



# "How To" Guide for ConfigSafe



*Presented by:*



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## Section 1: Introduction

The purpose of this "How To" Guide is to provide you with a basic overview of the ConfigSafe® product, its benefits, and how to use it to troubleshoot system problems. There are many other ConfigSafe resource materials available to you that provide in-depth information. We've created a resource center on our Web site to give you immediate access to the most up-to-date information available. A list of sample resource center materials is provided at the end of this guide.

In order for the "How To" Guide to be valuable to you, it must contain information that is both important and relevant to you. Therefore, we welcome your suggestions about how to make this a better tool, or your ideas for other materials that would be helpful.

Enjoy!

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## Section 2: What is ConfigSafe?

ConfigSafe is a configuration tracking and recovery tool for Windows® PCs. It tracks changes to configuration files and system information, and enables one-step restoration to saved working configurations. Some key functions include:

### Track Configuration Changes

ConfigSafe tracks changes to a system configuration, tracking all critical information such as file, system, drive, Registry, and system asset information.

### Report Configuration Changes

System changes between any two periods of time can be displayed using ConfigSafe. Changes are identified with the use of easy to read symbols and colored text. The reporting capabilities simplify the task of finding out exactly what has changed on a system. In fact, ConfigSafe can show the changed lines only, making troubleshooting problem PCs a breeze.

### Restore to Previous Configuration

ConfigSafe allows you to restore a system to a previously working configuration. The Restore capabilities provided by ConfigSafe are particularly useful for systems that "worked yesterday, but don't work today."

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## Section 3: How is IBM® Using ConfigSafe?

IBM currently pre-loads or includes ConfigSafe on the Ready to Configure or Software Selections CD on most IBM PCs, Aptiva systems, IntelliStation™ workstations and ThinkPad® notebook computers. IBM selected ConfigSafe because of its ability to help end-users resolve system configuration problems on their own. In addition, ConfigSafe can help you resolve problems faster when customers call the Helpcenter.

IBM licenses the ConfigSafe Preload Edition. ConfigSafe Preload Edition is a customized version that has been pre-set to track specific information. In addition, the Preload version has some enhancements and limitations from the retail version, ConfigSafe Desktop Edition. The differences are as follows:

- 1) **EZ Interface.** The EZ interface is a simplified interface provided to IBM customers. It provides easy access to the most common ConfigSafe functions. In addition, the advanced (or standard) interface can be accessed from the EZ interface main window.
- 2) **Profile Limitations.** The Preload Edition has several limitations, as follows:
  - a) **No Profile Editing.** Users will be unable to customize Profiles to track additional files, directories, Registry keys or system assets that are not currently tracked in a Snapshot.
  - b) **No Multiple Profile Capability.** Users will not be able to create multiple Profiles for tracking different types of information in different Snapshots. (For example, if a user wanted to have an additional profile that tracked changes to their Internet browser or other software programs).
- 3) **System Asset Limitations.** ConfigSafe Preload Edition currently tracks changes to the Windows desktop only. It does not support the tracking/comparison of additional system assets through the use of directory or wildcard specification.

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## Section 4: Benefits for IBM

ConfigSafe provides immense benefits to IBM, in terms of improving market perception and significantly reducing support costs. The major benefits are listed below.

### *Provides Market Differentiation*

- ◆ **Provides competitive edge** over other vendors' products
- ◆ **Better reviews & service ratings.** Enhanced support services are a key differentiating factor for reviewers when evaluating systems vendors and their products.
- ◆ **Provides excellent support tool for VARs and integrators** to use for aftermarket support services.

### *Reduces Helpcenter Costs*

- ◆ **Decreases number of calls** to technical support by enabling users to resolve problems themselves.
- ◆ **Increases first call resolution.** Many problems can now be resolved during the first phone call, eliminating costly callbacks.
- ◆ **Decreases talk time associated with support calls.** ConfigSafe can reduce the length of technical support calls by up to 50%.
- ◆ **Decreases number of RMAs issued.** Many more problems can be resolved using ConfigSafe, saving hundreds of dollars for *each* system that would previously require an RMA.
- ◆ **Reduces need for on-site support.**
- ◆ **Identifies warranty responsibility,** which is helpful for determining those problems covered under warranty, and those that require fee-based support.
- ◆ **Leverages current investment in other support tools,** such as remote control diagnostics.

### *Increases Helpcenter Productivity*

- ◆ **Minimal set up and training** is required for IBM Helpcenter technicians to start using ConfigSafe.
- ◆ **Allows rapid identification** of the exact area of system failures, enabling Helpcenter technicians to quickly pinpoint and resolve problems, and then move onto the next support call.
- ◆ **Provides powerful troubleshooting capabilities.** Problems can be replicated in the lab on other machines, and more quickly resolved. In addition, complex problems can be easily replicated for level 2 support teams.

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## Section 5: Benefits for IBM Customers

In addition to the benefits that IBM reaps from ConfigSafe, IBM customers will find ConfigSafe to be a lifesaver. Some of the major advantages are as follows:

- ◆ **Provides a quick fix.** Home users now have a self-diagnostic tool that helps them quickly get back up and running on their own. End-users can solve many more problems without requiring Helpcenter support, which decreases downtime, user frustration and support expenses.
- ◆ **Decreases user frustration.** Users don't need to spend a lot of time describing the symptoms of their problem, which often leads to miscommunication.
- ◆ **Users receive better, faster support.** Technicians can easily walk users through a ConfigSafe task to obtain required information and quickly resolve system problems.
- ◆ **Decreases downtime.** ConfigSafe can restore to a previous configuration in a matter of seconds.
- ◆ **Increases customer satisfaction.** With so much less time spent dealing with system problems when they arise, customers will be extremely satisfied with their product.



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## Section 6: Common ConfigSafe Terms & Definitions

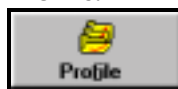
We've provided a "short list" of some of the basic ConfigSafe terms and definitions. This will help to familiarize you with common ConfigSafe terminology before you delve into the more detailed step-by-step usage sections. In addition, you can use these definitions if you need to explain different ConfigSafe features to customers. These are not provided in alphabetical order, but rather in terms of relevance.

### **Snapshot.**



A Snapshot represents the periodic or on-demand capturing of a system's configuration information. ConfigSafe keeps track of system changes by taking and storing system Snapshots, and they are used to generate change comparison reports.

### **Profile.**



A configuration Profile details the specific configuration files, directories, Registry keys, and System Assets to be captured when generating a ConfigSafe Snapshot. The default configuration Profile is called "System Snapshot" and it is generated upon installation of ConfigSafe. The ConfigSafe Preload Edition has a pre-defined Profile that cannot be changed.

