initial configuration wizard will start after installation.

### **Silent installation command for the Tivoli Continuous Data Protection for Files client**

Invoke the installer for a silent installation of the Tivoli Continuous Data Protection for Files client.

The client installer is an executable file with a name like 3.1.8.0-TIV-CDP-x86\_windows.exe for 32 bit, or 3.1.8.0-TIV-CDP-x64\_windows.exe for 64 bit. The installer name must include CDP and must be file type .exe. The version infix of the file name (3.1.8.0) can change from one version to the next.

Invoke the installation with the installer file name followed by parameters.

## Parameters

All parameters are optional. There must be a blank space before each parameter.

- /S** This parameter is passed to the installer executable and indicates silent installation. Without this parameter, you will install interactively via the installation wizard and (if necessary) the initial configuration wizard.
- /v** This parameter allows you to pass options supported by the Windows Installer to the MSI package. No space is allowed between /v and the options list. The options list must be enclosed in quotes if there are blank spaces in the options list. The following options are allowed:

**/qn** Everything except setup.exe is silent.

**/l\*v log file path**  
Specify a file to log the installation activities.

### INSTALLDIR=folder

The default new installation folder is C:\Program Files\Tivoli\CDP\_for\_Files. If you want to install to another folder, use this option and specify the folder. For example, you could specify C:\applications\cdp.

**Restriction:** You cannot specify the root folder of a drive. For example, you cannot specify C:\.

### REBOOT=ReallySuppress

Suppress system reboot after installation. This option is recommended when you are pushing installation to a remote computer, because rebooting after installation could be disruptive to users on the remote system. This option is not recommended for a local installation when a previous version of the client exists.

## Example: Install silently with default options

To install silently with default settings, including reboot after installation (this is recommended if the client was previously installed), use this syntax:

```
TivoliCDP_CDPForFiles_3.1.8.0_windows.exe /S /v"/qn "
```

Note that no blank space is permitted between the /v parameter and the double-quote delimiter of the options list.

## Example: Install silently with specific options

To install silently to non-default folder (c:\newdir); and to log the installation activities to c:\temp\msi.log; and to suppress a reboot after installation, use this syntax:

```
TivoliCDP_CDPForFiles_3.1.8.0_windows.exe  
/S /v" /qn INSTALLDIR=c:\newdir /l*v c:\temp\msi.log REBOOT=ReallySuppress "
```

## Upgrade the Tivoli Continuous Data Protection for Files client silently: pull upgrades and configurations

Once you have installed the Tivoli Continuous Data Protection for Files client, you can upgrade to a new product version by putting an installer executable file or a configuration file in the administration folder. The client pulls the software update or new configuration.

### Upgrade the product level

To upgrade the product, put a new client installer in the downloads folder. (For information on the downloads folder, see “Administration folders” on page 97). The client will pull the new product code and notify you to reboot the computer.

The client checks for new installer and configuration files every 10 – 20 minutes. If the date of an installer file is more recent than the file used for the current product level, the client will adopt the new product level. When the client detects a new installer file, a message will open from the system tray indicating that a new version of the software is being installed. When the installation is complete, a message will open from the system tray indicating that the new software has been loaded, and you must reboot to resume data protection. Between the time that the client pulls the upgrade and until the computer is rebooted, the client stops protecting your files. After the reboot, the client continues protecting your files. Your protection settings are the same as in the previous version of the product.

**Note:** Until you reboot, client will not back up any files. You will not lose any existing backup copies, but any changes you make will not be protected. If there is a long delay between install and reboot, consider forcing a backup of all protected files to protect any files that were changed during that time.

### Change protection settings

To change the protection settings, put a new configuration file in the downloads folder. To create a configuration file with the PC Edition or Server Edition of Continuous Data Protection for Files, see “Use the PC Edition or Server Edition of Tivoli Continuous Data Protection for Files to create a configuration file” on page 25. If the modification date of a configuration file is more recent than the file used for the current configuration, Tivoli Continuous Data Protection for Files will adopt the new configuration.

You can use central administration features to manage the configuration of several Tivoli Continuous Data Protection for Files clients. See Chapter 8, “Tivoli Continuous Data Protection for Files central management considerations,” on page 93 for instructions to set up and manage your clients.

The central administration feature allows you to manage existing clients' configurations, but does not support management of product upgrades.

### Considerations for upgrading a client

You can upgrade the client from previous releases as well as from a previous build of the current release.

The new client installer file name must contain the string CDP and be of file type .exe. For example, a typical name is `TivoliCDP_CDPForFiles_3.1.8.0_windows.exe`.



The date of the new installer file must be more recent than the date of the installer file that was used for the current product level.

After upgrading to a new product version, you must restart your computer.

## **Files stored on Tivoli Storage Manager**

Tivoli Continuous Data Protection for Files version 2.1 uses the Tivoli Storage Manager Backup-Archive client to store files on Tivoli Storage Manager server. These files must be restored by invoking the Tivoli Storage Manager Backup-Archive client. These files cannot be restored by the Tivoli Continuous Data Protection for Files version 2.2 and higher user interface.

Tivoli Continuous Data Protection for Files version 2.2 and higher uses the Tivoli Storage Manager API to store files on the Tivoli Storage Manager server. These files can be restored directly by the Tivoli Continuous Data Protection for Files client or Tivoli Storage Manager FastBack for Workstations user interface. These files cannot be restored by the Tivoli Storage Manager Backup-Archive client.

## **Upgrading from Windows XP to Windows Vista**

If you used Continuous Data Protection for Files version 2 on a Windows XP computer, you must follow this procedure:

1. Upgrade Continuous Data Protection for Files from version 2 to version 3 on the Windows XP computer.
2. Upgrade the operating system from Windows XP to Windows Vista.
3. Consider the configuration of your protected files, and change folder names as appropriate. The XP folder `\My Documents\` becomes `\Documents\` in Vista.

## **Cleaning up after uninstallation**

If you uninstall the client, you must clean your data files before installing the client again. When the client is uninstalled, some files are not removed by the installer. The old files can cause problems for a new installation of the client.

After uninstalling the client, and before installing it again, remove files in the following areas:

### **local storage area**

The local storage area is the `RealTimeBackup` folder on a local drive. Rename this folder if you want to save the backup copies.

### **remote storage area for the computer**

The remote storage area is in the `RealTimeBackup\computer_name` folder of the remote device that you configured for the previous installation. Rename this folder if you want to save the backup copies.

### **installation folder**

The default installation folder is `C:\Program Files\Tivoli\CDP_for_Files`.

### **The program data folder**

The program data folder varies according to operating system and previously installed versions.



## Pull upgrade from version 2 to version 3

If your version 2 Tivoli Continuous Data Protection for Files client pulls the installation of version 3.1, your version 2 client must be at level 2.2.1.20 or later. If you install by invoking the installer, the previous client level is not an issue.

## Deploying the client to other computers

There are several ways to deploy the initial installation of the Tivoli Continuous Data Protection for Files client to other computers.

- Use Microsoft Systems Management Server to install the Tivoli Continuous Data Protection for Files.msi package. Refer to Microsoft Systems Management Server documentation.
- Use IBM Tivoli Provisioning Manager Express®. Refer to IBM Tivoli Provisioning Manager Express documentation.
- Place the installer on a file server and ask end users to invoke the installer.

When the Tivoli Continuous Data Protection for Files client is initially installed, the installer can get configuration data from the file `\System32\fpd.txt` in the Windows installation folder. (See “Windows installation folder” on page 26). If this file does not exist, the installer installs Tivoli Continuous Data Protection for Files with the default configuration settings.

### FpPushInst.exe (push install command)

The `FpPushInst.exe` executable file pushes a client installer to another computer.

The `FpPushInst.exe` executable file can be found at the root of the installation folder.

The default installation folder is `C:\Program Files\Tivoli\CDP_for_Files`.

The `FpPushInst.exe` executable file pushes the Tivoli Continuous Data Protection for Files client installer executable to the `\System32\` sub-folder of the `ADMIN$` share on the target computer. (See “Windows installation folder” on page 26). The `FpPushInst.exe` executable file can also copy a local configuration file `fpd.txt`, to `\System32\` in the Windows installation folder. `FpPushInst.exe` executable file then starts a service on the remote computer to invoke a silent installation. Due to firewall and other system settings, the `FpPushInst.exe` executable does not work in some environments.

### Syntax

**FpPushInst.exe** remote computer name **/user:username /pwd:password /c:**local path of configuration file **/r** local path of installer **/S /v\** **/qn** options **\"**

### Parameters

There must be a blank space before each parameter. Blank space is optional between parameters and their values.

#### remote computer name

The host name of the computer where you want to install Tivoli Continuous Data Protection for Files.

#### /user:username /pwd:password

An administrative user account and password on the remote computer.

**/c:local path and file name of configuration file**

The path and file name of a Tivoli Continuous Data Protection for Files configuration file on the local computer. To create a configuration file with the PC Edition or Server Edition of Continuous Data Protection for Files, see “Use the PC Edition or Server Edition of Tivoli Continuous Data Protection for Files to create a configuration file” on page 25. The FpPushInst.exe executable copies the local configuration file to the \System32\ folder in the Windows installation folder of the remote computer. This parameter is optional. If not specified, the configuration of the remote Tivoli Continuous Data Protection for Files client will be the default configuration.

**Note:** The Tivoli Continuous Data Protection for Files installer looks for a configuration file named fpa.txt in the \System32\ folder in the Windows installation folder of the remote computer. Tivoli Continuous Data Protection for Files installer will not use a configuration file in that folder with any name other than fpa.txt. Hence, in most circumstances, the file you specify with this parameter should be named fpa.txt.

**/r local path and file name of installer file**

The path and file name of Tivoli Continuous Data Protection for Files installer file on local computer. Separate the parameter and the value with a blank space.

The installer file name must contain the string CDP and end with .exe. For example, a valid path and name is  
TivoliCDP\_CDPForFiles\_3.1.0.0\_windows.exe.

The installer file name must contain the string  
Tivoli\_FB4WKSTNS\_6.1.0.0\_x86\_windows.exe and end with .exe. For example, a valid path and name is Tivoli\_FB4WKSTNS\_6.1.0.0\_x86\_windows.exe.

- /S** The /S parameter is passed to the installer executable and indicates silent installation. This parameter is required in a push installation. No space is allowed between the setup.exe initial parameter list delimiter ("" and the initial parameter (/S).
- /v** This parameter allows you to pass options supported by the Windows Installer to the MSI package. No space is allowed between /v and the options list. The options list must be enclosed in quotes if there are blank spaces in the options list. The following options are allowed:

**/qn** Everything except setup.exe is silent. This option is required in a push installation.

**/l\*v log file path**

Specify a file to log the installation activities. The path corresponds to the remote computer.

**DONT\_LAUNCH\_FILEPATHSRV=1**

This option is required for push installation. A pushed installation runs in the system context. It is not recommended that you launch Tivoli Continuous Data Protection for Files in the system context after installation. Running Tivoli Continuous Data Protection for Files in the system context can lead to failures when backing up files, or failures later when a user tries to restore files. Use this option to suppress launching Tivoli Continuous Data Protection for Files in the system context immediately after installation.

**INSTALLDIR=folder**

The default installation folder is C:\Program Files\Tivoli\

CDP\_for\_Files. If you want to install to another folder, use this option and specify the folder. The path corresponds to the remote computer.

#### **REBOOT=ReallySuppress**

Suppress system reboot after installation. This option is recommended when you are pushing installation to a remote computer because rebooting after installation could be disruptive to users on the remote system. This option is not recommended for a local installation when a previous version of Tivoli Continuous Data Protection for Files exists.

### **Example**

This example pushes the installer file (TivoliCDP\_CDPForFiles\_3.1.0.0\_windows.exe) to the remote computer (Computer1). It also pushes a local configuration file c:\fpa.txt to the remote computer's Windows installation folder as \System32\fpa.txt. The /user and /pwd values are used to log on to the remote computer for this operation. FpPushInst.exe then starts a service on the remote computer to invoke the installer, passing to it the parameters: /S, REBOOT=ReallySuppress, DONT\_LAUNCH\_FILEPATHSRV=1. This tells the installer to install silently; do not reboot after installation, and do not launch Tivoli Continuous Data Protection for Files in the system context immediately after installation. The installer will adopt the protection settings in the configuration file in the Windows installation folder \System32\fpa.txt.

```
FpPushInst.exe \\Computer1 /user:Administrator /pwd:secret /c:c:\fpa.txt  
/r C:\TivoliSoftware\TivoliCDP_CDPForFiles_3.1.0.0_windows.exe  
"/S /v\" /qn REBOOT=ReallySuppress DONT_LAUNCH_FILEPATHSRV=1 \"
```

## **Use the PC Edition or Server Edition of Tivoli Continuous Data Protection for Files to create a configuration file**

### **About this task**

When Tivoli Continuous Data Protection for Files is initially installed, the installer can get configuration data from a file \System32\fpa.txt in the Windows installation folder. (See “Windows installation folder” on page 26). If this file does not exist, the installer will install Tivoli Continuous Data Protection for Files with default configuration.

After the initial installation, Tivoli Continuous Data Protection for Files will pull future configuration settings from configuration files placed in a downloads folder in the central administration area. New configurations will be adopted within 10 to 20 minutes after being placed in the downloads folder. For more information on the downloads folder see “Administration folders” on page 97. For more information on the central administration area see Chapter 8, “Tivoli Continuous Data Protection for Files central management considerations,” on page 93.

Create a configuration file from an existing client:

### **Procedure**

1. Use the Settings Notebook to configure the client as you want the configuration for other Tivoli Continuous Data Protection for Files clients.
2. Publish the configuration. Use the **Publish...** check box in the **Central Administration** page of the user interface. A configuration file called fpcommands.xml is created in the global downloads folder in the central administration area.

## What to do next

If you will use the file to change configuration after an initial installation, do not rename the file. Tivoli Continuous Data Protection for Files pulls configuration data only from a file named `fpcommands.xml`.

To use the published configuration settings when invoking the installer, rename the file to `fpa.txt` and place it in the `\System32\` folder in the Windows installation folder.

To use the published configuration settings after an initial installation, place the `fpcommands.xml` file in the downloads folder of the consuming Tivoli Continuous Data Protection for Files client.

If you will use the configuration file for a push installation, do not configure a forced backup. If you force a backup on a pushed installation, Tivoli Continuous Data Protection for Files will attempt to back up files in the system context. These backups can fail, and when a logged on user later attempts to restore these files the restore can fail. To avoid a forced backup, do not check the **Run 'Scan Now' on other computers** check box in the **Central Administration Settings** window.

## Windows installation folder

The Tivoli Continuous Data Protection for Files client references the Windows installation folder during installation. During the installation, the client can get configuration information from a file named `fpa.txt` in the `\System32\` subfolder in the Windows installation folder.

The Windows installation directory is also known by the environment variable `%WINDIR%`, and as shared drive `ADMIN$`. Typically, the Windows installation directory is `C:\Windows`.

---

## Chapter 3. Changing Protection Settings

When you initially install the Tivoli Continuous Data Protection for Files client, the Initial Configuration Wizard guides you to set your protection settings. After installation, you can change your protection settings with the Settings Notebook. If you are managing other Tivoli Continuous Data Protection for Files clients, see also Chapter 8, “Tivoli Continuous Data Protection for Files central management considerations,” on page 93. If you are managing a server, see also Chapter 9, “Protecting a server with Tivoli Continuous Data Protection for Files,” on page 103.

---

### Settings Notebook of Tivoli Continuous Data Protection for Files

After the initial installation and configuration, you can change your protection settings with the Settings Notebook.



Open the Settings Notebook by clicking **Settings** from the menu of the Tivoli Continuous Data Protection for Files Status panel.

Use the tabs in the left frame to navigate to any panel whose settings you want to change. Click the **OK** button to apply your new settings and return to the Tivoli Continuous Data Protection for Files Status panel. Click the **Apply** button to apply your new settings and stay in the Settings Notebook. Click the **Cancel** button to exit the Settings Notebook without applying your changes.

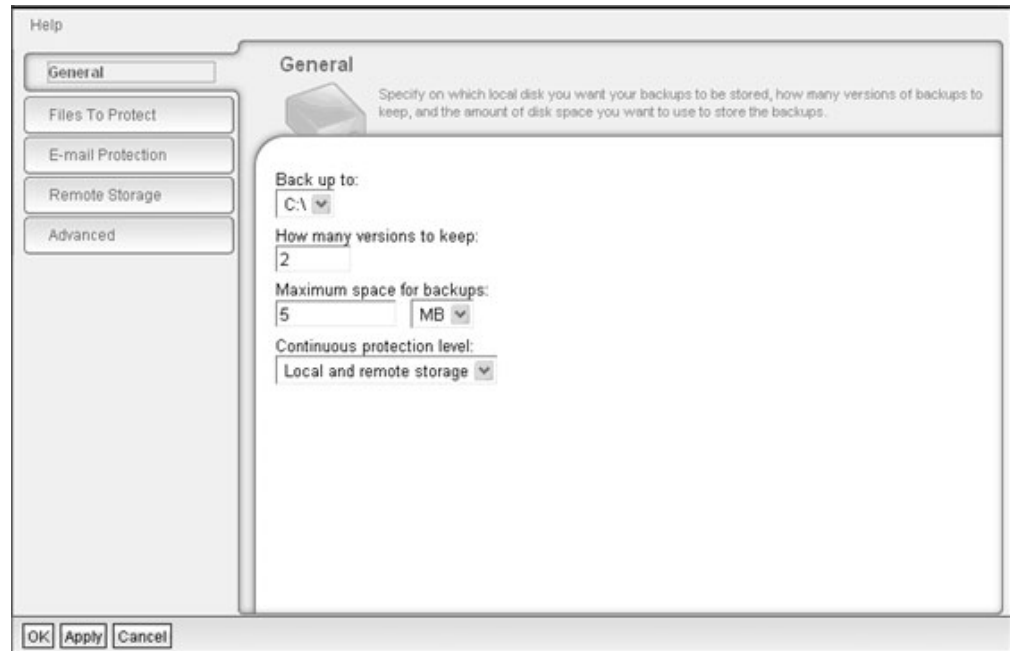
The Settings Notebook has 5 panels:

- Use the “**General** panel of client Settings Notebook” on page 28 for these settings:
  - Which drive to use for your local storage area

- How many versions of protected files to keep on local storage area
- The maximum size of your local storage area
- Whether you want to store backup copies on local storage area, remote storage area, neither, or both
- Use the “**Files to Protect**” panel of client Settings Notebook” on page 30 for these settings:
  - Which folders and files to continuously protect
  - Which folders to vault
  - Force a backup of all protected files when you change which files are continuously protected
- Use the “**E-mail Protection**” panel of client Settings Notebook” on page 41 for your e-mail protection settings, including the schedule to protect your e-mail and all files that are backed up on a schedule.
- Use the “**Remote Storage**” panel of client Settings Notebook” on page 42 for these settings:
  - Your remote storage area
  - How many versions of protected files to keep on remote storage area
  - The maximum size of your remote storage area
  - Whether to encrypt, compress, or use sub-file copy for backup copies stored on remote storage area
- Use the “**Advanced**” panel of client Settings Notebook” on page 48 for these settings:
  - Whether to allow program messages to pop up
  - Performance settings, including the following:
    - Maximum size of file to protect on local storage area
    - Maximum size of file to protect on remote storage area
  - The Advanced panel contains a link to set your scheduled backups. Follow the link to do these tasks:
    - Choose which files to back up on a schedule
    - Start a backup of your scheduled files immediately
    - View reports of your scheduled backups
  - The Advanced panel also contains a link to manage the throttle settings. Follow the link to do these tasks:
    - Manage the network rules settings
    - Manage bandwidth usage
    - Define throttle speed

## General panel of client Settings Notebook

Use the **General** panel to choose the local storage area for the backup copies of your continuously protected files. Choose the storage location and space, and how many versions of protected files you want to keep.



### Back up to: drop down list

Choose the location where your local backup copies will be stored. Local backup copies will be stored in a folder on one of your local drives. The default configuration is the non-removable local drive which has the most free space.

**Note:** Select a non-removable drive. Only non-removable drives can be used as the storage location for local backup copies.

Tivoli Continuous Data Protection for Files will create backup copies in a subfolder named `\RealTimeBackup\`. For example, if the local storage area is configured as the `C:\` drive, backup copies will be stored in `C:\RealTimeBackup\`.

**Note:** The drive selected in the **Back up to:** area specifies the location where the backup copies are stored. The **Back up to:** location does not specify the files and folders to protect.

### How many versions to keep: field

Tivoli Continuous Data Protection for Files can save more than 1 backup version of each file. When you restore a file, you can choose which version of the file you want to restore. When the configured number of versions is reached, older versions of a file are deleted. Keeping more versions requires more storage space, but allows you more choices when restoring a file.

### Maximum space for backups: field

Specify how much space to use for all backup copies on local storage. When the storage area becomes full, older versions of files are deleted until the storage area is at about 80 percent of the configured maximum. If, after deleting all versioned backup copies, local storage space is still insufficient, Tivoli Continuous Data Protection for Files will delete the oldest non-versioned files.

**Note:** No warning message displays when the maximum space is reached.

The default space for local backups is 500 MB.

During a forced backup of all protected files, Tivoli Continuous Data Protection for Files can use more space than you configured for local storage. (A forced backup of all files occurs during the initial backup when you install Tivoli Continuous Data Protection for Files, and when you check the **Back up with new settings** box in the Settings Notebook). The excessive space condition is only temporary. After the forced backup of all files is complete, the first time you change a protected file, Tivoli Continuous Data Protection for Files purges files from the local storage area, if necessary, to meet the space you configured.

**Note:** If you try to back up a file which is larger than the space you have allocated for your storage area, Tivoli Continuous Data Protection for Files will purge all older versions of your files, and then will fail to back up the file. Make sure that the maximum space for your storage areas is greater than the file size limit in the **Advanced** panel of the Settings Notebook.

### Continuous protection level: drop down list

Tivoli Continuous Data Protection for Files offers two levels of protection for your files: continuous protection and scheduled protection. See “Types of protection” on page 2 for a discussion of these two types of protection.

Use this box to select which storage areas to use for continuously protected files.

**None** Files will not be protected.

#### **Local storage only**

Tivoli Continuous Data Protection for Files will create backup copies only on the local storage area.

#### **Remote storage only**

Tivoli Continuous Data Protection for Files will create backup copies only on the remote storage area.

#### **Local and remote storage**

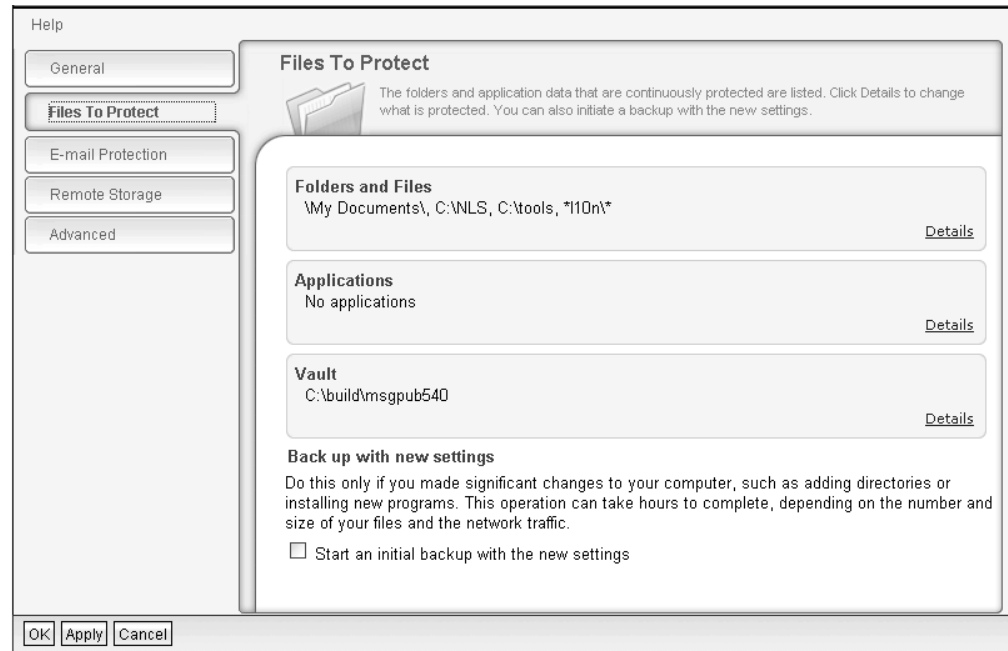
Tivoli Continuous Data Protection for Files will create backup copies on both the local and remote storage areas. This provides the most protection for your files, and is the default choice.

## Files to Protect panel of client Settings Notebook

Select the files and folders that you want to continuously protect, and the files and folders you want to vault.

You can specify the files to protect by using **Folders and Files** and **Applications**. You can also specify those folders that you want to vault. Vaulted folders cannot be modified nor deleted.





## Folders and Files box (Settings Notebook) of Tivoli Continuous Data Protection for Files

### Folders and Files

\\My Documents\\, C:\\NLS, C:\\tools, \*!10n\\\*

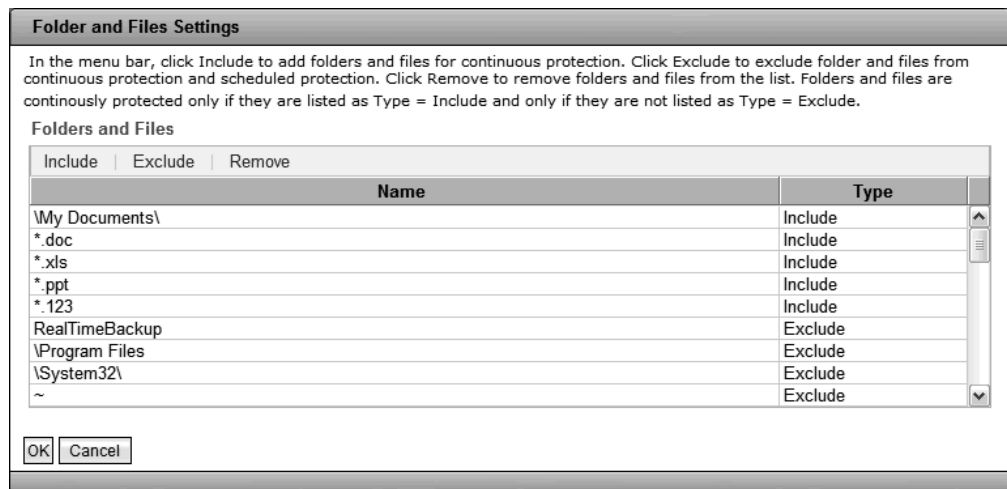
[Details](#)

This box gives a summary of the folders and files that are continuously protected. The number of items protected refers to the items in the list of folders and files. A single list item can specify more than one file. Click the **Details** link to view all items in the list and modify the list. The **Folders and Files Settings** dialog will display.

### Folders and Files Settings dialog for continuous protection by Tivoli Continuous Data Protection for Files:

Specify which folders and files to continuously protect by selecting those to include and those to exclude.

