Total Recovery Pro 7

User Guide

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Chapter 1: Introduction

1.1 Product Overview

FarStone Total Recovery Pro 7's hard drive imaging and cloning features let you quickly recover, replace, or upgrade your hard drive in case of any data disaster. Your operating system, files and settings will appear exactly as they were when you cloned or imaged your hard drive.

Simple enough for a home user, FarStone Total Recovery Pro 7 still has plenty of features for the system administrator, who can copy a single disk image onto multiple computer systems, dramatically reducing the time needed to install new software, configure settings, and load data. FarStone Total Recovery Pro 7 offers incremental backup, which could allow you to perform most imaging and recovery tasks without ever leaving the Windows environment.

FarStone Total Recovery Pro 7 backs up onto a network place, which is not available in the personal edition of Total Backup Recovery. With this feature, your data security cannot be influenced by disasters like, earthquake, fire or flood, any more. The whole process of all functionalities is very easy for everyone only by clicking buttons. So the FarStone Total Recovery Pro 7 is the best choice for backup and recovery.

With a special recovery environment (Recovery Manager), you can run Total Backup Recovery to back up and restore damaged partitions even if Windows won't start for some reason. Also some other features of Total Backup Recovery are still available in this recovery environment.

1.2 Powerful Backup Features

Total Recovery Pro 7's Suite of backup features included:

 Hard Drive Imaging: Backs up and restores a system with a complete copy of all files, installed software, partition information, and system settings.

- Incremental Backup: Manually or automatically updates saved disk images without ever leaving Windows. Incremental backup points log only the changes that have occurred since the last Complete Backup.
- **File Backup:** Manually or automatically backs up selected file/folder, file extension, etc.
- Universal Restore: Restores a complete system image of a particular configuration to a different hardware configuration system or a Virtual Machine.

1.3 Other Features and Benefits

- Complete External Backup: Store a complete system image on a USB hard drive, or on a network share.
- Easy Disk I mage Updates: Incremental Backup lets you quickly update your saved disk image without ever leaving Windows.
- **Flexible Backup:** Back up your client's hard drive to another local hard drive, network drive, or a USB device.
- Rapid, Controlled Recovery: Rebuild system via Complete Restore in minutes, not hours or days.
- Partition Support: Supports FAT, FAT32, NTFS and other unknown partitions.
- Hardware Support: Supports IDE, EIDE, SATA, and SCSI/RAID hard drives.
- **100% Protection:** Restore an operating system damaged by corrupt software, human error, a virus attack, or a software bug.
- **FTP Support:** Save another data copy onto a remote FTP server to enhance the protection of files and the entire computer.
- **Virtual Machine Support:** Convert the backup image into a VMware file image format to run it on a virtual machine.

1.4 Newly-added Features

- Google Desktop Search: Enable search engine support if you want to use Google Desktop to locate and recover files and folders contained in Backup Images.
- Customized File Backup Search: Users can restore files by searching for customized backup files.
- Web Browser: Users can go through the website in PE by clicking Launch
 Web Brower.
- **Explorer Window:** Files and folders on your computer will be displayed by clicking **Open Explorer Window**.
- One-Click Backup: Create an image for system partition with one click.
 (details refer to 4.2.1.1)
- **Recovery Manager:** By clicking **active** recovery manager in the tools tab, you can enter the recovery manager interface (details refer to 4.6.3).
- Change Security Identifier: If you select the utility, you can get accurate restored data in the process of Universal Restore.
- **Unmount Preview Drive:** It can help to remove the preview backup image from your computer.

Chapter 2: Installing and Uninstalling Total Recovery Pro 7

2.1 System Requirements

• CPU: Pentium or higher

RAM: 512 MB or more (1 GB or more for Vista)

• Hard Drive: 250 MB free space

Supported Desktop Operating Systems: Windows® XP (32-bit & x64),
 Windows® Vista (32-bit & 64-bit), Windows 7

2.2 Start Total Recovery Pro 7 Installation



If you purchased a CD:

Insert the CD into your CD-ROM drive. The setup program should start automatically. If it doesn't, browse the CD and double-click on the Autorun.exe. Follow the prompts displayed to finish your installation.

If you purchased an electronic download:

Save the executable file to your hard drive. Double-click on the file to launch the Total Recovery Pro 7 installer. Follow the prompts to finish your installation.

2.2.1 Installing Total Recovery Pro 7

- 1. Select **Setup**, and click **Next**.
- 2. Select the language preference of the application, and click **Next**.
- Carefully read the software license agreement. If you accept the terms of the agreement, select I accept the terms in the license agreement, and click Next.
- 4. Enter your personal information and **serial number**, and click **Next**.



Note

Installation without purchasing a serial number will activate a time-limited evaluation version of Total Recovery Pro 7.

- 5. Click **Next** to install to the default folder, or **Change** to select another location.
- 6. Click Install to launch the installation process.
- 7. Click **Finish** to complete the installation. You are required to restart your computer in order to launch Total Recovery Pro 7.

2.3 Uninstalling Total Recovery Pro 7

- 1. From the Windows Start menu, select **Start -> Settings-> Control Panel**.
- Double-click Add/Remove Programs, and select Change or Remove Programs.
- 3. Select **Total Recovery Pro 7**, and click **Remove** to begin uninstalling the associated component.

Chapter 3: Total Recovery Pro 7 Specific Terminology

3.1 File Backup

Total Recovery Pro 7 File Backup monitors file changes. When a change is detected, Total Recovery Pro 7 will record it and back it up according to your schedule. File backups can be stored locally or externally.

3.2 Hard Drive I maging

Hard Drive Imaging can be used for bare-metal disaster recovery when hard drive failure occurs.

3.3 Full and Incremental Backups

Full and incremental backup solutions aim to make storing several copies of the source data more feasible. To accomplish this, a complete backup is taken initially and then incremental backups can be scheduled or run manually (Incremental backup only stores the files or sectors that have changed since the previous full or incremental backup). Restoring a system to a certain point involves locating the complete backup and the incremental backups executed between the time of the complete backup and the time of the restore.

3.4 Total Recovery Pro 7 Universal Restore

With Total Recovery Pro 7 Universal Restore, there is no need to reinstall the operating system, applications, configuration files, individual files, and folders into the new system with different hardware configuration, or to a virtual machine. With Universal Restore, you can restore your system onto a similar or a different (than original) hardware configuration with a few mouse-clicks.

Chapter 4: Start Using Total Recovery Pro 7

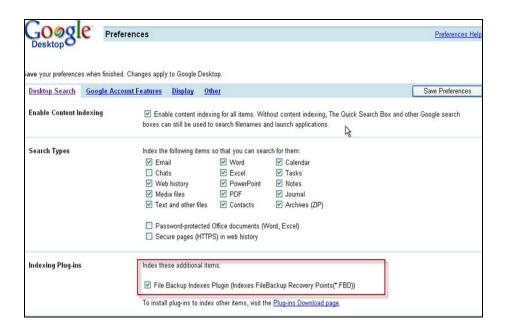
To launch Total Recovery Pro 7, double-click the **Total Recovery Pro 7** on your desktop or select **Start** –>**All Programs** –>**FarStone-**>**Total Recovery Pro 7**.



Tip

If Google Desktop is installed, when you start up Total Backup Recovery, it will confirm if you want to install "The Third Party Plug-in". Click "OK" to begin installation.