### **Report.**



Report creates a comparison report of the configurations captured in two different Snapshots, or between a Snapshot and the system's current configuration. Reports can be viewed online, printed, and saved as text files.

### **Restore.**



Restore allows you to select a previously taken system Snapshot and return your system to that configuration. The Restore feature is commonly used if a system no longer functions properly.

### **Undo.**



Undo allows you to reverse the results of a Restore process and return to the configuration in place just prior to using Restore. Undo can also be run from MS-DOS mode in a Windows 95/98 environment.

Now that you have reviewed and understand the basic terms and definitions, you are ready to take a closer look at ConfigSafe. We'll start by reviewing the main user interfaces in the following sections.

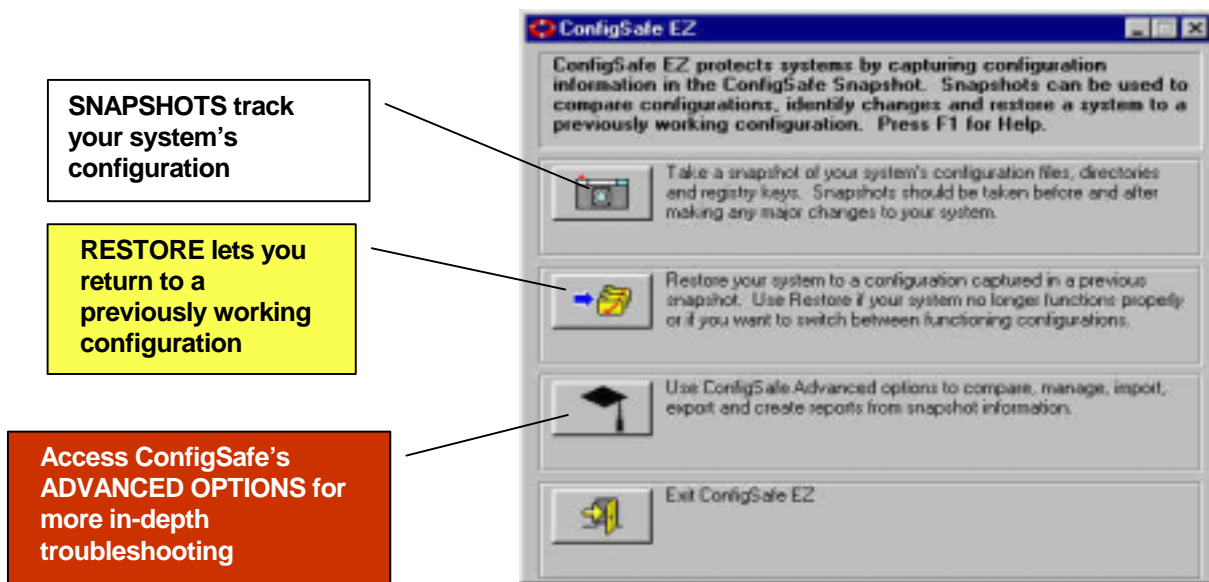
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## Section 7: Introduction to the EZ Interface

As you can see in the screen shot below, the ConfigSafe EZ interface is designed for the novice user: very simplistic and user-friendly.

The two most often used functions are **Snapshot** and **Restore**. Both of these functions can be accessed from the EZ interface. You can also go to the ConfigSafe standard interface by clicking on the **Advanced Options** button, and you can **Exit** ConfigSafe by selecting the Exit button.

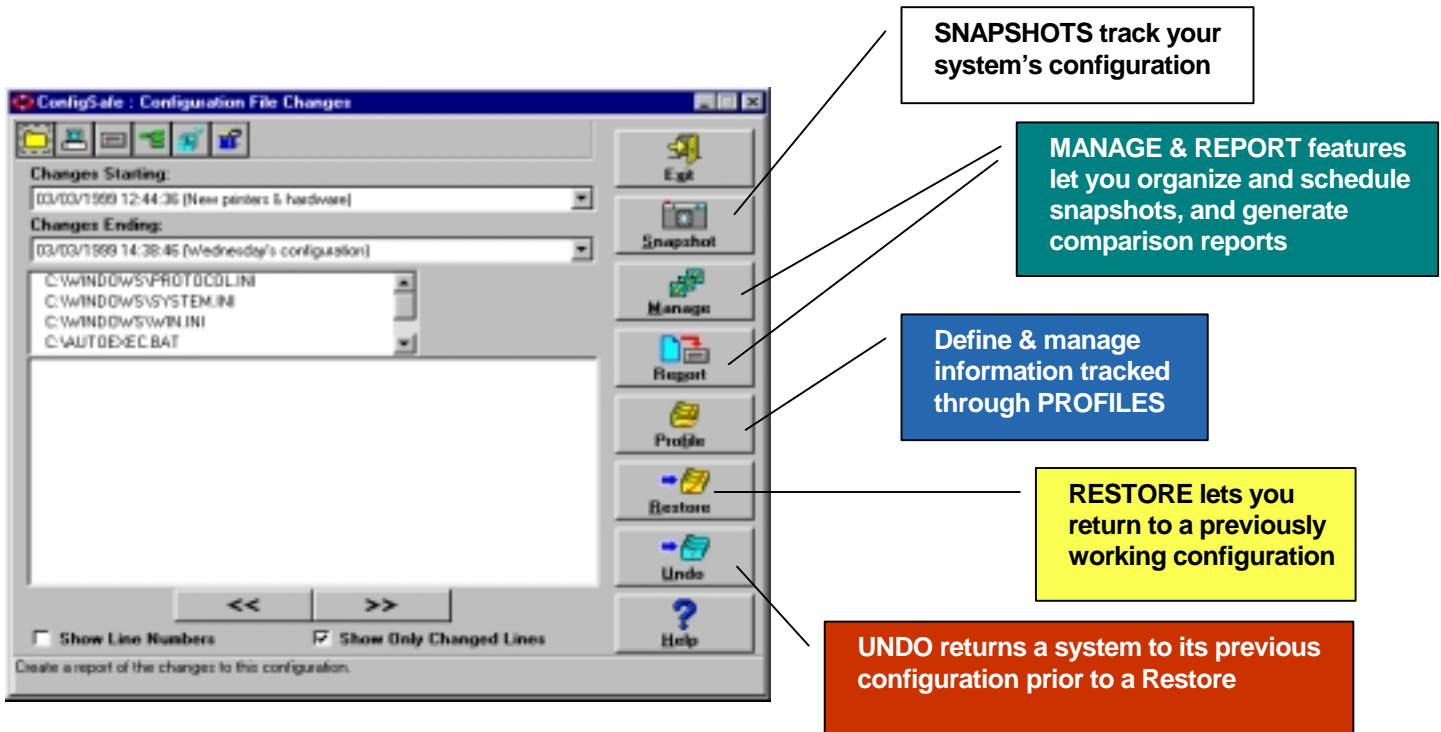
In addition descriptive text next to each button helps users understand what each button does and when to use them.