## List of Folders and Files to Include and Exclude



The top of the list box has three menu buttons. Click the buttons to add and remove items from the list.

### Include

Click **Include** to add files and folders that you want to continuously protect. The **Select folders** dialog will open.

### Exclude

Click **Exclude** to add files and folders that you want to exclude from continuous and scheduled protection. The **Select folders** dialog will open.

### Remove

Select a list item, then click **Remove** to remove that list item.

Each row in the list has two columns:

**Name** Patterns in the **Name** column specify one or more files or folders. See “Wildcards in file specifications” on page 10 to determine what files and folders will match a **Name** pattern with blanks or asterisks. When a folder is protected, all of its files and sub-folders are protected.

**Type** Values in the **Type** column indicate if the files and folders should be included or excluded from protection. Files and folders of type **Exclude** will be explicitly excluded from continuous and scheduled protection. Files of type **Include** will be protected. **Exclude** has precedence over **Include**, so any file or folder that matches an **Exclude** pattern will not be protected, even if the same file or folder matches an **Include** pattern. (See “Including and excluding files from protection” on page 33).

**Note:** This **Folders and Files Settings** list looks similar to the list displayed in the Initial Configuration Wizard. However, the Initial Configuration Wizard only allows file additions (all of type **Include**). The Initial Configuration Wizard is intended to get Tivoli Continuous Data Protection for Files started quickly and easily. Any **Exclude** patterns exclude files from protection as soon as Tivoli Continuous Data Protection for Files is installed, but they are hidden from view during installation. Although the installed **Exclude** patterns are recommended for most users, the **Exclude** patterns are exposed in the Settings Notebook to allow advanced users more robust configuration options.

## Protected drives:

All files that meet the include and exclude specifications, and that appear to Tivoli Continuous Data Protection for Files as internal drives, are protected.

In some cases, an external USB drive looks like an internal drive, and Tivoli Continuous Data Protection for Files tries to protect the files on that drive. If you do not want to protect that drive, add the drive letter to the exclusion list so that all files on the USB drive are excluded from protection. For example, if your E: drive is a USB drive, add E:\ to the list of excluded items.

## Including and excluding files from protection:

Protected files are specified by including files and by explicitly excluding files.

## Continuous and scheduled protection (not vaulted)

Tivoli Continuous Data Protection for Files keeps a list of files that are included for protection, and a list of files that are explicitly excluded from protection. The list of included files is separated into those files that are included for continuous protection, and those files that are included for scheduled protection. If a file is excluded, it is excluded from both continuous and scheduled protection.

A file is on the include list for continuous protection if it is defined as type **Include** in the **Folders and Files** box, or if it is defined in the **Applications** box. Both of these boxes are in the **Files to Protect** panel in the Settings Notebook of the client.

A file is on the include list for scheduled protection if it is defined in the **E-mail Protection** panel or the **Scheduled Backup Settings** link in the **Advanced** panel in the Settings Notebook of the client.

A file is on the exclude list if it is defined as type **Exclude** in the **Folders and Files** box in the **Files to Protect** panel in the Settings Notebook of the client.

It is possible that a file can be on both the include list and the exclude list.

If a file (or folder) is on the exclude list, it is not protected by continuous protection or by scheduled protection. Even if the file (or folder) is also on an include list, it is not protected.

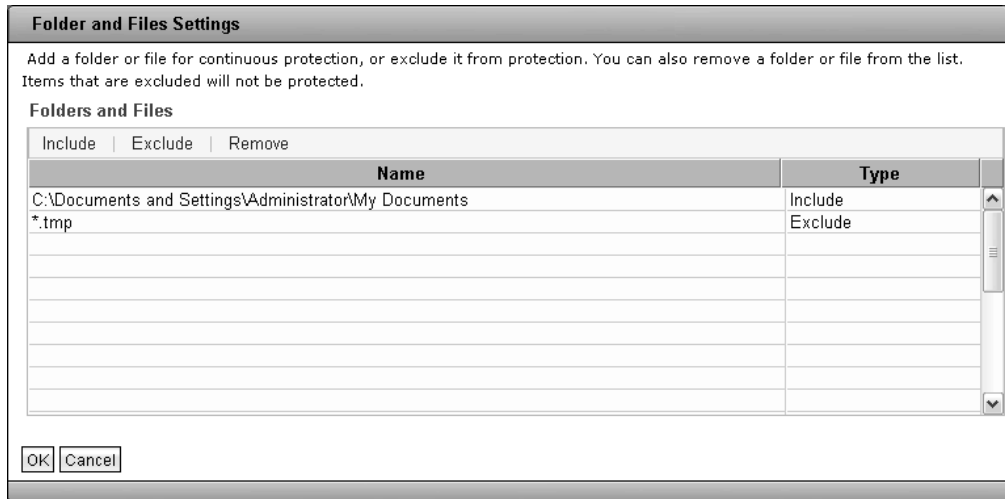
If a file is on an include list and not on the exclude list, it is protected.

If a file is not on an include list, it is not protected.

The table summarizes the interaction of inclusion and exclusion. The two left columns indicate if a file is included or excluded, and the right column indicates if the inclusion and exclusion yield protection for the file.

*Table 3. Inclusion and exclusion.* File protection by Include list and Exclude list.

	File is not specified in Include list.	File is specified in Include list.
File is specified in Exclude list.	File is not protected.	File is not protected.
File is not specified in Exclude list.	File is not protected.	File is protected.



Assume that the **Folders and Files** box includes only \My Documents\, and explicitly excludes only \*.tmp . The result is that any files with .tmp file extension in \My Documents\ folder is not protected. All other files in \My Documents\ folder and its subfolders are protected.

As another example, assume the pictured list. If you choose an application in the “**Application Settings**” dialog of Tivoli Continuous Data Protection for Files” on page 37 that typically creates files with extension .tmp, those .tmp files are not protected.

Tivoli Continuous Data Protection for Files provides a default list of files and folders to be included and excluded. This list excludes from protection various Windows operating system files, the **Program Files** folder, and temporary files. These exclusions are recommended.

If you have leading or trailing blank spaces in your file specifications, or if you use wildcards in your file specifications, the specifications in your files list can match more than one folder or file. See “Wildcards in file specifications” on page 10 for an explanation of how specifications match file and folder names.

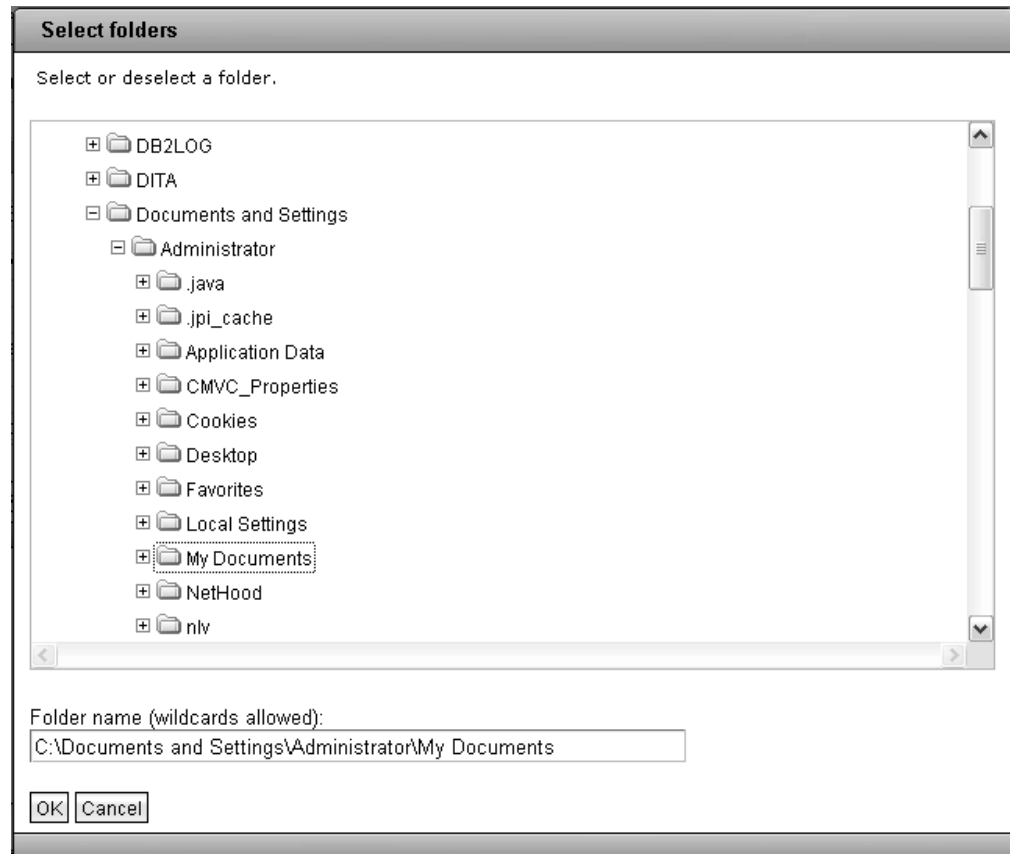
For example, consider a small variation to an excluded specification: \temp\. If you use instead \temp (without the closing folder delimiter), there is a very different effect. This small change has a potentially large impact. All files which have \temple, \temptation\, \temperature\, \template\, and other variations of \temp\*, would be excluded from protection.

Consider another example. You choose to exclude \*.gif so you can avoid backing up files saved by your browser when you open different Web sites. This specification also excludes all .gif files in \My Pictures\ folder.

### Vaulted folders

Vaulted folders, and the files in them, are not affected by the lists of files that are included for continuous or scheduled protection. However, excluded files and folders are not vaulted. All files that you define in the **Vault settings** dialog in the **Files to protect** panel of the Settings Notebook of the client are vaulted, unless they are excluded items.

## Select folders dialog of Tivoli Continuous Data Protection for Files:



The **Select folders** dialog allows you to specify files and folders. You can browse to choose a folder, or type the name of a file or folder in the **Folder name** text field. If you browse and choose a file or folder, you can modify its path in the **Folder name** text field.

**Note:** Only your internal drives can be protected. Any external storage devices are considered remote storage devices.

### Wildcards in file specifications:

You can use wildcards to specify the files to protect.

You can enter the complete path of a file that you want to protect. For example, C:\Documents and Settings\Administrator\My Documents\Soccer\2005AYS0\Parent Info U8B.doc. The complete path unambiguously matches a single file. But to specify all files this way requires many file paths. Use asterisks and blanks as wildcards to specify several files.

An asterisk matches any number of characters in a file path. If there are no asterisks, then Tivoli Continuous Data Protection for Files matches any file whose fully expanded path name has that exact pattern anywhere in the path or filename. The pattern is not case-sensitive.

If there are no asterisks in the pattern, then blank spaces before and after the pattern are interpreted as asterisks. Hence, \myDocs\ and \*\myDocs\\* yield the same matches. If there are asterisks in the pattern, then blank spaces before or after

the pattern match no characters. Hence, \myDir\, \*\myDir\, and \myDir\\* could yield three different matches, as in the table of examples pictured.

As an example, assume a pattern fish. This pattern matches: C:\dir\fish.doc and C:\fish\anyfile.doc and c:\Dirfishfood\something.

If the pattern has slashes around it (\fish\), it matches any object with \fish\ somewhere in the path. This pattern matches C:\fish\anyfile.doc but not C:\dir\fish.doc and not c:\Dirfishfood\something

Table 4. File and folder pattern matches

This pattern ...	... matches these folders and files on your computer:
\myDir\ or \mYdiR\ or *\myDir\* or *\mydir\*	c:\myDir\ c:\myDir\Contacts\ c:\myDir\Contacts\contacts.txt c:\Projects\myDir\ c:\Projects\myDir\myThings\ c:\Projects\myDir\myThings\things.doc c:\Projects\myDir\myThings\myPhoto.jpg d:\Notes\myDir\
*\myDir\	c:\myDir\ c:\Projects\myDir\ d:\Notes\myDir\
\myDir\*	
d:*\mydir\*	d:\Notes\myDir\
\my best	c:\Books\My Best.doc c:\Photos.jpg\My Best Photo\ c:\Photos.jpg\My Best Photo\Best.jpg f:\Projects\My Best Project\ f:\Projects\My Best Project\Dream.xls
.jpg	c:\Photos.jpg\ c:\Photos.jpg\myHouse.bmp c:\Photos.jpg\My Best Photo\Best.jpg c:\Projects\myDir\myThings\myPhoto.jpg
*.jpg	c:\Photos.jpg\ c:\Photos.jpg\My Best Photo\Best.jpg c:\Projects\myDir\myThings\myPhoto.jpg
E:\ E:\*	All files and folders on the E: drive.

## Applications box (Settings Notebook) of Tivoli Continuous Data Protection for Files

This box gives a short list of the applications that are protected.

### Applications

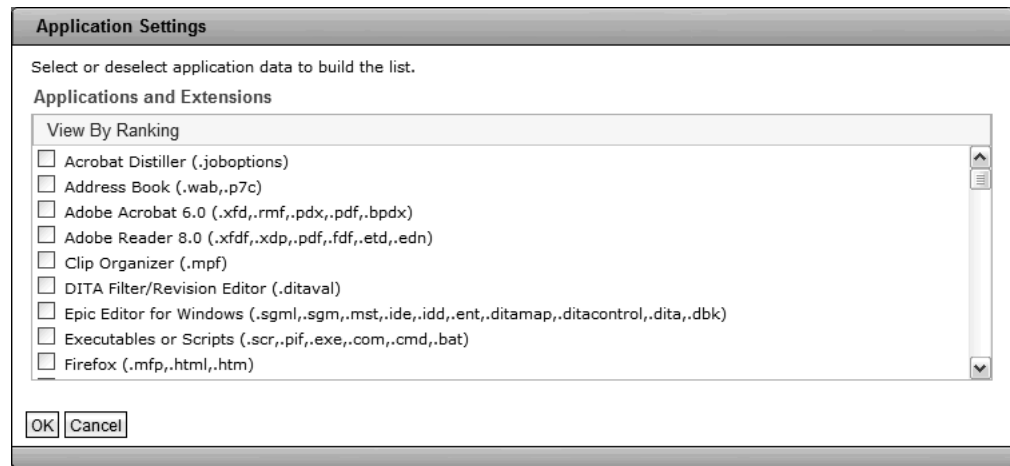
Lotus Organizer, Microsoft Excel, Microsoft PowerPoint, Microsoft Word, Software DVD Player

[Details](#)

To see the complete list of the applications that are protected, click **Details**. The **Application Settings** dialog will display.

## Application Settings dialog of Tivoli Continuous Data Protection for Files:

Specify a list of applications to protect.



The **Applications and Extensions** box presents a list of applications and their associated file extensions. When an application is checked, all files with the associated extensions will be protected. For example, when Adobe Acrobat is checked, all files with extension .xpd,.rmf,.pdf, and .bpdf will be protected. You can check and uncheck applications to suit your protection needs.

The list of applications has two views. Each view orders the applications in a different way. Click the menu item at the top of the box to change the view.

### View by Ranking

The applications that have the greatest quantity of files on your computer are presented at the top of the list. The applications that have the least quantity of files on your computer are presented at the bottom of the list.

### View Alphabetically

The applications are presented in alphabetical order.

If you check a box, all file extensions associated with that application will be added to the list of protected files.

If you uncheck a box, all files with that extension will be removed from the list of protected files. Note that removing file extensions from the list of protected files does not mean adding those files to the list of files that are explicitly excluded from protection.

Click **OK** in any of the views to update the list of protected files. Click **Cancel** to leave the dialog without changing the list of protected files.

You can add files to be protected in the **Application Settings** dialog, but these applications will be protected only if the files are not explicitly excluded. (See "Including and excluding files from protection" on page 33).

## Vault box of Tivoli Continuous Data Protection for Files

Displays a summary of vaulted folders.

### Vault

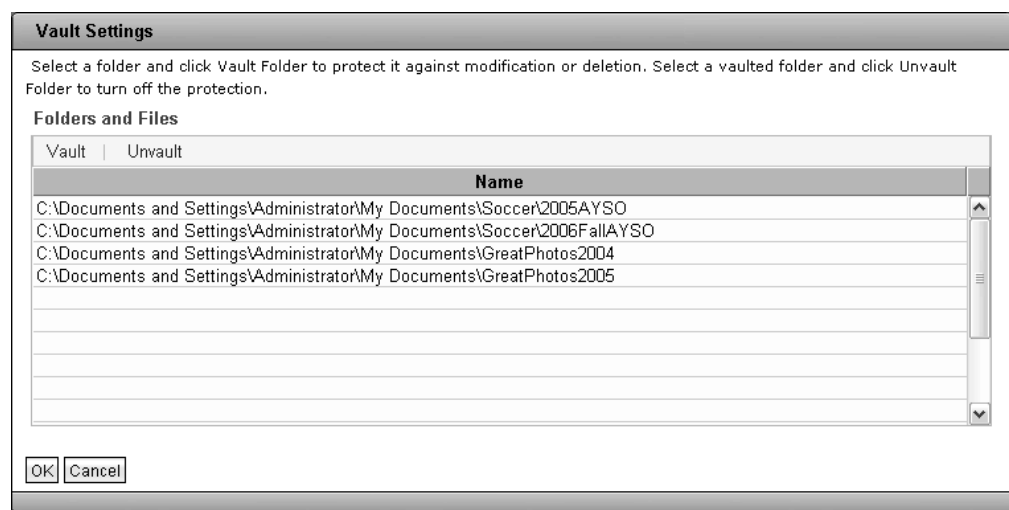
C:\build\msgpub540

[Details](#)

To change the folders that are protected, click **Details**.

### Vault Settings dialog of Tivoli Continuous Data Protection for Files:

Specify a list of folders. All files in that folder and all subfolders will be protected from being changed or deleted.



Vaulted folders cannot be modified nor deleted. Files can be added to the folder, but the files in the folder cannot be changed nor deleted.

The **Folders and Files** box lists the files that are protected by vault.

Click **Vault** to open a browser to choose files to protect.

Click **Unvault** to remove vault protection from the selected folder, and all its files and sub-folders.

The **Include** items from other dialogs does not affect the list of vaulted folders. However, items in the **Exclude** list will not be vaulted. All folders in the **Vault settings** dialog will be vaulted, unless they are excluded.

Click the **OK** button to add your changes to the pending settings updates.

**Note:** The configured settings will not be applied until you click the Settings Notebook **OK** or **Apply** button

Click the **Cancel** button to exit the dialog without applying changes.

### Vault duration:



You can specify the duration of vaulting by using special folder names. Files in these folders are vaulted for a specific period of time and after that time the files are not vaulted.

To specify duration of vaulting, create a folder named `\KeepSafe\` in any vaulted area. In the `\KeepSafe\` folder, create folders that indicate the vaulting period. For example, `C:\MyImportantDir\KeepSafe\Retain 3 years\`. Any file created in that folder are prevented from alteration or deletion for three years. After the expiration time, the file is no longer vaulted. There are three ways to indicate the vaulting period. Each way requires that you use a keyword in the folder name.

#### 1. `\KeepSafe\RetainForever\`

Files in this folder are vaulted forever. Such material can never be moved to another folder with shorter vaulting duration. Material can be moved within the folder tree and to other folders of the same duration.

#### 2. `\KeepSafe\Retain Duration\`

Specify exact vaulting periods using English terminology. Duration is specified by a combination of the following time units:

Years

Days

Hours

Minutes

Seconds

Use 1 or more time units. Each time unit you use must be preceded by a number up to five digits long. You can include spaces or underlines or dashes and mix case in the folder name. The following are valid examples:

```
\Retain23days4hours\  
\Retain 3years\  
\Retain_3years\  
\Retain-23DAYS_4minutes\  
\Retain 1000 days\
```

#### 3. `\KeepSafe\RetainUntil Date\`

Specify a date after which the vaulting expires. The date must include year, month, and day in the following format: `yyyymmddhhmmss`. The hours, minutes, and seconds are optional. The default time is `00:00:00`. The following are valid examples:

```
\RetainUntil20191231235959\  
\RetainUntil 20200101\  
\RetainUntil20200101\  
\RetainUntil_20200101\
```

#### Note:

You cannot create a `\Retain...` folder within a vaulted `\Retain...` folder.

You cannot move material that is in one vaulted `\Retain...` folder to a vaulted `\Retain...` folder that has an earlier expiration date.

### Back up with new settings check box of Tivoli Continuous Data Protection for Files

Scan all drives and back up all files that are configured for protection.

If you changed the specifications for **Folders and Files** or **Applications** to include files that were not previously protected, it is highly recommended that you back up those files now. Check the box to scan and protect all files when you click the Settings Notebook **OK** or **Apply** button.

During a forced backup of all protected files, Tivoli Continuous Data Protection for Files can use more space than you configured for local storage. (A forced backup of all files occurs during the initial backup when you install Tivoli Continuous Data Protection for Files, and when you check the **Back up with new settings** box in the Settings Notebook). The excessive space condition is only temporary. After the forced backup of all files is complete, the first time you change a protected file, Tivoli Continuous Data Protection for Files purges files from the local storage area, if necessary, to meet the space you configured.

A backup is not necessary to activate vault protection. If you changed **Vault** settings, the folders become vaulted when you click the Settings Notebook **OK** or **Apply** button.

Do not check this box if you are creating a configuration file for a push installation. If you use this configuration setting in a push install, the backup copies will be created in the system context. When you later run Tivoli Continuous Data Protection for Files in the user context, you can have problems restoring these files.

#### **When to back up all files:**

At certain times, you need to back up all files. Without this backup, some files are not protected.

When you first install the Tivoli Continuous Data Protection for Files client, you can immediately back up all files that you configured for protection. Without the initial backup, only files that change will be protected. The initial backup will protect all of the existing files that you designated for protection.

One exception is when you push an installation of Tivoli Continuous Data Protection for Files to a remote computer and do not reboot. If you force a backup on a pushed installation without rebooting, Tivoli Continuous Data Protection for Files attempts to back up files in the system context. These backups can fail, and when a logged-on user later attempts to restore these files the restore can fail.

After the initial backup, the typical rate of file changes does not require that you again back up all files at once. If you change the protection settings to include files that were not previously protected, the files need to be backed up. Until you change these files, and without a forced backup, Tivoli Continuous Data Protection for Files does not back up these files. To protect these files, you must force a backup of all files.

If you do not change your configuration but suddenly make a large change to the files that are configured for protection, you must also force a backup of all files. You must also force a backup if you add a new drive whose files are configured for protection.

A forced backup causes Tivoli Continuous Data Protection for Files to scan all local drives looking for files that you designated for protection. This means that every file in every directory will be investigated, and all files that meet the include, exclude, and size criteria will be copied to the local or remote or both storage

areas. The creation of backup copies could take several hours. It also takes significant processing resources. Plan the backup at a time when you do not need computing resources for other activities.

After this scan and backup is complete, Tivoli Continuous Data Protection for Files will continue to operate in the background without any significant impact on your regular computing activities.

Changing the **Vault** settings does not require a forced backup.

With a client, you can force a backup of your continuously protected files in two places:

- The Initial Configuration Wizard, when you initially configure the Tivoli Continuous Data Protection for Files client
- The **Files to Protect** panel in the Settings Notebook of the client, any time after initial configuration.

## E-mail Protection panel of client Settings Notebook

Select the email applications that you want to protect. Select a schedule for protecting the email applications.

The screenshot shows the 'E-mail Protection' panel within a settings notebook. On the left is a sidebar with buttons for 'Help', 'General', 'Files To Protect', 'E-mail Protection' (which is selected), 'Remote Storage', and 'Advanced'. The main area is titled 'E-mail Protection' and contains the following fields and controls:

- A note: 'Select an e-mail program that you want to protect. Large e-mail files can take a long time to back up, so protection of your e-mail is triggered at regular intervals. Select how often to protect your e-mail.'
- 'E-mail Application:' dropdown menu with 'Lotus Notes' selected.
- 'E-mail Application Data Folder (wildcards allowed):' text field with '\*.\*; \*.nsf' and a 'Browse' button.
- 'How often to protect your e-mail:' dropdown menu with 'Weekly' selected.
- 'On what day of the week:' dropdown menu with 'Friday' selected.
- 'At this time:' dropdown menu with '12:00' and a separate dropdown with 'AM' selected.
- A link: 'Scheduled Backup Settings'.
- At the bottom are 'OK', 'Apply', and 'Cancel' buttons.

Because email files typically are very large, they are not backed up continuously, but only on the schedule that you select.

Email files are backed up only to remote storage. If the remote storage is not available at the scheduled backup time, Tivoli Continuous Data Protection for Files will back up the email files when the remote storage area becomes available.

## E-mail Application list

Select one of the popular email applications in the list.

If your application is not listed, select **Other**.

## E-mail Application Data Folder text field

If you choose your email application from the **E-mail Application** list, the default file type for that application will appear in this box, and you will not be able to update the file specification. You can update this field only if you select **Other** in the **E-mail Application** list.

## How often to protect your e-mail list

You can schedule email protection at one of several intervals:

- **Never:** Email will not be protected.
- **Hourly:** Email files will be backed up every hour, just after the hour.
- **Daily:** If you choose this interval, also select the time for the backup.
- **Weekly:** If you choose this interval, also select the day and time for the backup.
- **Monthly:** If you choose this interval, also select the day of the month and time for the backup.

## Scheduled Backup Settings link

Click the **Scheduled Backup Settings** link to open the **Folders and Files Settings** dialog for scheduled backup.

## Remote Storage panel of client Settings Notebook

Specify the remote storage for the backups of your protected files.

The screenshot shows the 'Remote Storage' panel of a client settings notebook. On the left is a sidebar with navigation buttons: 'General', 'Files To Protect', 'E-mail Protection', 'Remote Storage' (which is selected), and 'Advanced'. The main area is titled 'Remote Storage' and contains the following settings:

- Back up to:** A dropdown menu set to 'External Device'.
- Location:** A text field containing 'C:\Server\'. To its right is a 'Browse' button.
- How many versions to keep:** A text field containing '5'.
- Maximum space for backups:** A text field containing '40' followed by a unit dropdown menu set to 'GB'.
- Advanced Settings:** Two radio buttons, 'Encrypt backups' and 'Compress backups', both of which are unselected.
- Use sub-file copy:** A checked checkbox with the text 'Use sub-file copy to send only changed portions of a file to remote storage to reduce network traffic. The changed portions are saved to a separate file on remote storage. (Local protection must be active.)'.
- Use sub-file copy for files larger than:** A text field containing '50' followed by a unit dropdown menu set to 'MB'.

At the bottom of the panel are three buttons: 'OK', 'Apply', and 'Cancel'.

Storing files in a remote storage area will protect the files in case local copies are lost. Backups of continuously protected files, and files protected on a schedule, are stored in the same remote area. Tivoli Continuous Data Protection for Files is very tolerant of intermittently available networks. If remote storage area is temporarily unavailable, Tivoli Continuous Data Protection for Files will queue backup copies until the remote storage becomes available.

### **Back up to: list and Location: text field**

Specify the remote storage device for your backup copies.

Specify the type of storage in the **Back up to:** list, and the location of your storage device in the **Location:** field. What you select from the **Back up to:** list affects what you enter in the **Location:** field.

