ORBiT Software

UNiBACK™

Quick-Start Guide

UNiBACK

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I. Chapter 1: Overview

Introduction

UNiBACK is a high performance UNIX backup utility. Fast, easy and reliable, UNiBACK is functionally more robust than standard utilities such as *fbackup*, *tar,* and *cpio*, and yet more affordable and better supported than higher end backup products. UNiBACK delivers the functionality, performance, and reliability required by today's computing environments.

Follow the steps in this guide for a basic tour of UNiBACK. The guide will lead you through software installation and a demonstration of how to easily define backup profiles, automate backups, and restore files.

Further technical documentation for UNiBACK may be found in the ***UNiBACK User Manual***.

Features

Several of the leading features of UNiBACK include:

- Java-based GUI
- Faster backup and restore than other UNIX utilities
- Comprehensive Scheduling Facility
- Tape Librarian
- Data compression to save time and tape

System Requirements

The minimum system requirements for the front-end component of UNiBACK are as follows:

- 80486 or higher, 66 MHz minimum; Pentium 233Mhz preferred
- 16 megabytes of random access memory (RAM) minimum; 32 megabytes of RAM preferred
- 10 megabytes of available hard-disk space
- VGA card (Super VGA recommended)
- 256 or more colors (necessary for Java performance)
- Windows-95 and TCP/IP networking installed

Documentation

UNiBACK comes with a complete set of documentation, including on-line help, to assist you in the use of the interface. These documents are described below:

UNiBACK Quick-Start Guide

This is the document you are currently reading, and should be the starting-point for anyone unfamiliar with UNiBACK. This guide walks the new UNiBACK user through installation and an example of application use in backup operations. The Quick-Start Guide accompanies the UNiBACK demo, and may be downloaded from our website, www.orbitsw.com, or a hardcopy may be requested by calling 1 (800) 89-ORBiT.

UNiBACK User Manual

The user manual contains more detailed explanations of UNiBACK's complete feature-set. It also describes the use of the UNiBACK package from the UNIX command-line. This manual is located on the demo tape in MS-Word format, and is also available in hard copy format upon request.

Online Help

UNiBACK has an extensive help system, providing procedures for creating, executing, and testing backups. To access the help index, select Help Topics from the Help menu

Web-Based Help

For up-to-date information on ORBiT products and documentation, or to download demo copies of various products, visit www.orbitsw.com. For additional assistance, we provide web-based Frequently Asked Questions (FAQ) at http://www.orbitsw.com/html/faq.html.

II. Chapter 2: Installing UNiBACK

In this chapter, the contents of the UNiBACK for Windows demo package are described, and instructions are included for installing the UNiBACK demo on your computer. The following descriptions and procedures are discussed:

- Demo Package Contents
- Installing the UNiBACK Server
- Installing the UNiBACK Client

Demo Package Contents

The UNiBACK demo package is supplied to ORBiT Software customers either to introduce the product or as the initial installation phase of ORBiT's service.

The Quick Start Guide accompanies the demo package and provides the user with clear instructions for installation and initial implementation of UNiBACK. ORBiT technical support staff are ready to assist the customer in installation and familiarization with the product. When a customer has purchased UNiBACK, ORBiT will deliver the UNiBACK User Manual as well. The User Manual provides detailed descriptions and instructions for the advanced application of UNiBACK to the unique environment of each customer.

Each demo package contains the following components:

- Diskettes or a CD containing UNiBACK for Windows.
- A DDS data cartridge containing the server program.
- This Quick-Start Guide in an attractive printed edition.

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Installing the UNiBACK Server

Before installing the Windows UNiBACK client, the UNiBACK server must be installed. This can be done quickly using the following instructions:

1. You must have superuser authority to install UNiBACK. Either login to UNIX as *root,* or enter the following command at the UNIX command line prompt:

```
su
```

2. Terminate any UNiBACK processes that are running.

If this is not the first installation of UNiBACK, be certain that no backup processes are running, especially the *backsched* process.

3. Insert the distribution media (e.g.: DDS data cartridge) into the appropriate drive device.

4. Load the installation script onto the system using the following commands:

```
cd /tmp
tar -xf <device>  installuni
```

<*device*> is the system name of the your standard device (eg: /dev/rmt/0m).

Important: Leave the tape in the tape drive. It will be needed in the next step.

5. Run the installation script by entering the following command:

```
./installuni
```

The first message that appears is:

```
Checking for active UNiBACK processes...
```

The installation procedure first checks for any existing UNiBACK processes. If processes are running, a series of messages like the following will appear:

```
Do you wish to terminate UNiBACK with pid 19007? (y or n, y is default)
```

6. Type "n", and press <return> if processes are running and you do not want to terminate them.

The installation script will conclude with the following message:

```
Unable to terminate one or more UNiBACK processes.
Clean up active UNiBACK processes and run ./installuni again.
```

If no processes are running, or all running processes have been stopped, the script continues with the following prompt:

```
Enter the path of the directory you would like UNiBACK installed in:
(press <return> for /orbit)
```

7. Press <return> to assign the default path, "/orbit", or type in an alternative path, and press <return>.

After the directory path has been indicated, the user is prompted for the Host name.

```
Enter the Host name of the host that is or will be the Administration machine:
(press <return> for <Host name>)
```

<*Host name*> is the name of the system onto which you are currently installing UNiBACK.

Note: The UNiBACK directory on the Administration host cannot be located on an NFS mounted disk.

8. Type in the Host name at the above prompt for the system that is or will be the Administrative host.

The UNiBACK database will be located on the Administrative host in the directory specified for UNiBACK in the previous steps.

The next prompt requests confirmation of the Host name.

```
<Host name> is the Administration machine.  Is this correct?
(y/n, y is default)
```

<Host name> is the name specified in the previous step.

Note: This verification prompt for the Administration host is required for each installation and update.

9. Press <return> to enter "y" (yes), the default if the <Host name> system will act as the Administration host, or, if the <Host name> is not correct, type "n" (no), and press <return>.

The following prompt will be displayed:

```
Enter the device name for the backup device:
(press <return> for <device>)
```

10. Enter the path of the system name for the media device where the media has been inserted.

After all of these prompts have been responded to, the following message will be displayed:

```
Installing UNiBACK
```

Because the installation script deals with the UNiBACK database, one of the following two messages, for upgrade or for initialization, is presented.

If the database already exists, this message will be displayed:

```
Upgrading database...Please wait
```

If this is a new installation, the following message will be displayed:

```
Initializing new database...Please wait
```

At the next step the UNiBACK scheduler, *backsched*, is started, and the following message is displayed:

```
backsched is now starting.  Please use “kill <pid>“ instead of “kill -9 <pid>“ when bringing it down.
```

Next, proceed with installing the Windows client →

Installing the UNiBACK Client

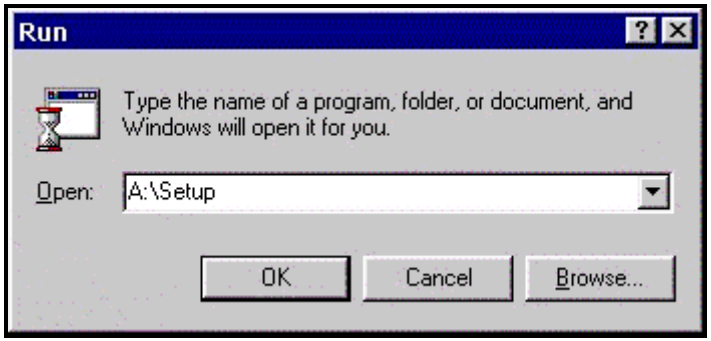
Once the server has been successfully installed, and the "*backsched*"' process is running, proceed with installing the Windows client.