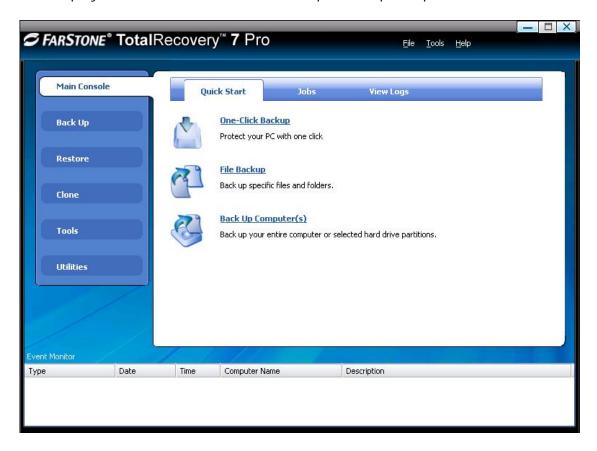
When entering the following interface, please select your wanted file types and options and "File Backup Index Plugin (Indexes FileBackup Recovery Points (*.FDB)), then Google Desktop will establish related indexes. You can open the .FDB files with the Google Desktop Search.



4.1 Main Console

4.1.1 Quick Start

This displays a shortcut menu for File Backup, Back up Computer.



*Total Recovery Pro 7 Main Console

One-Click Backup – Protect your PC with one click.

File Backup – Click here to back up the selected files and folders.

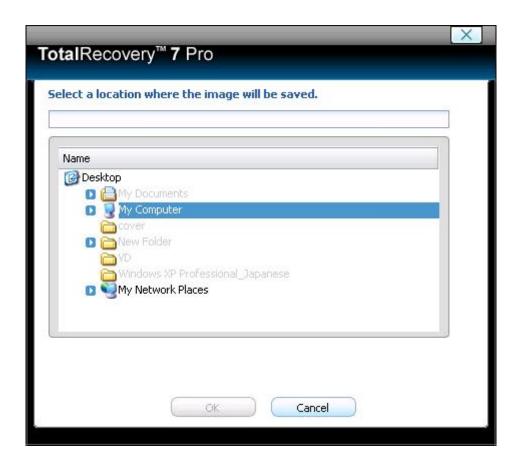
Back Up Computer(s) – Click here to back up the entire hard drive or partition(s) to an external location.

4.1.1.1 One-Click Backup

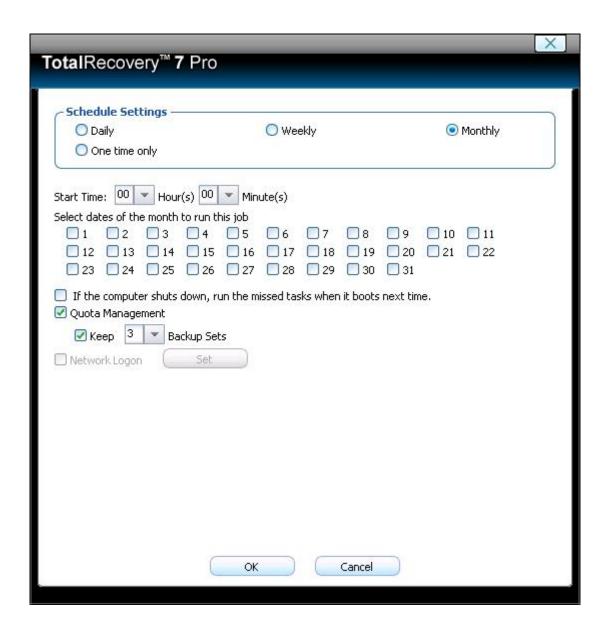
- 1. Click One-Click Backup.
- 2. A box pops up for you to choose the location where the backup files will save. In this box, you also have the option to edit the schedule.



A: Click **Browse for location** to enter the following box. You can save the image to the local hard disk, a CD, or a network by entering the location or choosing the location in the drop-down list.



 $\boldsymbol{\mathsf{B}}$: Click $\boldsymbol{\mathsf{Edit}}$ $\boldsymbol{\mathsf{Schedule}}.$ You can set anytime to backup files based on your demand.



4.1.2 Jobs

View Complete Backup, and File Backup jobs.

- Back Up Computers Total Recovery Pro 7 shows all file backup jobs related to this computer. There are four functions you can perform on each computer backup job.
 - a. **Detail** View detailed information about the backup jobs you've created, including the job name, source, destination, scheduled settings, description and FTP address for the selected backup.
 - Edit Schedule Schedule incremental updates for the backup job you've created; change other scheduled settings.

- c. Offsite Copy Change FTP settings or click Restore Defaults to restore the FTP settings to be the same as it in <u>Settings</u>.
- d. **Back Up Now –** Immediately Create an Incremental Backup.
- e. **Delete –** Delete the selected job.



Scheduling Complete Backups

- 1. Complete backups and incremental updates can be created according to the pre-set schedule.
- 2. If the system is busy, Total Recovery Pro 7 will not be able to perform the scheduled backup job, and will automatically try again later.
- File Backup Total Recovery Pro 7 displays all of the file backup jobs related to this computer. You will see the following options under each job:
 - a. **Detail** View detailed information about a backup job you've created, including the job name, job destination, scheduled settings and FTP address.
 - b. **Edit Schedule** Change scheduled settings for the backup job you created.
 - c. Offsite Copy Change FTP settings or click Restore Defaults to restore the FTP settings to be the same as it is in <u>Settings</u>.
 - d. Add Files Add files to your File Backup list.
 - e. Back Up Now Run the selected incremental File Backup job immediately.
 - f. Delete Delete the selected job.



Scheduling File Backups

1. If your system is busy, Total Recovery Pro 7 will not be able to initiate the backup process. Total Recovery Pro 7 will attempt to perform the backup again after 5 minutes.

- 2. The following files are not backed up:
 - a. Files in the Recycle Bin
 - b. Files in the System Volume Information directory, pagefile.sys, and the _\$temp directory
 - c. Hiberfil.sys
 - d. Files with ".rit" and ".tmp" extensions
 - e. Microsoft Office temporary files
 - f. Files in Total Recovery Pro 7's installation folder
 - g. Files in the Backup Destination directory of the backup job that is currently running
 - h. Files in the Temp directory

4.1.3 View Logs

This feature records all events of Total Recovery Pro 7, including warnings, errors and operations.

Save - Export the logs and save the event record as an excel file.

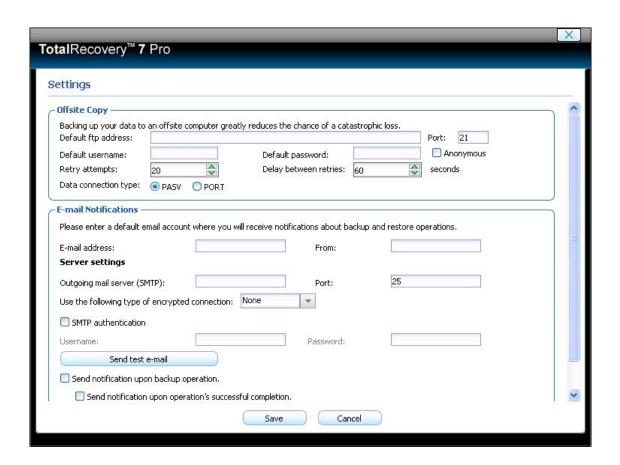
Delete - Delete the selected event(s).

Delete All - Delete all the saved events.

4.1.4 Settings

- Offsite Copy By setting the following options, users can save another image copy on an FTP server to ensure the data protection. This is the default for your file backup and complete backup.
 - a. FTP information Enter the address and port.

- b. FTP account Enter the username and password of the FTP. You can select **Anonymous** if the FTP server is shared to all users in the network.
- c. FTP connection retry frequency Enter Retry attempts (maximum is 100), Delay between retries (maximum is 600).
- **E-mail Notification** By configuring the below settings, Total Recovery Pro 7 will send an E-mail to your specified E-mail account when the backup is completed.
 - a. E-mail configuration Enter preferred E-mail address and other server settings.
 - b. Send test email Click here to test proper setting functionality.
 - c. Notification events Specify the events for which you would like to receive notification via E-mail regarding the backup operations.