### **External Device or File Server storage location**

You can specify a file server or removable disk to store the backup copies. The remote device can be another computer (such as a NAS or file server), or a remote disk, or a removable disk.

In the **Location:** field, if you choose a remote server, it is recommended that you use Universal Naming Convention (UNC) specification for the file server instead of drive letters. Drive letters can change after rebooting and often do not reconnect automatically.

If you choose a USB external device, you can select the driver letter. However, removable external device drive letters can change. Recommendations and detailed procedure for configuring USB drives as remote storage is in technical note 1245761 at the Tivoli Continuous Data Protection for Files collection of technical notes: <http://www-1.ibm.com/support/search.wss?rs=2339&tc=SS3PE6&rank=8&dc=DB520+D800+D900+DA900+DA800&dtm>

Click the **Browse** button to view a **Browse for folder** dialog box. Use this dialog box to navigate to the location for your remote storage area. If this dialog becomes hidden behind other windows, click the task bar to bring it to the front.

Tivoli Continuous Data Protection for Files creates backup copies in a subfolder named `\RealTimeBackup\computer name`. For example, if a computer name is `Computer1`, and the remote storage location is configured with the value `\\remote\share`, backup copies are stored in `\\remote\share\RealTimeBackup\Computer1\`.

If you log in to your computer with a user name and password that is valid also on your remote storage location, Tivoli Continuous Data Protection for Files authenticates transparently into that network location. If you do not log in to your computer with a user name and password that is valid also on your remote storage location, you must log in to the network interactively using another account with regular privileges. You can log in interactively by using the Net Use command.

Some versions of Windows have a concept of simplified file sharing, which allows one computer to easily connect to another computer over the network. The resulting connection allows only limited file system capabilities, and inhibits the creation of backup copies. Some information such as access control lists or file streams can be lost. It is recommended to disable simplified file sharing on the remote storage area.

## WebDAV Server storage location

Some Internet Service Providers (ISPs) provide Web-based Distributed Authoring and Versioning, or WebDAV. The WebDAV protocol provides the functionality to create, change, and move documents on a remote server. The WebDAV protocol is useful for authoring the documents which a Web server serves, but can also be used for general Web-based file storage. If your ISP provides WebDAV functionality, Tivoli Continuous Data Protection for Files can store backups on a Web-based server.

In the **Location:** field. Enter your WebDAV server location using the following format: `https://MyISP.com/MyAcct`.

When using WebDAV, Tivoli Continuous Data Protection for Files only supports the Basic Authentication method described in the HTTP 1.0 RFC. Because this authentication method sends the password as clear text over the network, it is also recommended that the Web server be configured to use secure sockets.

## Tivoli Storage Manager storage location

Tivoli Continuous Data Protection for Files can store backup copies on a Tivoli Storage Manager server. You do not need to install the Tivoli Storage Manager backup-archive client. If you install the Tivoli Storage Manager backup-archive client, it functions independently from Tivoli Continuous Data Protection for Files.

In the **Location:** field, specify the Tivoli Storage Manager server location, using the following format: `tsm://Host.com`. You can also use an IP address for the server address.

Tivoli Continuous Data Protection for Files supports Tivoli Storage Manager server version 5.5 or later.

Configure your Tivoli Storage Manager server before trying to connect from Tivoli Continuous Data Protection for Files. Register your computer as a Tivoli Storage Manager node. Tivoli Continuous Data Protection for Files will prompt for the password assigned at registration to connect to the Tivoli Storage Manager server. For more information about registering a Tivoli Storage Manager node for your computer, see *IBM Tivoli Storage Manager for Windows Administrator's Guide*.

If you specify a Tivoli Storage Manager server as the backup target, do not check any of the Advanced Settings on this page. If you want to use encryption or compression, you must specify these options in the `dsm.opt` file in the Tivoli Continuous Data Protection for Files subfolder of the "Program data folder" on page 46. Subfile backup is not supported when Tivoli Storage Manager server is the backup target.

As an alternative to backing up directly to a Tivoli Storage Manager server, consider backing up in two stages. First, use Tivoli Continuous Data Protection for Files to create remote backups on a file server. Second, schedule a Tivoli Storage Manager backup-archive client on that file server to back up the files to a Tivoli Storage Manager server. In this scenario, the only restriction is that if you use Tivoli Continuous Data Protection for Files encryption, then you cannot use Tivoli Storage Manager compression.

In order to manage storage space, the Tivoli Storage Manager administrator must grant authority to the Tivoli Storage Manager client node to delete backup copies.

For steps to assign authority to delete backup copies, see the topic in the problem determination section: “Tivoli Storage Manager client node lacks authority to delete backup copies” on page 106.

To avoid problems when using the Tivoli Storage Manager server, see the topic in the problem determination section: “Files are not backed up to Tivoli Storage Manager server” on page 106.

You can restore backup copies from the Tivoli Storage Manager server only with the Tivoli Continuous Data Protection for Files GUI. You cannot use the Tivoli Storage Manager Backup-Archive client to restore backup copies created by Tivoli Continuous Data Protection for Files.

When storing data on a Tivoli Storage Manager server, the following features must be turned off:

- Encrypt backups
- Compress backups
- Use sub-file copy

If encryption or compression is required for your data, then use the Tivoli Storage Manager compression or encryption features. Detailed information is available in the Usage recommendation for encryption, compression, and subfile backup document.

### **How many versions to keep: field**

Specify how many backup versions of a file to keep on remote storage.

Tivoli Continuous Data Protection for Files can store more than one backup version of each file. When you restore a file, you can choose which version of the file you want to restore. When the configured number of versions is reached, older versions of a file are deleted. Keeping more versions requires more storage space, but allows you more choices when restoring a file.

### **Maximum space for backups: field**

Specify how much space to use for all backup copies on remote storage.

The default size for the remote storage area is 40 GB. If you increase the number of backup versions to keep, consider increasing your storage area size. If you are unsure of how much space to allocate, you can monitor your space usage on the Status panel and adjust the version and space settings accordingly.

When the storage space becomes full, Tivoli Continuous Data Protection for Files deletes older backup copy versions of files that have several backup copy versions. After deleting the versioned backup copies, if more space is needed for new backup copies, Tivoli Continuous Data Protection for Files deletes the last remaining backup copies of enough files to make room for the newest backup copy.

If you try to remotely back up a file which is larger than the space you have allocated for your remote storage area, Tivoli Continuous Data Protection for Files will purge all older versions of your files, and then may fail to back up the file. Make sure that the maximum space for your remote storage areas is greater than the maximum file size for remote backup in the **Advanced** page of the Settings Notebook. For example, if you decrease your maximum space for backups to 1 GB, you must decrease the maximum file size for remote backup from the default of 1 GB.



## Encrypt backups radio button

Set encryption for remote backup copies.

The encryption feature provides extra security on your remote location. The encryption feature can be useful if multiple people have access to the remote server location, and you need to ensure that each user's data is protected from other users, or anyone else who has access to the remote server.

When you click the button labeled **Encrypt backups**, Tivoli Continuous Data Protection for Files will present a dialog so you can create a password for the encrypted files. This password is required to view or access any files which are backed up by Tivoli Continuous Data Protection for Files. The encrypted password is kept in the "Program data folder." If the files in the program data folder are lost, you will be prompted to enter a new password.

Once encryption has been enabled, the password is stored. If you disable encryption, then enable again, you are not prompted for a new password.

Tivoli Continuous Data Protection for Files does not support prompted encryption. Hence, if you specify Tivoli Storage Manager server as your remote storage area, you must configure non-prompted encryption in the Tivoli Storage Manager `dsm.opt` options file. In the `dsm.opt` file, use the statement: `encryptkey generate`. See *Tivoli Storage Manager for Windows Backup-Archive Client Installation and User's Guide* for information about setting encryption options in Tivoli Storage Manager `dsm.opt` file. Tivoli Continuous Data Protection for Files supports AES128 encryption but does not support AES56 encryption.

The `dsm.opt` file is in the "Program data folder."

Files stored on the local storage area are not encrypted. Files that are compressed can not be encrypted, and the user interface does not allow you to configure both encryption and compression. Files that use sub-file copy can be encrypted.

Tivoli Continuous Data Protection for Files can not protect backup copies that it has encrypted. This means that Tivoli Continuous Data Protection for Files cannot create encrypted backup copies, and then make backup copies (encrypted or not) of those backup copies.

This is an issue only if you store backup copies on a file server, and then use Tivoli Continuous Data Protection for Files to protect the files on the file server. If you configure Tivoli Continuous Data Protection for Files to encrypt the backup copies to a file server, you must not use Tivoli Continuous Data Protection for Files to protect the encrypted backup copies on that file server. You can use Tivoli Storage Manager or another backup solution to protect the encrypted backup copies on that file server.

You do not have to choose either encryption or compression. By clicking the buttons, you can clear both buttons, and select neither encryption or compression.

**Program data folder:** The program data folder varies according to the operating system and installation of the Tivoli Continuous Data Protection for Files client. This list indicates the program data folder for each operating system and product version:

### Microsoft Windows XP, upgrade from version 2.2

C:\Program Files\Tivoli\CDP\_for\_Files\



### Microsoft Windows XP, new installation of version 3.1

C:\Documents and Settings\All Users\Application Data\Tivoli\CDP\_for\_Files\.

**Note:** \Application Data\ is a hidden folder, and to see it you must modify your view preferences in **Explorer** to show hidden files and folders.

### Microsoft Windows Vista, new installation of version 3.1

C:\ProgramData\Tivoli\CDP\_for\_Files\.

**Note:** \ProgramData\ is a hidden folder, and to see it you must modify your view preferences in **Explorer** to show hidden files and folders.

### Microsoft Windows 7, new installation of version 3.1

C:\ProgramData\Tivoli\CDP\_for\_Files\.

**Note:** \ProgramData\ is a hidden folder, and to see it you must modify your view preferences in **Explorer** to show hidden files and folders.

## Compress backups radio button

Set compression for remote backup copies.

Use compression to save space on your remote storage location. The compression feature is not compatible with the encryption feature. You can use compression or encryption, but not both simultaneously. Files backed up using the compression function must be restored using Tivoli Continuous Data Protection for Files.

If you enable both compression and sub-file copy, sub-file copy has precedence. This means that a file which has a size larger than the minimum for sub-file copy is not compressed, since it is subject to sub-file copy activity. Only files smaller than the minimum size for sub-file copy are compressed.

You do not have to choose either encryption or compression. By clicking the buttons, you can clear both buttons, and select neither encryption or compression.

## Use sub-file copy radio button

Set sub-file copy for remote backup copies.

Initially, an entire file is copied to the storage areas. When sub-file copy is turned on, and when the file changes, only the changed information is copied to the storage area. The sub-file copies are saved as separate files on the remote storage.

Sub-file copy can significantly reduce the amount of network traffic. However, sub-file copy consumes more processing resource on your computer. The default setting is to use sub-file copy for files larger than 50 MB. If you need to conserve more network resources, you can reduce the size setting so sub-file copy is not used on even smaller files.

To use sub-file copy to remote storage, you must have a backup copy of your files on local storage. In the **General** panel of the Settings Notebook, set the **Continuous protection level** field to Local and remote storage. Then you can set the sub-file backup option.

Check the button to turn on sub-file copy. In the **Use sub-file copy for files larger than:** field, specify the file size threshold for using sub-file copy. For files larger than this size, only the changed information is copied to the storage area.

## Advanced panel of client Settings Notebook

The **Advanced** panel allows you to control popup messages and tune performance.

### Allow program messages to pop up

For certain types of activities or notifications, Tivoli Continuous Data Protection for Files opens messages from the icon in the system tray. To prevent the messages from opening, select **disabled**.

**Note:** If messaging is disabled, important program messages regarding the failure of Tivoli Continuous Data Protection for Files operations is suppressed, which could lead to potential loss of data.

### Performance Settings

#### Do not locally back up files larger than

Use this field to specify the size of files that are backed up to your local storage area. If you try to back up a file which is larger than the space you have allocated for your storage area, Tivoli Continuous Data Protection for Files will purge all older versions of your files, and then will fail to back up the file. Make sure that the file size limit in this field, and the size limit for files backed up to remote storage, is less than the maximum space for your storage areas.

#### Do not remotely back up files larger than

Use this field to specify the size of files that are backed up to your remote storage area.

#### Scheduled Backup Settings

Open the Folder and Files Settings by clicking the Scheduled Backup Settings link. You can use this window to create, modify and remove scheduled backups.

#### Throttle Settings

Open the Network Rules Settings by clicking the Throttle Settings link. You can use this window to create, modify and remove network rules.

### Folders and Files Settings dialog for scheduled backups by Tivoli Continuous Data Protection for Files

Specify folders and files to back up on the same schedule as e-mail files are backed up.

**Folder and Files Settings**

Select additional files and/or folders you want to be backed up when your e-mail is backed up.

**Folders and Files**

Include Remove

Name
*.nsf
*.id

☐ Start scheduled backup now [View Report](#)

OK Cancel

When considering what files to protect on a schedule, see “Types of protection” on page 2 and “Considerations for scheduled backups” on page 50.

## List of Folders and Files to Include

The top of the list box has two menu action items. Use the menu items to add and remove items from the list.

### Include

Click **Include** to add files and folders that you want to protect. The **Select folders** dialog will open.

### Remove

Select a list item, then click **Remove** to remove that list item.

Each row in the list has one column.

**Name** Patterns in the **Name** column specify one or more files or folders. See “Wildcards in file specifications” on page 10 to determine what files and folders will match a **Name** pattern with blanks or asterisks. When a folder is protected, all of its files and sub-folders are protected.

## Start scheduled backup now check box

The folders and files that you specify will be backed up on the same schedule as your e-mail backups. If you want to force a backup now, check the **Start scheduled backup now** box and click the **OK** button.

## View Report link

Click the **View Report** link to open a table of scheduled backup reports for all computers that share a common central administration folder.

## Scheduled backup reports table of Tivoli Continuous Data Protection for Files:

Use the reports table to monitor scheduled backups to remote storage areas.

[illegible]

To see the reports table, you must be connected to your remote storage area.

## Version

## Last Backup

**Files** A number indicating approximately how many files were successfully backed up at the last schedule. Due to the nature of the program and how the logging is done, this number is only an approximation.

## Failures

Click the number to display a report of the errors during scheduled backup.

### Considerations for scheduled backups:

50 IBM Tivoli Continuous Data Protection for Files 3.1.8.0: Installation and User's Guide

## **Files that are appropriate to protect on a schedule**

Large or frequently saved files can consume considerable computing or network resources when they are backed up. You can schedule periodic backups of these files when the burden on computing or network resources are least inconvenient.

Some files are not often closed and saved, but must be backed up periodically. Files protected by schedule are backed up even if they are open, but you can try to schedule the backup for a time when the files are closed.

Scheduled backup can yield fewer backup versions than continuously protected files. Fewer backup versions use less storage space, but offer fewer opportunities when you want to restore a file.

## **When does a scheduled backup occur**

The files that you select for scheduled protection are backed up at the scheduled time, if they change during the scheduled interval. If a file changed several times during the schedule, only the last version of the file is backed up at the scheduled time.

If the remote storage area is not available at the scheduled backup time, the files that have changed at that time are noted and are backed up when the remote storage becomes available. If a noted file changes after the scheduled backup time, and before the remote storage becomes available, only the last version of the file is backed up.

If the computer is powered off or Tivoli Continuous Data Protection for Files is not running at the schedule time, the scheduled backup runs when the computer is powered on and Tivoli Continuous Data Protection for Files is running.

If you shut down a computer or stop the Tivoli Continuous Data Protection for Files client when a scheduled backup is running, the backup resumes when the client is running again and the remote storage is available.

If you forced a backup of scheduled files during the 30 minutes prior to the scheduled time, the scheduled backup does not occur.

## **Closing applications before a scheduled backup**

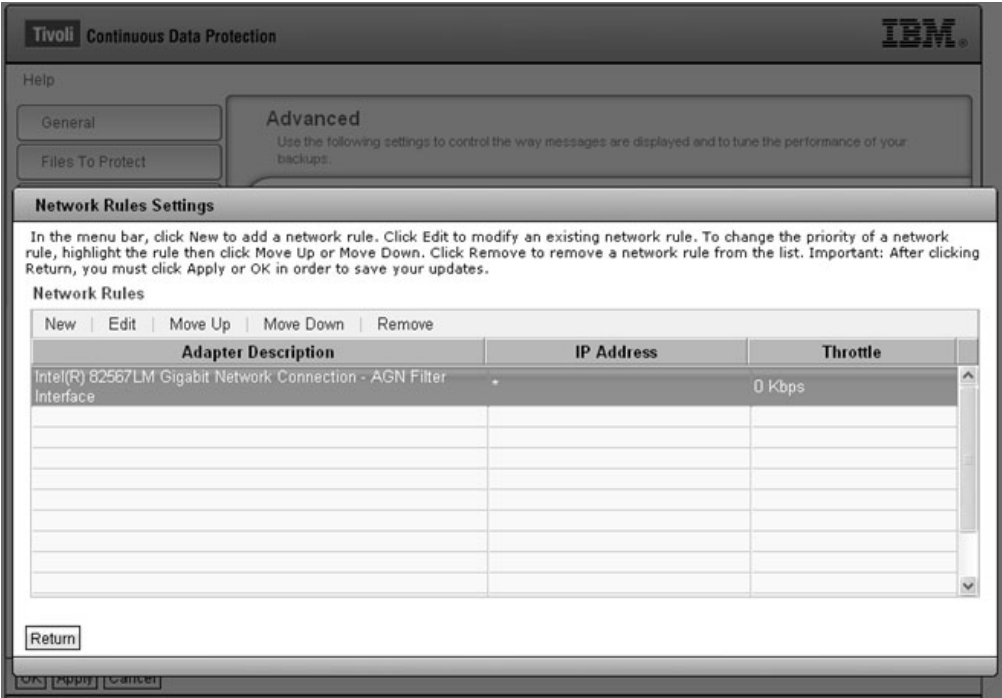
Tivoli Continuous Data Protection for Files backs up all files that have changed during the schedule interval, including files that are still open at the time of backup. The backup copies of files that are backed up while open can be corrupted. So it is suggested that you close applications before a scheduled backup. Tivoli Continuous Data Protection for Files offers an opportunity to close applications before a scheduled backup.

At the beginning of a scheduled backup, Tivoli Continuous Data Protection for Files attempts to close all files that are listed in a text file called `closeapps.txt` in the installation directory. Each line in the file must be a program name, with name and extension, but no folder path. Tivoli Continuous Data Protection for Files sends a close command to each instance of every program named in the `closeapps.txt` file. Note that Tivoli Continuous Data Protection for Files does not send a start command to any of those programs when the scheduled backup is finished.

# Specifying throttle settings and network rules for Tivoli Continuous Data Protection for Files

Modify or create policy rules that manage bandwidth usage in the networks you have specified.

Use the **Network Rules** dialog to manage bandwidth usage for each network. When a network is accessed, Tivoli Continuous Data Protection for Files uses the first rule in the list that matches the network. As a result, the throttle setting does not require a manual update every time Tivoli Continuous Data Protection for Files accesses a different network. When a new network is detected, a default network rule is created. This default rule is added to the bottom of the network rule list.



## Working with Network Rules

Use the Network Rules window to add new network rules, edit existing network rules, and change the order of network rules listed in the window.

- New** Click **New** to create a new network rule using the **New Network Rules** dialog.
- Edit** Select a list item, then click **Edit** to modify the value for an adapter, IP address, or throttle setting.
- Move Up** Select a list item and click **Move Up** to increase the priority of this rule. When searching for rules to apply to a network, Tivoli Continuous Data Protection for Files searches the list in order from highest to lowest.
- Move Down** Select a list item and click **Move Down** to decrease the priority of this rule. When searching for rules to apply to a network, Tivoli Continuous Data Protection for Files searches the list in order from highest to lowest.
- Remove** Select a list item, then click **Remove** to remove that network rule from the list.

## Create a Network Rule

In the New Network dialog, the following fields are available:

### Adapter

Use the dropdown menu to select the Adapter you need. When you select an adapter from list, the other fields in this dialog will be auto-filled..

### Description

A description of the selected adapter displays. This field cannot be updated.

### DNS Suffix

The Domain Name System information is displayed.

### IP Address

The IP address associated with the selected adapter displays. To change this value, enter another IP address. You can use an asterisk (\*). For example:

192.168.\*

### IPv6 Address

If your system supports IPv6 an IPv6 field is displayed with the IP address auto displayed.

### Throttle

Type in the throttle level you want to set, in the Throttle field and select the size (Kbps, Mbps or Gbps) from the dropdown menu.

Click OK to create the new network rule, or Cancel to cancel the operation.

When you have successfully created a new network rule, it is added to the top of the network rule list.

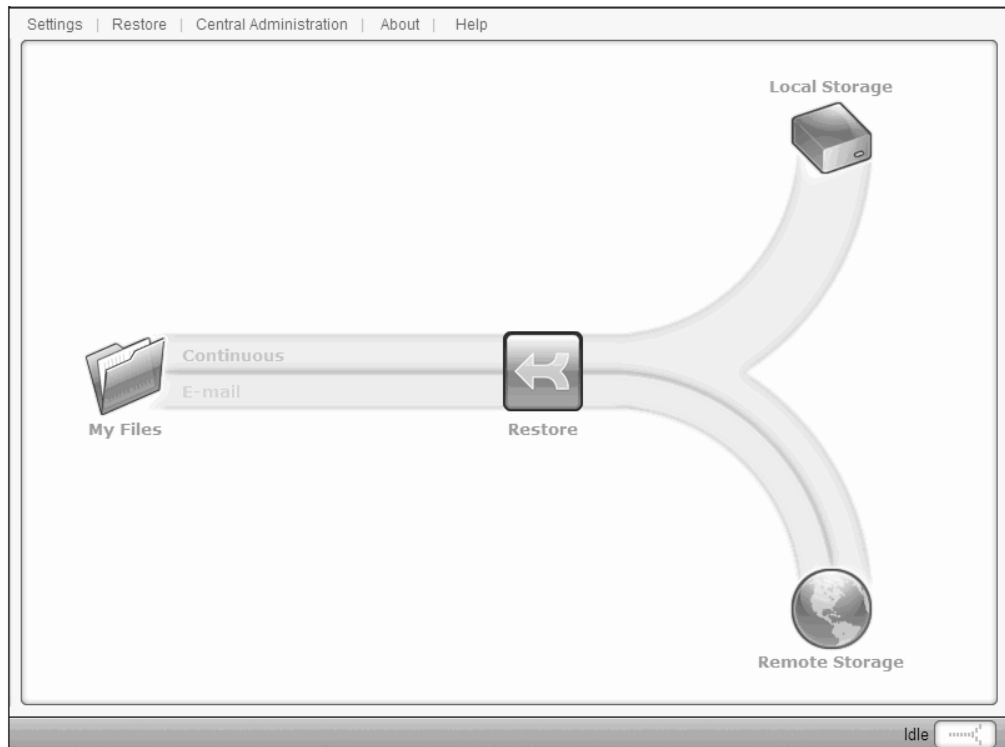
---

## Changing protection settings for the Tivoli Continuous Data Protection for Files client


You can change which files and applications are protected, and how they are protected.

These tasks assume that you have installed the Tivoli Continuous Data Protection for Files client. If you are configuring the client during product installation, see “Initial Configuration Wizard of Tivoli Continuous Data Protection for Files” on page 6.

These tasks also assume that you start from the Tivoli Continuous Data Protection for Files Status panel.



The Status panel displays when you click twice the Tivoli Continuous Data

Protection for Files client icon  in the system tray, or start the client from the **Start** menu.

You can also start the client GUI from the **Start** menu. Choose **Start > All Programs > Tivoli > CDP for Files > IBM Tivoli Continuous Data Protection for Files**.

## Specifying which files and applications are protected by Tivoli Continuous Data Protection for Files

You can specify which files are continuously protected, which files are protected on a schedule, and which files are vaulted. For an explanation of the different kinds of protection, see “Types of protection” on page 2.

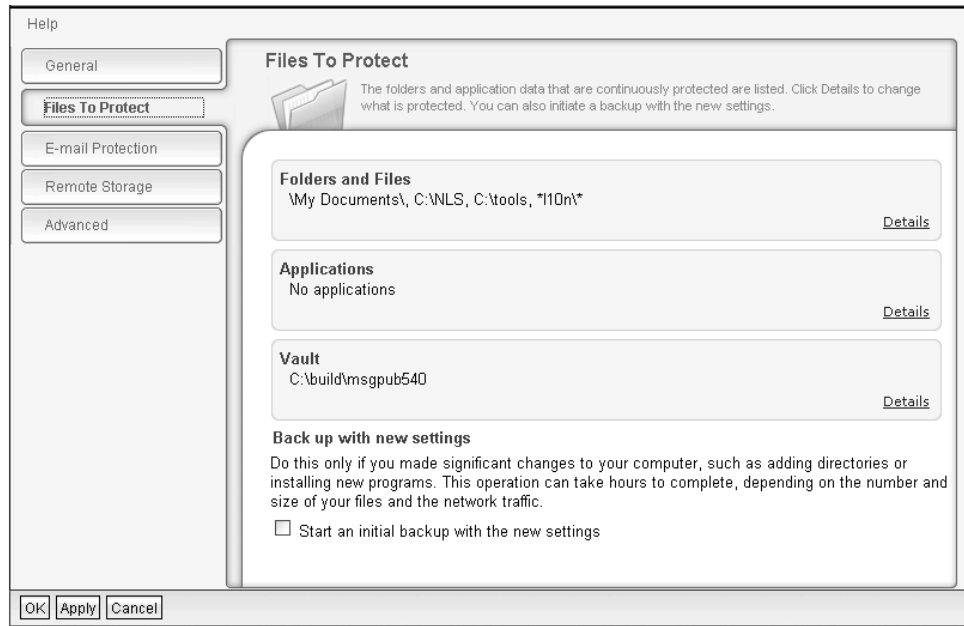
### Specifying which files and applications are continuously protected by Tivoli Continuous Data Protection for Files

You can specify which files are protected continuously. You will be able to restore the latest version of these files. You will be able to restore different versions of these files.

#### Procedure

1. Open the Tivoli Continuous Data Protection for Files Status panel.
2. Click the **Settings** menu item. The Settings Notebook displays.
3. In the Settings Notebook, click the **Files to Protect** tab on the left side of the notebook. The **Files to Protect** page displays. The page has 3 summary boxes: **Folders and Files**, **Applications**, and **Vault**.





4. In the **Applications** box, click the **details** link. The **Applications Settings** dialog displays, and the **Files to Protect** page becomes inactive.
5. Check the applications whose files you want to protect. Uncheck those applications whose files you do not want to protect.
6. Click the **OK** button. The **Applications Settings** dialog exits, and the **Files to Protect** page again becomes active.
7. If you want to add or exclude files and folders by specifying file paths, in the **Folders and Files** box, click the **details** link. The **Folder and Files Settings** dialog displays, and the **Files to Protect** page becomes inactive. For an explanation of how to include and exclude files in this dialog, see “**Folders and Files Settings** dialog for continuous protection by Tivoli Continuous Data Protection for Files” on page 31
8. If you added applications or file specifications, you should now force a backup to ensure that all the new files are immediately protected. See “When to back up all files” on page 40 for an explanation. Check the **Back up with new settings** check box.
9. Click the **OK** button. The Settings Notebook exits and your new settings are applied.