This UNiBACK setup program guides you through the installation procedure.

To install UNiBACK:

1. Start Windows.
2. Insert the CD or Diskette into the appropriate drive.
3. Click the Windows Start button, and click Run.

   The Run dialog appears.



4. In the Open field, type "A:\Setup" (where "A" is the letter of your drive).
5. Click OK.

   The Setup program begins.

6. Follow the instructions on the Install Wizard.

III. Chapter 3: Getting Familiar with the Menus and Screens

This chapter will provide the steps to be taken to start UNiBACK and will familiarize you with the menus and screens within UNiBACK. Each section will include a sample screen and an explanation of the fields within each screen. The following procedures and screens will be discussed in this chapter:

- Starting UNiBACK
- Main Menu
- Backup Profile Screens
- Restore Profile Screens
- Monitor Screens
- Device Screens
- Volume Pool Screens
- Schedule Screens
- Administration Screens

Starting UNiBACK

The following procedures assume that the server portion of the software has already been installed and that the *backsched* and *daemon* processes are running.

1. Start the UNiBACK software, in windows, by double-clicking on the UNiBACK icon:

The Host-Name prompt should appear:

2. Enter the name of your server in the Host Name field.

(Domain is not required for local access.)

UNiBACK will now attempt to connect to the host and will retrieve all the system information.

The login prompt should next be displayed:

3. Enter your username and password, and click on the OK button.

Note: The password is associated with your UNIX login ID on the server. Log on as root to obtain full access.

Once the username and password are verified, the Main Menu will load.

Main Menu

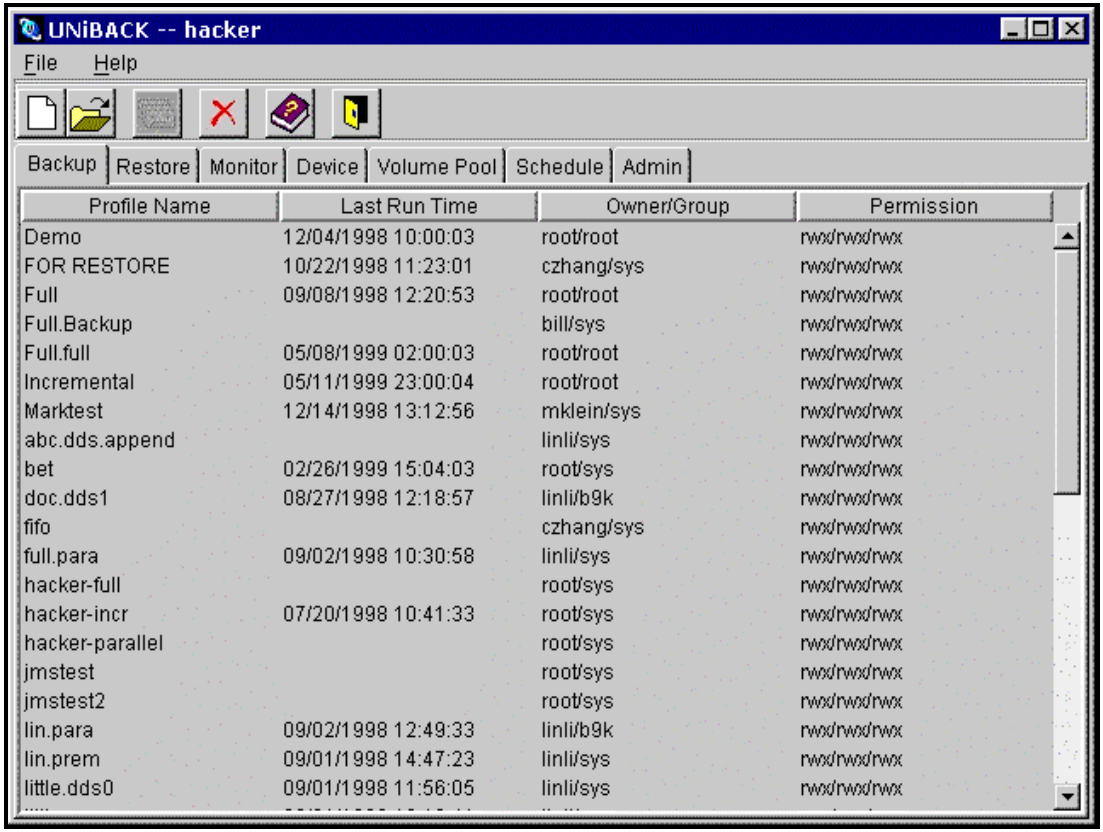
The UNiBACK graphical user interface is organized around the Main Menu presented to the user when UNiBACK is first opened. The Main Menu contains seven menu tabs for accessing detailed screens used to configure and maintain the various backup and restore process settings. When a user clicks on any of the menu tabs, other than the Admin tab, a *list view* is presented with a listing of records in the lower 2/3 of the screen. By double-clicking any one of these records, or by selecting a record and pressing the Enter key, the *detail view* screens may be opened. With the Admin tab, the Administration screen is presented immediately. All of the UNiBACK screens with their associated sets of screens may be accessed through the seven tabbed main menu selections.

Each of the seven views from the main menu shares a title bar, with File and Help selections, and a tool bar with icons for "Create a new entry", "Open selected entry", "List volumes in a pool", "Delete selected entries", "Help", and "Exit BOC". The Main Menu loads with the Backup tab selected by default, and displays a list of previously defined backup profiles.

Next, proceed with inspecting the various UNiBACK screens and procedures. →

Main Menu, Backup Selection

With the Backup tab selected from the Main Menu, the previously defined backup profiles, and information related to each profile, are listed for viewing, modification, or use in the Backup process. The information displayed in the four columns here includes the profile name, last run time, owner group, and permission information.



The following information is displayed in the four columns on this screen:

Profile Name: The name of the backup profile used to create this backup.

Last Run Time: The date and time the backup was last run.

Owner/Group: The user ID and user group name associated with the backup profile.

Permission: The access permissions assigned to each configured backup profile.

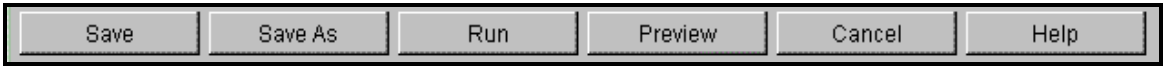
By moving the mouse over the desired profile, you can either double-click the mouse, or select File-Open, to display the Backup Profile, General, screen.

This will open the selected profile, bringing up the Backup, General screen. →

Backup Profile Screens

The Backup Profile screen contains four menu tabs for accessing the configuration fields of the General, Template, Device, and Filter screens. These field settings configure the backup process.