*E-mail Notification Setup

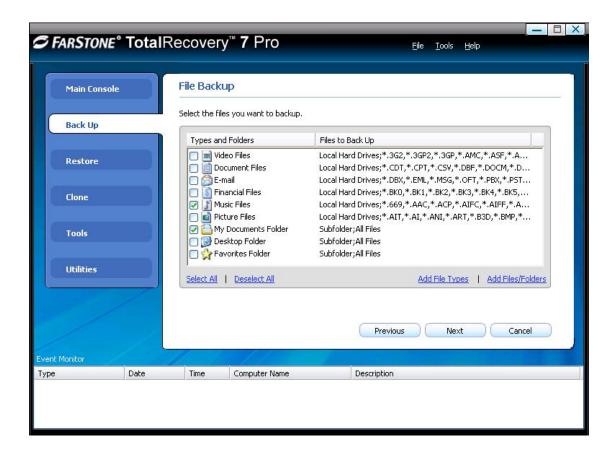
4.2 Backup Console

4.2.1 File Backup

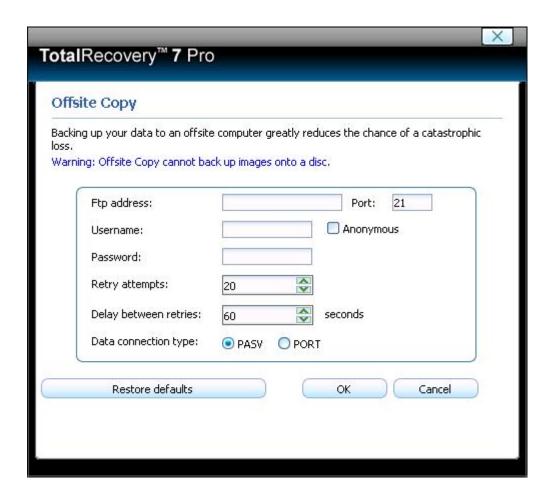
- 1. Start the Total Recovery Pro 7 Program. Select **Back Up** and then click **File Backup**.
- 2. Select **New File Backup** to create a new job.
- 3. Enter a name for your new job
- 4. Select the file(s) you want to back up. You can also click Add Files/Folders or Add FileTypes to add file type, folder, or individual file to back up according to your preference. Click Next to continue.

Add Files/Folders: Click this to select the files or folders you want to add from Windows[®] Explorer.

Add File Types: Click this to enter the **Select File** Types interface, as shown below.



- *Select Files for Backup or Add File/Folders or Add File Types
- a. Click **Delete Type** to remove file types you don't want to back up.
- b. Click Add New Type to add new file type in the backup list. You will need to enter a file type extension and a description. Or click Add Group to create a new file type group. You will need to enter a group name.
- 5. Select a location to store the backup file, such as a shared folder or locally, on the system. Click **Next** to continue. If you want to save one more image copy on the FTP, select **Enable offsite copy** (optional), and click **Settings** to configure these below.



*Enable Offsite Copy

- a. FTP information Enter the address and port.
- b. FTP account Enter the username and password of the FTP. You can select **Anonymous** if the FTP server is shared with all users in the network.
- c. FTP connection retry frequency Enter Retry attempts (maximum is 100), Delay between retries (maximum is 600).
- d. Restore Defaults Clear all FTP settings.



qiT

This feature only supports local image files. If you want to use the image file on the network or disc, you should first save it onto the local computer.

The entire FTP upload process executes in the background. If the program fails to upload backup data onto the FTP server, it will be recorded in logs

which can be checked through **View Logs**. Total Recovery Pro 7 will retry three times automatically until the next startup.

Click Start Now to proceed. You can also choose to run daily, weekly, or monthly backups.

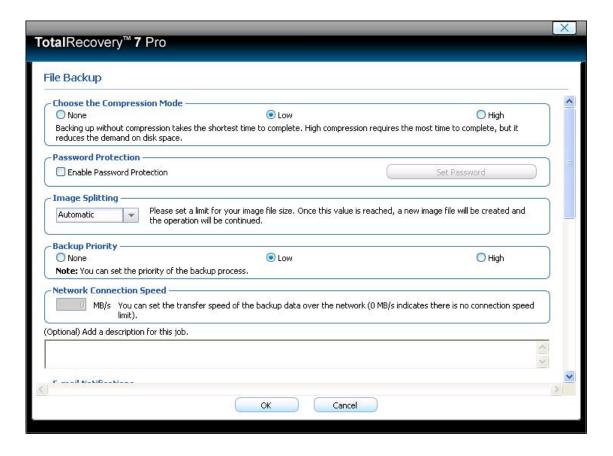


Note

If you select weekly or monthly, then the program will make a base backup at the 1st backup of each week or each month, after which the incremental backup will be made. These base and incremental backup files will be kept in one backup set only.

If you set the **Quota Management** checkbox to "Keep 3 Backup Sets", then the program will reserve space for only 3 backup sets (backup setting number is 99). For example: If you select "monthly" and decide to make 3 backups sets in one month, then the 1st backup set of that month will be deleted to make space for the 1st backup set of the next month.

Click **Advanced** for optional settings including: backup priority, network connection speed, compression mode, password protection, image split, backup description, configuration of E-mail notifications and Pre/Post command:



*Optional Advanced Settings

- 7. Review your information and settings, and click **Next** to launch the backup process. For best results, close all of the files you want to back up prior to launching your backup job.
- 8. Click **Finish** to return to the main console. Or to specify your preferred Schedule Settings, **click here to create a schedule now**. By doing so, you can choose to repeat the backup operation at a specific scheduled time.

Updating a File Backup Job

- 1. Launch Total Recovery Pro 7.
- 2. Select Back Up, and click File Backup.
- 3. Select Incremental File Backup, and click Next.
- 4. Select an existing job from the Job List.
- 5. Review your information and settings, and click **Next** to launch the incremental backup.
- 6. Click **Finish** to return to the main console.

4.2.2 Back Up My Computer

- 1. Start the Total Recovery Pro 7 Program. Select **Back Up** and then click **Back Up Computer(s)**.
- 2. Select Create a New Complete Backup.
- 3. Enter a name for your new Complete Backup and click **Next**.
- 4. Select the partition(s) or the entire hard disk to back up, and click Next.



Tip:

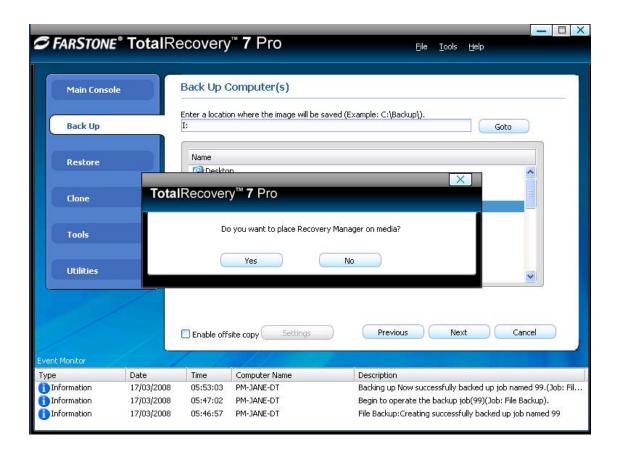
If you want to restore with **Universal Restore** later, you must choose your system partition (e.g. C:) to back up.