If you click on the Advanced Options button, you will be brought to the ConfigSafe Standard interface, which is shown on the next page.

## Section 8: Introduction to the Standard Interface

The Standard interface allows you to operate the full ConfigSafe set of features. In addition to the Snapshot and Restore features that can also be accessed through the EZ interface, you can use the Manage and Reporting capabilities, use the Undo feature, and view on-screen configuration comparisons.



### A Note Before You Begin

The following sections will take you through step-by-step instructions for using ConfigSafe. These instructions will help you to walk customers through common ConfigSafe tasks. By performing these tasks, the customer will be able to provide you with more detailed information about their system configuration. If the user is experiencing a configuration problem, it will be much quicker and easier to pinpoint the source of the problem using ConfigSafe.

The step-by-step instructions will refer back to the EZ and Standard user interface screens, so you may wish to keep these pages handy as you read through the instructions.

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## Section 9: Installing & Loading ConfigSafe

ConfigSafe is pre-installed on all IBM desktop PCs, so the customer does not have to install ConfigSafe in order to begin using the program.

### Reinstallation on older systems

If the user needs to *re-install* ConfigSafe for any reason, the setup program is provided on the Applications CD on older models. To access the installation on older systems, the customer should use the installation program that is preloaded on the system.

### Reinstallation on newer systems

On newer models, ConfigSafe is provided on the Software Selections CD. All the customer needs to do is insert the CD into the computer, and Autorun and the Software Selections CD user interface will guide the customer through re-installation.

### Starting ConfigSafe

To load ConfigSafe, simply go to **Start Menu/Programs/ConfigSafe** and choose the ConfigSafe lifesaver icon. This will launch ConfigSafe and bring you into the EZ interface.

Instructions for using the EZ interface are detailed in the next section.

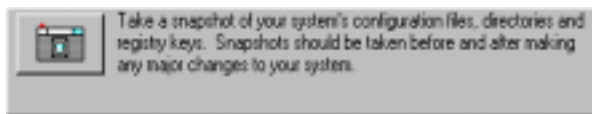
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## Section 10: Step by Step Instructions for ConfigSafe EZ Interface

The EZ interface provides short explanations on the main screen to help the customer understand what ConfigSafe can do for them, and when to use each of the buttons.

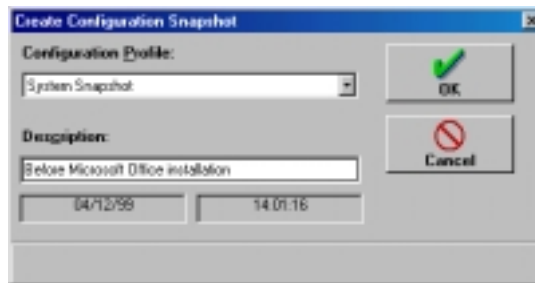
### Taking A Snapshot

From the EZ interface, you can take a Snapshot by clicking on the Snapshot button. As you can see from the text below, ConfigSafe recommends that users take Snapshots prior to and after making any changes to the system.



*Snapshot button text tells users when to take system Snapshots.*

When you press on the Snapshot button, you are taken to the *Create Configuration Snapshot* screen.



*Take Snapshots before installing new hardware or software. These Snapshots help to protect your system from problems that occur from faulty installations.*

On this screen, you will see the following pieces of information:

- ◆ **Configuration Profile Name:** This will always be *System Snapshot* because you cannot modify or create new Profiles with the ConfigSafe Preload Edition.
- ◆ **Description:** This field will be blank. A detailed description should be typed in this field, as it helps to identify the Snapshot in the event that you need to Restore or compare this configuration Snapshot. In the example above, the Snapshot captures the configuration in place prior to MS-Office installation.
- ◆ **Date/Time:** The date and time of the Snapshot will be recorded in order to identify when each Snapshot was taken.

Selecting OK will initiate a ConfigSafe Snapshot. An information screen will be displayed to keep you informed of the Snapshot's progress, as shown below.

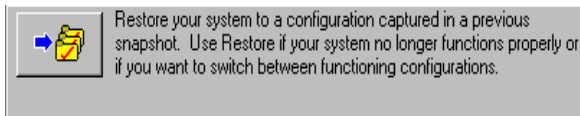
*Informative wait screens display Snapshot progress to eliminate any guesswork about what ConfigSafe is doing.*



This information will change as ConfigSafe polls your system and stores the different pieces of information that make up a System Snapshot. When the Snapshot is complete, the wait screen will disappear and you will be brought back to the EZ interface.

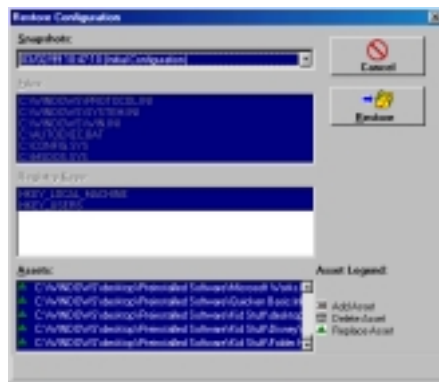
### Restoring to Saved Snapshots

From the EZ interface, you can Restore your system to a saved Snapshot. ConfigSafe provides an explanation of when to use Restore, such as if your system is no longer working properly.



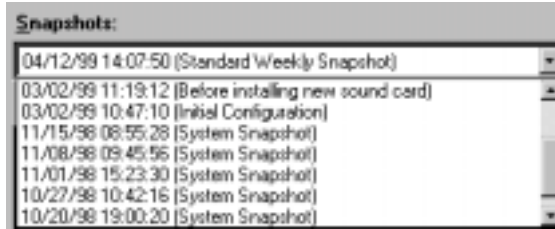
You can Restore a system to any of the saved Snapshots available (see additional notes in Advanced Section regarding *Maximum Snapshots to Save* under Snapshot Management). Another useful application for the Restore feature is to return the system to the Initial Configuration (or Factory Configuration). If a customer has altered their system configuration beyond repair, and just wants to return to their original system settings, you can Restore to this Snapshot.