## Results

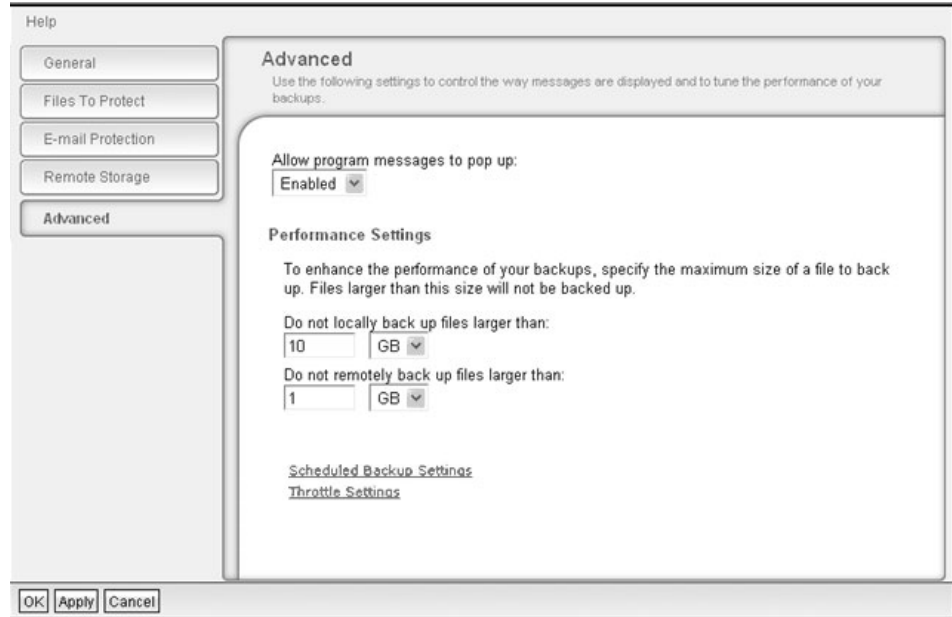
If you forced a backup, your system performance will become slower during the extensive scan of your protected drives.

## Specifying which files and applications are protected on a schedule by Tivoli Continuous Data Protection for Files

You can Specify which files are protected on a schedule. You will be able to restore the last version of the file that you saved before the scheduled backup. You will not be able to restore versions of the file that were saved between scheduled backups.

## Procedure

1. Open the Tivoli Continuous Data Protection for Files Status panel.
2. Click the **Settings** menu item. The Settings Notebook displays.
3. In the Settings Notebook, click the **Advanced** tab on the left side of the notebook. The **Advanced** page displays.



4. Click the **Scheduled Backup Settings** link. The **Folders and Files Settings** dialog for scheduled backups displays, and the **Advanced** page becomes inactive.
5. Click the **Include** menu item. The **Select Folders** dialog displays, and the **Folders and Files Settings** dialog becomes inactive.
6. Choose a folder in the folders tree, or specify a folder in the **Folder name (wildcards allowed)** field. You can specify individual files or folders. With wildcards, you can specify all files and folders that match your pattern. See "Wildcards in file specifications" on page 10 for details.
7. Click the **OK** button. The **Select Folders** dialog exits, and the **Folders and Files Settings** dialog for scheduled backups again becomes active. The file or folder that you specified is added to the list.
8. Repeat the above 3 steps to specify more folders to protect.
9. In the **Folders and Files Settings** dialog, select the files and folders that you no longer want protected on a schedule, and click the **Remove** menu item. The files and folders are removed from the list.
10. Click the **OK** button. The **Folders and Files Settings** dialog exits, and the **Advanced** page in the Settings Notebook again becomes active.
11. Click the **OK** button. The Settings Notebook exits and your new settings are applied.

### Considerations for scheduled backups:

Protect appropriate files on a schedule, and prepare the files for backup.

## **Files that are appropriate to protect on a schedule**

Large or frequently saved files can consume considerable computing or network resources when they are backed up. You can schedule periodic backups of these files when the burden on computing or network resources are least inconvenient.

Some files are not often closed and saved, but must be backed up periodically. Files protected by schedule are backed up even if they are open, but you can try to schedule the backup for a time when the files are closed.

Scheduled backup can yield fewer backup versions than continuously protected files. Fewer backup versions use less storage space, but offer fewer opportunities when you want to restore a file.

## **When does a scheduled backup occur**

The files that you select for scheduled protection are backed up at the scheduled time, if they change during the scheduled interval. If a file changed several times during the schedule, only the last version of the file is backed up at the scheduled time.

If the remote storage area is not available at the scheduled backup time, the files that have changed at that time are noted and are backed up when the remote storage becomes available. If a noted file changes after the scheduled backup time, and before the remote storage becomes available, only the last version of the file is backed up.

If the computer is powered off or Tivoli Continuous Data Protection for Files is not running at the schedule time, the scheduled backup runs when the computer is powered on and Tivoli Continuous Data Protection for Files is running.

If you shut down a computer or stop the Tivoli Continuous Data Protection for Files client when a scheduled backup is running, the backup resumes when the client is running again and the remote storage is available.

If you forced a backup of scheduled files during the 30 minutes prior to the scheduled time, the scheduled backup does not occur.

## **Closing applications before a scheduled backup**

Tivoli Continuous Data Protection for Files backs up all files that have changed during the schedule interval, including files that are still open at the time of backup. The backup copies of files that are backed up while open can be corrupted. So it is suggested that you close applications before a scheduled backup. Tivoli Continuous Data Protection for Files offers an opportunity to close applications before a scheduled backup.

At the beginning of a scheduled backup, Tivoli Continuous Data Protection for Files attempts to close all files that are listed in a text file called `closeapps.txt` in the installation directory. Each line in the file must be a program name, with name and extension, but no folder path. Tivoli Continuous Data Protection for Files sends a close command to each instance of every program named in the `closeapps.txt` file. Note that Tivoli Continuous Data Protection for Files does not send a start command to any of those programs when the scheduled backup is finished.

## Specifying which email applications are protected by Tivoli Continuous Data Protection for Files

Email applications have their own page in the Settings Notebook.

### Procedure

1. Open the Tivoli Continuous Data Protection for Files Status panel.
2. Click the **Settings** menu item. The Settings Notebook displays.
3. In the Settings Notebook, click the **E-mail Protection** tab on the left side of the notebook. The **E-mail Protection** page displays.

The screenshot shows the 'E-mail Protection' settings window. On the left is a sidebar with tabs: 'General', 'Files To Protect', 'E-mail Protection' (selected), 'Remote Storage', and 'Advanced'. The main area is titled 'E-mail Protection' and contains the following fields and options:

- E-mail Application:** A dropdown menu currently showing 'Lotus Notes'.
- E-mail Application Data Folder (wildcards allowed):** A text field containing '\*.id; \*.nsf' and a 'Browse...' button to its right.
- How often to protect your e-mail:** A dropdown menu showing 'Weekly'.
- On what day of the week:** A dropdown menu showing 'Friday'.
- At this time:** Two dropdown menus showing '12:00' and 'AM'.
- A link labeled 'Scheduled Backup Settings' at the bottom.

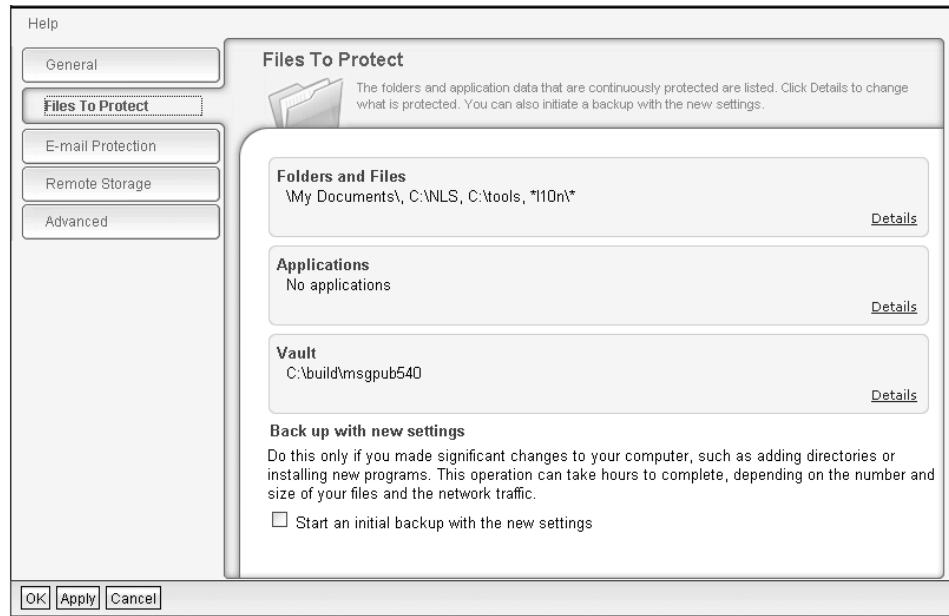
At the bottom of the window are three buttons: 'OK', 'Apply', and 'Cancel'.

4. Choose your email application from the **E-mail Application** drop down list. If your application is not listed in the drop down list, choose **Other**. If you chose **Other**, the **E-mail Application Data Folder (wildcards allowed)** field will become active.
5. If you chose **Other**, enter a file specification in the **E-mail Application Data Folder (wildcards allowed)** field. You can type the specification or browse for the folder.
6. Click the **OK** button. The Settings Notebook exits and your new settings are applied.

## Specifying which files and applications are vaulted by Tivoli Continuous Data Protection for Files

### Procedure

1. Click the **Settings** menu item. The Settings Notebook displays.
2. In the Settings Notebook, click the **Files to Protect** tab on the left side of the notebook. The **Files to Protect** page displays. The page has 3 summary boxes: **Folders and Files**, **Applications**, and **Vault**.



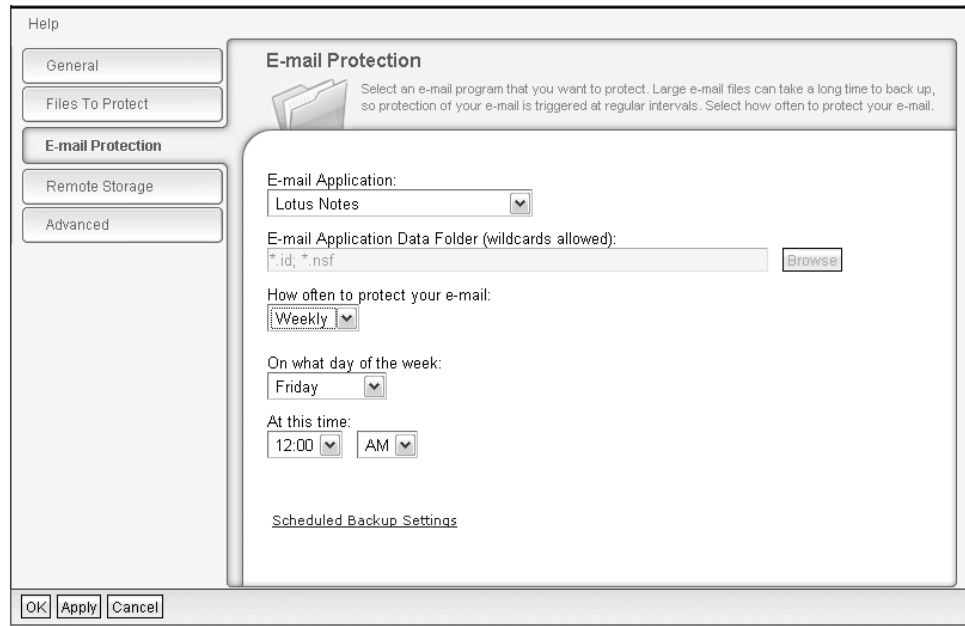
3. In the **Vault** box, click the **details** link. The **Vault Settings** dialog displays, and the **Files to Protect** page becomes inactive.
4. Click the **Vault** menu item. The **Select Folders** dialog displays, and the **Vault Settings** dialog becomes inactive.
5. Choose a folder in the folders tree, or specify a folder in the **Folder name (wildcards allowed)** field. You cannot specify individual files. With wildcards, you can specify all folders that match your pattern. See “Wildcards in file specifications” on page 10 for details.
6. Click the **OK** button. The **Select Folders** dialog exits, and the **Vault Settings** dialog again becomes active. The folder that you specified is added to the list.
7. Repeat the above 3 steps to specify more folders to vault.
8. In the **Vault Settings** dialog, select the folders that you no longer want vaulted, and click the **Unvault** menu item. The folders that you specified are removed from the list.
9. Click the **OK** button. The **Vault Settings** dialog exits, and the **Files to Protect** page in the Settings Notebook again becomes active.
10. Click the **OK** button. The Settings Notebook exits, and your folders become vaulted.

## Specifying the period for scheduled protection by Tivoli Continuous Data Protection for Files

All files that are protected on a schedule are protected on the schedule that is configured in the **E-mail Protection** page in the Settings Notebook. When you change the schedule for e-mail files, you change the schedule for all files that are protected on a schedule.

### Procedure

1. Open the Tivoli Continuous Data Protection for Files Status panel.
2. Click the **Settings** menu item. The Settings Notebook displays.
3. In the Settings Notebook, click the **E-mail Protection** tab on the left side of the notebook. The **E-mail Protection** page displays.



4. Choose the schedule period in the **How often to protect your e-mail:** drop down list. Depending on the schedule period that you chose, day or time fields will display
5. If applicable for the scheduled period, choose the day and time to perform the backup.
6. Click the **OK** button. The Settings Notebook exits and your new settings are applied.

## Specifying storage for backup copies by Tivoli Continuous Data Protection for Files

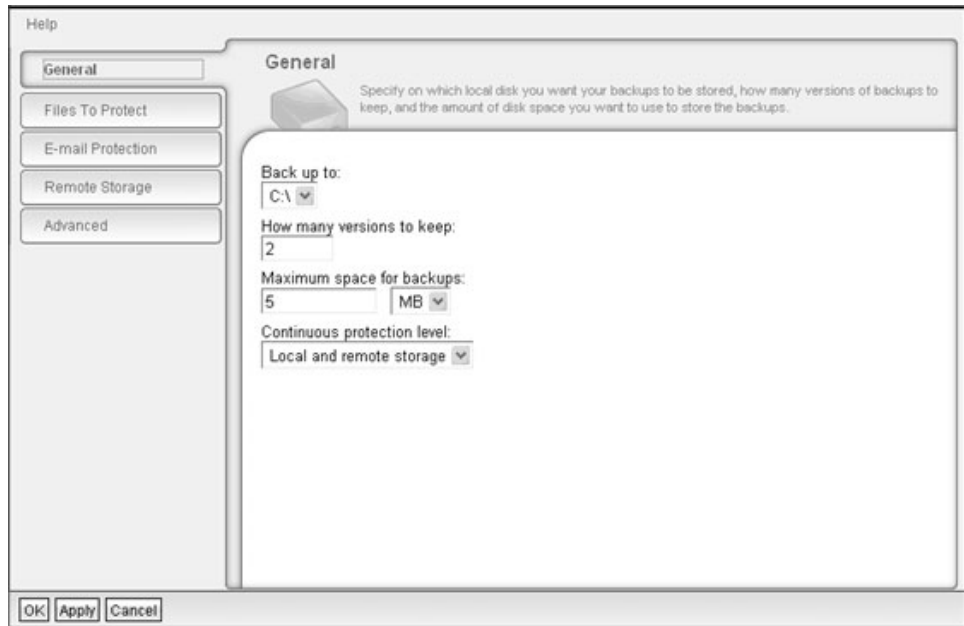
You can specify local storage areas, remote storage, and on which storage areas to store backup copies.

### Specifying the local storage area for backup copies by Tivoli Continuous Data Protection for Files

You can specify on which local drive to store backup copies. You can specify how many versions to keep, and the maximum space for backup copies. Specify also whether to use local storage, remote storage, both, or neither.

#### Procedure

1. Open the Tivoli Continuous Data Protection for Files Status panel.
2. Click the **Settings** menu item. The **General** page the Settings Notebook displays.



3. Choose the location, number of versions, and space for local backup copies. For explanations of the fields on this page, see “**General** panel of client Settings Notebook” on page 28.
4. Click the **OK** button. The Settings Notebook exits and your new settings are applied.

### Specifying the remote storage area for backup copies by Tivoli Continuous Data Protection for Files

You can specify where backup copies are stored on your remote and external devices. You can specify how many versions to keep, and the maximum space for backup copies.

#### Procedure

1. Open the Tivoli Continuous Data Protection for Files Status panel.
2. Click the **Settings** menu item. The Settings Notebook displays.
3. In the Settings Notebook, click the **Remote Storage** tab on the left side of the notebook. The **Remote Storage** page displays.

4. Choose appropriate values for the remote storage area fields. For explanations of the fields on this page, see “**Remote Storage** panel of client Settings Notebook” on page 42.
5. Click the **OK** button. The Settings Notebook exits and your new settings are applied.

---

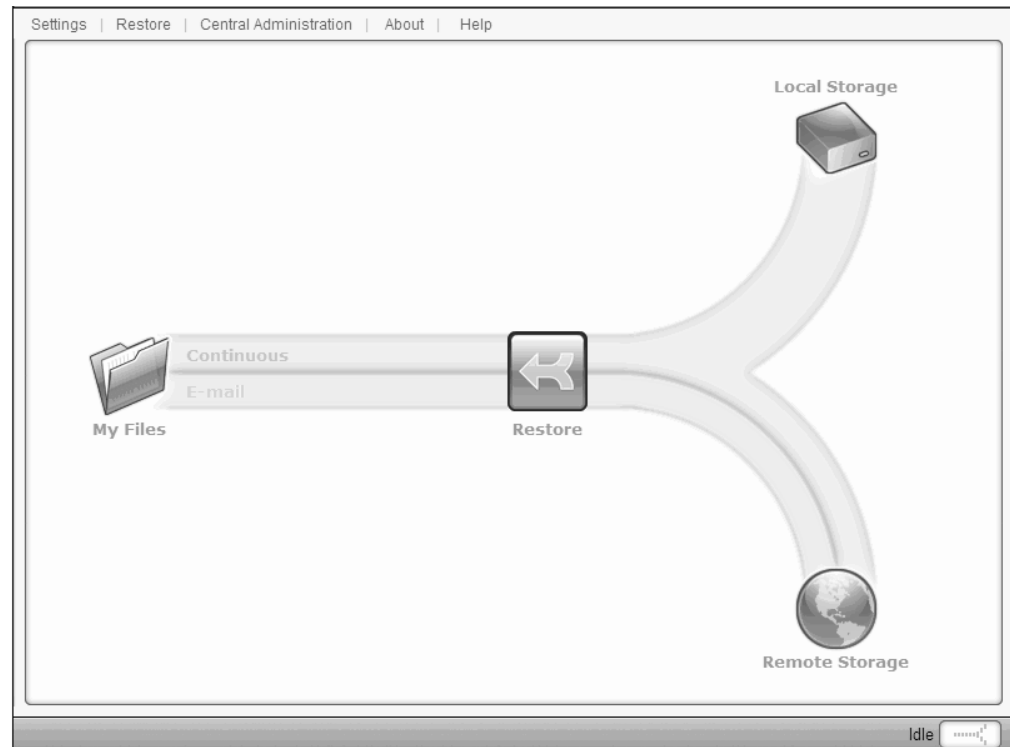
## Forcing a backup by Tivoli Continuous Data Protection for Files

When you change your configuration so that a new set of files is protected, either by continuous protection or scheduled protection, it is recommended that you back up all protected files. Failing to back up all protected files will yield protection only for those files that you change.


You can force a backup of all protected files; force a scheduled backup before the scheduled period elapses; and stop a forced backup.

These tasks assume that you start from the Tivoli Continuous Data Protection for Files Status panel.





The Status panel displays when you click twice the Tivoli Continuous Data

Protection for Files client icon  in the system tray, or start the client from the **Start** menu.

You can also start the client GUI from the **Start** menu. Choose **Start > All Programs > Tivoli > CDP for Files > IBM Tivoli Continuous Data Protection for Files**.

## Backing up all files that are protected by Tivoli Continuous Data Protection for Files

When you change your configuration to extend continuous or scheduled protection to more files, it is recommended that you back up all protected files. Failing to back up all protected files will yield protection only for those files that you change.

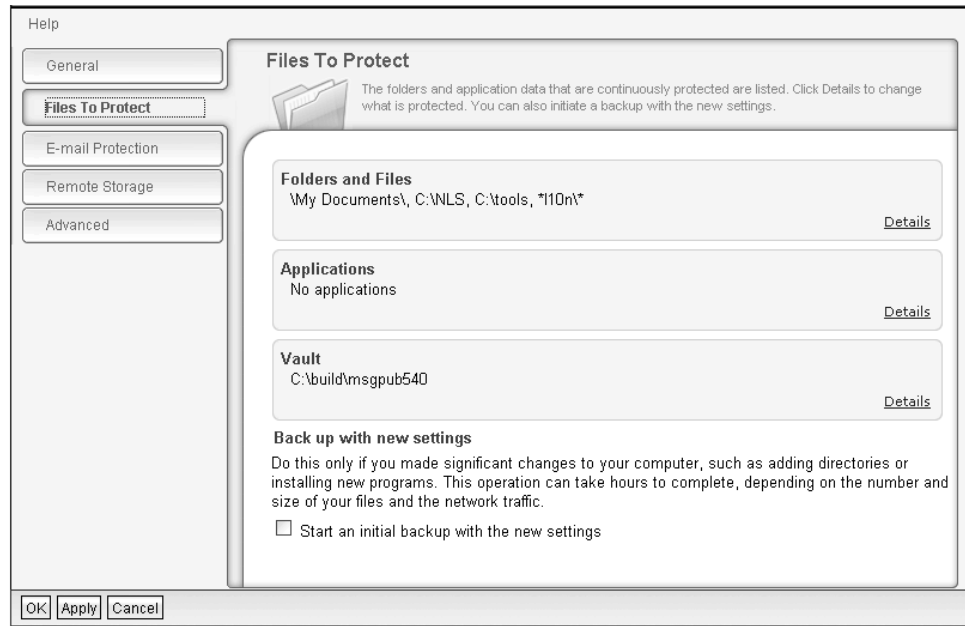
### About this task

For an explanation of when to back up all files, see “When to back up all files” on page 40.

Follow these instructions to force a backup of all files that are continuously protected and all files that are protected on a schedule.

### Procedure

1. Open the Tivoli Continuous Data Protection for Files Status panel.
2. Click the **Settings** menu item. The Settings Notebook displays.
3. In the Settings Notebook, click the **Files to Protect** tab on the left side of the notebook. The **Files to Protect** page displays.



4. Check the **Back up with new settings** check box.
5. Click the **OK** button. The Settings Notebook exits and Tivoli Continuous Data Protection for Files begins to scan your protected drives and back up all files that you designated for continuous or scheduled protection. Your system performance will become slower during the extensive scan of your protected drives.

## Forcing a scheduled backup by Tivoli Continuous Data Protection for Files

You can force a scheduled backup before the schedule period expires. As a result, you do not need to wait for the schedule period to expire. All files that have changed since the last scheduled backup will be backed up.

### About this task

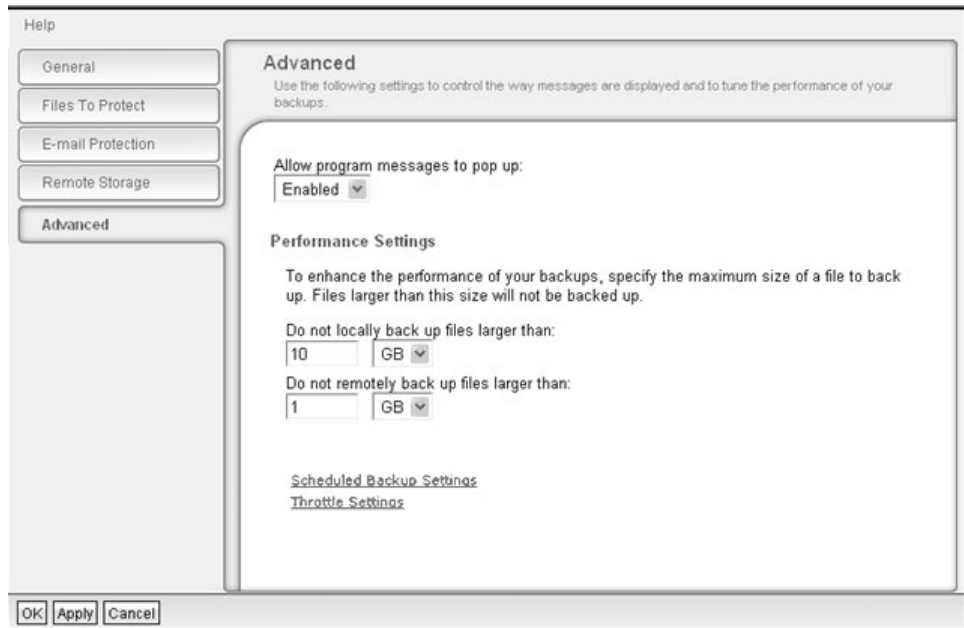
If you want to back up files that are protected on a schedule, prior to the scheduled time, you can force a backup of all files that have changed since the last scheduled backup. If you force a backup of scheduled files during the 30 minutes prior to the scheduled time, the scheduled backup does not occur. If the remote storage area is not available when you force a scheduled backup, the changed files are noted, and the most recent version of the noted files is backed up when remote storage becomes available.

**Note:** You will not back up all files that are designated for scheduled protection, but only those files that have changed since the last scheduled backup.

To force a scheduled backup, start at the Status panel.

### Procedure

1. Open the Tivoli Continuous Data Protection for Files Status panel.
2. Click the **Settings** menu item. The Settings Notebook displays.
3. In the Settings Notebook, click the **Advanced** tab on the left side of the notebook. The **Advanced** page displays.



4. Click the **Scheduled Backup Settings** link. The **Folders and Files Settings** dialog for scheduled backups displays, and the **Advanced** page becomes inactive.
5. Check the **Start scheduled backup now** check box.
6. Click the **OK** button. The **Folders and Files Settings** dialog exits, and the **Advanced** page in the Settings Notebook again becomes active.
7. Click the **OK** button. The Settings Notebook exits and Tivoli Continuous Data Protection for Files begins to back up all files that have changed since the last scheduled backup.

## Stopping backup activity by Tivoli Continuous Data Protection for Files

You can stop backup activity.

### About this task

The steps for stopping any kind of backup activity or restore activity are very similar. See “Stopping backup or restore activity by Tivoli Continuous Data Protection for Files” on page 71.