- 5. Enter the storage path and click **Goto**. Or select a destination location on a hard drive, USB storage medium, or a network location to store the image file.
 - A . If you choose to back up the image to a USB or CD/DVD, you can select to place Recovery Manager on the media by clicking **Yes** when you are prompted, "Do you want to place Recovery Manager on media?"



- Tip:

After backing up your computer onto USB or CD/DVD, you can directly boot into Recovery Manager by selecting "boot from USB or CD/DVD" when inserting the USB or putting the CD/DVD into the drive.



B. If the destination location is just USB, you will see the tip "Do you want to place Recovery Manager on media? NOTE: This will overwrite all the data on the destination."

- C. If you want to save one more image copy on the FTP, select Enable offsite copy (optional), and click Settings to configure these below.
 - a. FTP information Enter the address and port.
 - b. FTP account Enter the username and password of the FTP. You can select **Anonymous** if the FTP server is shared to all users in the network.
 - c. FTP connection retry frequency Enter Retry attempts (maximum is 100), Delay between retries (maximum is 600).
 - d. Restore Defaults Clear all FTP settings.



Tip

This feature only supports the local image file. If you want to use the image file on the network or disc, you should first save it on the local computer.

The entire FTP upload process executes in the background. If the program fails to upload backup data onto the FTP server, it will be recorded in log files which can be checked through **View Logs**. Total Recovery Pro 7 will retry three times automatically until the next startup.

- 6. Click **Next** to continue.
- 7. Click **Start Now** to proceed. You can also choose to run daily, weekly or monthly backups.



Note

If you select weekly or monthly, then the program will make a base backup at 1st backup of each week or each month, after which the incremental backup will be made, and this base and incremental backup files will be kept in one backup set only.

If you set the **Quota Management** checkbox to "Keep 3 Backup Sets", then the program will reserve space for only 3 backup sets (backup setting number is 99). For example: If you select "monthly" and decide to make 3 backups sets in one month, then the 1st backup set of that month will be deleted to make space for the 1st backup set of the next month.

8. Click **Next** to begin backing up the files. You can choose the tip, "Shut down the computer when backup is completed" in the right corner of the interface in the process of files backup. However, when image backup is about to complete, a box will pop up to give you the tip that you can cancel or continue the behavior within the limited time.



- Optional settings will pop-up if you click **Advanced**. These settings include: backup priority, network connection speed, compression mode, password protection, image split, backup description, configuration of E-mail notification and Pre/Post command.
- 10. Click Next.
- 11. Review the information and settings that have been specified. Click **Next** to launch the backup process. Or click **Previous** to modify setting(s).



Tip

If the system is busy, and Total Recovery Pro 7 cannot successfully start the backup process, Total Recovery Pro 7 will try to back up again.

12. Click **Finish** to return to the main console. If you would like to edit the schedule for this job, select **click here to create a schedule now**.

Creating an Incremental Backup

- 1. Launch Total Recovery Pro 7.
- 2. Select Back Up and click Back Up Computer(s).

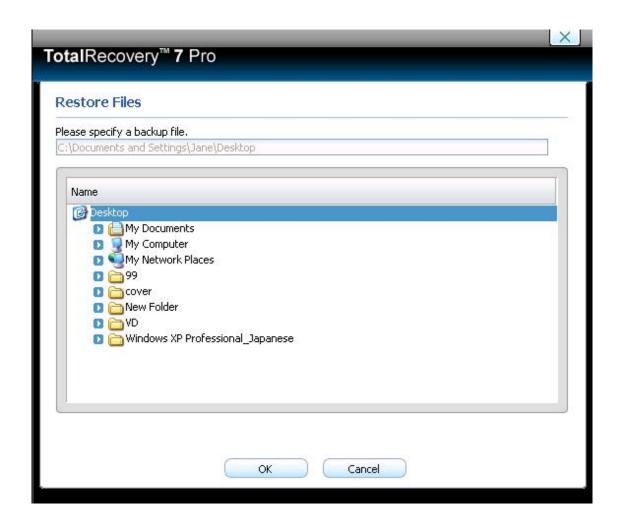
- 3. Select Incremental Backup and click Next.
- 4. Select an existing job from the Job List.
- 5. Review your information and settings, and click **Next** to launch the incremental backup.
- 6. Click **Finish** to return to the main console.

4.3 Restore Console

4.3.1 Restore Files

To restore file(s), please do the following:

- 1. Select **Restore** and then click **Restore Files**.
- 2. Select a backup image file from the drop down list. You can also **click here** to select it on a network share. Click **Next** to continue.



*Select backup image from network share

- 3. Select Files from the most recent backup or Files from a previous backup and click Next. If you select Files from a previous backup, please select the backup point you want to restore from the list.
- 4. If you select "Please select common restoration or special restoration", then click Next, skip to step 6; if you select "Search special files for the restoration", then click Next, skip to step 5.
- 5. Click Search to choose the file(s), or input the file name you want to restore, then click **Search**.
- 6. Select the file(s) you want to restore.
- 7. Select a location to save the restored files:

- a. If **New Desktop Folder** is selected, the restored files will be saved in a new folder on the client's desktop, with the folder hierarchy preserved exactly as it was backed up.
- b. If **Original Location** is selected, the restored files will be saved to their original folder and will overwrite existing files in that folder with the same name.
- c. If Another Folder is selected, click Select a folder to browse a folder on the network. The restored files will be kept in their original folder hierarchy.
- 8. Click **Next** to start the restore after confirming the source and the destination.
- 9. Click **Finish** to return to the main console.

4.3.2 Restore Your Computer

To restore a partition or the entire hard drive, please do the following:

- 1. Launch Total Recovery Pro 7.
- 2. Select **Restore**, and click **Restore Your Computer**.
- 3. Select a backup image from the list, or **click here** to select an image file stored on a network share. Click **Next** to continue.
- 4. Select a Complete Backup point or any Incremental Backup point to restore from, and click **Next**.

If you want to restore your entire physical disk drive, click **One-Click Restore**, then click **Restore** to begin the restoration process; or click **No** to exit.

- 5. Select **Do not use Universal Restore**, and click **Next**.
- 6. Select to restore a single partition or the entire hard drive, and click **Next**.
- 7. Click **OK** to return to the original location, or click **Cancel** to select another location. If you choose **OK**, skip to step 11.

- 8. Select a destination partition or a destination hard drive to be restored from the image file, and click **Next**.
- 9. To restore a single partition, skip to step 10. To restore the entire hard disk, please select a restore option.
 - a. Select the checkbox if you would like to modify the destination partition size.
 - b. Do not check the box if you have multiple systems or a hidden partition.

If you selected option \mathbf{a} , double click the partition capacity to be resized from the list. If you selected option \mathbf{b} , skip to step 10.

10. When it displays the structure of the destination partition, double-click the highlighted partition and modify its size, and click **Next** to continue.



Tip

The restoration process will require your computer to reboot into the FarStone Recovery Environment.

- 11. Click **Next** to start the restoration after confirming the source and the destination.
- 12. Click **Yes** to begin the restoration process. Then Click **OK** to enter the FarStone recovery environment to complete the restoration process automatically.

Your computer will restart to complete the restoration. After that, it will reboot into Windows automatically.

4.3.3 Perform Universal Restore

You can restore the system partition or the entire hard drive of the selected client to dissimilar hardware.

- 1. Launch Total Recovery Pro 7.
- 2. Select **Restore**, and click **Restore Your Computer**.
- 3. Select a backup image from the list, or click here to select an image file stored on a network share. Click **Next** to continue.



Note

The image you selected needs be supported by **Universal Restore**. More information about **Universal Restore**, please refer to <u>section 4.1.3</u>.