To Restore to a saved Snapshot, simply press the Restore button. You will be brought into the *Restore Configuration* screen, as follows.



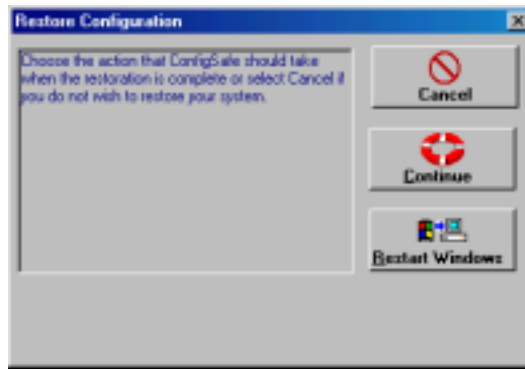
*Restore Configuration screen shows you the files, Registry keys and System Assets that will be restored for the selected saved Snapshot.*

From this screen, you choose the saved Snapshot you wish to Restore from the list of available Snapshots.



*ConfigSafe provides a list of available Snapshots to choose from.*

Once you have chosen the desired Snapshot, click OK. ConfigSafe will confirm this action with an additional screen that prompts you to either Cancel the operation, or to choose the desired action you wish to occur after the Restore - Continue or Restart Windows.

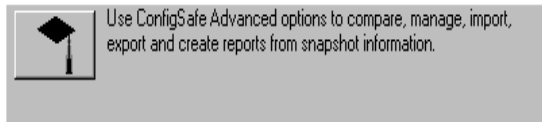


You have now mastered the two most common ConfigSafe functions: Taking and Restoring system Snapshots.

## Accessing the Advanced Options

To move onto some of ConfigSafe's advanced functions, select the Advanced Options button on the ConfigSafe EZ main screen.

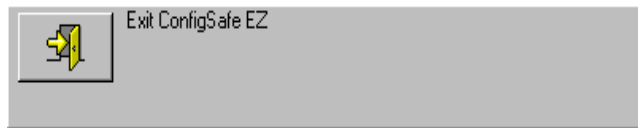
*Click on the Advanced Options button to access ConfigSafe's in-depth troubleshooting capabilities.*



Selecting this button will bring you into the ConfigSafe Standard interface, which provides full access to ConfigSafe features for Snapshot comparison, reporting and management.

## Exiting ConfigSafe

To exit the ConfigSafe program, you simply select the Exit button on the EZ interface.



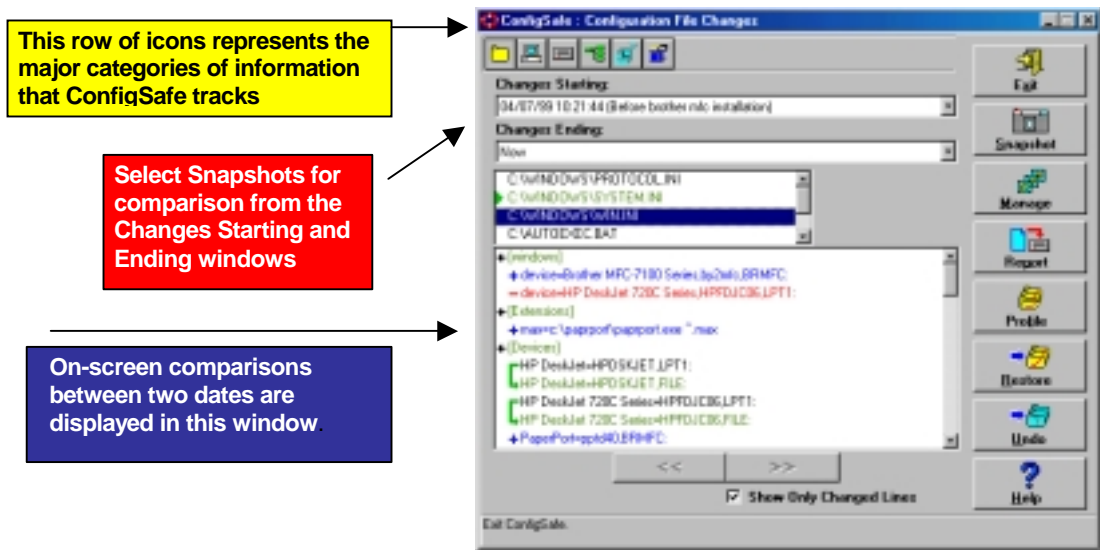
We will now move onto the next section, "Step by Step Instructions for ConfigSafe Standard Interface."



# Section 11: Step by Step Instructions for ConfigSafe Standard Interface

## Overview of Standard Interface Main Screen

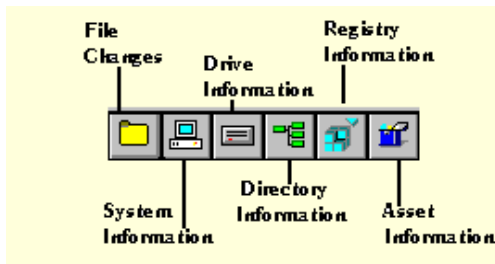
While you have already reviewed some brief information about each of the buttons on the Standard interface main screen, additional information is provided on this screen. First, we will walk you through the remainder of the Standard interface main screen, before moving on to the other features accessed from this screen.



From the main screen, on-screen comparison reports can be displayed between two chosen Snapshots or a chosen Snapshot and the system's current configuration.

## Information Category Icons

Because there is so much information tracked, the comparisons cannot be displayed on-screen all at one time. Instead, ConfigSafe provides icons that represent each major piece of system information that ConfigSafe tracks, as shown below.



*Each category of system information that ConfigSafe tracks is represented by an icon on the main screen of the Standard interface.*

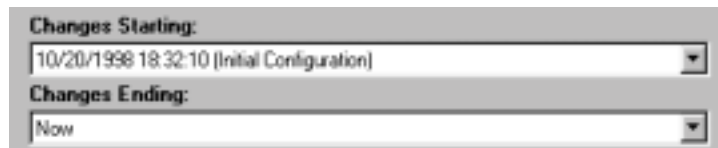
Clicking on each icon will display a comparison report for that category of information.

Below is a chart of the information represented in each category.