---

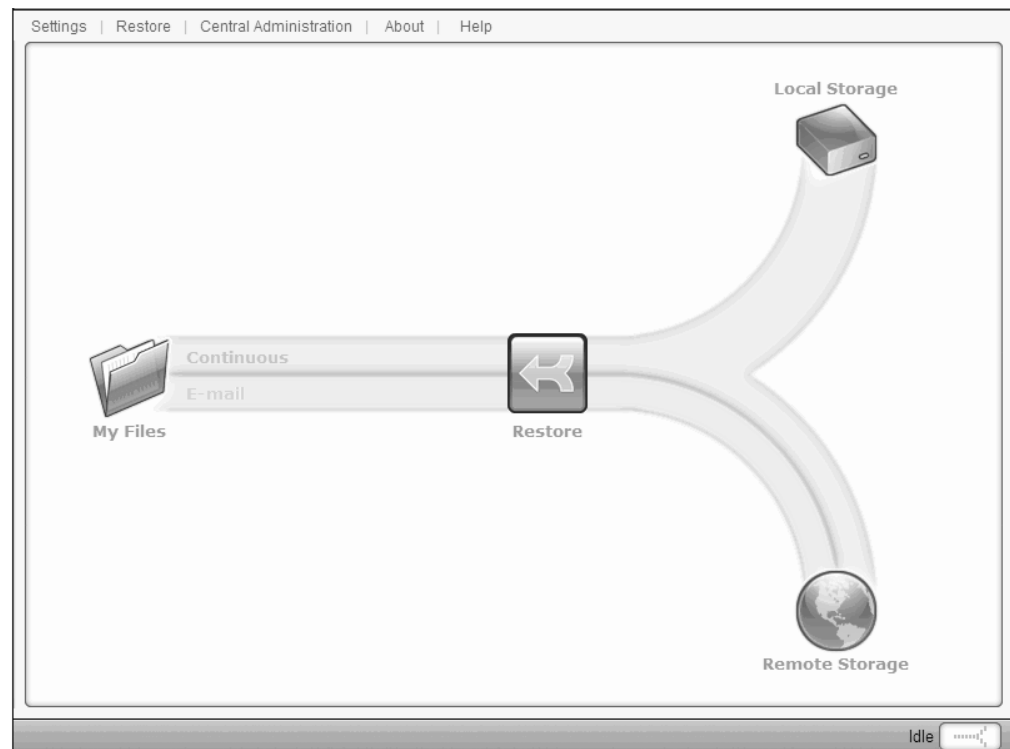
## Chapter 4. Starting and stopping protection activity of the Tivoli Continuous Data Protection for Files client

Start and stop the client and client backup activity. Run the client as a service.


---

### Starting the client GUI

Start the client GUI (graphical user interface) to work with the Tivoli Continuous Data Protection for Files client. From the Status panel of the GUI, you can modify data protection settings, restore files, and monitor protection activity.



The Status panel displays when you click twice the Tivoli Continuous Data

Protection for Files client icon  in the system tray, or start the client from the **Start** menu.

You can also start the client GUI from the **Start** menu. Choose **Start > All Programs > Tivoli > CDP for Files > IBM Tivoli Continuous Data Protection for Files**.

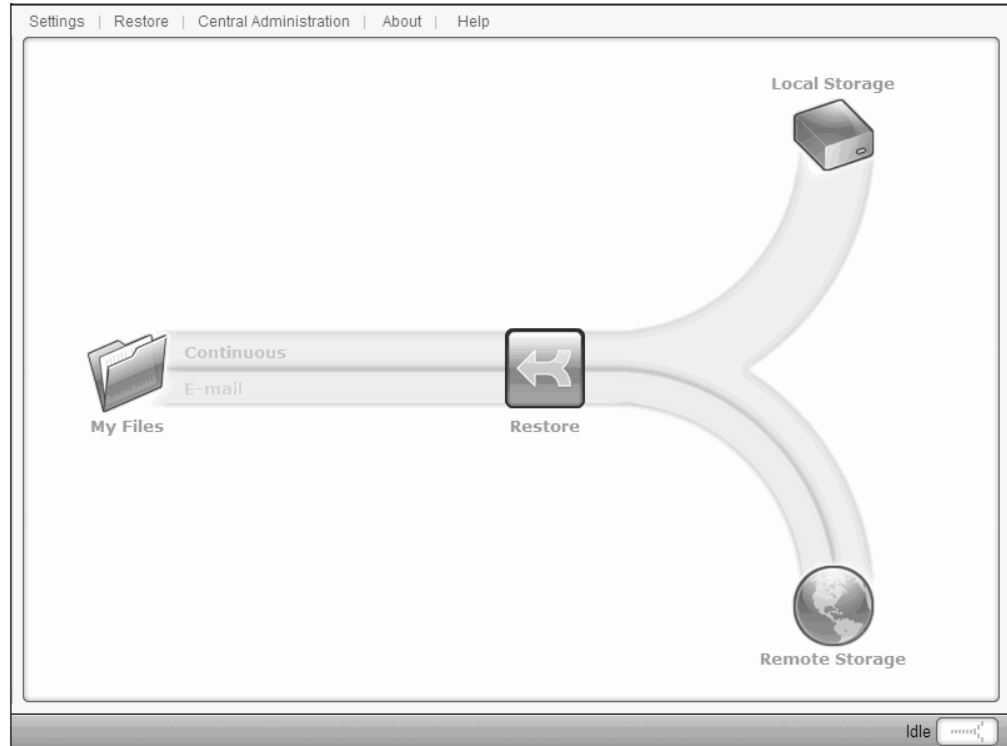
---

### Forcing a backup by Tivoli Continuous Data Protection for Files


When you change your configuration so that a new set of files is protected, either by continuous protection or scheduled protection, it is recommended that you back up all protected files. Failing to back up all protected files will yield protection only for those files that you change.

You can force a backup of all protected files; force a scheduled backup before the scheduled period elapses; and stop a forced backup.

These tasks assume that you start from the Tivoli Continuous Data Protection for Files Status panel.



The Status panel displays when you click twice the Tivoli Continuous Data

Protection for Files client icon  in the system tray, or start the client from the **Start** menu.

You can also start the client GUI from the **Start** menu. Choose **Start > All Programs > Tivoli > CDP for Files > IBM Tivoli Continuous Data Protection for Files**.

## When to back up all files

At certain times, you need to back up all files. Without this backup, some files are not protected.

When you first install the Tivoli Continuous Data Protection for Files client, you can immediately back up all files that you configured for protection. Without the initial backup, only files that change will be protected. The initial backup will protect all of the existing files that you designated for protection.

One exception is when you push an installation of Tivoli Continuous Data Protection for Files to a remote computer and do not reboot. If you force a backup on a pushed installation without rebooting, Tivoli Continuous Data Protection for Files attempts to back up files in the system context. These backups can fail, and when a logged-on user later attempts to restore these files the restore can fail.

After the initial backup, the typical rate of file changes does not require that you again back up all files at once. If you change the protection settings to include files that were not previously protected, the files need to be backed up. Until you change these files, and without a forced backup, Tivoli Continuous Data Protection for Files does not back up these files. To protect these files, you must force a backup of all files.

If you do not change your configuration but suddenly make a large change to the files that are configured for protection, you must also force a backup of all files. You must also force a backup if you add a new drive whose files are configured for protection.

A forced backup causes Tivoli Continuous Data Protection for Files to scan all local drives looking for files that you designated for protection. This means that every file in every directory will be investigated, and all files that meet the include, exclude, and size criteria will be copied to the local or remote or both storage areas. The creation of backup copies could take several hours. It also takes significant processing resources. Plan the backup at a time when you do not need computing resources for other activities.

After this scan and backup is complete, Tivoli Continuous Data Protection for Files will continue to operate in the background without any significant impact on your regular computing activities.

Changing the **Vault** settings does not require a forced backup.

With a client, you can force a backup of your continuously protected files in two places:

- The Initial Configuration Wizard, when you initially configure the Tivoli Continuous Data Protection for Files client
- The **Files to Protect** panel in the Settings Notebook of the client, any time after initial configuration.

## Backing up all files that are protected by Tivoli Continuous Data Protection for Files

When you change your configuration to extend continuous or scheduled protection to more files, it is recommended that you back up all protected files. Failing to back up all protected files will yield protection only for those files that you change.

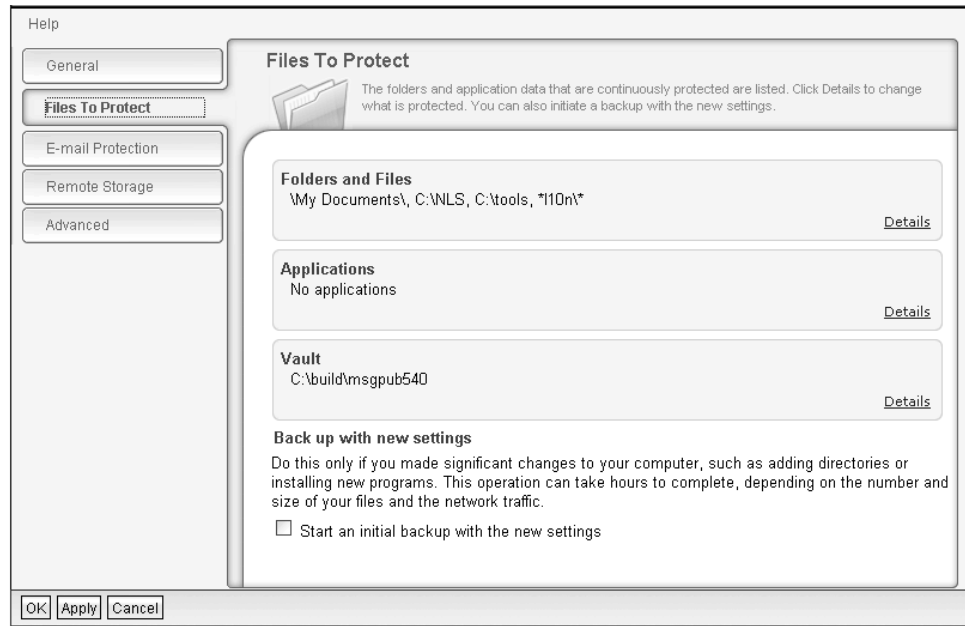
### About this task

For an explanation of when to back up all files, see “When to back up all files” on page 40.

Follow these instructions to force a backup of all files that are continuously protected and all files that are protected on a schedule.

### Procedure

1. Open the Tivoli Continuous Data Protection for Files Status panel.
2. Click the **Settings** menu item. The Settings Notebook displays.
3. In the Settings Notebook, click the **Files to Protect** tab on the left side of the notebook. The **Files to Protect** page displays.



4. Check the **Back up with new settings** check box.
5. Click the **OK** button. The Settings Notebook exits and Tivoli Continuous Data Protection for Files begins to scan your protected drives and back up all files that you designated for continuous or scheduled protection. Your system performance will become slower during the extensive scan of your protected drives.

## Forcing a scheduled backup by Tivoli Continuous Data Protection for Files

You can force a scheduled backup before the schedule period expires. As a result, you do not need to wait for the schedule period to expire. All files that have changed since the last scheduled backup will be backed up.

### About this task

If you want to back up files that are protected on a schedule, prior to the scheduled time, you can force a backup of all files that have changed since the last scheduled backup. If you force a backup of scheduled files during the 30 minutes prior to the scheduled time, the scheduled backup does not occur. If the remote storage area is not available when you force a scheduled backup, the changed files are noted, and the most recent version of the noted files is backed up when remote storage becomes available.

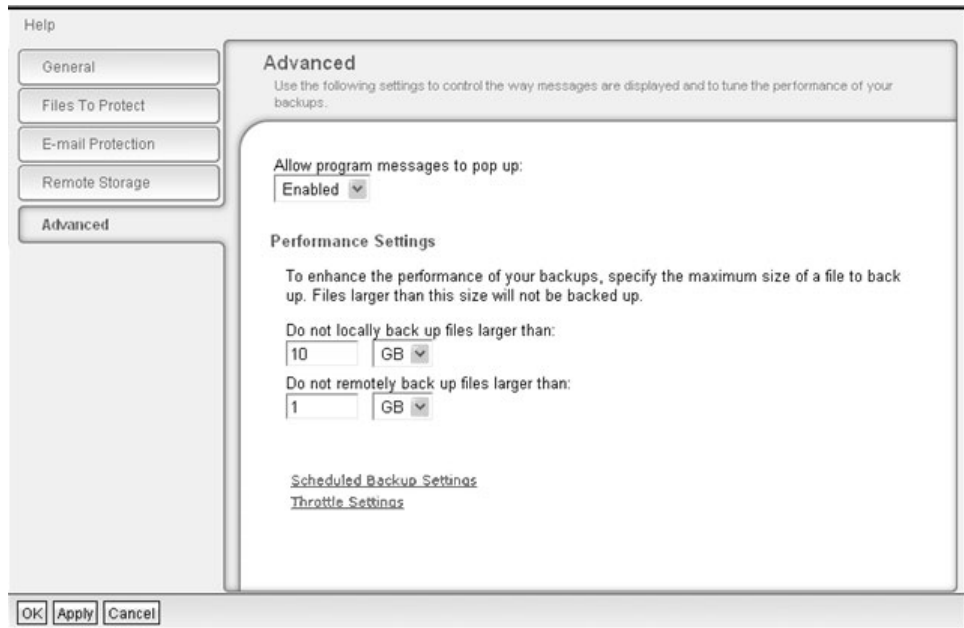
**Note:** You will not back up all files that are designated for scheduled protection, but only those files that have changed since the last scheduled backup.

To force a scheduled backup, start at the Status panel.

### Procedure

1. Open the Tivoli Continuous Data Protection for Files Status panel.
2. Click the **Settings** menu item. The Settings Notebook displays.
3. In the Settings Notebook, click the **Advanced** tab on the left side of the notebook. The **Advanced** page displays.





4. Click the **Scheduled Backup Settings** link. The **Folders and Files Settings** dialog for scheduled backups displays, and the **Advanced** page becomes inactive.
5. Check the **Start scheduled backup now** check box.
6. Click the **OK** button. The **Folders and Files Settings** dialog exits, and the **Advanced** page in the Settings Notebook again becomes active.
7. Click the **OK** button. The Settings Notebook exits and Tivoli Continuous Data Protection for Files begins to back up all files that have changed since the last scheduled backup.

## Stopping backup activity by Tivoli Continuous Data Protection for Files

You can stop backup activity.

### About this task

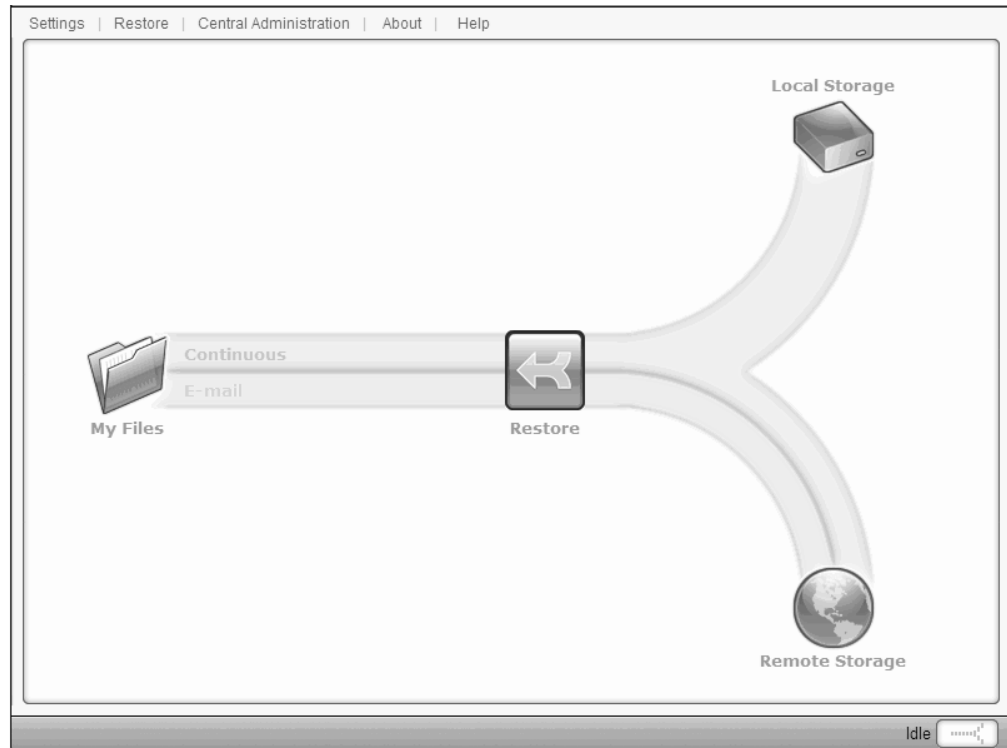
The steps for stopping any kind of backup activity or restore activity are very similar. See “Stopping backup or restore activity by Tivoli Continuous Data Protection for Files.”

---


## Stopping backup or restore activity by Tivoli Continuous Data Protection for Files

You can stop any backup or restore activity.

This task assumes that you start from the Tivoli Continuous Data Protection for Files Status panel.



The Status panel displays when you click twice the Tivoli Continuous Data

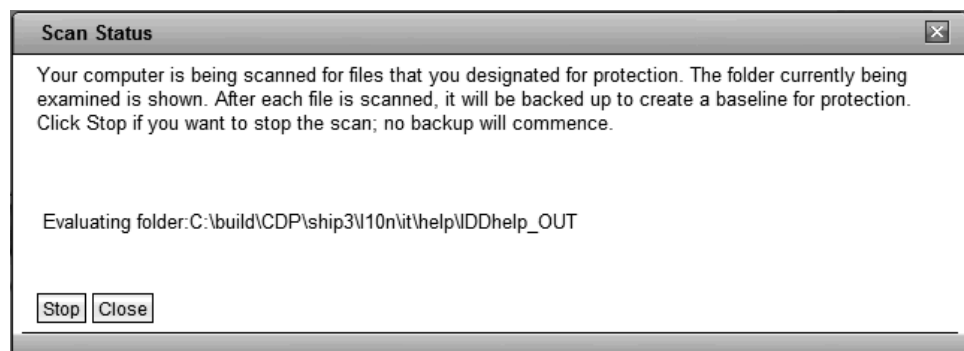
Protection for Files client icon  in the system tray, or start the client from the **Start** menu.

You can also start the client GUI from the **Start** menu. Choose **Start > All Programs > Tivoli > CDP for Files > IBM Tivoli Continuous Data Protection for Files**.

1. The bar at the bottom of the Status panel displays a brief text message of the status of backup and restore activities. Let your cursor hover over the text. A summary of activities will pop up from the bar. The summary lists 5 activities. For each activity, there is a link to a detailed status dialog, and a brief text that indicates the status of the activity.



2. Click the link for the activity you want to stop. The detailed status dialog for that activity displays, and the Status panel becomes inactive.



3. Click the **Stop** button. Click the **Close** button. The detailed status dialog exits, and the Status panel becomes active again. Within a short time, the activity will stop.

## Managing Tivoli Continuous Data Protection for Files Clients

To use central administration features, you must configure the managing client (administrator) and managed clients. For configuration information, and instructions for centrally administering properly configured clients, see Chapter 8, “Tivoli Continuous Data Protection for Files central management considerations,” on page 93.

---

## Restarting the Tivoli Continuous Data Protection for Files client process

The FilePathSrv.exe client process is started automatically every time the computer starts. If the FilePathSrv.exe client process does not start automatically or stops running, your files are not protected.

To determine if the FilePathSrv.exe process is running, look for the FilePathSrv.exe process in Task Manager. If you cannot see this process, the process is not running.

To restart the process on a Command Prompt window, do the following:

1. Open a Command Prompt window.
2. Navigate to the Tivoli Continuous Data Protection for Files installation folder. (The default installation folder is C:\Program Files\Tivoli\CDP\_for\_Files.
3. Type the following: `filepathsrv -d`

Confirm that the process is running by checking the System Event log or Task Manager. In the System Event log, there should be an entry which states: HTML listener started successfully and listening on port 9003. This is event # 6049. In Task Manager, you should see FilePathSrv.exe process.

You can also restart the process from the **Start** menu. Choose **Start > All Programs > Startup > CDPforFilesSrv**.

---

## Run the Tivoli Continuous Data Protection for Files client as a service

You can run the client as a service instead of a logged-in application.

If the client runs on a server, it needs to run as a service instead of as a logged-in application. The product provides this capability.

In the client install directory there is a program called FpForFileServers.js. If you invoke this executable file, the client runs as a service instead of as a logged-in application.

The default account for services on Microsoft Windows has no privilege for accessing folders shared via a network. The FpForFileServers.js executable file launches the Microsoft Windows services configuration panel so that you can update the FilePathSrv service. Specify a valid account name and password that can access your remote backup locations. On Windows Vista and Windows 7, run the command in a command prompt with elevated privileges.

When you uninstall the Tivoli Continuous Data Protection for Files client, the Tivoli Continuous Data Protection for Files service is also uninstalled.

**Note:** The Tivoli Continuous Data Protection for Files client installation directory and tree allows full access by all users on the system during installation. This is done so that non-privileged users (users without administration rights) can still be protected by the software and use the GUI. This is probably not a desirable setting for multi-user workstations. This is also not desirable because on the installation tree there are log files and programs whose contents and use should not be available to all users. Consider setting more restrictive ACLs on the installation directory and tree.

---

## Chapter 5. Monitoring the protection of Tivoli Continuous Data Protection for Files

Once Tivoli Continuous Data Protection for Files is installed and configured, you can monitor the state of your protection. You can receive pop-up messages, check that the Tivoli Continuous Data Protection for Files daemon is running, and use the Tivoli Continuous Data Protection for Files user interface to check detailed status of your protection.

If you determine that Tivoli Continuous Data Protection for Files is not protecting your files as you intended, often the solution will be suggested by the data available from Tivoli Continuous Data Protection for Files reports or configuration settings. If the solution is not clear, consider the information in Chapter 10, “Troubleshooting the Tivoli Continuous Data Protection for Files client,” on page 105. The following monitoring opportunities are available.

### Pop-up Messages

Once you install and configure Tivoli Continuous Data Protection for Files, it will work unobtrusively in the background. As a result, you should not need to access Tivoli Continuous Data Protection for Files until you want to restore a file. Unless you will do some active monitoring of Tivoli Continuous Data Protection for Files, it is recommended that you allow Tivoli Continuous Data Protection for Files to notify you when your attention is needed for your system. For example, if you are running out of space in your storage area, Tivoli Continuous Data Protection for Files will warn you with a message.

To receive messages from Tivoli Continuous Data Protection for Files, you must configure Tivoli Continuous Data Protection for Files to send you messages. By default, Tivoli Continuous Data Protection for Files sends you messages. You configure this setting in the **Allow program messages to pop up** drop down list in the **Advanced** page of the Settings Notebook.

### Tivoli Continuous Data Protection for Files Icon in the System Tray

When the Tivoli Continuous Data Protection for Files daemon is protecting your files as a logged in application, the Tivoli Continuous Data Protection for Files icon



appears in the desktop system tray. (If Tivoli Continuous Data Protection for Files is running as a service, the icon does not appear in the system tray). If you do not see the icon in your system tray, and Tivoli Continuous Data Protection for Files is not running as a service, you must restart the process. See “Restarting the Tivoli Continuous Data Protection for Files client process” on page 74.

---

## Monitoring protection with the Tivoli Continuous Data Protection for Files client

If you want to actively check the status of your protection, there are several checks you can do in the Tivoli Continuous Data Protection for Files client user interface.

## Tivoli Continuous Data Protection for Files client Status page

The Status page provides status information at a glance. The items below help you monitor the status of your protection. For an explanation of all fields on the page, see “Status panel of Tivoli Continuous Data Protection for Files” on page 79.

### Icon Color

The icons on the Status panel reflect the status of those areas. In normal conditions, the icons are blue. The icon changes to yellow as a warning.

The **Remote Storage** icon becomes yellow when you are disconnected from your remote storage area. This is not necessarily cause for alarm. For example, if you know that you will connect to your remote storage location before long, you do not need to worry. Tivoli Continuous Data Protection for Files queues changed files while the storage area is unavailable, and transfers the files when the storage becomes available. However, if you are not aware that your remote storage is unavailable, and do not know that you will soon recover your connection, you should investigate your remote storage.

The **Local Storage** icon becomes yellow if Tivoli Continuous Data Protection for Files cannot access the local storage area.

If the color of any icon is not blue and you are not aware of a transient threat to your protection system, you should investigate further.

The **Restore** icon and the **My Files** icon never change color.

### Icon Displays Data and Links

Let your pointer hover over an icon to display summary information and links to detailed information.

The summary information for each icon gives clues about your protection status, and the links provide details.

### My Files icon

#### Files under protection

If the number of files under protection is not reasonable given the changes you've made and list of files that you've configured, you should investigate further. Verify that you accurately configured the list of files to protect.

Click the **Settings** link below **Files under protection** to configure the files to protect.

#### View Report

The **View Report** link opens a detailed list of recent protection activity. The top of the list contains failed activities and messages describing the failures.

#### E-mail protection

If the **Last successful backup on** field does not indicate a recent successful backup, verify the configuration of your e-mail application and the schedule for your e-mail backups.

Click the **Settings** link below **E-mail protection** to configure your e-mail protection.

### Local Storage icon

If the **Usage** bar indicates that your local storage is full, you should investigate further. You can re-configure your local storage area.

Click the **Settings** link to configure your local storage area.

### Remote Storage icon

#### Usage bar

If the usage bar indicates that your remote storage is full, you should investigate further. You can re-configure your remote storage area.

Click the **Settings** link to configure your remote storage area.

## Continuous Protection Activity Report

A report of continuous protection activity is available from a link in the Status panel. The report is called **Activity Report**. To navigate to the **Activity Report**, see “Viewing the continuous protection activity report of a Tivoli Continuous Data Protection for Files client” on page 83.

Activity Report

Tuesday, March 27, 2007 2:18:28 PM

Failures

The following lists the operations that failed. Look for repeated failures as a basis for troubleshooting. For information on how to correct issues, see [Troubleshooting](#).

Date and Time	File Name	Activity	Reason for Failure
03/27/2007 11:18:41	de	Rmdir (Local)	This replication item is being skipped due the target directory not being empty (possibly has versioned files).

Successful

The following is a list of recent successful operations.

Date and Time	File Name	Activity
03/27/2007 13:22:16	cdp_cpt_upgrade.dita	Backup (Local)
03/27/2007 13:21:20	cdp_cpt_upgrade.dita.asv	Backup (Local)
03/27/2007 13:11:19	cdp_cpt_upgrade.dita.asv	Backup (Local)
03/27/2007 13:02:09	DitaLink.cat	Backup (Local)
03/27/2007 13:02:09	DitaLink.cat.old	Backup (Local)
03/27/2007 13:02:09	DitaLink.cat	Backup (Local)
03/27/2007 13:02:09	DitaLink.cat.old	Backup (Local)
03/27/2007 11:49:55	CDP31_helpxhm.log	Backup (Local)

The **Activity Report** lists failed activities (if any) at the top of the report. The failed activity is accompanied by a reason for the failure. Successful activities are listed below.

The list is not a complete list of all activities; only the most recent activities are listed.