- 4. Select a Complete Backup point or any Incremental Backup point to restore from, and click **Next**.
- 5. Select to restore with **Universal Restore**, and click **Next**.





Tip

If you select the utility, you can get accurate restored data in the process of Universal Restore.

6. When the dialog box appears, click **OK** to restart your system into FarStone Recovery Environment to begin the restoration process, or **Cancel** to exit.

After your computer restarts to complete the Universal Restore, you need to do the following:

1. Select to restore a single partition or the entire hard drive, and click **Next**.

- 2. Click **OK** to restore to the original location, or click **Cancel** to select another location. If you choose **OK**, skip to step 6.
- 3. Select a destination partition or a destination hard drive to be restored from the image file, and click **Next**.
- 4. To restore a single partition, skip to step 6. To restore the entire hard disk, please select a restore option.
 - a. Select the checkbox to modify the destination partition size.
 - b. Do not check the box if you have information on multiple systems

If you selected option \mathbf{a} , double click the partition Capacity to be resized from the list. If you selected option \mathbf{b} , skip to step $\mathbf{6}$.

- 5. When it displays the structure of the destination partition, double click the highlighted partition and modify its size, and click **Next** to continue.
- 6. Click **Next** to continue after confirming all settings.
- 7. Click **Yes** to begin the restoration process. After the restoration process is complete, Windows will automatically reboot.

4.4 Clone Console

4.4.1 Clone Drive

Clone Drive duplicates one hard drive to another. It eliminates the need to reinstall the operating system, drivers and applications, and enables you to upgrade a new hard drive with only a few clicks.



Tip

To use this function you will need to have at least two hard drives on your computer.

The target hard drive should have enough space to store the data of the source hard drive.

1. Select Clone and then click Clone Drive.

2. Select the Source Disk (top pane) and then the Destination Disk (bottom pane). You can choose to modify the Destination Partition Size manually by selecting Modify the destination partition size. You can also choose not to modify the Destination Partition Size by selecting Keep the partition size of the destination drive the same as the source drive. Click Next to continue.



Tip

If you select **Keep the partition size of Destination Hard Drive the same as the Source Hard Drive**, skip to step 4.

If the Hard Drive you want to clone is going to boot your system, select **Keep the partition size of Destination Hard Drive the same as the Source Hard Drive**.

- You can alter the Destination Partition size by double-clicking the entry of Destination Partition and change the size in a popup dialog box. Click Next to continue.
- 4. After confirming your selections, click **Clone Now** to proceed or click **Previous** to change your selection. If the system is busy, Total Recovery Pro 7 will automatically try to clone again.



Note

The cloning process will overwrite all data on the destination disk. Click **Continue** to begin the cloning process, or click **Cancel** to exit.

5. Click **Shutdown** to complete the cloning process.

4.4.2 Clone Partition

With Total Recovery Pro 7, you can copy data from the source partition into the destination partition.

- 1. Select Clone and then click Clone Partition.
- 2. Select a Source Partition in the Hard Drive (top pane).



Note

You can only choose one partition at a time The Source Partition and the Destination Partition cannot be the same.

3. Select a Destination Partition in the original Hard Drive or another Hard Drive (bottom pane), then click **Next** to continue.



Tip

The selected destination partition must have enough space to hold the data of the source partition.

4. After confirming your selections, click Clone Now to start the duplication process or you can click Previous to change your selections. You can start the cloning process by clicking Start Clone. If the system is busy, Total Recovery Pro 7 will automatically try to clone again.



. Tip

The cloning process will overwrite all data on the destination disk. Click Continue to begin the cloning process, or click Cancel to exit.

5. Click **Return to Main Console** to complete the process.

4.5 Tools Tab

4.5.1 ISCSI Initiator

First, ensure that the iSCSI initiator is installed on the machine. On Windows Vista, it is installed by default; other Windows systems require a download and manual installation. With this feature, users may connect to the iSCSI device and access a great deal of information and configuration options.

- 1. Click on the **Tools** tab, and select **iSCSI Initiator**.
- 2. Select the **Discovery** tab.
- 3. Click **Add** and enter the **IP** address or **DNS** name and **Port number** for the Target Portal on which you would like to log on.
- 4. If your Target Portal requires Chap for authentication, click **Advanced**. Then select the **Chap logon information** option and enter the **Target secret**. Click **OK** twice to return to the iSCSI Initiator Properties dialog.
- 5. Verify the **Target Portals** properties displayed on the Discovery tab.
- 6. Select the **Targets** tab to view a list of available targets which you can log on to. Note that the **Status** for these targets is shown as **Inactive** prior to login.



. Tip

- a. If your targets are not listed in the Targets tab, verify discovery and successfully login by repeating Steps 3 through 6.
- b. If you successfully log into the Target portal but the target is still not listed, verify that the target has Logical Unit Numbers (LUNs) assigned to the server.
- c. If the target is still not listed, check the System Event Log for errors, resolve any issues noted in the log, and repeat Steps 2 through 5 to log on to the Target Portal.
- 7. Select the target that you want to log on to and click **Log On**.
- 8. Click Advanced and enter the username and password of the iSCSI target.
- 9. Verify that your target indicates "Connected" in the Status column.

Once connected, you can operate the connected iSCSI hard drive as you would a physical hard drive on your system (such as backup and restore).

4.5.2 Create a Bootable Rescue Disk

Create a bootable disk to recover from a system crash or hard drive failure

1. Insert a blank disc or USB device.



Note

Before creating a Bootable Rescue Disk, data on the disk should be formatted.

- 2. Click **Tools** tab on the left or **Tools** menu on the top of the interface, and then select **Bootable Rescue Disk**.
- Select the CD/DVD drive or the USB device you will be using to create your Bootable Rescue Disk, and click Next.



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If there is some data on the inserted device, you will be asked whether or not you wish to erase the disc. If you want to continue, click **Erase**. Click **Change** to insert another blank CD/DVD, or **Cancel** to stop the creation process.

4. Click **Finish** to complete the process.

4.5.3 Recovery Manager

The manager can allow you to recover your computer at the boot item before the operating system starts through activation.

You can perform the utility by clicking **Activate** if you would like to recover the computer before booting the operating system.

- 1. Click Recovery Manager
- 2. Select Activate
- 3. Restart your computer and press F4 to enter Recovery Manager.

If you do not need to enter the Recovery Manager to recover your data, you can deactivate it.

4.6 Utilities

4.6.1 Convert Backup to Virtual Disk

After converting the complete backup image as a *.vmdk format successfully, you can conveniently load it as a new hard disk on your virtual machine. In doing so, all data on the original hard disk is available on that virtual machine.



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If you did not install **VMware Virtual Disk Development Kits**, this function will be disabled. You can visit the provided link to download it.

- 1. Click on the Tools tab, and select Convert Backup to Virtual Disk.
- 2. Enter the storage path of the backup image and click **Go to**. You may also select it locally or remotely and click **Next**.
- 3. Select a complete backup point or an incremental backup point, and click Next.
- 4. Select to convert a single partition or the entire hard drive, and click Next.
- 5. Choose to either convert to VMware 5 or VMware 6, or click **Next**.
- 6. Select a local or remote destination path to save the conversion backup. Click **Next** to launch the conversion process.
- 7. Confirm all information about this conversion. Click **Next** to launch the conversion process.
- 8. Click **Finish** to return to the main console when the process completes.

4.6.2 Check Image Integrity

Use this function to check if a complete backup image file is valid and can be used for restoration.

 Click the Tools tab in the left or the Tools menu on the top of the interface, and then select Check Image Integrity.

- Enter the storage path of the image you want to check, and click Go to to select the image. You can also select the storage path of the image you want to check and click Next.
- Select to validate either the Complete or Incremental Backup point, and click Next to continue.
- 4. After validating the backup point, click **Finish** to complete the Image Integrity Check.