Information Category	Definition
File Changes	Identifies changes to system, network, multimedia configuration files and more.
System Information	Identifies the installation, upgrade, or removal of key system software components, such as: <ul style="list-style-type: none"> <li>• Coprocessor</li> <li>• Base memory</li> <li>• Windows version</li> <li>• Processor vendor</li> <li>• Processor type</li> </ul>
Drive Definitions	Identifies changes to drive information, such as: <ul style="list-style-type: none"> <li>• Drive definitions</li> <li>• Free space</li> <li>• Network connections</li> <li>• CD-ROM or zip drive installations</li> </ul>
Network Connections	Identifies changes a user has made to their network connections, e.g. they added or removed a network connection, or redirected a drive to another server.
Directory Structure	Tracks any changes to a user's directory structure.
Registry Information	Tracks changes to important sections of Windows 95/98 or Windows NT Registry. By default, it tracks the entire Registry.
System Assets	Tracks changes to the Windows Desktop

## Changes Starting/Ending Windows

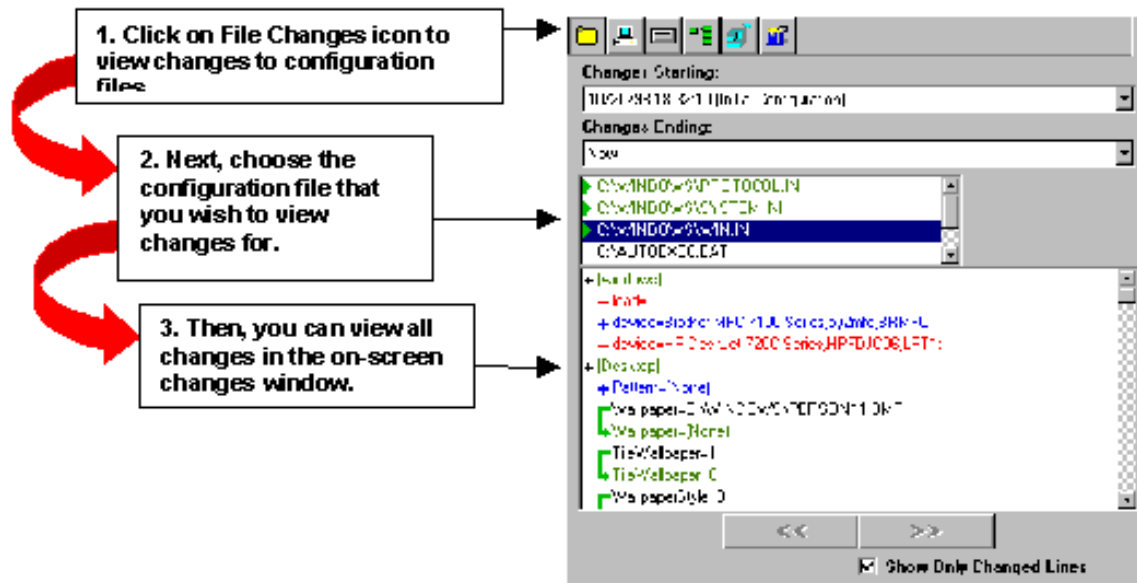
The Changes Starting and Changes Ending windows are used to select the dates for which a comparison will be made. Drop-down lists are provided that let you choose a Snapshot to use for the Changes Starting date, and whether to compare the chosen Snapshot against another Snapshot, or against the current configuration (Now). For example, in the screen below an on-screen comparison will be generated that shows the changes to the system made between October 10, 1998 and the current date/time.



## Generating On-screen Comparison Reports

To view changes between two Snapshots or a Snapshot and the current configuration, simply select the parameters in the Changes Starting and Changes Ending windows, then click on each of the ConfigSafe icons. Changes for that category will be displayed in the on-screen changes window.

In the example below, we've selected the File Changes icon. To view changes for this information category, you must first select the file you wish to compare. As you can see, we've chosen the WIN.INI file. All changes to the WIN.INI file since October 10<sup>th</sup> are displayed in the on-screen changes window.



Easy to understand colored text is used to help point out the changes. Changes are shown in **GREEN**, additions in **BLUE**, and deletions in **RED**.

In addition, ConfigSafe provides the option to show only the changed lines (by clicking on the Show Only Changed Lines checkbox), which lets you view all of the changes in a condensed format.

By clicking on the other ConfigSafe icons (drive, system, directory, Registry, and Assets), you can view changes that have occurred to those categories for the dates you selected in the Changes Starting and Changes Ending windows.

You've now had a good overview of the basic features available on the ConfigSafe Standard interface main screen. We will now move onto a description of the features accessed through the buttons on the right side of the Standard interface main screen.

## Taking and Restoring Snapshots

Using the Standard interface, you can Take Snapshots and Restore to saved Snapshots in the very same way that you would from the EZ interface. We've repeated the instructions briefly; for more details, refer to the EZ interface instructions.

### *Taking Snapshots*

To take a Snapshot, simply click on the Snapshot button, type in the description and select OK.

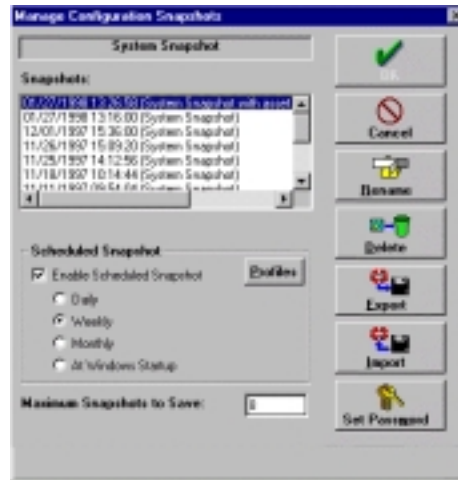
### *Restoring Snapshots*

To Restore to a saved Snapshot, select the Restore button, choose the Snapshot you wish to restore and click OK. Remember that ConfigSafe will confirm this action by enabling you to Cancel the Restore or you can choose the action you wish to perform after the restore - Continue or Restart Windows

## Manage Features

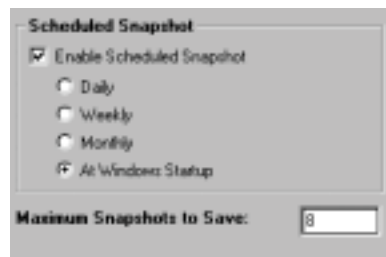
By clicking on the Manage button, you can access ConfigSafe options for managing and scheduling system Snapshots.

*Management features let you schedule, rename, delete, import and export saved Snapshots.*



### *Scheduled Snapshot Options*

This section lets you set up and define automatic, or scheduled, Snapshots. If you select the "Enable Scheduled Snapshots" checkbox, ConfigSafe will automatically take Snapshots at the intervals you select - Daily, Weekly, Monthly, or At Windows Startup.