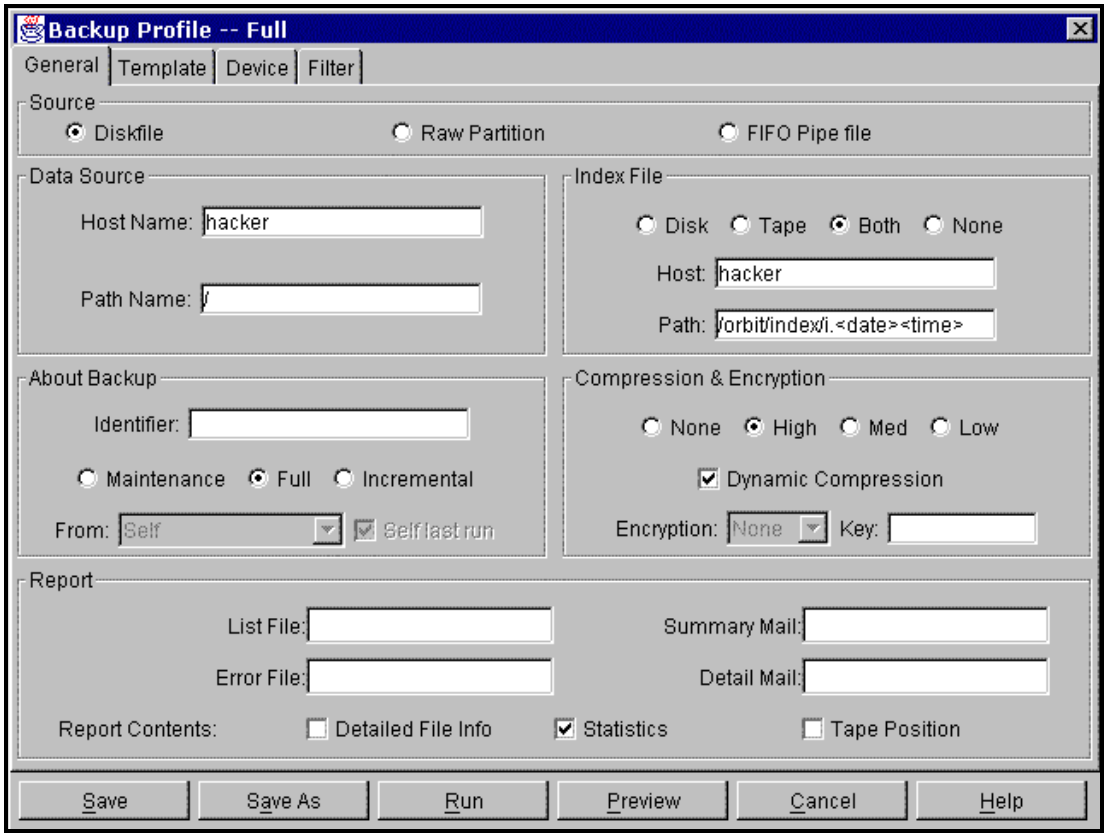
At the bottom of the Backup Profile screen, six command buttons are available from each of the four tabbed views.



- **Save** Adds a newly defined profile to the backup profile list.
- **Save As** Creates a copy of an existing profile.
- **Run** Activates the backup process after a specific profile has been designated.
- **Preview** Displays, on the Monitor screen, statistics generated by running the backup but does not write data to a device.
- **Cancel** Quits the Backup Profile screen, and returns the user to the Main Menu.
- **Help** Opens the online technical support index and articles.

Backup Profile, General Screen

When a backup profile is selected, the Backup Profile screen is displayed with the General menu tab selected by default. Backup process settings may be indicated for data source, index file, backup identification, compression and encryption, and reports.



The Backup, General screen is divided into the following sections:

- **Source:** Specify the type of data to be backed up.

  Diskfile …… Data sources are primarily ordinary disk files.

Raw Partition …… Source is a Raw Disk Partition.
FIFO Pipe File …… Source is an FIFO file.

- **Data Source:** Type in the Host name and Starting Location for the backup in the Host Name and Path Name fields.

  Host Name ……Identify the server from which data is to be backed up.
  Path Name ……Define the location within the host server's directory tree where the backup is to begin.

- **Index File:** Indicate if Index files are to be used for this backup, and, if so, where they are to be stored.

  Disk …… Keeps the index file on the system for easy retrieval.
  Tape …… The index file is kept on tape only.
  Both …… The index file is kept both on tape and disk.
  None …… No index file is used (not recommended if fast file recovery is desired).
  Host …… Identifies the server where the index file is to reside.
  Path …… Indicates the location and filename of the index file. The filename, generated when the backup profile is created, includes the current date and time.

- **About Backup:** Specify the name to use for this backup in a *restore* process and the type of backup being created.

  Identifier …… Define the name by which to identify this backup during a *restore* process.
  Maintenance …… Has no relationship to any other backup.
  Full …….. Selects all files, regardless of when they were last modified.
  Incremental …… Selects files based on the date of last modification of a specified backup.
  Incremental from … Becomes active when the *Incremental* radio button is selected, and is used to indicate the name of the backup profile to which this profile is related.

- **Compression and Encryption:** …… Select the level of Compression best suited for your system.

  High …… High-density compression using an LZW algorithm.
  Medium …… Medium-density run-length compression using an 8-bit key.
  Low …… Low-density run length compression using a 32-bit key.
  None …… No data compression.

  Also select whether you want to use **Dynamic Compression** or **Encryption**.

  See Chapter 5, Advanced Features, for more information about Compression Settings.

Note: To use Encryption, you must also use compression. Do not use Dynamic with Encryption.

- **Report:** Define the full path name for each of the reports generated by UNiBACK during a backup or restore process.

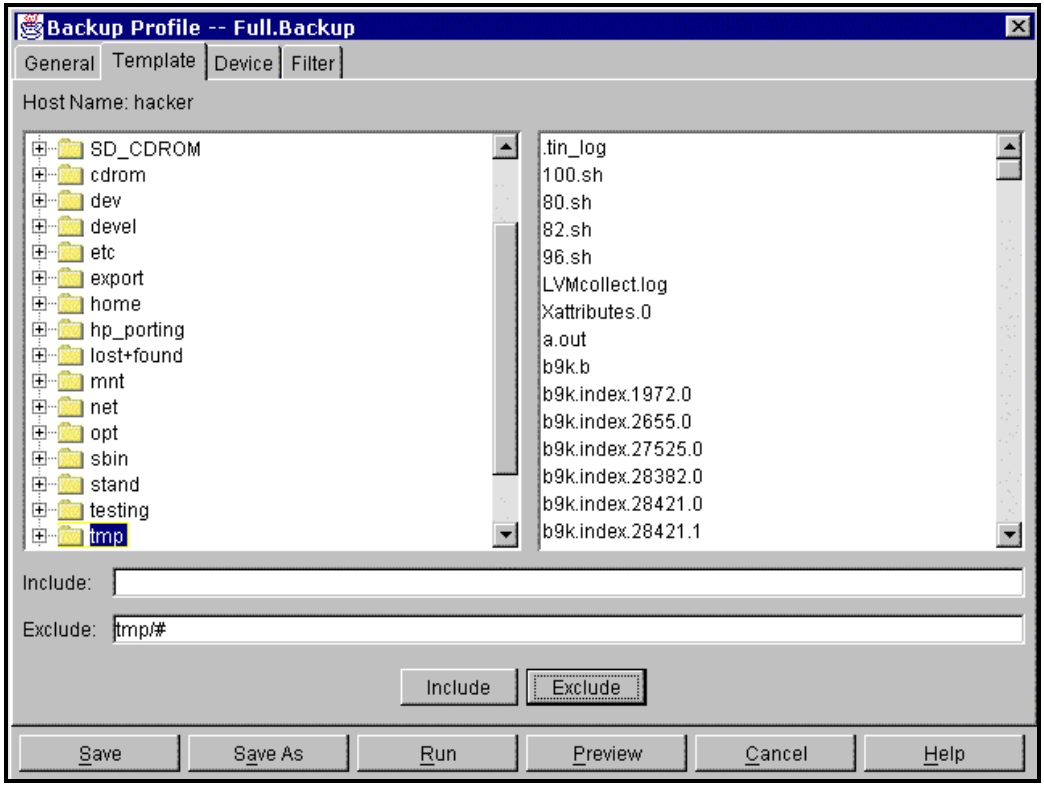
  List File …… The path and filename of the backup output report (eg: /orbit/log/backuplist.<date>).
  Error File …… The path and filename of the report containing backup error messages.
  Summary Mail …… The addresses and names of users who are to be mailed the results of the backup.
  Detail Mail …… Same as summary mail, with more detailed information regarding files.

