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How to Use the Compaq Disaster Recovery Tape

Abstract: The Compaq™ one-tape Disaster Recovery Utility for stand-alone tape drives uses a backup disaster recovery tape and firmware that enables the tape drive to emulate a bootable SCSI CD-ROM under disaster recovery situations. The backup disaster recovery tape made before a failure occurs contains enough information to bring the system up and needs no other software or CDs to restore the system.

This document explains disaster recovery methods and how these methods are implemented with Compaq servers and tape drives.

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How to Use the Compaq Disaster Recovery Tape
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Introduction

A disaster can strike a company's computer system at any time. The server crashes, fails to reboot, or recovers but does not function as expected. A company can lose most or all of its data under these situations unless a disaster recovery strategy is implemented. If a complete backup has been done before the failure, then the questions become how long will it take to get the data back, and how long will the system be down.

Conventional disaster recovery methods can take 4 to 10 hours to return a system to the original state. Although the component replacement only takes a few minutes, installing the operating system and restoring the data takes considerably longer. For example, it takes approximately three hours to install the Windows NT 4.0 operating system, and this does not include the time needed to install all of the other applications. Prolonged disaster recovery costs the business in time and revenue.

The Compaq™ one-tape Disaster Recovery Utility simplifies the disaster recovery process. If a full backup with the Disaster Recovery Utility has been completed before a failure occurs, a system can be up and running within one hour. So instead of losing hundreds of thousands of dollars due to lost time, the company may only lose hundreds of dollars.

Current Disaster Recovery Process

Current disaster recovery methods are lengthy and time consuming. These methods use several different types of media (CDs, diskettes, and tapes) to restore the server to the state it was in before the failure occurred, which increases the chances for an unsuccessful restore of the system. For example, the media can be faulty, the diskettes or CDs not current, or parts of the disaster recovery media can be misplaced.

Preparing for Disaster Recovery

To prepare the system for recovery using current process:

1. Create a series of bootable diskettes (three to five diskettes depending on the vendor software used) using the Microsoft Windows NT CD-ROM.
2. Create a tape backup of the system.
3. Update the bootable diskettes every time the system configuration changes, and store these diskettes where they will be readily available if needed.

Restoring a System

To restore the system using current process:

1. Retrieve the bootable diskettes and tapes.
2. Retrieve the Microsoft Windows NT CD-ROM.
3. Boot the system from diskette for Disaster Recovery.
4. Restore the Windows NT base system from CD-ROM.
5. Restore the Windows NT system from tape.

Using the Compaq Disaster Recovery Process

Compaq developed a solution to save time, money, and resources in the event a system failure occurs. The one-tape Disaster Recovery Utility was developed for use on Compaq servers and tape drives. This recovery method simplifies the recovery process and helps to ensure a successful recovery after a system failure.

Disaster Recovery Utility

The Compaq one-tape Disaster Recovery Utility includes the following features.

- Compaq-specific firmware that allows the tape device to emulate a bootable SCSI CD-ROM in a Disaster Recovery Mode.
- Vendor-specific software that creates a Disaster Recovery tape that has sequential boot information for the boot sequence, and then loads a mini-restore function to restore the failed system.
- Completely self-contained design that does not require other software or CDs to restore the system.

Preparing for Disaster Recovery

Perform a disaster recovery (DR) backup using a Compaq tape drive and software.

1. The software automatically identifies the tape drive as a DR tape drive and prompts for either a normal DR tape or a bootable DR tape.
2. Select the bootable DR tape option and complete the backup process. Write-protect the tape after the backup process completes and store the tape for future use.

Restoring a System

To restore the system using the backup DR tape:

1. Retrieve the most recent DR tape.
2. Make sure the DR tape is write-protected. Load the DR tape in the tape drive.
3. When all three LED indicator lights on the front of the tape drive are blinking, power cycle the computer or the tape drive if the tape drive is an external device, within 15 seconds to place the tape drive into the DR mode.
4. The system is restored completely from the DR tape without the need for CDs, diskettes, or any other media.

Disaster Recovery Screens

When the Disaster Recovery tape is loaded, the first screens displayed will be the Windows NT Server Setup screens. Follow the onscreen prompts to set up the server to the original configuration the system was in before the failure occurred. After the system hardware has been configured, the screens for the vendor disaster recovery software will display. When using VERITAS Intelligent Disaster Recovery for Microsoft Windows NT and Microsoft Windows 2000, the following disaster recovery wizard screens will display.

Figure 1 shows the welcome screen that displays for the VERITAS Intelligent Disaster Recovery software. At this time in the disaster recovery process, the tape drive is no longer seen as a CD-ROM, but as a tape drive again.



Figure 1: Welcome screen

The next screen in the disaster recovery process is the Select Recovery File. The user selects the file that contains recovery information for the failed server.