The activity can be one of the following:

**Backup**

Tivoli Continuous Data Protection for Files creates a backup copy on the storage area.

**Delete** Tivoli Continuous Data Protection for Files deletes the most recent backup copy from the storage area.

**Purge** Tivoli Continuous Data Protection for Files deletes a versioned backup copy because the storage area is full.

**Report**

Tivoli Continuous Data Protection for Files sends a report of scheduled backup activity to the central management area.

**Version**

Tivoli Continuous Data Protection for Files adds a version suffix to a backup copy. A backup copy becomes versioned when Tivoli Continuous Data Protection for Files creates a newer backup copy of the same file.

## **Scheduled Backup Report**

Reports of scheduled backup activity are available from links in the scheduled backup reports table. Because e-mail is protected on a schedule, this report also corresponds to e-mail protection. Reports are available for your local Tivoli Continuous Data Protection for Files client and for clients that you manage.

When managing Tivoli Continuous Data Protection for Files clients, you can view the reports to see when the last successful scheduled backups took place. If it has been an extended period of time, this could indicate a problem with the Tivoli Continuous Data Protection for Files client.

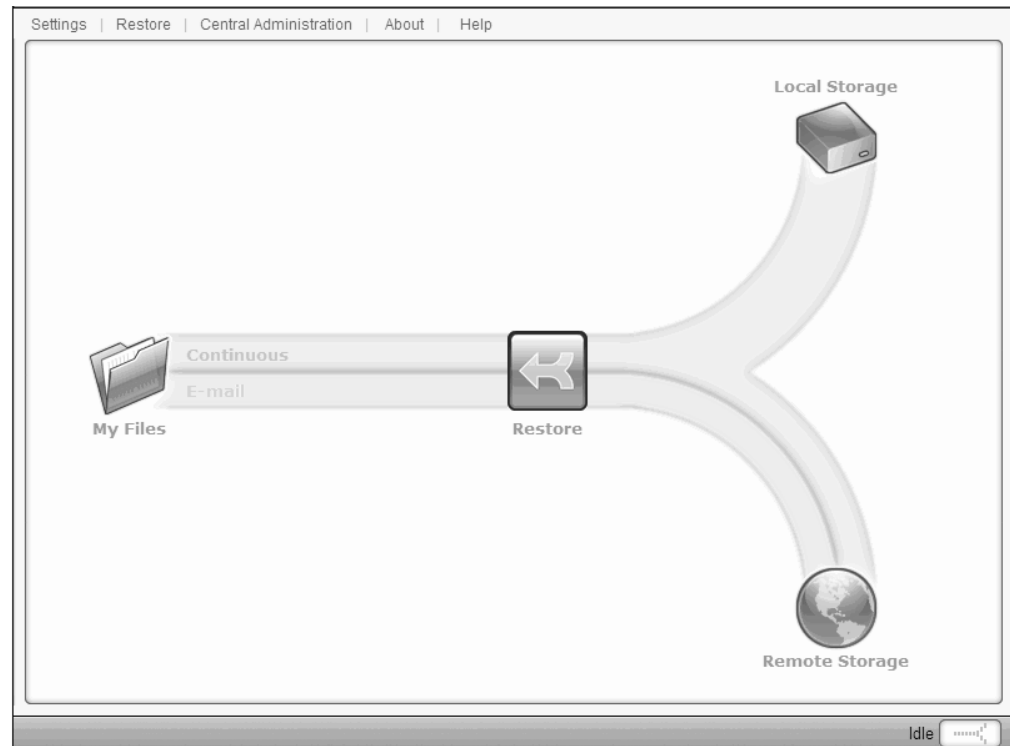
For an explanation of the scheduled backup reports table, see “Scheduled backup reports table of Tivoli Continuous Data Protection for Files” on page 49.

To navigate to the scheduled backup reports table, see “Viewing the report of scheduled backups by a Tivoli Continuous Data Protection for Files client” on page 84.




## Status panel of Tivoli Continuous Data Protection for Files

The Status panel is the entry to the Tivoli Continuous Data Protection for Files user interface. You can view a summary of how your files are being protected, and link to other panels to view details and change protection settings.



The Status panel displays when you click twice the Tivoli Continuous Data

Protection for Files client icon  in the system tray, or start the client from the **Start** menu.

You can also start the client GUI from the **Start** menu. Choose **Start > All Programs > Tivoli > CDP for Files > IBM Tivoli Continuous Data Protection for Files**.

### Menu Links

The top of the panel has 5 links:

The top of the panel has 4 links:

#### Settings

Links to the “Settings Notebook of Tivoli Continuous Data Protection for Files” on page 27. Use the Settings Notebook to change your protection settings.

#### Restore

Links to the “Restore Wizard of Tivoli Continuous Data Protection for Files” on page 86. Use the Restore Wizard to restore a file from a backup copy.

## Central Administration

Links to the “**Central Administration Settings**” window of Tivoli Continuous Data Protection for Files” on page 99. Use the Central Administration panel to manage Tivoli Continuous Data Protection for Files on other computers.

**Note:** The Central Administration feature is available only in the OEM version of the product.

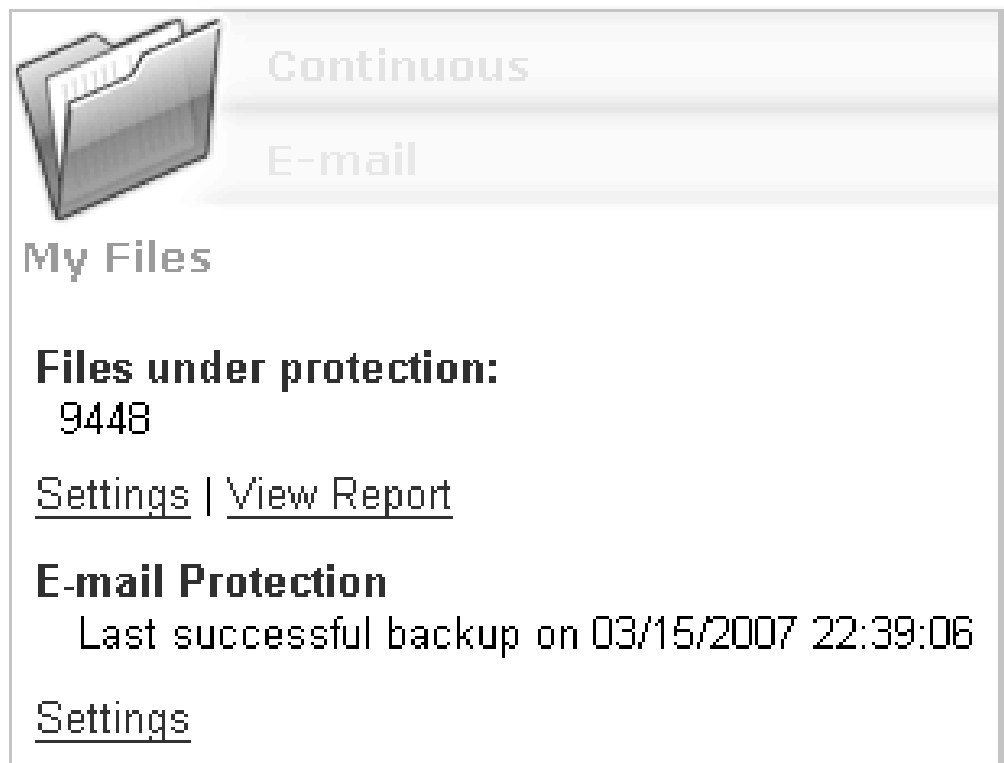
**About** Provides information about the product, including version level.

**Help** Links to the online help documentation.

## Graphic Icons

The center of the screen contains a graphic representation of Tivoli Continuous Data Protection for Files protection. Let your pointer hover over an icon to display summary information and links to detailed information.

### My Files



### Files under protection:

#### Number

An approximation of the total number of files that have been protected. Due to the nature of the program and how the logging is done, this number is only an approximation.

#### Settings

Links to the **Files to Protect** panel of the Settings Notebook. Use this link to change the files that are continuously protected.

### View Report

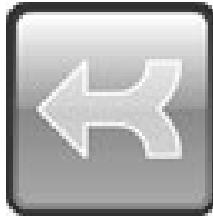
Links to the **Activity Report**. The **Activity Report** shows details of recent backup and restore activity.

For an explanation of the **Activity Report**, see “Continuous Protection Activity Report” on page 77

### E-mail Protection

#### Settings

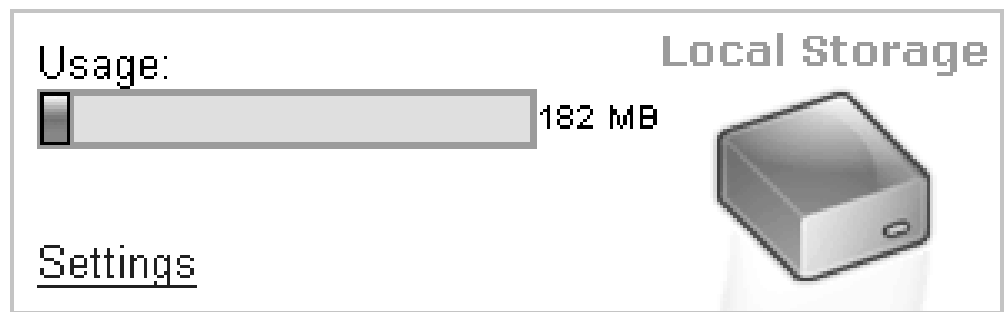
Links to the **E-mail** panel of the Settings Notebook. Use this link to change the e-mail application that is protected.



#### Restore

Links to the restore wizard, which helps you restore files from backup copies.

### Local Storage



**Usage:** Shows approximately how much space is being used by backup copies on local storage. The bar graph indicates what portion of the storage is being used. The text indicates the usage in bytes.

#### Settings

Links to the **General** panel of the Settings Notebook. Use this link to change the size or location of your local storage; how many versions to keep of each protected file; and whether to use local storage, remote storage, or both.

### Remote Storage



**Usage:** Shows approximately how much space is being used by backup copies on remote storage. The bar graph indicates what portion of the storage is being used. The text indicates the usage in bytes.

**Files Pending:**

When remote storage is not available, Tivoli Continuous Data Protection for Files queues backup copies that are destined for remote storage. When the remote storage becomes available, Tivoli Continuous Data Protection for Files transmits the queued backup copies. This field indicates the number of files that are destined for remote storage but have not yet been transmitted.

**Settings**

Links to the **Remote Storage** panel of the Settings Notebook.

## Status Panel

The bar at the bottom of the screen displays a brief text message of the status of backup and restore activities. Let your cursor hover over the text to pop up status of 5 activities and links to detailed status reports.

The status of the activities can be one of the following:

**idle** The activity is idle. An activity can become idle before finishing if it is stopped by the user.

**preempted**

The activity is idle, pending a higher-priority activity.

**active** The activity is active.

**paused**

The activity was paused by the user.

**disconnected**

The storage area is unavailable.


**disabled**

The storage area is not configured.

## System Tray

The System Tray in the bottom left of the computer screen displays the FastBack for Workstations icon. When you hover the cursor over this icon, a pop up displaying the IBM Tivoli Storage Manager FastBack For Workstations version is displayed along with a summary status of the Local Backup and the Remote Backup.

If the status is disconnected or paused, the icon will change to .

If errors have occurred, the icon will change to .

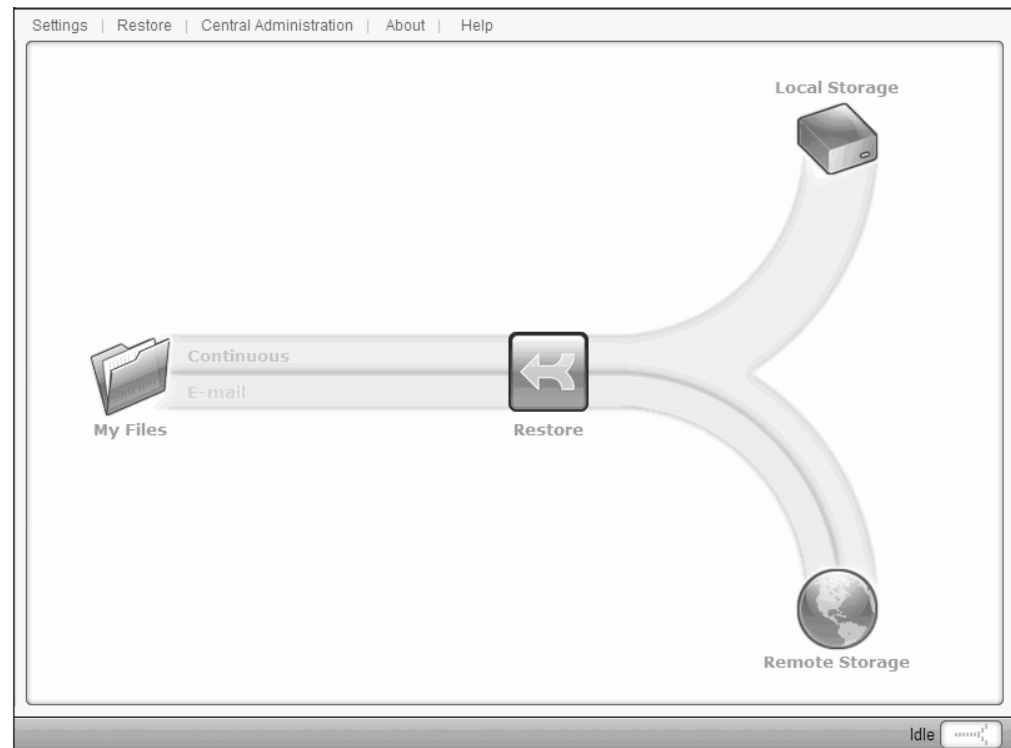
**Note:**

- The error icon will disappear when the user views the activity report. The error icon will reappear when the error occurs again.
- Only the error icon will be displayed if errors have occurred and the status is disconnected.


## Viewing reports by Tivoli Continuous Data Protection for Files

You can view reports of continuous and scheduled protection activities.

Assume that you start from the Tivoli Continuous Data Protection for Files Status panel.



The Status panel displays when you click twice the Tivoli Continuous Data

Protection for Files client icon  in the system tray, or start the client from the **Start** menu.

You can also start the client GUI from the **Start** menu. Choose **Start > All Programs > Tivoli > CDP for Files > IBM Tivoli Continuous Data Protection for Files**.

## Viewing the continuous protection activity report of a Tivoli Continuous Data Protection for Files client

### About this task

You can see a detailed report of recent backup activities. The report shows successful activities, and failed activities with messages.

### Procedure

1. Open the Tivoli Continuous Data Protection for Files Status panel.
2. Let your pointer hover over the **My Files** icon. Summary information and links fly down from the icon.
3. Click the link **View Report**. The **Activity Report** displays.

## Viewing the report of scheduled backups by a Tivoli Continuous Data Protection for Files client

### About this task

You can see a detailed report of scheduled backup activities. Choose from a list of backup reports. The report shows successful activities, and failed activities with messages.

### Procedure

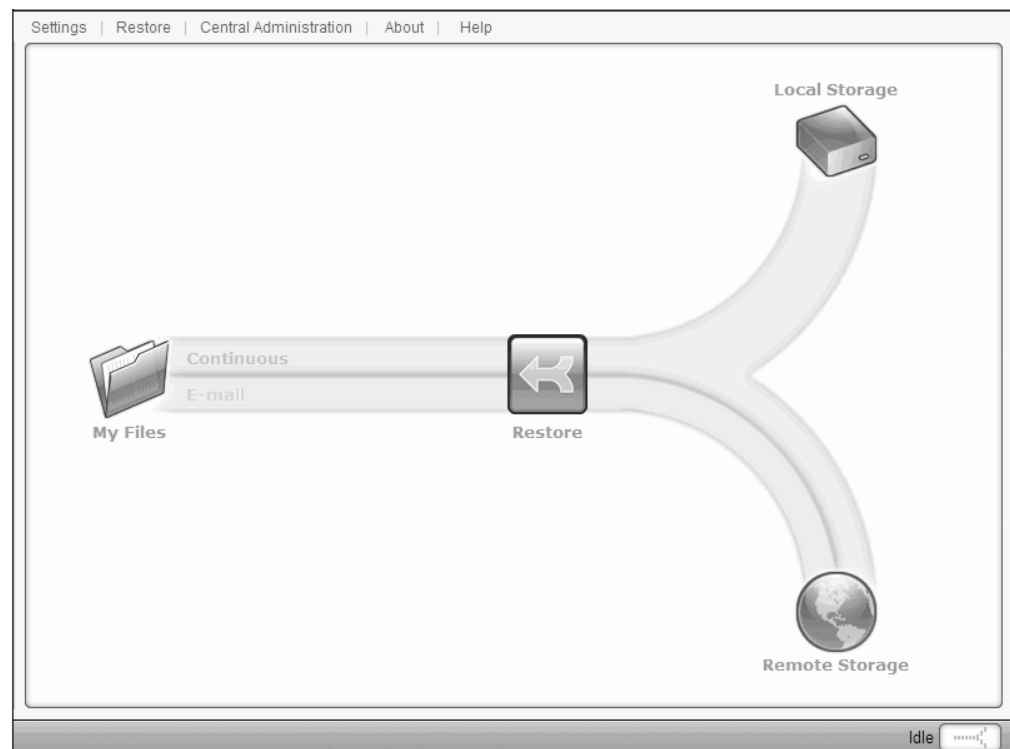
1. Open the Tivoli Continuous Data Protection for Files Status panel.
2. Let your pointer hover over the **Remote Storage** icon. The summary information and links fly out.
3. Click the link **Settings**. The Settings Notebook displays; the **Remote Storage** page is selected.
4. On the left side of the notebook, select the **Advanced** page.
5. Click the link **Scheduled Backup Settings**. The **Folders and Files Settings** dialog for scheduled backup displays.
6. Click the link **View Report**.

---


## Chapter 6. Restoring files with the Tivoli Continuous Data Protection for Files client

The Tivoli Continuous Data Protection for Files client makes backup copies of your files so that when the time comes, you can restore your files. You can restore a file that you deleted, and you can restore an earlier version of a file that does not have your recent changes. A wizard guides you to find the file; choose the right version, and choose the location to restore your file.

Start from the Tivoli Continuous Data Protection for Files client Status panel.



The Status panel displays when you click twice the Tivoli Continuous Data

Protection for Files client icon  in the system tray, or start the client from the **Start** menu.

You can also start the client GUI from the **Start** menu. Choose **Start > All Programs > Tivoli > CDP for Files > IBM Tivoli Continuous Data Protection for Files**.

Click the large arrow in the middle of the Status panel. The Restore Wizard guides you to restore your file.

For explanations of the Restore Wizard fields, see “Restore Wizard of Tivoli Continuous Data Protection for Files” on page 86.

## Restore Wizard of Tivoli Continuous Data Protection for Files

Restore a protected file with this Restore Wizard.

Use the control buttons at the bottom of each wizard page to navigate to all pages. When you reach the final page, click the **Finish** button to restore your files.

The wizard has 4 pages:

- “**Welcome** panel (Restore Wizard) of Tivoli Continuous Data Protection for Files”
- “**Files to Restore** panel of Tivoli Continuous Data Protection for Files”
- “**Restore Location** panel of Tivoli Continuous Data Protection for Files” on page 89
- “**Summary** panel (Restore Wizard) of Tivoli Continuous Data Protection for Files” on page 90

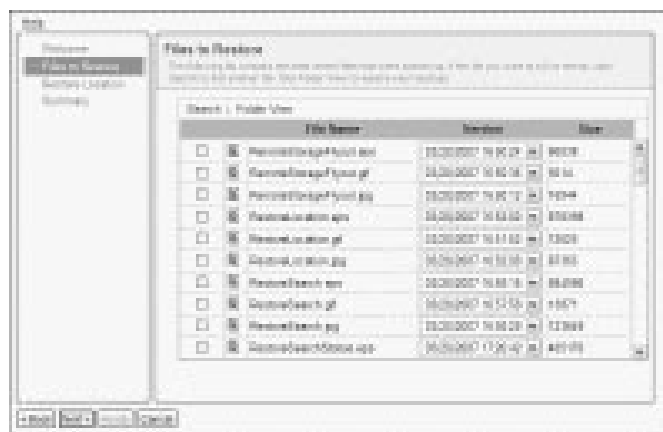
## Welcome panel (Restore Wizard) of Tivoli Continuous Data Protection for Files

The **Welcome** panel lists the steps to restore your files. Click the **Next** button to advance to the next panel of the wizard. Click the **Cancel** button to exit the wizard without restoring any files.

## Files to Restore panel of Tivoli Continuous Data Protection for Files

Choose files to restore.

## Files to Restore list



The box contains a list of files that you can choose to restore. Each row contains the following fields:

**Select** Check the box if you want to restore the file.

## File Name

The name of the file that you can restore. Let your pointer hover over the file name to pop up the full path of the file.



### Version

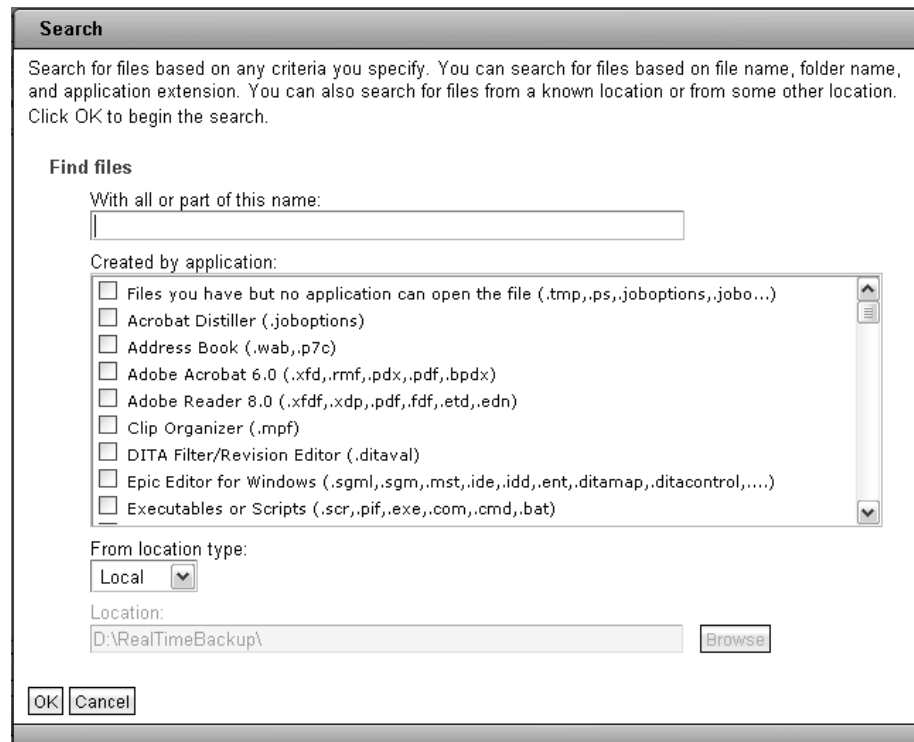
The drop-down box lists the dates and times that this file was modified. Choose the version that you want to restore.

**Size** The size of the file.

The list initially contains approximately 20 of the files that were most recently backed up. Change the list of files by clicking the **Search** or **Folder View** menu items at the top of the box:

### Search

Presents a dialog that allows you to search for backup copies to add to the list.



The **Search** dialog has several fields. The fields are combined to narrow the search criteria. Leaving any field blank increases the chances of finding more files.

#### Find files **With all or part of this name:** field

Use this field if you know the name or part of the name of the file you want to restore. You can enter a partial file name or folder and use an asterisk as wildcard. If you enter nothing, the search can yield files from any folder with any name.

#### Find files **Created by application:** check box list

Use this list if you know the application that created the file you want to restore. Check as many applications as you want. If you enter nothing, the search can yield files from any application.

#### Find files **From location type:** drop down list

Choose the location of the backup copy.

You can choose from three locations:

**Local** The local storage area that is currently configured.

### Remote

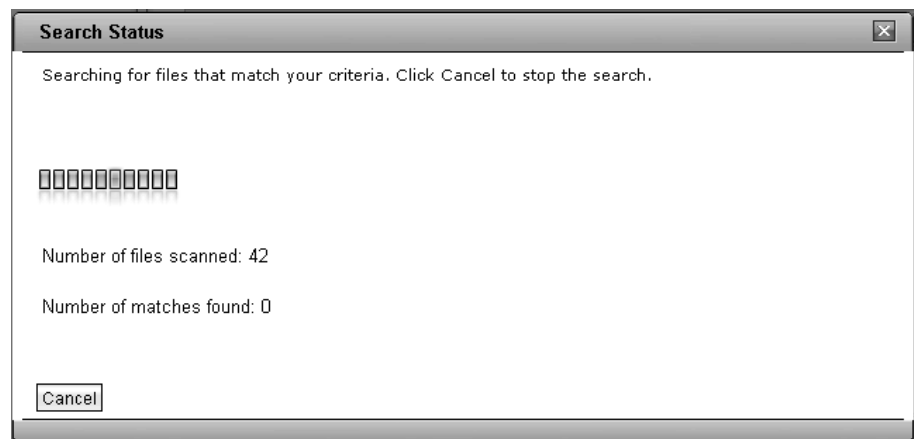
The remote storage area that is currently configured.

### Other

Any folder of your choosing. If you previously configured your local or remote storage areas differently than your current configurations, you can search in those previously configured areas. When you choose this option, the **Location** text entry field becomes active. Type the location to search or click the **Browse** button to browse for the folder.

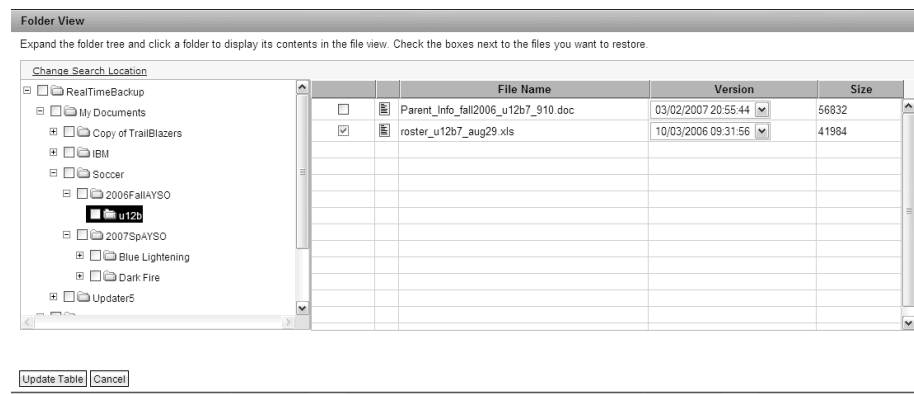
Click the **Search** dialog **OK** to begin searching.

Click the **Search** dialog **Cancel** button to exit the **Search** dialog without searching.



The **Search Status** window will show the progress of your search. The **Search Status Cancel** button will stop the search and return to the list of files without adding the files in your search criteria. If the search completes without being cancelled, the **Files to Restore** list will contain the results of your search.