  Also select the contents of the reports:

  Detailed File Info … Includes file size, time last modified, privilege information, etc..
  Statistics …… Includes the detailed final statistics (number of bytes, throughput, etc.).
  Tape Position …… Includes the volume, file, block, and starting byte address for each file.

Now Select the Template menu tab to see the Backup, Template screen with the directory tree of your host. →

Backup Profile, Template Screen



The Backup Profile, Template screen is divided into three sections. On the left side, the directory structure of your system is shown, while on the right, the files within the selected directory are listed. At the bottom of the page, the directories and files to be included in, or excluded from, the backup may be indicated.

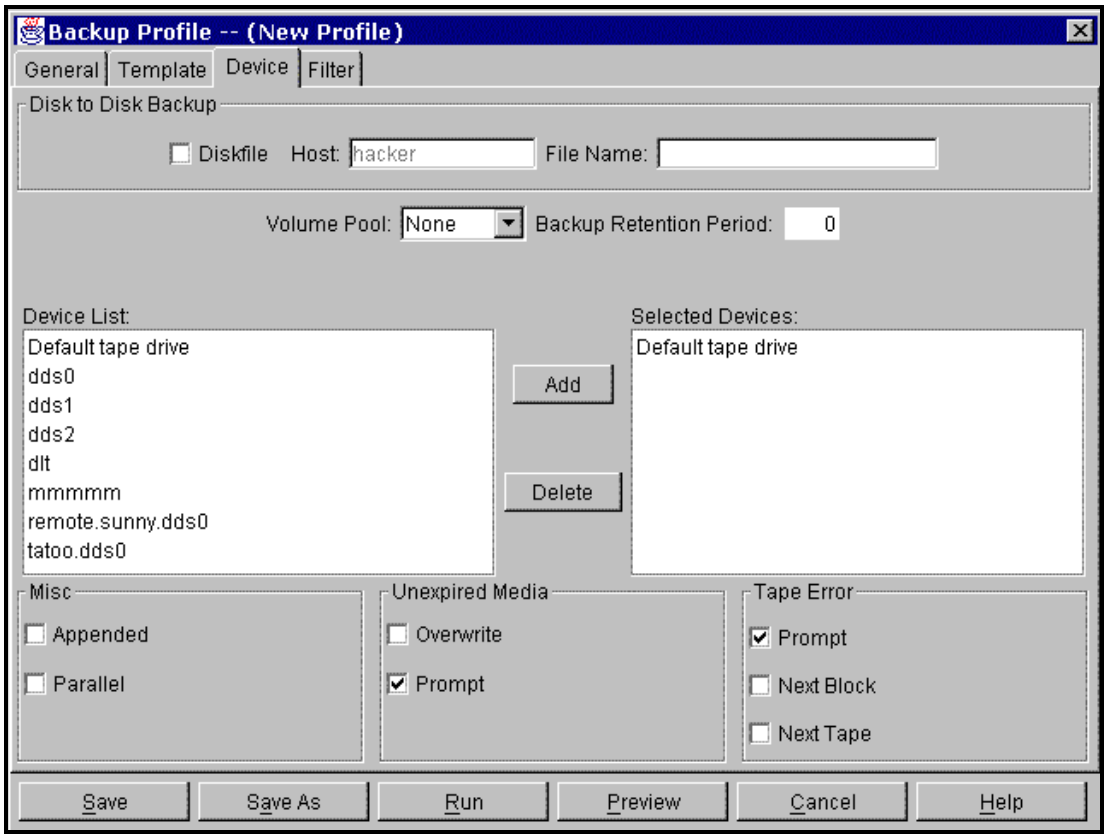
- Simply click on the folder icon at the left to cause all files within that directory to be listed at the right.
- Next, click on either the INCLUDE or EXCLUDE button.

The "#" displayed in the Include box, above, is the wild-card character. This specifies that all files and sub-directories below the currently selected directory are to be included. The wildcard character may also be used in the Exclude box.

Click on the Device menu tab to open the Backup Profile, Device screen.→

Backup Profile, Device Configuration Screen

Target backup devices may be defined and configured using the Backup Profile, Device screen. The Diskfile checkbox must be selected, and the Host and Filename must be indicated, to store data to the system.



Regular, pre-defined, backup devices may simply be selected from the list of available devices on the left by highlighting the device name and clicking on the *Add* button. The indicated device name will appear on the right-hand side of the screen.

The attributes of the backup device are further defined by selecting from the options at the lower portion of the Backup Profile, Device screen.

When the settings are as desired, proceed to the Filter menu tab.

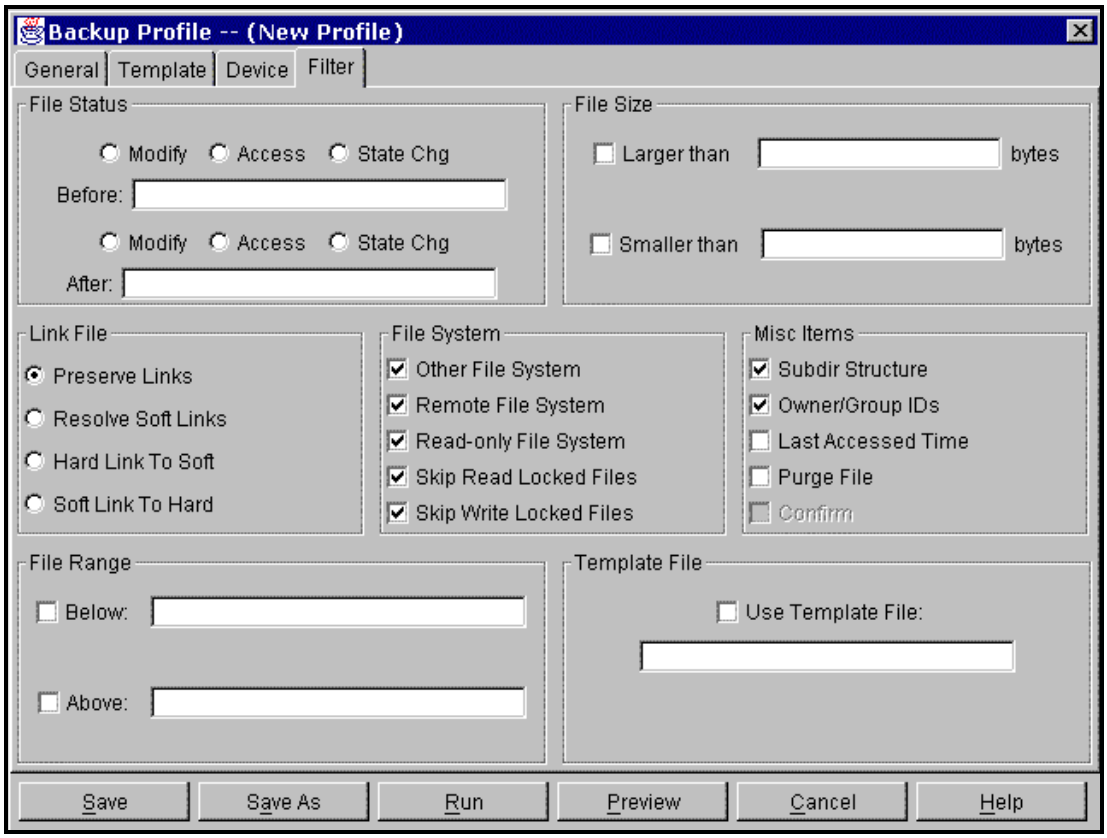
These options are as follows:

- **Appended:** Selecting this option causes the backup to be appended to the existing tapeset.
- **Parallel:** When enabled, this option allows the backup to write to multiple devices simultaneously.
- **Overwrite:** With this option selected, the backup will automatically overwrite any existing information on the tape, whether that information has expired or not.
- **Prompt:** If enabled, the operator will be prompted when the system senses unexpired media in the drive.
- **Tape Error:** One of three actions to be taken when an tape error occurs may be indicated: prompting the operator, proceeding with the backup using the next block on the current tape, or proceeding using the next tape in the drive loader magazine.

Select the Filter menu tab to display the Backup Profile, Filter screen. →

Backup Profile, File Filtering Screen

The Backup Profile, Filter screen allows you to further define the criteria used during backups.



Files may be excluded or included based on the following criteria:

- **File Status:** Specify the status condition to be used in qualifying files for backup, and indicate the date range parameters.

  Modify …… Files are to be selected by the date their data was last modified.
  Access …… Files are to be selected by the date they were last accessed.

State Chg …… Files are to be selected by the date their index number (inode) status was last changed.
Before / After Date …… Specify the date range parameters for selecting files.

- **File Size:** Files that fall outside of a certain size range in bytes are to be excluded. Parameters are:

  Larger than …… Specifies the upper limits, in bytes, for files to be included in the backup.
  Smaller than …… Specifies the lower limits, in bytes, for files to be included in the backup

- **Link File:** Informs UNiBACK how to handle links during the backup. Options are:

  Preserve Links …… Preserves hard and soft-links.
  This is the default.
  Resolve Soft-Links …… Follows soft-links to their data files and backs-up the data files without the links.
  Hard-Link to Soft …… Hard-links are restored as soft links
  Soft-link to Hard …… Soft-Links are restored as hard-links

- **File System:** Allows file inclusion or exclusion based on the file system where the file resides. All three File System fields are checked by default to indicate inclusion. Options are:

  Other File System …… Excludes files from Other File systems.
  Remote File System …… Excludes files from a network (remote) file system (NFS mounts).
  Read-Only File System… Excludes read-only systems (CD-Roms).

- **Miscellaneous Items:**

  Subdir Structure …… Checking this field assures that the sub-directory structure is retained.
  This is the default.

  Owner/Group IDs …… Checking this field excludes permissions information from the backup.
  The default is to leave this field unchecked to **include** permission information on the backup.

  Note: Files are restored with the default permissions of the user performing the restore.

Last Accessed Time …… Selecting this option causes UNiBACK to change the last access time to the current date/time for all files backed-up.
The default is to leave this field unchecked and thus retain the last-accessed time.

Purge File …… This option allows you to purge files after storing and is for archiving purposes.
The default is to leave this field unchecked and **not** to purge files.

Confirm …… Selecting this option causes confirmation to be requested before each file is purged.
This is the default.

- **File Range:** Permits only files that fall between these two parameters to be included in the backup.

  Below/Above: …… Specify the beginning and/or ending filename in the range.

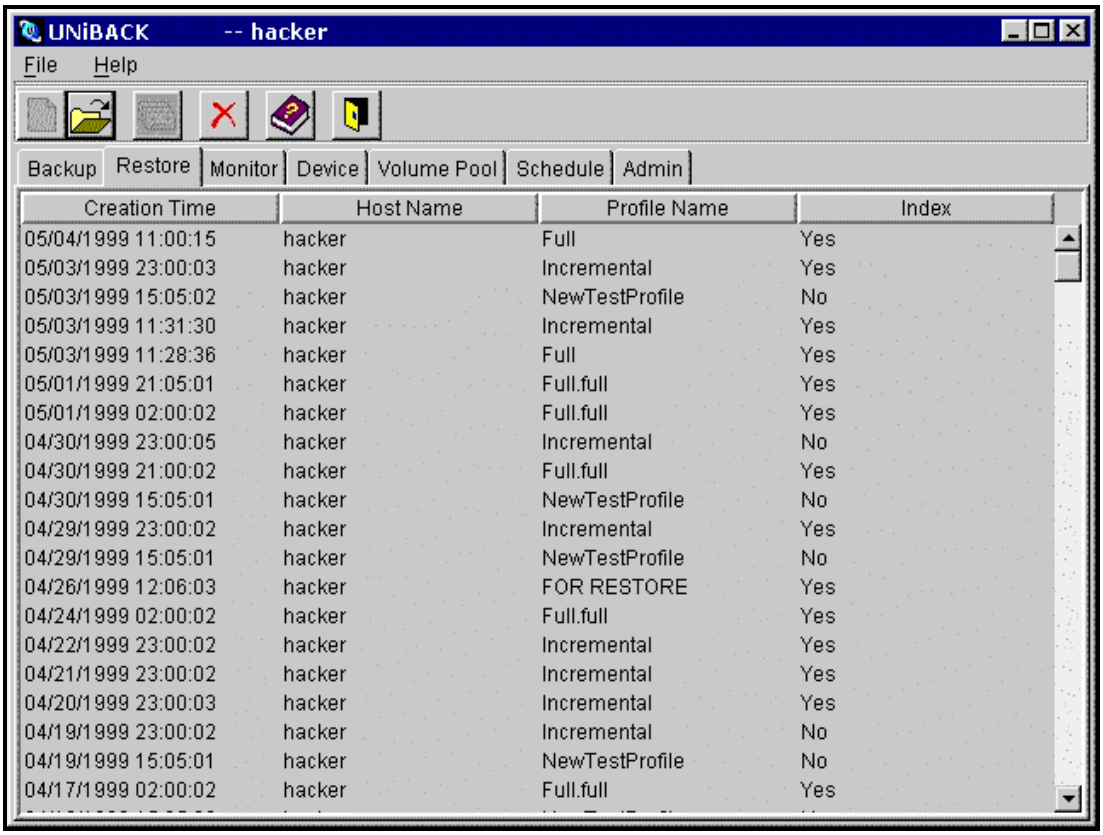
- **Template File:** Allows the path name of a file containing filesets to be included or excluded from the restore.

  Template filename: …… Specify the fully-qualified path name for the template file.

  For more information about templates, see the *UNiBACK User Manual.*

Main Menu, Restore Selection

With the Restore tab selected from the Main Menu, the backup profiles, and information related to each profile, are listed for use in the restore process.