4.6.3 Preview Backup Image

Preview the content of the specified partition with the complete backup image to make sure you will only restore the needed partition(s).

1. Click on the **Tools** tab, and then select **Preview Backup Image**.



Note

If you have mounted an image before, you will be prompted to dismount the previous image. Click **Continue** to dismount the previous image, or **Cancel** to exit this process.

- 2. Enter the storage path of the image you want to preview and click **Go to** to select the image, or select the storage path of the image you want to preview and click **Next**.
- 3. Select a complete or incremental backup point, and click **Next**.
- 4. Select the partition you want to preview, and click **Mount** to load the image into the system.
- 5. You can now browse and copy data on the preview drive in Windows® Explorer.
- 6. You can click **Yes** to mount another image, or **No** to return to the main console.

If you do not want to preview the image anymore, select **Unmount Preview Drive** on the **Tools** tab, or select the **Tools** menu and click **Unmount Image**to close the previewed partition.

4.6.4 Unmount Preview Drive

It can remove the preview backup image.

Chapter 5: Total Recovery Pro 7 Pre-OS

5.1 Enter Total Recovery Pro 7 Pre-OS Manager

To launch the Total Recovery Pro 7 Pre-OS, select to **Activate** the recovery manager in the tools tab (details refer to 4.6.3), then restart the computer and press **F4** on your keyboard before Windows® begins to load. You can also enter the Pre-OS manager via the following means: a bootable rescue disk, USB drive, USB key.



· Tip

To prevent its use as a pirated operating system, Windows PE automatically stops running the shell and reboots after **72 hours of** continuous use. This time period is not configurable.

5.1.1 Boot from Bootable Rescue Disk

- 1. Insert the Bootable Rescue Disk and restart your computer, and then enter the BIOS to set the CD/DVD ROM as the first boot device.
- 2. After entering the Total Recovery Pro 7 Pre-OS main console, you can then backup and restore your computer, clone a hard disk and many other useful functions.

5.1.2 Boot into Windows via a USB Drive or USB Key

With the USB Hot Drive, you can restore the entire system from a Windows environment.

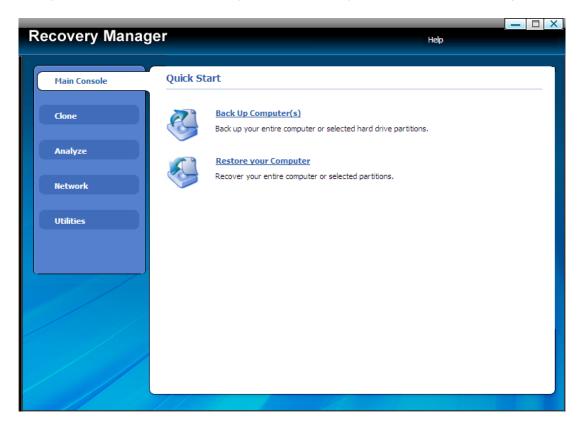
Follow the steps below to use the USB Hot Drive:

- 1. Connect the USB device, start your computer, enter the BIOS to set the USB device as the first bootable option, and save your settings.
- 2. Restart the system and boot from the USB device.

3. After entering Windows, use Total Recovery Pro 7 to restore the system. All of Total Recovery Pro 7's other features will also be available to you.

5.2 Total Recovery Pro 7 Pre-OS Main Console

After you enter the Total Recovery Pro 7 Pre-OS, you will see the following window.



5.2.1 Quick Start

Back Up Computer(s) – Click here to back up partition(s) or the entire hard drive for your system.

Restore Your Computer – Click here to restore from a complete backup point.

5.2.2 Backup (Computers)

5.2.2.1 Back up Your Computer in PE Manager

- 1. Click Back Up Computer(s).
- 2. Enter a name for your new Complete Backup, and click Next.

3. Select the partition(s) or the entire hard disk to back up, and click Next.



Tip

This backup performed in PE is not supported by Universal Restore.

- 4. Enter the storage path and click **Go to**, or select a destination location on a hard drive, USB storage medium, or a network location to store the image file. Some optional settings will be displayed if you click **Advanced**; these include: compression mode, password protection, image split, backup priority, and network connection speed.
- 5. Click Next.
- 6. Review the information and settings that have been specified. Click **Next** to launch the backup process, or click **Previous** to modify setting(s).
- 7. Click **Finish** to return to main console.

5.2.3 Restore Your Computer

5.2.3.1 Restore Your Computer in Pre-OS Manager

To restore a partition or the entire hard drive, please do the following:

- 1. Enter into Total Recovery Pro 7 Pre-OS manager.
- 2. Click Restore Your Computer.
- 3. Select a backup image from the list, or **click here** to select an image file stored on a network share. Click **Next** to continue.
- 4. Select a Complete Backup point or any Incremental Backup point to restore from, and click **Next**.
- 5. Select to restore a single partition or the entire hard drive, and click **Next**.

- 6. Select a destination partition or a destination hard drive to be restored from the image file, and click Next. If you choose to restore a single partition, click Yes to launch the restoration process.
- 7. To restore the entire hard disk, select a restore option.
 - a. Select the checkbox to modify the destination partition size.
 - b. Do not select if you fear information loss on multiple systems or hidden partition.

If you selected option \mathbf{a} , double click the partition Capacity to be resized from the list. If you selected option \mathbf{b} , skip to step 9.

- 8. When it shows the structure of the destination partition, double click the highlighted partition and modify its size, and click **Next** to continue.
- 9. Click **OK** to begin the restoration process.

After the restoration process is complete, Windows will automatically reboot.

5.2.3.2 Perform Universal Restore

You can restore the system partition or the entire hard drive of the selected client to a dissimilar hardware.

- 1. Launch Total Recovery Pro 7 Pre-OS manager.
- 2. Click **Restore Your Computer**.
- Select a backup image from the list, or click here to select an image file supported by Universal Restore. Click Next to continue.



Note

The image you selected needs to be supported by **Universal Restore**. More information about **Universal Restore**, please <u>refer to section</u> 4.1.3.

- 4. Select a Complete Backup point or any Incremental Backup point to restore from, and click **Next**.
- 5. Select to restore with **Universal Restore**, and click **Next**.



Tip

If you select the utility, you can get accurate restored data in the process of Universal Restore.

- 6. Select to restore a single partition or the entire hard drive, and click **Next**.
- 7. Select a destination partition or a destination hard drive to be restored from the image file, and click **Next**. If you choose to restore a single partition, click **Yes** to launch the restoration process.
- 8. To restore the entire hard disk, select a restore option.
 - a. Select the checkbox to modify the destination partition size.
 - b. Do not select if you fear information loss on multiple systems.

If you selected option \mathbf{a} , double click the partition Capacity to be resized from the list. If you selected option \mathbf{b} , skip to step 10.

- 9. When it shows the structure of the destination partition, double click the highlighted partition and modify its size, and click **Next** to continue.
- 10. Click **Next** to begin the restoration process.
- 11. Click **Finish** to complete the process.

5.2.4 Clone Tab

5.2.4.1 Clone Drive

Clone Drive duplicates one hard drive to another. It eliminates the need to reinstall the operating system, drivers and applications, and enables you to upgrade a new hard drive with only a few clicks.



Tip

To use this function, you will need to have at least two hard drives on your computer.

The target hard drive should have enough space to store the data of the

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- 1. Select Clone and then click Clone Drive.
- 2. Select the Source Disk (top pane) and then the Destination Disk (bottom pane). You can choose to modify the Destination Partition Size manually by selecting Modify the destination partition size. You can also choose not to modify the Destination Partition Size by selecting Keep the partition size of the destination drive the same as the source drive. Click Next to continue.