## Folder View



Presents a dialog that allows you to browse folders to find your files.

**Folder View** dialog has the following fields:

### Folder tree

Browse the tree to find a folder. Click a folder and the files in that folder will display in the file view to the right of the folder tree.

### File view

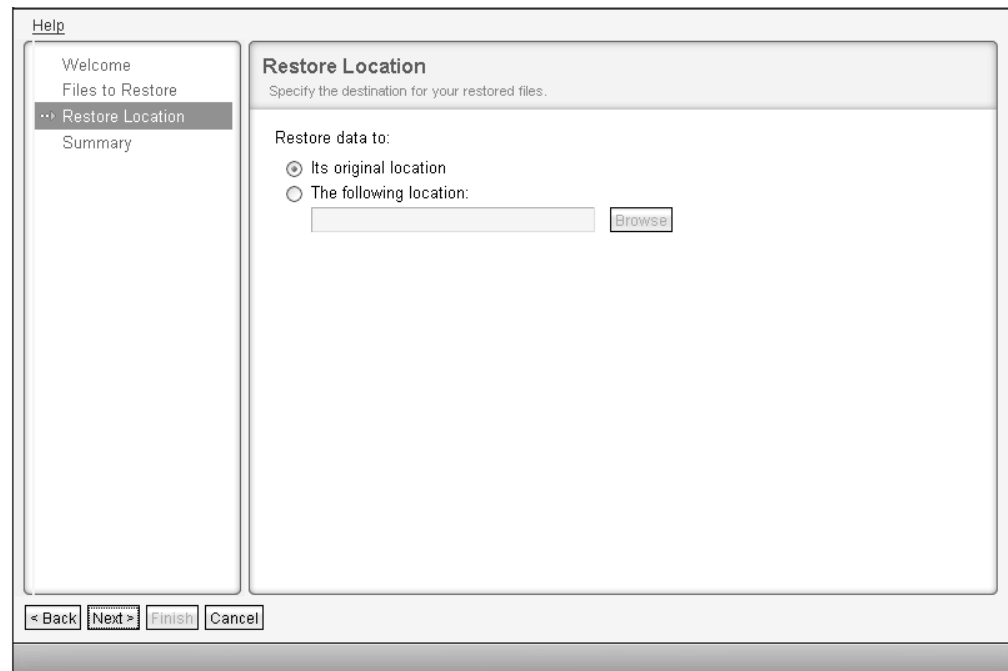
Displays the files in a folder that you chose. Check the box in the **Select** column to select a file. The **Version** drop-down list shows the dates that the file was backed up. Choose the version that you want to restore.

Click **Update Table** to add the selected files to the list of files.

Click **Cancel** to exit the dialog without adding any files to the list of files.

## Restore Location panel of Tivoli Continuous Data Protection for Files

Choose the location to restore your files.



You can restore your files to their original location, or to a different location.

### Restore data to: Its original location

Check the button if you want to restore the files you chose to their original locations. The original location is the full path that pops up when you let your pointer hover over the file name in the **Files to Restore** panel.

### Restore data to: The following location

If you want to restore the files to a different location, check the button and enter the new location in the field. You can use the **Browse** button to select the location. All files that you chose will be restored to the path that you specify. No part of the original path will be appended to the path that you specify.

For example, assume the original file's full path is C:\Documents and Settings\Administrator\My Documents\My Pictures\Vacation2006\Family.jpg. Assume also that you want to restore the file to a folder called D:\BestPhotos. In the **Restore data to:** field, you must provide the folder name and a file name. Assume that you specify D:\BestPhotos\Family2006.jpg. Tivoli Continuous Data Protection for Files will restore the file to this path: D:\BestPhotos\Family2006.jpg.

## Summary panel (Restore Wizard) of Tivoli Continuous Data Protection for Files

Use the **Summary** panel to view a summary of your choices, and decide if you want to restore your files.

The **Summary** panel displays the locations and number of files that you specified in the previous panels of the wizard.

Choose **Back** to return to a previous panel to modify your choices.

Choose **Finish** to restore your files. If popup messages are enabled, you see a message when your restore is complete.

Choose **Cancel** to exit the wizard without restoring your files.

---

## Chapter 7. Storage areas of Tivoli Continuous Data Protection for Files

Tivoli Continuous Data Protection for Files stores many backup copies in the native file format. You can restore the backup copies by using native file system commands. Some backup copies are created using sub-file copy, compression, or encryption. These must be restored with the Tivoli Continuous Data Protection for Files client.

---

### Format of backup copies created by Tivoli Continuous Data Protection for Files

Tivoli Continuous Data Protection for Files keeps most backup copies in the same format as the original file.

Although Tivoli Continuous Data Protection for Files provides tools and views to see the backup copies and to restore them, in many cases it is not necessary to use Tivoli Continuous Data Protection for Files to restore those backup copies. They are simply files, with contents exactly like the originals, in a directory tree structure that simulates the original tree.

Some backup copies are not in the same format as the original files, and must be restored using Tivoli Continuous Data Protection for Files:

- Backup copies stored on Tivoli Storage Manager server
- Backup copies that were encrypted
- Backup copies that were compressed
- Large files that were backed up with sub-file copy. In the storage area, the sub-file copies have -FPdelta file name suffix.
- Versioned bit map backups. In the storage area, these backup copies have -TPdelta file name suffix.

---

### Versioning of backup copies created by Tivoli Continuous Data Protection for Files

As you change a file, Tivoli Continuous Data Protection for Files keeps backup copies of each version of the original file.

To track versions of a file, Tivoli Continuous Data Protection for Files adds a version suffix to the file name of the backup copy. On the local storage area, all backup copies contain a version suffix. On the remote storage area, all backup copies except the most recent backup copy contain a version suffix. When a file is deleted on your computer, Tivoli Continuous Data Protection for Files adds a version identifier to the file name of the most recent backup copy on the remote storage area.

The version suffix is “-FP” followed by a number. For example, a file named `data.xls` could be stored as versioned backup copy `data.xls-FP1168376676.xls`.

The most recent backup copy of a file is the “active” backup copy. Older backup copies of that file are “inactive” backup copies. If storage space is approaching the

limit, Tivoli Continuous Data Protection for Files will delete inactive backup copies of a file before deleting active backup copies.

A file that is protected by schedule could change several times during the schedule interval. Only the last version of the file prior to the end of the schedule will be backed up. A continuously protected file (one that is protected, but not protected by schedule) is backed up after every change.

Tivoli Continuous Data Protection for Files keeps as many versions of a file on local storage as you configure in the **Versions to keep:** field of the **General** page of the Settings Notebook, and as space allows.

Tivoli Continuous Data Protection for Files keeps as many versions of a file on remote storage as you configure in the **Versions to keep:** field of the **Remote Storage** page of the Settings Notebook, and as space allows.

---

## Modifying backup copies

If you move or modify backup copies with native file system tools, the client ceases to function correctly and is not supported.

You can use native file system tools to copy backup copies to restore your original files. Do not use native file system tools to modify backup copies. Use native file system tools to remove backup copies only if you uninstall the client.

---

## Chapter 8. Tivoli Continuous Data Protection for Files central management considerations

Concepts, examples, and steps for centrally managing Tivoli Continuous Data Protection for Files clients.

**Note:** The Central Administration feature is available only in the OEM version of the product.

### Configuring Manageable Clients

Tivoli Continuous Data Protection for Files has features that allow an administrator to manage the configuration of other Tivoli Continuous Data Protection for Files clients. You can manage the installed product level and configuration of other Tivoli Continuous Data Protection for Files clients. The administrator can also monitor the activity reports of the other clients. To use the central management features, you must configure your Tivoli Continuous Data Protection for Files clients to work together.

Several features allow central management:

#### **Tivoli Continuous Data Protection for Files clients pull upgrade and configuration information**

Once Tivoli Continuous Data Protection for Files is installed, you can update the product level and configuration by putting the installer and configuration file in the appropriate downloads folder for the consuming clients. See “Advanced installation of the Tivoli Continuous Data Protection for Files client” on page 19 for details on silent installation.

#### **You can configure the folders that Tivoli Continuous Data Protection for Files clients use to share configuration data**

You can configure the downloads and reports folders of the managed clients, and the central administration folder of the managing client. You must configure each so that the managed clients consume the configuration and information exported by the managing client. The same configuration allows the managing client to view the activity reports of the managed clients. You can change the administration folder of the managing client to communicate with different groups of managed clients. See “Administration folders” on page 97 for details about the central administration folder, and the downloads and reports sub-folders.

#### **An executable pushes product installation to other computers**

The product includes an executable that will push Tivoli Continuous Data Protection for Files to other computers. You can push a configuration at the time of the installation. See “FpPushInst.exe (push install command)” on page 23 for details.

### An Example Configuration

The key to configuring your clients to be managed is in defining the central administration folders. Let's assume that there is one managing (administrator) client; and two groups of clients to be managed.

In this example, the managed clients in group A do not explicitly configure the **Central administration folder:** field in the **Central Administration Settings** window, so their central administration folder defaults to the \RealTimeBackup\ folder on the remote storage location. Both computers have the same central administration folder.

Further, this example assumes that the managed clients in group B have different remote storage locations (or, in one case, no remote storage). Two clients with different remote storage locations would have different default central administration folders, and one client without remote storage would have no central administration folder. These three could not be managed as group unless they have a common central administration folder. You want to manage them as a group, so you must specify a common central administration folder. Configure a common central administration folder in the **Central administration folder:** field in the **Central Administration Settings** window.

The configurations of the clients could look as below.

*Table 5. Central Administration folder configurations for managing clients.*

Computer Name	Group	Remote storage location (configured in Settings Notebook, Remote Storage page)	Central Administration Settings window, Central administration folder: field value	The settings in the two columns to the left yield the central administration folder
BrightStar	Administrator	not applicable for managing other clients		
Mercury	Managed group A	\\MyServer\MyShare\	not configured	\\MyServer\MyShare\RealTimeBackup
Venus	Managed group A	\\MyServer\MyShare\	not configured	\\MyServer\MyShare\RealTimeBackup
Neptune	Managed group B	\\SpaceMan\CDPstorage\	\\SpaceMan\CDPadmin\	\\SpaceMan\CDPadmin\
Uranus	Managed group B	https://MyISP.com/MyAcct	\\SpaceMan\CDPadmin\	\\SpaceMan\CDPadmin\
Pluto	Managed group B	not configured	\\SpaceMan\CDPadmin\	\\SpaceMan\CDPadmin\

## Using the Example Configuration to Manage a Group

When you want to manage group A, configure BrightStar's central administration folder to be the same as the central administration folder for group A.



Table 6. BrightStar Central Administration folder for managing group A.

		Remote storage location (configured in Settings Notebook, Remote Storage page)	Central Administration Settings window, Central administration folder: field value	The settings in the two columns to the left yield the central administration folder
Computer Name	Group			
BrightStar	Administrator	not applicable for managing other clients	\\MyServer\MyShare\RealTimeBackup	\\MyServer\MyShare\RealTimeBackup

For example, to manage the configuration of the clients in group A, do the following:

1. Use the Settings Notebook to update the configuration of BrightStar. Configure the values that you want to export to group A.
2. Click the **Apply** button on any page of the Settings Notebook.
3. Open the **Central Administration Settings** window.
4. In the **Central administration folder:** enter (or browse for) \\MyServer\MyShare\RealTimeBackup.
5. Click the **OK** button. The window will close.
6. Open the **Central Administration Settings** window again.
7. Check the **Publish this computer's settings as the configuration template for other computers to use** check box.

At this point, consider if you want BrightStar to operate with this configuration, or if you want to return to the Settings Notebook and restore BrightStar's previous configuration.

When you want to manage group B, configure BrightStar's central administration folder to be the same as the central administration folder for group B.

Table 7. BrightStar Central Administration folder for managing group B.

		Remote storage location (configured in Settings Notebook, Remote Storage page)	Central Administration Settings window, Central administration folder: field value	The settings in the two columns to the left yield the central administration folder
Computer Name	Group			
BrightStar	Administrator	not applicable for managing other clients	\\SpaceMan\CDPadmin\	\\SpaceMan\CDPadmin\

For example, to view the backup reports of the clients in group B, do the following:

1. Open the **Central Administration Settings** window.
2. In the **Central administration folder:** enter (or browse for) \\SpaceMan\CDPadmin\.
3. Click the **OK** button. The window will close.
4. Open the **Central Administration Settings** window again.

- Click the **View Report** link. The remote storage reports table will open. The remote storage reports table gives a summary of scheduled backup activity for the group B computers.

At this point, consider if you want BrightStar to operate with this central administration folder, or if you want to restore BrightStar's previous central administration folder.

## Using the Example Configuration to Manage a Single Client in a Group

When you want to manage Mercury, configure BrightStar's central administration folder to be the same as the central administration sub-folder that is unique for Mercury.

*Table 8. BrightStar Central Administration folder for managing Mercury.*

Computer Name	Group	Remote storage location (configured in Settings Notebook, Remote Storage page)	Central Administration Settings window, Central administration folder: field value	The settings in the two columns to the left yield the central administration folder
BrightStar	Administrator	not applicable for managing other clients	\\MyServer\MyShare\RealTimeBackup\Mercury\	\\MyServer\MyShare\RealTimeBackup\Mercury\

For example, to manage the configuration of the client on Mercury, do the following:

- Use the Settings Notebook to update the configuration of BrightStar. Configure the values that you want to export to Mercury.
- Click the **Apply** button on any page of the Settings Notebook.
- Open the **Central Administration Settings** window.
- In the **Central administration folder:** enter (or browse for) \\MyServer\MyShare\RealTimeBackup\Mercury\.
- Click the **OK** button. The window will close.
- Open the **Central Administration Settings** window again.
- Check the **Publish this computer's settings as the configuration template for other computers to use** check box.

At this point, consider if you want BrightStar to operate with this configuration, or if you want to return to the Settings Notebook and restore BrightStar's previous configuration.

## Managing Clients Using Native File System Tools

The examples above assume that you use the Tivoli Continuous Data Protection for Files feature (**Publish this computer's settings as the configuration template for other computers to use**) to distribute configurations to the managed clients. You can also use native file system tools to distribute configuration files to the managed clients. You can use native file system tools to copy a configuration file to the downloads folder for a single client or for a group of clients. Assume that the managed clients have been configured as above, so that they may be managed

individually or managed as a group. The table below indicates the appropriate downloads folder for configuring the group or the individual computer.

*Table 9. Downloads folders for managing groups and clients*

Computer Name	Group	Copy a configuration file to this folder to manage the group.	Copy a configuration file to this folder to manage the individual computer.
BrightStar	Administrator	Not applicable for the administrator computer	
Mercury	Managed group A	\\MyServer\MyShare\ RealTimeBackup\ BackupAdmin\ Downloads	\\MyServer\MyShare\ RealTimeBackup\ Mercury\ BackupAdmin\ Downloads
Venus	Managed group A		\\MyServer\MyShare\ RealTimeBackup\ Venus\BackupAdmin\ Downloads
Neptune	Managed group B	\\SpaceMan\ CDPadmin\ BackupAdmin\ Downloads	\\SpaceMan\ CDPadmin\Neptune\ BackupAdmin\ Downloads
Uranus	Managed group B		\\SpaceMan\ CDPadmin\Uranus\ BackupAdmin\ Downloads
Pluto	Managed group B		\\SpaceMan\ CDPadmin\Pluto\ BackupAdmin\ Downloads

## Administration folders

Tivoli Continuous Data Protection for Files uses particular folders to manage reports, configuration settings, and product level. Clients pull configuration information and new product code from these folders. Clients store their status reports in these folders. Clients can push their configuration information to these folders for other clients to consume.

The central administration folder for a group of computers can be specified in the **Central Administration Folder:** field in the **Central Administration Settings** window. If the **Central Administration Folder:** field is not configured, then the central administration folder defaults to the \RealTimeBackup\ folder in the remote storage area. If neither the **Central Administration Folder:** field nor a remote storage area is configured, then there is no central administration folder.

**Note:** There is no administration folder when you specify Tivoli Storage Manager server remote storage. If you use Tivoli Storage Manager server remote storage and you want to use administration folders, you must configure the **Central Administration Folder:** field in the **Central Administration Settings** window.

The administration folder contains two levels of administrative sub-folders.

### Computer-specific sub-folders

These folders apply to only 1 computer. In each computer-specific sub-folder, there are two sub-folders:

#### The Reports folder

The client stores status reports in the Reports folder. You can view the reports in the graphical user interface of the client. The full path of the reports folder is <administration folder location>\<computer name>\BackupAdmin\Reports\.

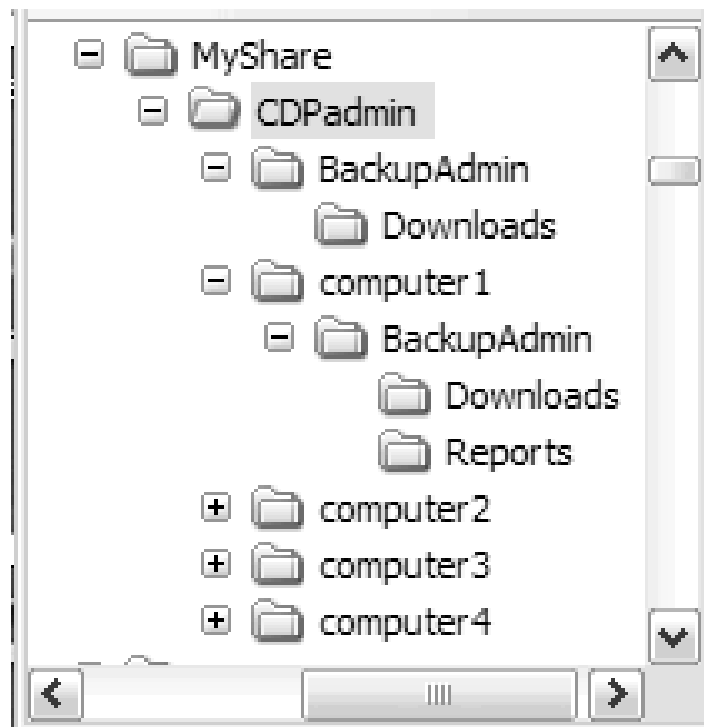
#### The Downloads folder

When you put product upgrades or configuration files in this folder, the client will automatically adopt the product upgrades or configuration. The full path is <administration folder location>\<computer name>\BackupAdmin\Downloads\.

**Note:** The consuming computers must have read access to the administration folders.

### Group administrative sub-folders

These folders apply to all computers that share this administration folder. In each group administrative sub-folder, there is a Downloads sub-folder. When you put product upgrades or configuration files in the group administrative Downloads sub-folder, all clients that share this group administrative folder will automatically adopt the product upgrades or configuration.



### Example of administration subfolder names

Here is an example of administration subfolder names, given two specifications of the central administration folder. In one column, assume that the central administration folder is configured in the **Central Administration Folder:** field in the **Central Administration Settings** window as \\MyServer\MyShare\CDPadmin\.

another column, assume that the central administration folder is not configured in the **Central Administration Folder:** field in the **Central Administration Settings** window, but defaults to the remote storage location. Assume that the remote storage location is configured as \\MyServer\MyShare\. For both specifications, assume that your computer name is Computer1.

Table 10. Central Administration Folder Names

	Central Administration area is configured in the Central administration folder: field in the Central Administration Settings window as \\MyServer\MyShare\CDPadmin\	Central Administration area is not configured in the Central administration folder: field in the Central Administration Settings window, but defaults to a subfolder of the remote storage location: \\MyServer\MyShare\
Central administration folder:	\\MyServer\MyShare\CDPadmin\	\\MyServer\MyShare\RealTimeBackup\
Reports folder name for single computer:	\\MyServer\MyShare\CDPadmin\Computer1\BackupAdmin\Reports\	\\MyServer\MyShare\RealTimeBackup\Computer1\BackupAdmin\Reports\
Downloads folder name for single computer:	\\MyServer\MyShare\CDPadmin\Computer1\BackupAdmin\Downloads\	\\MyServer\MyShare\RealTimeBackup\Computer1\BackupAdmin\Downloads\
Downloads folder name for all computers that share the central administration folder:	\\MyServer\MyShare\CDPadmin\BackupAdmin\Downloads\	\\MyServer\MyShare\RealTimeBackup\BackupAdmin\Downloads\

## Central Administration Settings window of Tivoli Continuous Data Protection for Files

Use the **Central Administration Settings** window to identify administration folders for this computer, and to manage the configuration settings on other computers.

**Note:** The Central Administration feature is available only in the OEM version of the product.

Settings | About | Help

### Central Administration Settings

Specify the central management area. Click Publish to copy the template to the central management area for others to use. Click View Report to display history reports.

Central Administration Folder:

☒ Publish this computers settings as the configuration template for other computers to use

☐ Lock the configuration of other computers

☐ Run 'Scan Now' on other computers.

[View Report](#)

### Central Administration Folder: field

Type or browse for a folder that will be the central administration folder for this computer. The administrative tasks on the **Central Administration Settings** window are limited to only those computers that are centrally managed from this folder. If you type the name of a folder that does not exist, Tivoli Continuous Data Protection for Files will create the folder.

The central administration folder is used for several purposes. You can change the folder depending on your purpose. See a discussion of central administration folder uses in “Administration folders” on page 97.

### Publish this computer's settings as the configuration template for other computers to use check box

When managing Tivoli Continuous Data Protection for Files on a group of computers, it is customary to configure one computer as the template for all computers in the group. If you have configured other computers to share the central administration folder of this computer, they can be centrally managed by this computer. Check this box to use this computer's settings to configure the other computers. When you click the **OK** button, this computer's configuration settings file will be copied to the downloads subfolder of the central administration folder that is shared by the group of computers. All computers that share the central administration folder will adopt the Tivoli Continuous Data Protection for Files settings that you publish.

If you publish this computer's settings, your management of the group can be further extended:

#### Lock the configuration of other computers check box

Check this box to prevent any of the centrally managed computers from changing their settings.



Each row identifies the reports associated with one Tivoli Continuous Data Protection for Files client, and contains the following cells:

**Version**

The version of Tivoli Continuous Data Protection for Files.

**Last Backup**

The last completed scheduled backup.

**Files** A number indicating approximately how many files were successfully backed up at the last schedule. Due to the nature of the program and how the logging is done, this number is only an approximation.

Click the number to display a complete report of the scheduled backup. In addition to files backed up, the report shows administrative activities and failed backup attempts.

**Failures**

This column indicates how many errors there were during the backup.

Click the number to display a report of the errors during scheduled backup.

**History**

Click the link to display a list of the historical backup and failure logs. Once this list is displayed, you are able to click on logs to display more information. Only reports which had actual files backed up will show as active links.



---

## Chapter 9. Protecting a server with Tivoli Continuous Data Protection for Files

Consider the following issues when you protect a server.

### **Managing a server that stores backup files**

If you are protecting a server that contains remote storage areas for several Tivoli Continuous Data Protection for Files clients, you can avoid protecting all versioned backup copies. Because all versioned backup copies on a remote storage area contain an -FP suffix, you can exclude versioned backup copies from protection by excluding -FP. This way you will protect only the most recent backup copies.

Tivoli Continuous Data Protection for Files can not protect backup copies that it has encrypted. This means that Tivoli Continuous Data Protection for Files cannot create encrypted backup copies, and then make backup copies (encrypted or not) of those backup copies.



---

## Chapter 10. Troubleshooting the Tivoli Continuous Data Protection for Files client

Information is available for some common problems and suggested solutions are provided.

---

### Files are not backed up by Tivoli Continuous Data Protection for Files

Files can fail backup for several reasons. Some common reasons are provided in this section.

#### Storage for backup copies is not correctly configured in Tivoli Continuous Data Protection for Files

If the area to store backup copies of your protected files is not properly specified, Tivoli Continuous Data Protection for Files can not back up files.

Verify that you have correctly specified local or remote storage areas in the Settings Notebook. Local storage and which location (local or remote) is specified in the “**General**” panel of client Settings Notebook” on page 28 of the Settings Notebook. Remote storage is specified in the “**Remote Storage**” panel of client Settings Notebook” on page 42.

#### Files to protect are incorrectly configured in Tivoli Continuous Data Protection for Files

The files that Tivoli Continuous Data Protection for Files protects are configurable. If you have configured your list of protected files incorrectly, Tivoli Continuous Data Protection for Files does not back up the files.

Tivoli Continuous Data Protection for Files backs up only those files that are configured for protection. The list of continuously protected files is configured in the “**Files to Protect**” panel of client Settings Notebook” on page 30 of the Settings Notebook. Note that exclusions from protection have priority over inclusions. If an application or file path is explicitly included for protection, verify that no list items exclude the file from protection. See “Including and excluding files from protection” on page 33.

#### Files in use are not backed up by Tivoli Continuous Data Protection for Files

Attempts to perform a local or remote backup of a file that is saved but not closed can fail. This can occur with Quicken Quick Books objects (files with an extension ending in .QBW).

The failure is indicated by the message in the Windows System Tray: The software has experienced a problem. Check for details in the View Report link from the Status page. Also check the Windows System Event log and Application log.

Details of the failure in the linked report and in replication.log can look like this:

```
<replication-status when="date/time" lastStatus="FAIL"
explanation="WinErr:32(crcIn)"
errValue="5081" errMnemonic="SRCFILE" action="COPY"
src="X:\path\to\filename.QBW"
dst="C:\RealTimeBackup\x\path\to\filename.QBW"
```

To protect such files, add the application type to the include list for scheduled backup, and select a time for scheduled backup when the application is not in use.

## Files are not backed up to Tivoli Storage Manager server

These topics discuss problems backing up files to Tivoli Storage Manager server.

### Tivoli Storage Manager node name does not match hostname

If the node name assigned by the Tivoli Storage Manager administrator is different from the Tivoli Continuous Data Protection for Files client's hostname, back up to the Tivoli Storage Manager server fails, since Tivoli Continuous Data Protection for Files cannot identify itself properly to the Tivoli Storage Manager server.

The following error message displays:

```
FilePath ERROR ANS1353E (RC53)
Session rejected: Unknown or incorrect ID entered
node:<node name> rc=53 reason=65535 tsm_init_api_session tsmInitEx failed
```

Tivoli Continuous Data Protection for Files uses Tivoli Storage Manager API. By default, the Tivoli Storage Manager API uses the client's hostname as the Tivoli Storage Manager node name when identifying itself to the Tivoli Storage Manager server. A Tivoli Storage Manager server administrator typically registers a node using the hostname. In some cases, the Tivoli Storage Manager server administrator uses a name that is different from the client's hostname, and this causes the problem.

When this happens, you must configure the Tivoli Storage Manager API to use the appropriate node name when logging on to the Tivoli Storage Manager server. You can correct this problem by doing the following:

1. Edit the dsm.opt file. This file is in the Tivoli Continuous Data Protection for Files subfolder of the "Program data folder" on page 46.
2. Add the node name to the dsm.opt file. To do this, go to the end of the file, and on a new line add the NODENAME parameter followed by the node name. For example: NODENAME TSMclientnode1.
3. Save the dsm.opt file.