Creation Time	Host Name	Profile Name	Index
05/04/1999 11:00:15	hacker	Full	Yes
05/03/1999 23:00:03	hacker	Incremental	Yes
05/03/1999 15:05:02	hacker	NewTestProfile	No
05/03/1999 11:31:30	hacker	Incremental	Yes
05/03/1999 11:28:36	hacker	Full	Yes
05/01/1999 21:05:01	hacker	Full.full	Yes
05/01/1999 02:00:02	hacker	Full.full	Yes
04/30/1999 23:00:05	hacker	Incremental	No
04/30/1999 21:00:02	hacker	Full.full	Yes
04/30/1999 15:05:01	hacker	NewTestProfile	No
04/29/1999 23:00:02	hacker	Incremental	Yes
04/29/1999 15:05:01	hacker	NewTestProfile	No
04/26/1999 12:06:03	hacker	FOR RESTORE	Yes
04/24/1999 02:00:02	hacker	Full.full	Yes
04/22/1999 23:00:02	hacker	Incremental	Yes
04/21/1999 23:00:02	hacker	Incremental	Yes
04/20/1999 23:00:03	hacker	Incremental	Yes
04/19/1999 23:00:02	hacker	Incremental	No
04/19/1999 15:05:01	hacker	NewTestProfile	No
04/17/1999 02:00:02	hacker	Full.full	Yes

The following information can be found on this screen:

- **Creation Time:** Date and Time the backup was created.
- **Host Name:** The host from which the backup was run.

- **Profile Name:** The Backup Profile used to create this backup.
- **Index:** Whether (Yes/No) an Index file was created during the backup process.

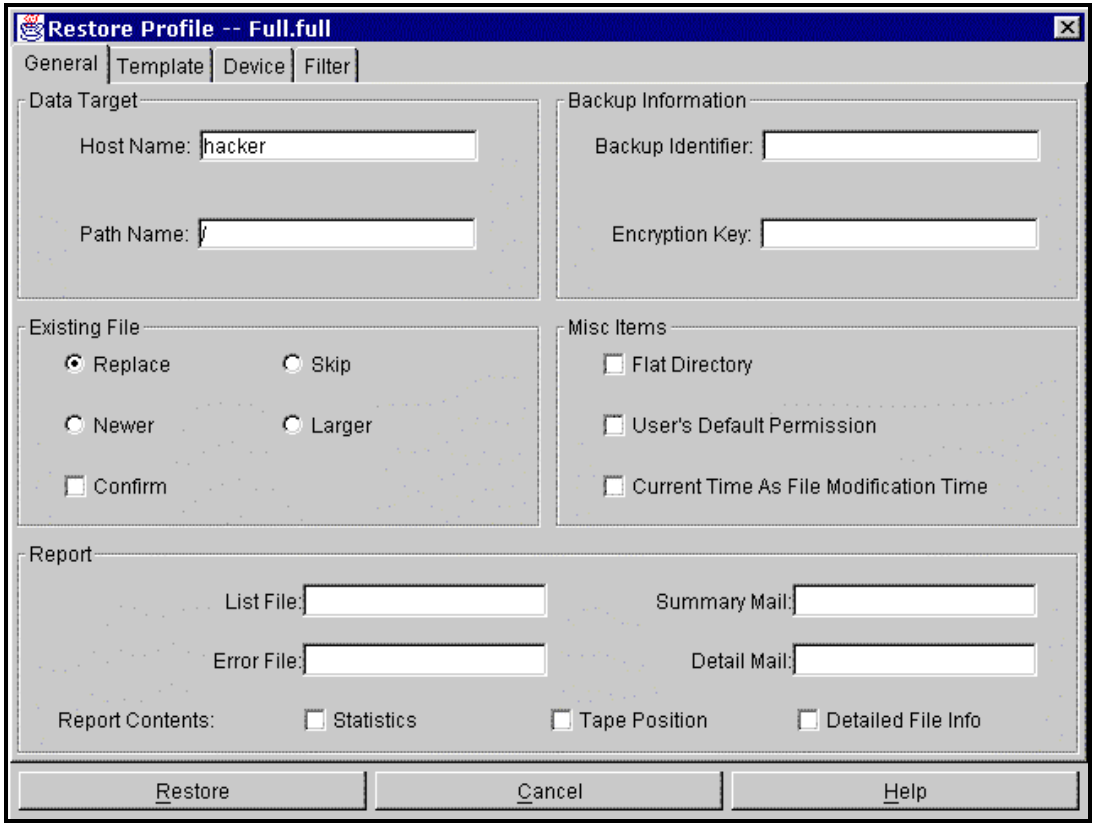
A restore is initiated by moving the mouse over the desired backup event profile to select it, then either double-clicking the mouse, or selecting File-Open.

This will open the selected profile, bringing up the Restore, General screen. →

Restore Profile Screens

The Restore screen contains four menu tabs for accessing the configuration fields of the General, Template, Device, and File Filtering screens. These field settings configure the restore process.

Restore Profile, General Screen



The Restore, General screen is used to configure the basic parameters of the restore process. When a restore backup profile is selected, the Restore screen is displayed with the General menu tab selected by default. Other restore process settings may be indicated for Template, Device, and File Filtering.

The Restore, General screen is divided into five sections with various fields provided for restore configuration settings. A brief explanation of these settings follows.

- **Data Target:**

  Host-Name: …… Select the host to which files will be restored.
  Path Name: …… Enter the directory path into which files will be restored.

- **Backup Information:**

  Backup Identifier: … Enter the name of the backup profile to be used for the restore.

  This is primarily used to identify appended backups.

  Encryption Key: … Enter the correct key to be used to decrypt the data from the tape.

- **Existing File:** This option specifies how the restore should act when it encounters a file which already exists on the system.

  Replace: …… By default, the current file will be overwritten by the file on the tape.
  Skip: …… If the file currently exists, the restore is to be skipped.
  Newer: …… Retain the file more recently created.
  Larger …… Keep or restore the file which is larger in size.
  Confirm: …… Prompt the user to confirm the action to take place for each existing file.

- **Miscellaneous Items:**

  Flat Directory: …… Use this option if files are to be restored directly into the target directory.
  Users Default Permissions: … Select this item to retain the Default Permissions of users.
  Current Time as File Modification Time: … Select this option if the time the restore is run is to become the new file modification time.