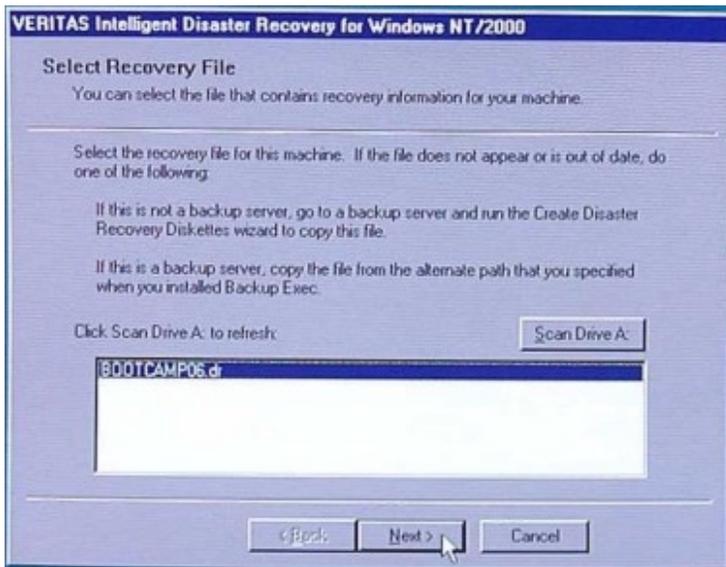


Figure 2: Select Recovery File screen

The next screen in the disaster recovery process is the Modify Hard Disk Layout screen. This wizard screen allows the user to run the Windows NT Administrator program to make any additional partition changes to the system hard disk.

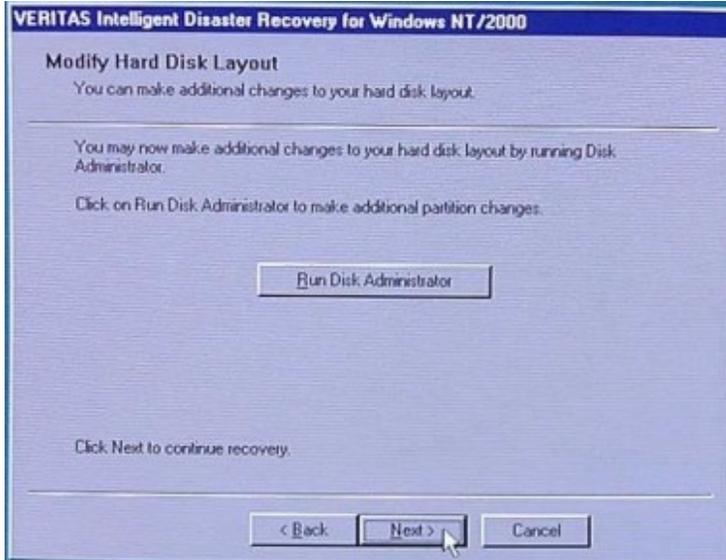


Figure 3: Modify Hard Disk Layout screen

The next screen in the disaster recovery process is the Detecting Media Devices screen. This screen shows the attached devices, such as the tape drive, that can be used to restore the server.

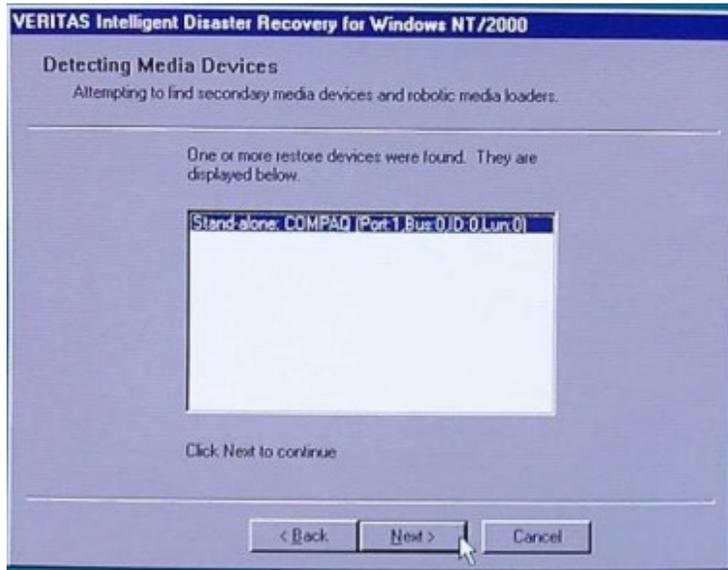


Figure 4: Detecting Media Devices screen

The next screen in the disaster recovery process is the Restoring Data screen. This screen provides status on the tape drive during the data restore process.