*It's a good idea to enable scheduled Snapshots. They keep track of system changes in the event that you run into problems and you need to return to a time when you know your PC functioned properly.*

### *Maximum Snapshots to Save*

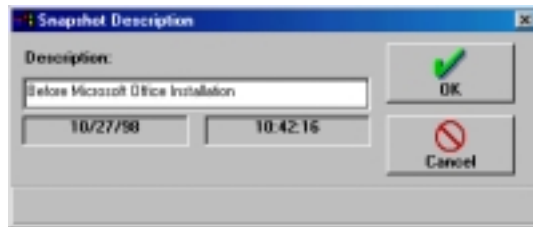
In addition, you should define how many Snapshots ConfigSafe should save on your system. The default number of Snapshots saved is 8. **Each Snapshot takes up approximately XXX of hard disk space.** ConfigSafe will delete the least recent file when the maximum number is reached. However, the Initial Configuration Snapshot will always remain on the system, and will not count towards the maximum number of Snapshots saved.

### *Snapshot window*

This window displays a list of all saved Snapshots. You use this window to select the Snapshot for which you will perform management features such as Rename, Delete, Export and Import.

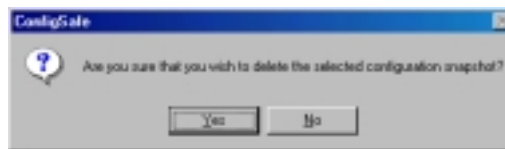
### *Rename*

The Rename feature allows you to rename your Snapshot. This is very useful if you took a manual system Snapshot before installing new software but forgot to provide a description, such as *Before Microsoft Office Installation*.



### *Delete*

The Delete button allows you to delete Snapshots. This is useful if you wish to remove Snapshots. ConfigSafe will always confirm this action, giving you a second chance to keep the Snapshot.



### *Exporting Snapshots*

The Export feature allows you to save Snapshot information outside of the ConfigSafe application. This feature is very useful if a customer is having trouble with their system. It enables you to easily export the Snapshot and e-mail it to the Helpcenter.

To export a Snapshot, simply choose the Snapshot you wish to export from the Snapshot window and click on the Export button. You will be brought into the Export Options screen. From this screen, you can choose the specific information to be exported from this Snapshot.



*Exporting Snapshots is easy. You can even determine which information is exported by using the checkboxes on this screen.*

After you've provided a description and selected the information to be exported, you need to save the Snapshot, as follows.

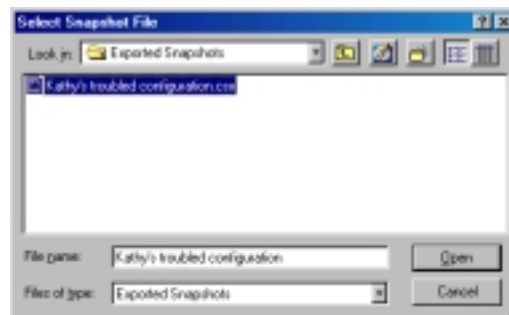


When you have finished exporting the Snapshot, you can send it as a standard e-mail file attachment.

### *Importing Snapshots*

Snapshots can also be imported into ConfigSafe when you wish to retrieve the Snapshot information from outside of the ConfigSafe application. For example, in the scenario above, a customer who is having trouble with their system can take a Snapshot, export it and email it to the IBM Helpcenter.

*Snapshots can be imported onto other systems in order to replicate the configuration of the troubled system. This helps to pinpoint the exact source of system problems.*



Once received, the Snapshot can be imported onto another system that has ConfigSafe by selecting the Import button. Importing a Snapshot will allow for comparison of the configuration differences and further troubleshooting. This is very helpful if you import the Snapshot to a system with the same configuration.

Using ConfigSafe, you can analyze any potential problems. You can even make the corrections to the system, take a Snapshot of the corrected configuration, and export the Snapshot for the customer to import and restore.

#### *Password Protecting the Restore Function*

The Set Password button on the Manage screen allows you to define password access to the Restore function. This feature is very useful if you have small children that use your computer, and you want to make sure that they do not unintentionally restore your system to another configuration contained within a Snapshot.

To enable password protection, click on the Set Password button. You will be brought into the Password screen, where you can enter your password.



*Password protection keeps children or other users from accidentally restoring to saved Snapshot configurations.*

Click the OK button. You will be asked to confirm the password. Then click OK again.

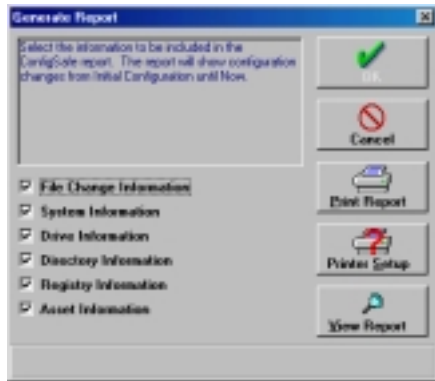
Now that you have reviewed all of the Management Features, we will move onto the next button. To exit the Management screen, select Cancel or OK. You will be brought back to the Standard interface main screen.

## Generating Snapshot Reports

The next button on the ConfigSafe Standard interface is Report. The Report feature lets you generate detailed comparison reports between two Snapshots or a Snapshot and the current configuration.

The Report capability is similar to the on-screen comparison reports, but it lets you create a printed or saved file of the comparison report.

To generate a Report, you must first select the Snapshots in the Changes Starting and Changes Ending windows on the main screen. Once you have selected these parameters for comparison, click on the Report button. You should now see the Report main screen, as shown below.



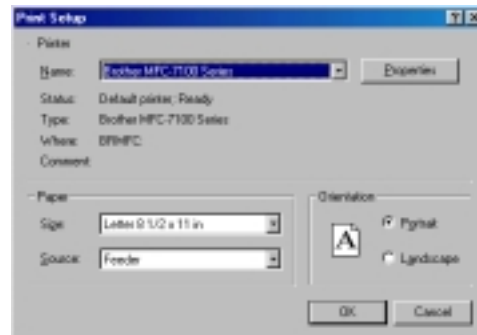
At the Report main screen, you will see some descriptive text. This text will tell you to select the information to include in the report, which you can do by selecting or de-selecting the checkboxes for each information category that ConfigSafe tracks in a Snapshot. In addition, it reminds you of the parameters you selected in the Changes Starting and Ending Windows, so that you're sure you selected the correct dates/Snapshots.

You can now choose to either Print or View the report.

### *Printing Comparison Reports*

If you choose to Print the report, you can first access Printer Setup to make sure that your printer properties are set correctly, as shown below.