Tip

If you select **Keep the partition size of Destination Hard Drive the same as the Source Hard Drive**, please skip to step 4.

If the Hard Drive you want to clone is going to boot your system, select **Keep the partition size of Destination Hard Drive the same as the Source Hard Drive**.

- 3. You can alter the Destination Partition size by double-clicking the specified size of the Destination Partition and change the size in a popup dialog box. Click **Next** to continue.
- 4. After confirming your selections, click Clone Now to proceed or you can click Previous to change your selection. If the system is busy, Total Recovery Pro 7 will try to automatically clone again.



Note

The cloning process will overwrite all data on the destination disk. Click **Continue** to begin the cloning process. You can also click **Cancel** to exit.

5. Click **Shutdown** to complete the cloning process.

5.2.4.2 Clone Partition

With Total Recovery Pro 7, you can copy data from the source partition into the destination partition.

- 1. Select Clone and then click Clone Partition.
- 2. Select a Source Partition in the Hard Drive (top pane).



Note

You can only choose one partition at a time. The Source Partition and the Destination Partition cannot be chosen at the same.

3. Select a Destination Partition in the original Hard Drive or another Hard Drive (bottom pane), then click **Next** to continue.



. Tip

The selected destination partition must have enough space to hold the data of the source partition.

4. After confirming your selections, click Clone Now to start the duplicating process or you can click Previous to change your selections. You can start the cloning process by clicking Start Clone. If the system is busy, Total Recovery Pro 7 will automatically try to clone again.



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The cloning process will overwrite all data on the destination disk. Click Continue to begin the cloning process, or click Cancel to exit.

5. Click **Return to Main Console** to complete the process.

5.2.5Analyze Tab

5.2.5.1 Check Backup Image

Use this function to check if a complete backup image file is valid and can be used for restoration.

- 1. Select the **Analyze** tab in the left pane, and then select **Check Backup Image.**
- 2. Enter the storage path of the image you want to check, and click **Go to** to select the image. You can also select the storage path of the image you want to check and click **Next**.
- 3. Select to check either the Complete or Incremental Backup point, and click **Next** to continue.
- 4. After checking the backup image, click **Finish** to complete the Image Backup Check.

5.2.5.2 Check Hard Disk Errors

In this section, you can check if the backup data in your complete backup image file is valid.

- 1. Select Analyze tab and click on Check Hard Disk for Errors icon.
- 2. Select the disk to be checked.
- 3. Do one of the following to launch checking process.
 - a. To check for errors without repairing them, click **Check Now** without selecting either of the check boxes above.
 - b. To check and correct system errors, make the appropriate selections in the check boxes, then click **Check Now**.
- 4. Click **OK** to complete the process.
- 5. Click **Finish** to return to the main console.

5.2.5.3 Run Command Shell

The command shell executes programs and displays their output on the screen by using individual characters similar to the MS-DOS command interpreter Command.com. You can use the command shell to create and edit batch files (also called scripts) and to automate routine tasks. You can perform operations more efficiently by using batch files than you can by using the user interface.

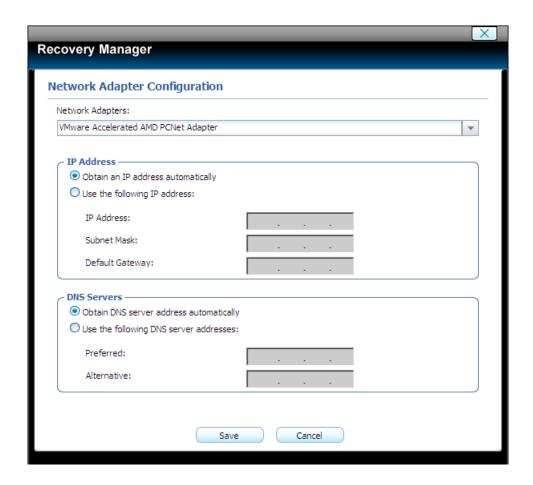
- 1. Select Analyze tab and click on Open Command Shell Window icon.
- 2. Enter the command in the pop-up window and press **Enter** key.
- 3. Type exit and press **Enter** key to return to main console.

5.2.6 Network Tab

5.2.6.1 Network Adapter Configuration

Total Recovery Pro 7 can back up to, or restore from a network location. To use this feature, you should first configure your network settings. From here, you can configure the **IP Address Settings** and **DNS Server Settings**.

Click the **Network** tab and then select **Network Adapter Configuration**. You will see the following screen:



From here, you can setup your network adapter, IP address, Subnet mask and Default gateway.

If you have more than one network adapter on your system, select the adapter to be used from the dropdown menu.

IP Address Settings:

- Obtain an IP address automatically: If your network supports DHCP (Dynamic Host Configuration Protocol), this option will automatically obtain an IP address from a DHCP server or a Point-to-Point Protocol (PPP) dial-up network access server. Total Recovery Pro 7 Client sets DHCP as the default option.
- IP address: Choose this option to manually specify an IP address for your network. This option can be used when automatically obtaining an IP address fails or when there is an IP address conflict.

If your computer is on a Local Area Network (LAN), you can configure the LAN settings to back up images to or restore from a network location.

DNS Server Settings:

- Obtaining a DNS server address automatically: DNS (Domain Name System) is an internet service that translates domain names into IP addresses. It is a system for name resolution, suitable for network computers with fixed IP addresses. Total Recovery Pro 7 sets DHCP as the default option.
- Use the following DNS server address: Manually specify the DNS server address if needed. You can enter a preferred one and an alternative one (if the former one is unavailable).

5.2.6.2 Map Network Drive

In this section, you can use the network folder as the local one, and assign a drive letter for it. Doing so allows you to access the image files in that folder more conveniently.

After the network resource is successfully connected, you can access all of its data just like on your local computer.

- 1. Select **Network** tab and click on **Map Network Drive** icon.
- 2. Select a drive letter from the drop-down list to map the shared resource
- 3. Enter the computer share name of the resource in this format: \\Server name\\share name. Or click Browse to locate the resource.
- 4. Click Save.
- **5.** In the User name and password dialogue box, type your user name in this format: **domain name\username**. Enter password if prompted.



Note

All mapped drive(s) will be removed if you reboot or shut down this computer.

5.2.6.3 iSCSI Initiator

First, ensure that the ISCSI initiator is installed on the machine. On Windows Vista, it is installed by default; other Windows systems require a download and manual installation. With this feature, users may connect to the iSCSI device and access a great deal of information and configuration options. For more details regarding the configuration of iSCSI initiator, please refer to <u>4.5.5</u>.

5.2.6.4 Launch Web Brower

Click the button, users will go through the website in PE.

5.2.7 Utilities

5.2.7.1 Preview Backup Image

Preview the content of the specified partition of a complete backup image to make sure you can only restore the needed partition(s).

1. Click on the **Tools** tab, and then select **Preview Backup I mage**.



Note

If you have mounted an image before, you will be prompted to dismount the previous image. Click **Continue** to dismount the previous image, or **Cancel** to exit this process.