The next time Tivoli Continuous Data Protection for Files connects to the Tivoli Storage Manager server, it uses the node name you specified. Tivoli Continuous Data Protection for Files prompts you for the password, if necessary.

### Tivoli Storage Manager client node lacks authority to delete backup copies

If Tivoli Continuous Data Protection for Files does not have delete backup permission on the Tivoli Storage Manager server, it cannot successfully purge older files when the designated storage space is getting full.

The following error is displayed in the replication.log file:

```
FilePath ERROR ANS1126E (RC27)
The file space cannot be deleted because
this node does not have permission to delete archived or backed up data.
```

The following error is displayed in a pop-up window:  
Target file system can only handle sequential I/Os.

Remote backup can be suspended because the backup storage space cannot be purged to make room for new files.

Tivoli Continuous Data Protection for Files requires permission to manage space on the Tivoli Storage Manager server and to create file versions. The registered node which is used by the Tivoli Continuous Data Protection for Files client to access the Tivoli Storage Manager server must have the permission to delete the backups it creates. This function is required when Tivoli Continuous Data Protection for Files needs to purge files when the backup storage space is full.

Enable permission to delete backup copies for Tivoli Storage Manager Enterprise server as below. This sample assumes node name of TSMclientnode1; replace the node name appropriately when you enter the command:

1. Log into the Tivoli Storage Manager server and bring up the Tivoli Storage Manager administrative command line.
2. Enter this command to the Tivoli Storage Manager server: update node TSMclientnode1 **backdel=y**.

Enable permission to delete backup copies for Tivoli Storage Manager Express server as follows:

1. Open an administrative command prompt.
2. Enter this command: query session. Note the session numbers for your client node.
3. Enter this command, where session\_number is the session number you identified in the previous step: cancel session session\_number. Repeat if there is more than one session for your client node.
4. Enter this command, where TSMclientnode1 is the name of your client node: update node TSMnode backdel=y

### **Non-system accounts do not have appropriate user security rights to use Tivoli Storage Manager**

If a non-system account does not have appropriate user security rights, and Tivoli Continuous Data Protection for Files is configured to back up files to Tivoli Storage Manager server, files modified by the non-system account are not backed up.

In order to back up files to a Tivoli Storage Manager server, the proper user security rights must be given to the non-system user account to use the Tivoli Storage Manager client. Any non-system account (local or domain) must have the following rights:

- Back up files and directories
- Restore files and directories
- Manage auditing and security logs

---

## **Tivoli Continuous Data Protection for Files user interface replaces existing browser session**

When the user interface is started, it replaces an existing browser session. You can change this behavior by changing the settings in more recent versions of Mozilla Firefox and Internet Explorer. In Internet Explorer version 7, you can prevent this behavior.

In Internet Explorer version 7 and above, change the tabbed browsing settings as follows:

1. In **Tools** menu, choose **Internet Options**. The **Internet Options** notebook displays.
2. Select the **General** tab. The **General** page displays
3. In the **Tabs** section, click the **Settings** button. The **Tabbed Browsing Settings** dialog displays.
4. In the **Open links from other programs in:** section, click the **A new window** radio button.
5. Click the **OK** button. The **Tabbed Browsing Settings** dialog exits.
6. In the **Internet Options** notebook, click the **OK** button.
7. The **Internet Options** notebook exits and your new settings are applied.

In Mozilla Firefox version 1.5.0.10 and above, change the tabbed browsing settings as follows:

1. In **Tools** menu, choose **Options**. The **Options** notebook displays.
2. Select the **Tabs** tab. The **Tabs** page displays
3. In the **Open links from other applications in:** section, click the **A new window** radio button.
4. Click the **OK** button. The **Options** notebook exits and your new settings are applied.

---

## Tivoli Continuous Data Protection for Files user interface contains no file data

If the Tivoli Continuous Data Protection for Files daemon is not running, or if your browser is in offline mode, the Tivoli Continuous Data Protection for Files user interface contains no file data. This condition is accompanied by an error message which begins like this: `FPA_getNamedObject: Could not find:`. There are two possible causes for this problem.

### Your browser is offline.

Your browser must be in online mode to see file data. Internet Explorer and Firefox browsers are turned on- or off- line by checking or unchecking **File > Work Offline** from the browser menu. Confirm that this menu item is not checked.

### The Tivoli Continuous Data Protection for Files daemon is not running.

To determine if the Tivoli Continuous Data Protection for Files daemon is running, and restart if necessary, see "Restarting the Tivoli Continuous Data Protection for Files client process" on page 74.

## Restarting the Tivoli Continuous Data Protection for Files client process

The `FilePathSrv.exe` client process is started automatically every time the computer starts. If the `FilePathSrv.exe` client process does not start automatically or stops running, your files are not protected.

To determine if the `FilePathSrv.exe` process is running, look for the `FilePathSrv.exe` process in Task Manager. If you cannot see this process, the process is not running.

To restart the process on a Command Prompt window, do the following:

1. Open a Command Prompt window.
2. Navigate to the Tivoli Continuous Data Protection for Files installation folder.  
(The default installation folder is C:\Program Files\Tivoli\CDP\_for\_Files.
3. Type the following: `filepathsrv -d`

Confirm that the process is running by checking the System Event log or Task Manager. In the System Event log, there should be an entry which states: HTML listener started successfully and listening on port 9003. This is event # 6049. In Task Manager, you should see FilePathSrv.exe process.

You can also restart the process from the **Start** menu. Choose **Start > All Programs > Startup > CDPforFilesSrv**.

---

## The number of backup copy versions is greater than configured in Tivoli Continuous Data Protection for Files

The number of backup copy versions exceeds **How many versions to keep** configuration setting.

The problem occurs when versions are not tracked properly.

The problem can occur because data folders were not removed between an uninstall and a new install. The new install does not have a record of the backup copies created from the previous install and use of the product. This can occur on local storage, remote storage, or both. For a list of folders to remove after uninstall, and before installing again, see “Cleaning up after uninstallation” on page 22.

The problem can also be caused, on remote storage only, because of changes to the encryption or compression settings.

When encryption or compression settings are turned on or off, the versions counter is reset to 0, even if some backup copies exist. This behavior results because Tivoli Continuous Data Protection for Files tracks file versions without encryption/compression differently than file versions with encryption/compression.

As an example, assume that a file `file.txt` is continuously protected, and has reached its 5 version limit (5 is the default version limit). The backup copies were neither encrypted nor compressed. The user then enables compression. Tivoli Continuous Data Protection for Files then creates up to 5 new backup copy versions of the file. The restore view will show 5 versions of the file having name `file.txt` (corresponding to the original 5 versions backed up without compression), and 5 versions of the file named `file.txt.cdp` (corresponding to the new 5 versions backed up with compression enabled).

---

## Limit user access to files on a target file server

Set up the security permissions on a target file server to make sure that users only have access to the files that they back up.

By default, the first client that connects to a given server share creates the `RealTimeBackup` directory. Permissions assigned to the `RealTimeBackup` directory do not prevent users from reading files they do not own.

The settings used in this example assume one primary user of Tivoli Continuous Data Protection for Files on the client. This primary user is the first user from a client that connects to the server and creates the subdirectory for files backed up from that client. If Tivoli Continuous Data Protection for Files operates from other accounts on that client, failures might occur when copying files to the remote server. Error messages such as Failed to open the destination file are logged to the activity report.

## Windows file server

This example assumes that the following conditions exist:

- The Windows XP server shares a directory named c:\fileservertest.
- The accounts used to access the server are members of the Users group.

## Access Control List (ACL) settings for the RealTimeBackup directory

ACL settings enable client accounts to create directories that are only accessible by the account that created them. As a result, the directory that contains data for a node is not created until that node connects to the server.

Using Windows Explorer, set the ACL for the c:\fileservertest\RealTimeBackup directory according to these settings:

*Table 11. ACL settings for the RealTimeBackup directory*

Type	Name	Permission	Applies to
Allow	Administrators	Full Control	This folder, subfolders, and files
Allow	CREATOR OWNER	Full Control	This folder, subfolders, and files
Allow	Users	Special	This folder only
Allow	OWNER RIGHTS*	Full Control	This folder, subfolders, and files

\* Note: The OWNER RIGHTS object must be added for Windows 2008 Servers.

The ability for objects to inherit permissions from the parent is not set. As a result, set the Special access for the Users group to only permit these settings:

Traverse Folder / Execute Allow  
 List Folder / Read Data Allow  
 Read Attributes Allow  
 Read Extended Attributes Allow  
 Create Files / Write Data Allow  
 Create Folders / Append Data Allow  
 Delete subfolders and files Allow  
 Read Permission's Allow

## ACL settings for the RealTimeBackup\BackupAdmin directory

The RealTimeBackup\BackupAdmin directory is used by the Tivoli Continuous Data Protection for Files client to download revisions and configurations. Nodes require read-only access to these directories:

c:\fileservertest\RealTimeBackup\BackupAdmin



Table 12. ACL settings for the RealTimeBackup\BackupAdmin directory

Type	Name	Permission	Applies to
Allow	Users	Read, Execute	This folder, subfolders, and files
Allow	Administrators	Full Control	This folder, subfolders, and files

The ability for objects to inherit permissions from the parent is not set. As a result, set the Special access for the Users group to only permit these settings:

Traverse Folder / Execute Allow  
List Folder / Read Data Allow  
Read Attributes Allow  
Read Extended Attributes Allow  
Delete subfolders and files Allow  
Delete Allow  
Read Permission's Allow

## UNIX file server running Samba

This example, assumes that the Samba server is set up to share a directory named /fileservertest.

These settings enable users to create directories under the RealTimeBackup directory:

```
chmod o+wrxt /fileservertest/RealTimeBackup
chmod o+rx /fileservertest/RealTimeBackup/BackupAdmin
chown root /fileservertest/RealTimeBackup/BackupAdmin
```

In the Samba configuration file (smb.conf), set the create mask and directory mask parameters to each specify 0700. For example:

```
[fileservertest]
path = /fileservertest
writable = yes
create mask = 0700
directory mask = 0700
```



---

## Appendix. Accessibility features for Tivoli Continuous Data Protection for Files

Accessibility features help a user who has a physical disability, such as restricted mobility or limited vision, to use software products successfully. The major accessibility features of Tivoli Continuous Data Protection for Files are described in this topic.

### Accessibility features

The following list includes the major accessibility features in Tivoli Continuous Data Protection for Files:

- Keyboard-only operation
- Interfaces that are commonly used by screen readers
- Keys that are discernible by touch but do not activate just by touching them
- Industry-standard devices for ports and connectors
- The attachment of alternative input and output devices
- User documentation provided in HTML and PDF format. Descriptive text is provided for all documentation images.

The Tivoli Continuous Data Protection for Files Information Center, and its related publications, are accessibility-enabled.

### Keyboard navigation

Tivoli Continuous Data Protection for Files follows Microsoft conventions for most keyboard navigation and access. Drag and Drop support is managed using the Microsoft Windows Accessibility option known as MouseKeys. For more information about MouseKeys and other Windows accessibility options, please refer to the Windows Online Help (keyword: MouseKeys).

The following access methods differ from Microsoft conventions.

In the Tivoli Continuous Data Protection for Files client, there are several tasks in which you select files:

- Select files to include for continuous protection and to exclude from any protection.
- Select files to include for scheduled protection.
- Select files to vault

Each of these tasks presents a list of file specifications labeled **Folders and Files**. You can add file specifications to the list and remove file specifications. When you add a file specification, you can browse for files in a file tree. The file tree opens when you click **Include**, **Exclude**, or **Vault**. Navigate the file tree with the following method:

1. Press Tab and Shift+Tab to navigate to + (expand folder). Press Enter to expand the folder.
2. Press Down Arrow and Up Arrow to navigate among the objects in the folder.
3. On an expanded folder, press Enter to collapse the folder.

4. As you navigate the file tree, the object that has focus is displayed in the **Folder name (wildcards allowed)** field at the bottom of the panel.
5. Press Tab to navigate to the text field. Optionally, edit the text field.
6. Press Tab to navigate to **OK**. Click **OK** to add the file specification to the **Folders and Files** list.

To remove file specifications from the list, select a file specification and click **Remove**. Navigate the list of file specifications with this method:

1. Press Tab to move down to the next file specification and Shift+Tab to move up to the previous file specification.
2. Press Spacebar to select a file specification or to clear a selection.
3. Press Shift+Tab to navigate to **Remove**. Click **Remove** to remove the file specification from the **Folders and Files** list.

The **Folders and Files** list is displayed when you navigate the following paths:

- **Settings > Files to Protect > Folders and Files box > Details**
- **Settings > Files to Protect > Vault box > Details**
- **Settings > E-mail Protection > Scheduled Backup Settings**
- **Settings > Advanced > Scheduled Backup Settings**

The **Files to Restore** panel in the restore wizard also allows you to select files from a file tree, and add and remove files from a list. When you select **Folder View**, a panel with a file tree and a list of files is displayed. The restore file tree and files list is similar to other file trees and files lists. The restore controls are different in the following ways:

- The file tree folder items each have a check box.
- The items in the folders and files list each have a check box. If there are more than one versions of a file, the row contains list of versions in the **Version** column.

Press Spacebar to select or clear a check box. If more than one version of a file is available, select the version this way:

- Press Tab to navigate to the **Version** column.
- Use Up Arrow and Down Arrow to select a version.

## Related accessibility information

You can view the publications for Tivoli Continuous Data Protection for Files in Adobe Portable Document Format (PDF) using the Adobe Acrobat Reader. You can access these or any of the other documentation PDFs at IBM Publications Center at <http://www.ibm.com/shop/publications/order/>.

## IBM and accessibility

For more information about the commitment that IBM has to accessibility, see the IBM Human Ability and Accessibility Center at <http://www.ibm.com/able>.

---

## Notices

This information was developed for products and services offered in the U.S.A.

IBM may not offer the products, services, or features discussed in this document in other countries. Consult your local IBM representative for information on the products and services currently available in your area. Any reference to an IBM product, program, or service is not intended to state or imply that only that IBM product, program, or service may be used. Any functionally equivalent product, program, or service that does not infringe any IBM intellectual property right may be used instead. However, it is the user's responsibility to evaluate and verify the operation of any non-IBM product, program, or service.

IBM may have patents or pending patent applications covering subject matter described in this document. The furnishing of this document does not grant you any license to these patents. You can send license inquiries, in writing, to:

IBM Director of Licensing  
IBM Corporation  
North Castle Drive  
Armonk, NY 10504-1785  
U.S.A.

For license inquiries regarding double-byte (DBCS) information, contact the IBM Intellectual Property Department in your country or send inquiries, in writing, to:

Intellectual Property Licensing  
Legal and Intellectual Property Law  
IBM Japan Ltd.  
1623-14, Shimotsuruma, Yamato-shi  
Kanagawa 242-8502 Japan

**The following paragraph does not apply to the United Kingdom or any other country where such provisions are inconsistent with local law:**

INTERNATIONAL BUSINESS MACHINES CORPORATION PROVIDES THIS PUBLICATION "AS IS" WITHOUT WARRANTY OF ANY KIND, EITHER EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF NON-INFRINGEMENT, MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. Some states do not allow disclaimer of express or implied warranties in certain transactions, therefore, this statement may not apply to you.

This information could include technical inaccuracies or typographical errors. Changes are periodically made to the information herein; these changes will be incorporated in new editions of the publication. IBM may make improvements and/or changes in the product(s) and/or the program(s) described in this publication at any time without notice.

Any references in this information to non-IBM Web sites are provided for convenience only and do not in any manner serve as an endorsement of those Web sites. The materials at those Web sites are not part of the materials for this IBM product and use of those Web sites is at your own risk.

IBM may use or distribute any of the information you supply in any way it believes appropriate without incurring any obligation to you.

Licensees of this program who wish to have information about it for the purpose of enabling: (i) the exchange of information between independently created programs and other programs (including this one) and (ii) the mutual use of the information which has been exchanged, should contact:

IBM Corporation  
Software Interoperability Coordinator, Department 49XA  
3605 Highway 52 N  
Rochester, MN 55901  
U.S.A.

Such information may be available, subject to appropriate terms and conditions, including in some cases, payment of a fee.

The licensed program described in this information and all licensed material available for it are provided by IBM under terms of the IBM Customer Agreement, IBM International Program License Agreement, or any equivalent agreement between us.

Any performance data contained herein was determined in a controlled environment. Therefore, the results obtained in other operating environments may vary significantly. Some measurements may have been made on development-level systems and there is no guarantee that these measurements will be the same on generally available systems. Furthermore, some measurements may have been estimated through extrapolation. Actual results may vary. Users of this document should verify the applicable data for their specific environment.

Information concerning non-IBM products was obtained from the suppliers of those products, their published announcements or other publicly available sources. IBM has not tested those products and cannot confirm the accuracy of performance, compatibility or any other claims related to non-IBM products. Questions on the capabilities of non-IBM products should be addressed to the suppliers of those products.

All statements regarding IBM's future direction or intent are subject to change or withdrawal without notice, and represent goals and objectives only.

This information contains examples of data and reports used in daily business operations. To illustrate them as completely as possible, the examples include the names of individuals, companies, brands, and products. All of these names are fictitious and any similarity to the names and addresses used by an actual business enterprise is entirely coincidental.

#### COPYRIGHT LICENSE:

This information contains sample application programs in source language, which illustrate programming techniques on various operating platforms. You may copy, modify, and distribute these sample programs in any form without payment to IBM, for the purposes of developing, using, marketing or distributing application programs conforming to the application programming interface for the operating platform for which the sample programs are written. These examples have not been thoroughly tested under all conditions. IBM, therefore, cannot guarantee or imply reliability, serviceability, or function of these programs.

If you are viewing this information softcopy, the photographs and color illustrations may not appear.





---

## Trademarks

IBM, the IBM logo and the following terms are trademarks of the International Business Machines Corporation in the United States, other countries, or both:

Lotus Notes  
Redbooks  
Tivoli

UNIX is a registered trademark of The Open Group in the United States and other countries.

Linux is a trademark of Linus Torvalds in the United States, other countries, or both.

Java and all Java-based trademarks and logos are trademarks or registered trademarks of Oracle and/or its affiliates.

Adobe, the Adobe logo, PostScript, and the PostScript logo are either registered trademarks or trademarks of Adobe Systems Incorporated in the United States, and/or other countries.

Intel, Intel logo, Intel Inside, Intel Inside logo, Intel Centrino, Intel Centrino logo, Celeron, Intel Xeon, Intel SpeedStep, Itanium, and Pentium are trademarks or registered trademarks of Intel Corporation or its subsidiaries in the United States and other countries.

Microsoft, Windows, Windows NT, and the Windows logo are trademarks of Microsoft Corporation in the United States, other countries, or both.

Other product and service names might be trademarks of IBM or other companies.



---

# Index

## A

- accessibility features 113
- activity log
  - viewing in the client GUI 83
- Activity Report 76, 77
- administration folders 97
- Advanced panel of client Settings
  - Notebook 48
- Application Settings dialog 37
- Applications and Extensions box 12, 37
- Applications box 11, 36

## B

- back up all files
  - force a backup of all protected files 63, 69
  - force a scheduled backup 64, 70
  - stopping a backup 72
  - when to back up all files 40, 68
- Back up to: drop down list 14, 43
- Back up with new settings check box 40
- backup copies
  - format 91
  - modify with native file system tools 92
  - restore files 85
  - specify the local storage area 60
  - specify the remote storage area 61
  - versions 91
- BackupAdmin folder 97

## C

- central administration folders 97
- Central Administration Settings
  - window 99
- central management considerations 93
- clients 48
  - logs
    - viewing in the client GUI 83
  - overview 1
- closeapps.txt 51, 57
- Compress backups radio button 47
- configuration file
  - client 25
- configuration of clients
  - performance settings 48
- Configuration Wizard 6
  - E-mail Protection panel 13
  - Initial Backup panel 17
  - Remote Storage panel 14
  - Summary panel 18
  - Welcome page 7
  - What is Critical panel 8
- continuous protection
  - definition 2
  - force a backup of all files 63, 69
  - monitoring 76
  - restore files 85

- continuous protection (*continued*)
  - specify files using wildcards 10, 35
  - specify the local storage area 60
  - specify the remote storage area 61
  - specify which files are included and excluded 33
  - specify which files are protected 54
  - when to force a backup of all files 40, 68
- Critical Settings dialog 12

## D

- deploy the client 23
- Downloads folder 97
- drives, protected 33
- dsm.opt 106

## E

- E-mail Application Data Folder text field 13, 42
- E-mail Application drop down list 13, 42
- e-mail protection
  - monitoring 76
  - restore files 85
- E-mail Protection panel (Initial Configuration Wizard) 13
- E-mail Protection panel of client Settings
  - Notebook 41
- education
  - see Tivoli technical training v
- email protection
  - specify which applications are protected 58
- Encrypt backups radio button 46
- exclude files from protection 33
- external device
  - remote storage location 14, 43

## F

- file server
  - remote storage location 14, 43
- FilePathSrv.exe
  - run as a service 74
  - starting 74, 108
- files
  - specifying 10, 35
- Files are not backed up 105, 106
- Files to protect are incorrectly specified 105
- Files to Protect panel of client Settings
  - Notebook 30
- Files to Restore panel 86
- fixes, obtaining vi, vii
- Folders and Files box 8, 31
- Folders and Files Settings dialog (Initial Configuration Wizard) 9

- Folders and Files Settings dialog for continuous protection 32
- Folders and Files Settings dialog for scheduled backups 49
- force a backup
  - back up all protected files 63, 69
  - scheduled backup 64, 70
  - stopping a backup 72
  - when to force a backup of all files 40, 68
- fpa.txt 25
- fpcommands.xml 25
- FpForFileServers.js 74
- FpPushInst.exe 23

## G

- General panel of client Settings
  - Notebook 29

## H

- How many versions to keep: field 45
- How often to protect your e-mail drop down list 13, 42

## I

- IBM Support Assistant vi
- include files for protection 33
- information center v
- Initial Backup panel 17
- Initial Configuration Wizard 6
  - E-mail Protection panel 13
  - Initial Backup panel 17
  - Remote Storage panel 14
  - Summary panel 18
  - Welcome page 7
  - What is Critical panel 8
- installation
  - client
    - advanced 19
    - basic 5
    - command 20
    - configuration file 25
    - local silent installation 19
    - pull upgrade 21
    - pull upgrade considerations 21
    - push to remote computers 23
    - uninstall 18
  - system requirements
    - client 5
  - upgrade considerations 2
- Internet, search for problem resolution vi
- Internet, searching for problem resolution vi
- interpreting file and folder patterns 10, 35

## K

knowledge bases, searching v

## L

Local Backup Copy Versions are Greater than Configured 109

local storage area  
specify the location 60

Local Storage icon 76

Location text field 14, 43

logs  
client activity log, viewing  
client GUI 83

## M

managing a server 103

managing clients 93

Maximum space for backups: field 16, 45

monitoring  
continuous protection 76  
e-mail protection 76  
local client 75  
managed clients 76  
scheduled protection 76

## N

name patterns with wildcards 10, 35

new for version 3.1.8 1

Number of Backup Copy Versions are Greater than Configured 109

## O

ordering publications v

## P

patterns with wildcards 10, 35

performance settings

clients 48

pop-up messages 75

product overview

clients 1

protected drives 33

protecting a server 103

publications

ordering v

pull upgrade installation, client 21

push the client installation to remote computers 23

## R

Remote Backup Copy Versions are Greater than Configured 109

remote storage

WebDAV server 14, 43

remote storage area

specify the location 61

Remote Storage icon 76

remote storage location  
external device 14, 43

file server 14, 43

Tivoli Storage Manager 14, 43

USB device 14, 43

Remote Storage panel (Initial Configuration Wizard) 14

Remote Storage panel of client Settings Notebook 42

Reports folder 97

restore files 85

Restore Location panel 89

Restore Wizard 86

Files to Restore panel 86

Restore Location panel 89

Summary panel 90

Welcome panel 86

## S

Scheduled backup reports table 50, 101

scheduled protection

close applications prior to scheduled backup 51, 57

definition 2

force a scheduled backup 64, 70

monitoring 76

restore files 85

scheduled backup considerations 51, 57

specify files using wildcards 10, 35

specify the schedule period 59

specify the storage area 61

specify which files are included and excluded 33

specify which files are protected 56  
when to force a backup of all files 40, 68

Select folders dialog 9, 35

Settings Notebook 27

Advanced panel 48

E-mail Protection panel 41

Files to Protect panel 30

General panel 29

Remote Storage panel 42

silent installation

command 20

local silent installation

client 19

push the client to remote computers 23

specifying files to protect 10, 35

starting

back up all files 63, 69

client

run as a service 74

client GUI 67

FilePathSrv.exe client process 74, 108

scheduled backup 64, 70

Starting and stopping the client 67

Status panel 79

starting 67

stopping

backup or restore activity 72

storage area

specify the local storage area 60

specify the remote storage area 61

Storage for backup copies is not correctly specified 105

sub-file copy radio button 47

Summary panel (Initial Configuration Wizard) 18

Summary panel (Restore Wizard) 90

support information v

system requirements  
client 5

## T

Target file system can only handle sequential I/Os. 106

Throttle Settings dialog for network rules 52

Tivoli Storage Manager 106

client node lacks authority to delete

backup copies 106

delete backup copies 106

dsm.opt 106

node name does not match

hostname 106

user security rights 107

Tivoli Storage Manager remote storage location 14, 43

Tivoli technical training v

trademarks 119

training, Tivoli technical v

## U

upgrade the client

considerations for pull upgrade 21

pull installation 21

USB device

exclude from protection 33

remote storage location 14, 43

Use sub-file copy radio button 47

user interface contains no file data 108

## V

Vault box 38

vault duration 39

Vault Settings dialog 38

vaulted protection

definition 2

specify vault duration 39

specify which files are vaulted 58

## W

WebDAV server remote storage

location 14, 43

Welcome page (Initial Configuration Wizard) 7

Welcome panel (Restore Wizard) 86

What is Critical panel (Initial Configuration Wizard) 8

when to back up all files 40, 68

wildcards in file specifications 10, 35

Windows installation folder 26

Windows, Notebooks, and Dialogs

Application Settings dialog 37

## Windows, Notebooks, and Dialogs

*(continued)*

- Central Administration Settings window 99
- Critical Settings dialog 12
- Folders and Files Settings dialog 9
- Folders and Files Settings dialog for continuous protection 32
- Folders and Files Settings dialog for scheduled backups 49
- Initial Configuration Wizard 6
  - E-mail Protection panel 13
  - Initial Backup panel 17
  - Remote Storage panel 14
  - Summary panel 18
  - Welcome page 7
  - What is Critical panel 8
- Restore Wizard 86
  - Files to Restore panel 86
  - Restore Location panel 89
  - Summary panel 90
  - Welcome panel 86
- Scheduled backup reports table 50, 101
- Select folders dialog 9, 35
- Settings Notebook 27
  - Advanced panel 48
  - E-mail Protection panel 41
  - Files to Protect panel 30
  - General panel 29
  - Remote Storage panel 42
- Status panel 79
- Throttle Settings dialog for network rules 52
- Vault Settings dialog 38







Printed in USA

GC32-1783-05