*ConfigSafe lets you easily access Printer Setup properties before printing change reports.*

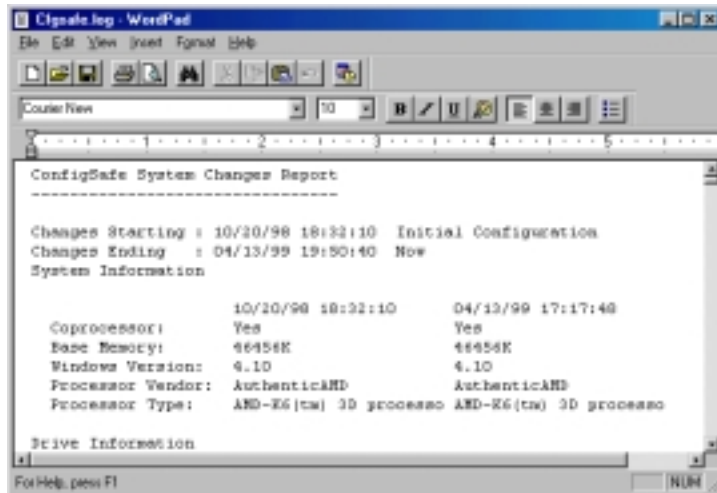


Once you set up your print properties, you can print the comparison report by clicking on the Print Report button. ConfigSafe generates the report to send to your printer. This may take a few moments, and ConfigSafe provides you with information progress screens as it compiles the report.

### *Viewing Comparison Reports*

To View a report that can be saved as a text file, select the View Report button. ConfigSafe will take a few moments to generate the report, informing you with progress screens as it gathers the information to display. Once ConfigSafe has generated the report, it will display the information in Notepad or WordPad, depending upon the size of the file. A sample report is shown below.





You can save this as a text file, or print it to a printer.

To exit the Report screen, select Cancel.

### Profile Features

The ConfigSafe Preload Edition that is provided on IBM systems does not allow you to access any of the Profile features (see Section 3 for more detailed information).

If you click on the Profile button, you will see the following screen:

*ConfigSafe Preload Edition does not provide access to Profile features. Upgrade information is displayed if you click on the Profile button.*



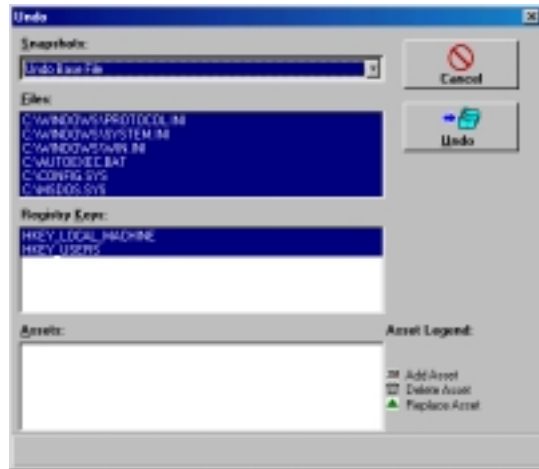
You can print this information for future reference, or Exit the screen.

### Undoing a Restore

ConfigSafe provides a safety mechanism that lets you reverse the Restore process. This is very useful if you have restored the system to a previous saved Snapshot, and find that it did not fix the problem.

In the event that this occurs, you will most likely wish to return to the configuration in place just prior to the Restore, and perhaps Restore to a different Snapshot.

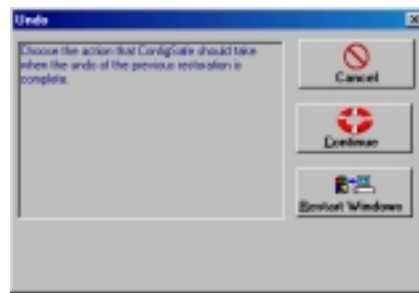
To "undo" a Restore, simply click on the Undo button. This will take you into the Undo screen, which shows you the files that will be restored, as shown below.



*You can reverse a Restore and return to the current configuration using the Undo button.*

ConfigSafe will always confirm the Undo process with you, and asks you to determine the action you want performed after the Undo - Continue or Restart Windows.

*ConfigSafe will always confirm an Undo process.*

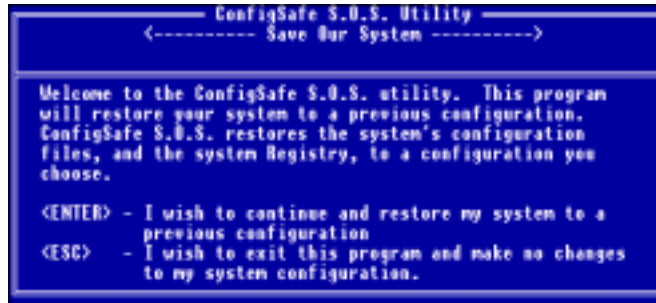


## Using SOS to Restore Systems that Won't Boot into Windows

ConfigSafe also provides a powerful DOS utility called SOS. SOS will let you restore your system to a saved Snapshot configuration when your system won't even boot into Windows.

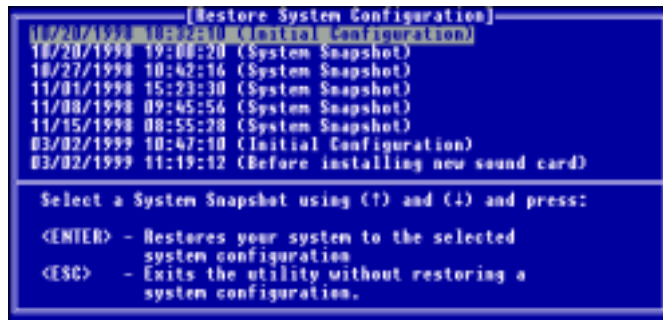
SOS works on all Windows 95/98 systems and on Windows NT FAT systems. In addition, on Windows NTFS systems that have two partitions, SOS can be used to restore the primary NT partition.

To use SOS, switch to the ConfigSafe installation directory (C:\CFGSAFE). Type SOS. You will see the SOS utility main screen, as shown below.



Press <Enter> to access the available Snapshot list, as follows.

*SOS lets you restore to a configuration Snapshot from DOS.*

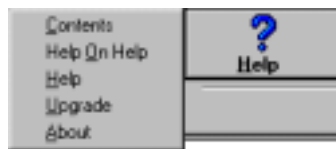


From this screen, select the configuration to be restored and press <Enter>. ConfigSafe will always ask you to confirm the Restore before taking action.

## Accessing Online Help

ConfigSafe provides extensive online help to assist you as you use the product. To access help, simply click on the Help button on the Standard interface, or press F1 from any location within the EZ or Standard interfaces.