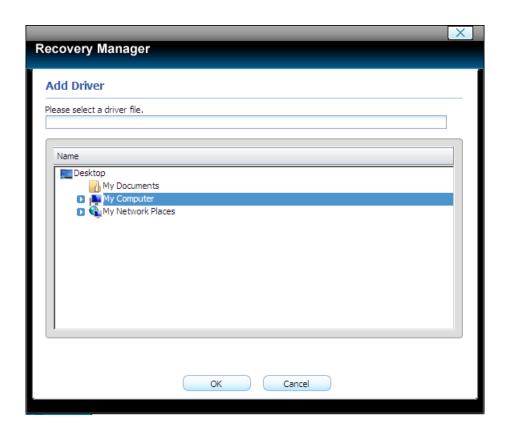
- 2. Enter the storage path of the image you want to preview and click **Go to** to select the image, or select the storage path of the image you want to preview and click **Next**.
- 3. Select a complete backup point or an incremental backup point, and click **Next**.
- 4. Select the partition you want to preview, and click **Mount** to load the image into the system.
- 5. You can now browse and copy data on the preview drive in Windows® Explorer.
- 6. You can click **Yes** to mount another image, or **No** to return to the main console.

If you would no longer like to preview the image, select **Unmount Preview Drive** on the **Tools** tab to close the previewed partition.

5.2.7.2 Add Driver

If Total Recovery Pro 7 cannot detect the compatible and available driver for the application you need, you can manually install a third party driver.

- 5. Select the **Tools** tab and click on the **Add Driver** icon.
- 6. Select the driver file on the local computer or on the network.



^{*}Select a driver file on your local computer or shared network.

3. Click OK.



Note

All mapped drive(s) will be removed if you reboot or shut down the computer.

The added driver(s) can now work with the matched applications.

5.2.7.3 Open Explorer Window

Select Tools tab, then click **Open Explorer Window**, files and folders on your computer will be displayed.

5.2.7.4 Unmount Preview Drive

The utility can remove the preview backup image

Chapter 6: Glossary

Total Recovery Pro 7 Image

A Total Recovery Pro 7 image is a file containing a complete copy of a computer's hard drive or partitions on that hard drive. With this image, you can transfer the contents of a hard drive to a portable medium such as a recordable CD/DVD, USB drive, or to another hard drive, for later restoration when needed.

Recovery CD/DVD

The Recovery CD/DVD allows users to restore their system by inserting this disc into their CD/DVD-ROM drive. Once the system is booted up, the Recovery CD/DVD will restore the system automatically based on the content contained on the Recovery CD/DVD.

• Clone (Copy) Partition/Drive

The term "cloning" refers to the physical reading of all sectors of a source partition / disk and the subsequent writing of this raw sector information to the corresponding sectors of a destination partition or disk. The size, file system formats, brand of the source partition/disk and target partition/disk can be different.

System Partition

The system partition refers to the disk volume that contains the hardware-specific files that are needed to launch Windows (for example: Ntldr, Boot.ini, and Ntdetect.com). On dynamic disks, this is known as the system volume.

Boot Partition

The boot partition refers to the disk volume that contains the Windows operating system files (by default, in the WINDOWS folder) and its support files (by default in the WINDOWS\System32 folder). The boot partition can, but is not required, to be the same partition as the system partition. There will be one (and only one) system partition, but there will be one boot partition for each operating system in a multi-boot system. On dynamic disks, this is known as the boot volume.

Universal Restore

Universal Restore allows you to restore your system partition and active

partitions to different hardware configurations or virtual machines, such as a replaced motherboard or hard drive controller.

Chapter 7: Appendix

7.1 Frequently Asked Questions

- Q. How long does it take Total Recovery Pro 7 to back up or restore a system?
- A: This depends on the amount of data on your system. However, Total Recovery Pro 7's technology minimizes the time it takes to perform a backup.
- Q. I started Total Recovery Pro 7 in Windows immediately after the installation was completed, but a message says that I have to restart my computer in order to run it. Why?
- A: You have to restart your computer after installing Total Recovery Pro 7 in order for all configuration changes to take effect.
- Q. When I restored a partition from an image file, Total Recovery Pro 7 prompted me that "There is not enough space on the Destination Partition". But I'm sure the free space on the Destination Partition is larger than the used space in the Source Partition. Why am I getting this prompt?
- A: If data at the end of the source partition cannot be moved, Total Recovery Pro 7 will prompt you with this notice.
- Q. I created an image for Drive C: on two CD-R discs. Why can't the disc be mounted as a temporary partition?
- A: Mounting a partition requires all the backup data of the drive. If you use one of two discs, it cannot provide the complete information. To solve this problem, copy the image files from the two discs to the hard drive and then mount it as a temporary partition. This problem cannot be overcome by using multiple CD/DVD drives.
- Q. While creating a Recovery CD/DVD, an error message appears.

- A: This error may occur if the quality of the recordable CD/DVD media is not good, or the disc is incompatible with the recorder. To solve this problem, please try a different brand of CD/DVD media or upgrade your CD/DVD recorder.
- Q. Do I need to do anything before installing Total Recovery Pro 7?
- A: We recommend running Windows CheckDisk to scan for hard drive errors.
- Q. Bad Sectors have already been detected on a hard drive. How does this affect my backup and restore options?
- A: Total Recovery Pro 7 will try to copy all used sectors when performing a Complete or Incremental backup. You may be prompted to skip a bad sector or a job could fail due to bad sectors. Therefore, it's recommended to run Windows Check Disk command to detect and repair hard drive errors, or use utilities provided by your hard drive manufacturer, when attempting to resolve this type of problem.
- Q. Can Total Recovery Pro 7 fix my system after my hard drive has been accidentally formatted or repartitioned?
- A: Yes if Total Recovery Pro 7 was installed prior to the incident.
- Q. Can I use disk tools such as Fdisk, PartitionMagic and Norton Speed Disk after installing Total Recovery Pro 7 on my computer?
- A: There is no known resource conflicting with those utilities.
- Q. I've installed three operating systems on my computer, including Linux.

 Can Total Recovery Pro 7 protect all three systems?
- A: Total Recovery Pro 7 protects multiple Windows operating systems completely, and we recommend using **Back Up Computers** to protect the non-windows systems.
- Q. Does Total Recovery Pro 7 work in Windows Safe Mode?
- A: Total Recovery Pro 7 does not work in Windows Safe Mode.
- Q. Can Total Recovery Pro 7 protect my PC from a destructive virus?

A: While Total Recovery Pro 7 cannot prevent the actual virus attack, it can restore your computer to a point before the attack occurred, recovering your files and effectively removing the virus.

Q. Does Total Recovery Pro 7 Provide support for Windows® advanced power management?

A: Total Recovery Pro 7 supports all Windows® advanced power management features (Standby, Sleep, Hibernate).

Q. How can I restore without having a DHCP Server on the network?

A: If the DHCP service is not running on your network, you'll have to manually enter a static IP address to access the network through **Network Adapter Configuration** in Pre-OS.

Q. What happens if my PC misses a scheduled backup?

A: Total Recovery Pro 7 will start the missed backup automatically at next boot up if you select the checkbox in the setting interface saying If the computer shuts down, run the missed tasks when it boots next time. If you don't select that checkbox, Total Recovery Pro 7 will start the next scheduled backup at next boot up.

Q. Does the Total Recovery Pro 7 conflict with any other applications?

A: Please close the following applications when launching Total Recovery Pro 7: Utimaco and SafeGuard.

Q. Which partition types does Total Recovery Pro 7 recognize?

A: NTFS, FAT, FAT32, Linux Ext2 and Ext3.

Q. Why is my backup image larger than the source partition or hard disk?

A. The source partition or hard disk may have too much of fragmentation.

Defragment it and then run the backup again.

Q. How can I access the computer outside the Workgroup through the network under the Pre-OS?

- A. Click on the **Tools** tab and select **Map Network Drive**. And then map the directory on the remote computer as you wish.
- Q. How can I get SDK download location correctly before I use the Convert Backup to Virtual Disk feature?
- A. VMware Home Page (<u>www.vmware.com</u>) ->Download ->VMware SDK&APIs >Virtual Disk ->VMware Virtual Disk Development Kit