- **Report Options:**

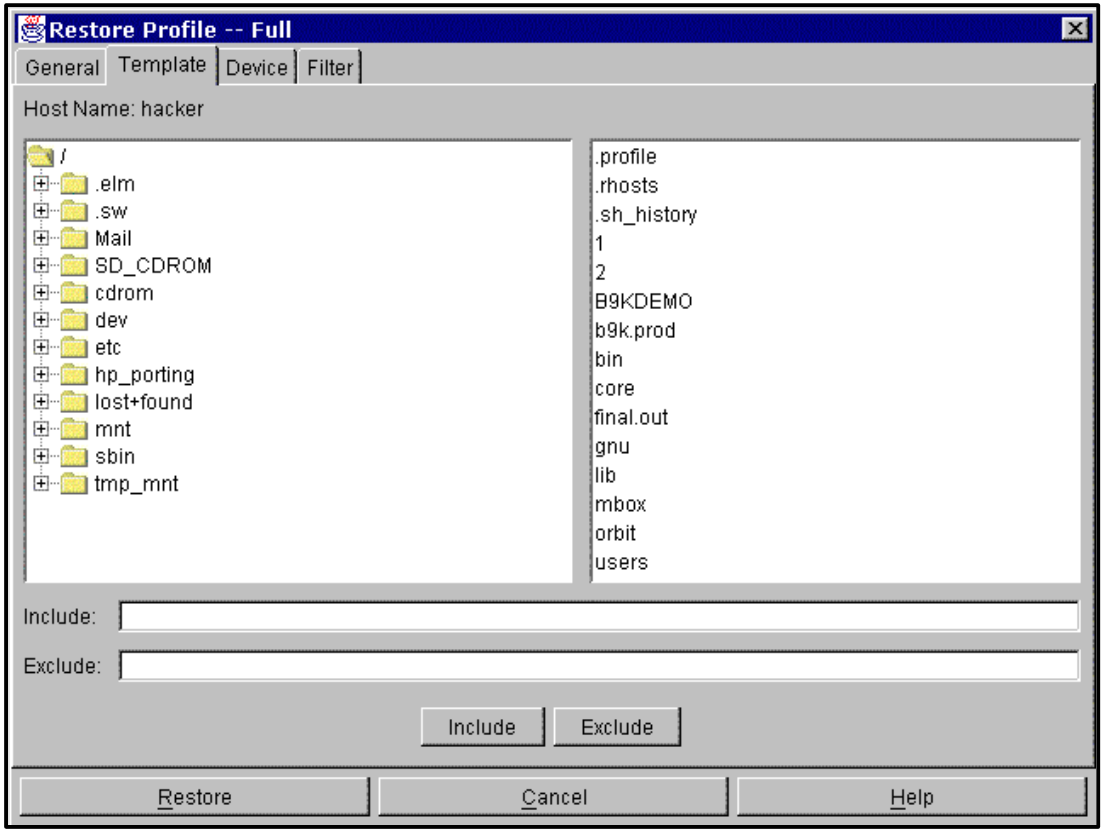
  List File: …… Specify the path and filename of the file to contain the list of restored files.
  Error File: …… Specify the path and filename of the file to contain report messages for errors encountered during the restore.
  Summary Mail: …… Specify the users who should receive mail once the restore is complete.
  Detail Mail: …… Specify the users who should receive more detailed information about the restore.

- **Report Contents:**

  Statistics: …… Include vital statistics about the restore on the report.
  Tape Position: …… Include the tape position (block) for each file restored.
  Detailed File Information: … Include more detailed information about each file restored.

Now Select the Template menu tab to display the Restore, Template screen. →

Restore Profile, Template Scree



The Restore, Template screen is used to select directories and files to be restored. This screen is divided into three sections. On the left side, the directory structure of your system is shown, on the right, the files within a selected directory are listed, and at the bottom of the page, the directories and files to be included in, or excluded from, the restore may be listed.

Simply click on a folder icon at the left of the screen to list all files within the directory on the right side of the screen, then click on either the Include or Exclude button.

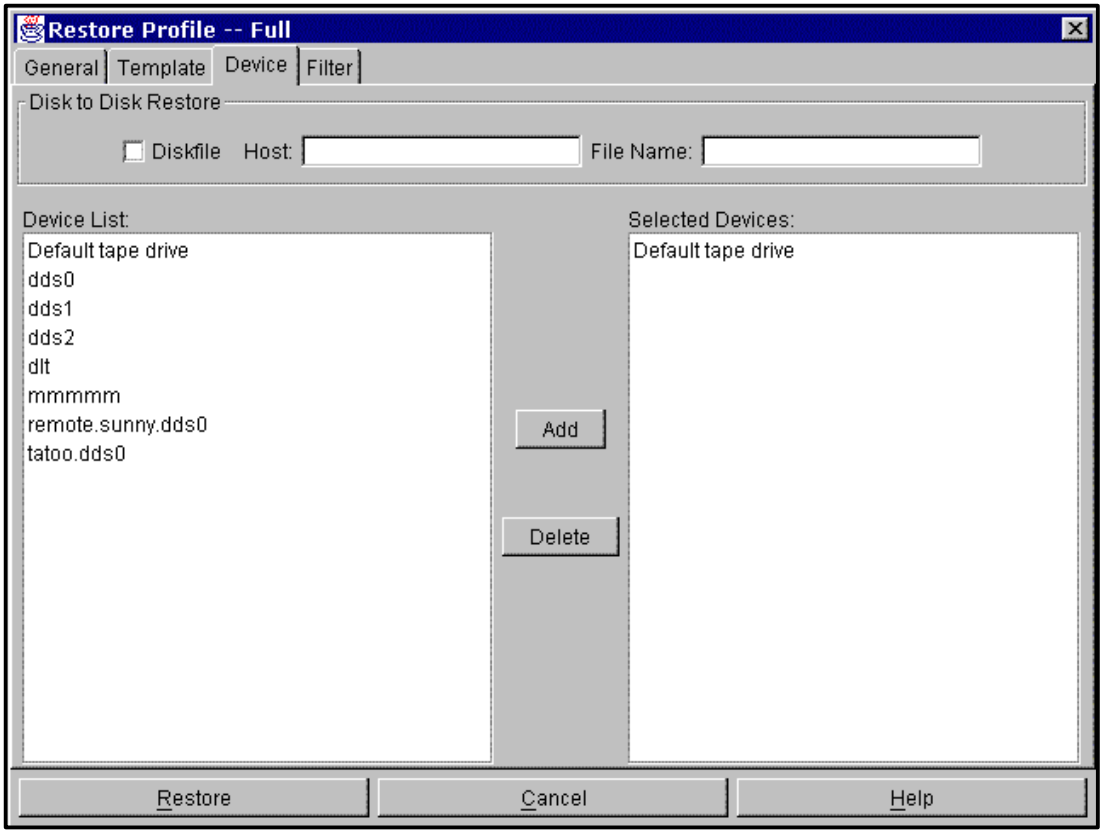
The wild-card character (“#”) specifies all files and sub-directories below the currently selected directory and may be used in either the Include and the Exclude boxes.

Once you have indicated the files to be restored, continue defining the restore process options.

Use the other menu tabs on the Restore Screen (Device, Filter) to change additional parameters.
If you are ready to begin restoring files, click on the Restore button. To just list the files to be restored, click on the List Only button.

Now Select the Device menu tab to display the Restore, Device configuration screen. →