ConfigSafe provides several options for help, as shown below.



## You've Completed The Step-by-Step Instructions

You've now finished the review of the step-by-step instructions. To exit ConfigSafe, simply press the Exit button. If you are in the Standard interface, you will be brought back into the EZ interface and you must select Exit again.

Next we will review some common uses for ConfigSafe and frequently asked questions.

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## Section 12: Typical scenarios in which ConfigSafe can be used

The uses for ConfigSafe are limitless, and the benefits immense. The most basic piece of advice is to take a ConfigSafe Snapshot before installing any new hardware or software on your system. That way, if the installation program causes a conflict that results in an improperly functioning system, you can always get back to your previous working configuration.

Also, it's a good idea to set up scheduled Snapshots. Often, system changes occur behind the scenes, and we don't actually know what's being changed or when it was done. By scheduling a weekly Snapshot, for example, you always have the ability to revert your system to a period in time in which you know it worked properly.

ConfigSafe can easily resolve some of these common scenarios that cause system problems:

- ◆ If a user or installation program alters sensitive configuration files
- ◆ If a user or installation program makes dangerous changes to the Registry
- ◆ If the user adds a new disk drive or CD-ROM to their system
- ◆ If the user's network connections change
- ◆ If the user adds memory to their system
- ◆ If the user or installation program updates the DOS or Windows software

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## Section 13: Frequently Asked Questions

Q. Can ConfigSafe be used instead of backups?

A. ConfigSafe should be used in addition to a regular system backup schedule. ConfigSafe does not archive files, except those related to the system configuration. If a non-configuration file is deleted or corrupted it will be necessary to restore that file from backups, or the original installation media.

Q. What is the Registry?

A. The Registry is basically a database of all useful system information. In Windows 3.1x, users began to encounter too many .INI files and simply too much information in the WIN.INI file. To “simplify” this problem, Microsoft came up with the Registry. Now Microsoft recommends that all program and system configuration information be stored in the Registry. Note: The Registry is not implemented the same way on Windows 95/98 and Windows NT.

Q. Why can't I just copy the Registry files to and from a backup on Windows 95/98?

A. Registry support on Windows 95/98 is implemented by the virtual memory manager virtual device driver (VMM.VXD). The Registry is basically a database stored in the files USER.DAT and SYSTEM.DAT. The files USER.DAT and SYSTEM.DAT are read by Registry support during system initialization. Calls to the registry APIs are passed to Registry support, which queries the copy of the Registry that is in memory. Periodically the Registry support routines flush changes in the live registry to the USER.DAT and SYSTEM.DAT files on the disk. Thus the USER.DAT and SYSTEM.DAT files on the disk are not read in by Registry support except at system startup. Also, during normal shutdown the contents of the “live” Registry are written back to disk as USER.DAT and SYSTEM.DAT, so any files simply copied to USER.DAT or SYSTEM.DAT will be overwritten.

Q. How does ConfigSafe handle a corrupted Windows 95/98 Registry and what should a user do if a corrupted Registry is encountered?

A. In general, the Registry restoration process by ConfigSafe is done either:

1. through the Windows interface (by clicking the RESTORE button when ConfigSafe is running), or
2. through the DOS SOS routine in MS-DOS or in Windows 95/98 MS-DOS mode.

It is likely that when the Windows 95/98 live Registry becomes corrupted, it is due to installing a software program or changes to the Windows 95/98 configuration/Registry. The ConfigSafe Windows RESTORE function uses the Windows 95 Registry API to access and restore the Registry database. The use of this API maintains maximum compatibility with Microsoft systems. However, if the live Registry is corrupted, Windows 95/98 may deny ConfigSafe access to specific areas of the live registry database, either keys or values. If this is the case, ConfigSafe will

log entries into the file called "regerror.log", and Windows 95/98 will continue to carry this corrupted Registry database.

This corruption of the live Registry results in the possibility that the system won't boot into Windows 95/98 again, even though you attempted to restore to a known good Snapshot. If errors are encountered ConfigSafe will continue to restore to all portions of the Registry allowed by the Windows 95/98 Registry API. Please note that not necessarily all Registry keys being denied access are corrupted. For example, some of the Registry keys containing transient values may not be accessible at times, but such denials have no impact when restoring to a previous Snapshot. If the ConfigSafe Windows Restore function is used, and it does not boot into Windows 95/98, then the SOS feature comes to the rescue.

The SOS application does not require "permission" from Windows 95/98 to access the Registry. Instead, it forces the system to take a previous Snapshot completely, and it should restore the system to a previous configuration regardless of whether the Registry was in a good or corrupted state prior to running SOS. Therefore, the process should be that whenever you try to restore to a known good Snapshot and it does not boot into Windows 95/98, you should boot into DOS and use SOS to restore the same Snapshot.

Q. How can I restore the Registry on a non-booting Windows NT system?

A. This only works for systems having Registry problems and not hardware problems. Reboot the system using the Emergency Recovery Diskettes. On Diskette 2 you have the option to restore the Registry to the original settings; select this option and reboot the system. When it comes up, run ConfigSafe to restore the configuration you want, then reboot the system again. Your system should now be restored to the specified configuration.

Q. How can I compare 2 older Snapshots?

A. When running ConfigSafe both fields that display current Snapshot and previous Snapshot are combo boxes. Simply click on the arrow to the right of the combo box and you will get a list of snapshots to chose from. The older snapshot must be in the lower combo box.

Q. Why are there more Snapshots listed than configured as "Maximum Snapshots to Save"?

A. ConfigSafe always keeps the initial Snapshot. Manually created Snapshots are also not considered when calculating "Maximum Snapshots to Save." Only Snapshots taken automatically are counted for "Maximum Snapshots to Save."

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## Section 14: ConfigSafe Resources

### Company Contact Information

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### IBM Resource Center

We've created a special area on our Web site to provide you with the latest information on ConfigSafe. To access this area, go to the following URL:

<http://www.configsafe.com/ibm/>

Below is a partial listing of the materials you'll find on the site.

- ◆ ConfigSafe news and reviews
- ◆ "How To Guide" in PDF format
- ◆ ConfigSafe product overview and data sheets for the ConfigSafe family of products
- ◆ ConfigSafe information brief
- ◆ ConfigSafe whitepaper for IBM consumer customers (targeted to Aptiva users)
- ◆ ConfigSafe whitepaper for IBM commercial customers (for CDT users)
- ◆ ConfigSafe screen cam for IBM preloads
- ◆ ConfigSafe manual
- ◆ Technical tips