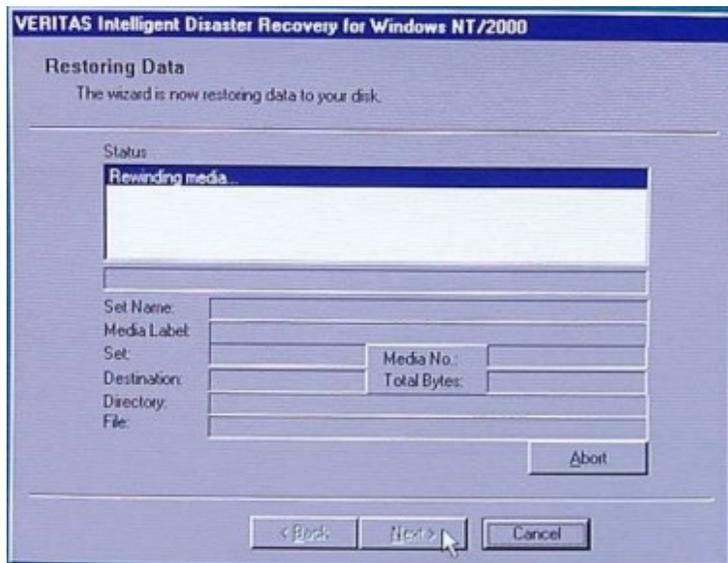


Figure 5: Restoring Data screen

The next screen in the disaster recovery process is the Found a Backup Set screen. This screen shows a backup set was found and waits for the user to click Restore Set, which restores the backup data to the disk drive.

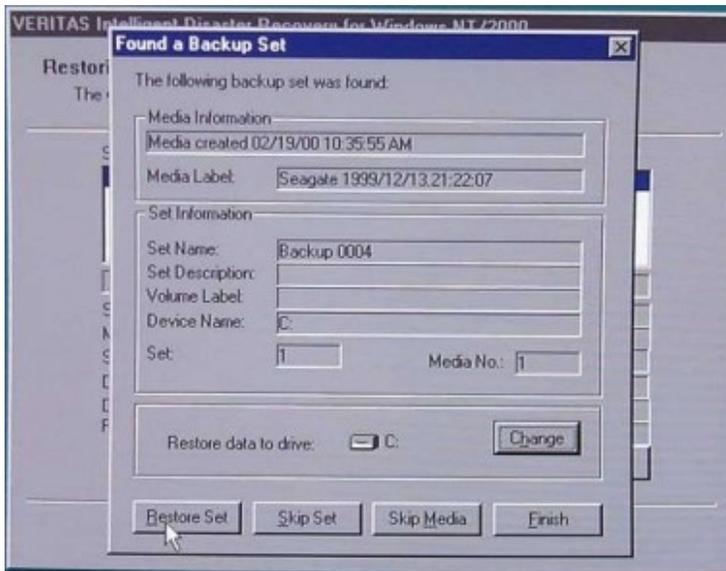


Figure 6: Found a Backup Set screen

The last wizard screen in the disaster recovery process is the Disaster Recovery complete screen. Eject the tape when this screen appears. Click Finish to end the Disaster Recovery process.



Figure 7: Intelligent Disaster Recovery complete screen

The last screen that displays after restoring the partitions of the hard drive to the original configuration is the Operating System (OS) Loader screen. The user will select which operating system to start.

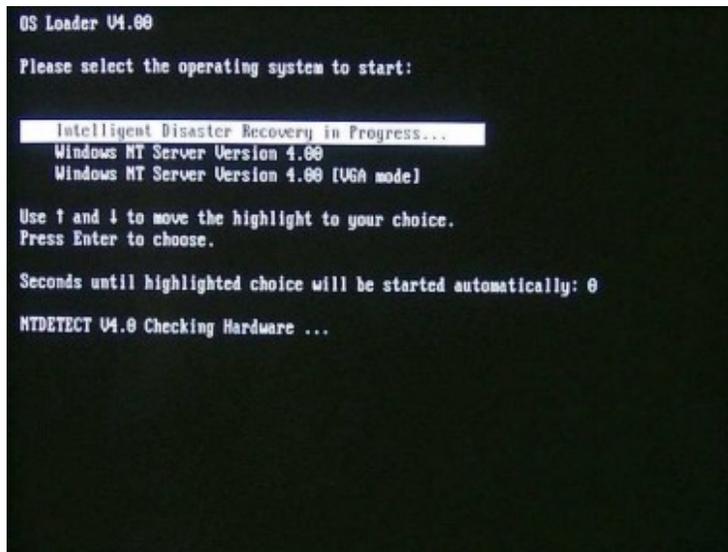


Figure 8: Operating System Loader screen

Disaster Recovery Tape Advantages

The Compaq one-tape Disaster Recovery Utility provides the following benefits:

- Reduces the number of steps that need to be performed during a Disaster Recovery process.
- Reduces the time needed for the backup and restore windows.
- Simplifies the Disaster Recovery process by reducing the number of items (diskettes, CDs, and tapes) to a single tape. This also helps to ensure a successful recovery by eliminating problems associated with damaged or unavailable media.