Restore Profile, Device Screen

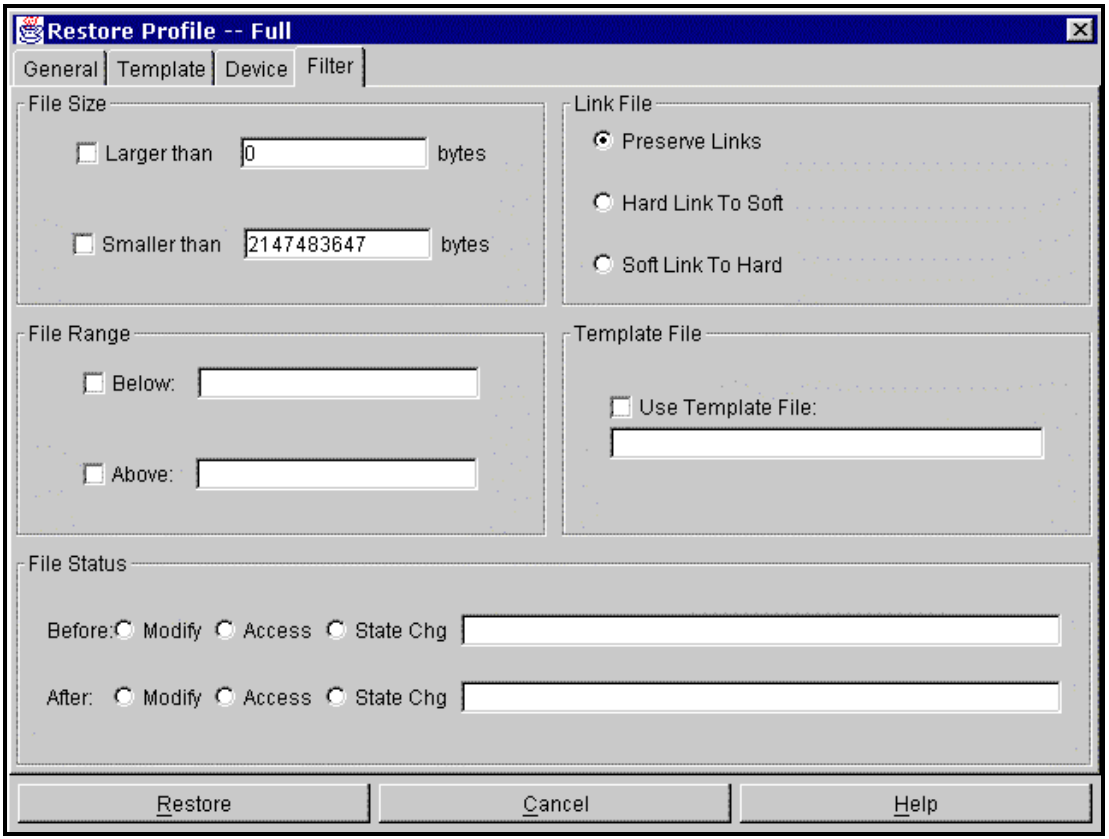


On the Restore, Device screen, the device drives to be used in the restore may be defined. If this restore is from a disk-to-disk backup, the Diskfile option must be selected, and the Host name and Path name must be entered in the text boxes provided.

Devices listed in the left section of the screen may be selected for use in the restore. For a restore from a parallel backup, additional drives may be defined by highlighting the device name at the left and clicking on the *Add* button. The indicated device name will appear on the right-hand side of the screen.

Now select the Filter menu tab to display the Restore, Filter screen.→

Restore Profile, Filter Screen



The Restore, Filter screen allows you to further define the file selection criteria to restrict certain files from the restore. The following options are available:

- **File Size:** Use this option to restrict from the restore files which are beyond a certain size range.

  Larger Than: …… Check this box, and type in the maximum number of bytes in an acceptable file.
  Smaller Than: …… Check this box, and type in the minimum number of bytes in an acceptable file.

- **Link File:** Use this option to define how links are to be handled in the restore process.

  Preserve Links …… Soft and hard links are preserved.
  Hard Link to Soft … Hard Links are restored as soft links.
  Soft Link to Hard … Soft Links are converted to hard link.

- **File Range:** Use this option to restrict files based on filenames with their corresponding creation dates and times.

  Below …… Specifies that all files, listed by create date sequence, which appear **after** the named file, be included in the restore process.
  Above …… Specifies that all files, listed by create date sequence, which appear **before** the named file, be included in the restore process.

- **Template File:** Use this option if you want to specify a template file for the restore.

  See the ***Reference Manual*** for more information on template files.

- **File Status:** Specify one of the three status conditions to be used to qualify files for the restore, then indicate the date range parameters.

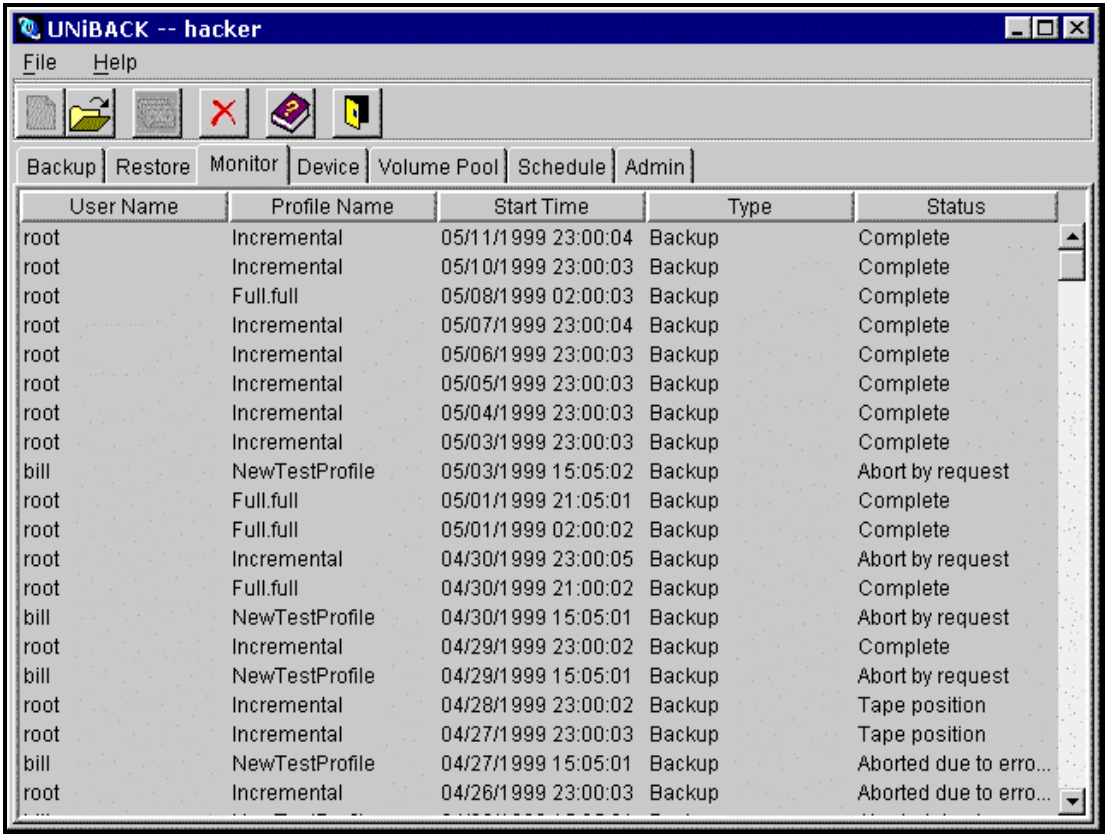
  Modify …… Selects files by the date they were last modified.
  Access …… Selects files by the date they were last accessed.
  State Chg. …… Selects files by the date the file status was last changed.

  Before/After Date … Specifies the date range parameters for selecting files.

If you are finished setting the restore parameters, select Restore, otherwise select Cancel.

Main Menu, Monitor Screen

The Main Menu, Monitor, screen displays the current status, and the history, of all backups initiated on this host.



User Name	Profile Name	Start Time	Type	Status
root	Incremental	05/11/1999 23:00:04	Backup	Complete
root	Incremental	05/10/1999 23:00:03	Backup	Complete
root	Full.full	05/08/1999 02:00:03	Backup	Complete
root	Incremental	05/07/1999 23:00:04	Backup	Complete
root	Incremental	05/06/1999 23:00:03	Backup	Complete
root	Incremental	05/05/1999 23:00:03	Backup	Complete
root	Incremental	05/04/1999 23:00:03	Backup	Complete
root	Incremental	05/03/1999 23:00:03	Backup	Complete
bill	NewTestProfile	05/03/1999 15:05:02	Backup	Abort by request
root	Full.full	05/01/1999 21:05:01	Backup	Complete
root	Full.full	05/01/1999 02:00:02	Backup	Complete
root	Incremental	04/30/1999 23:00:05	Backup	Abort by request
root	Full.full	04/30/1999 21:00:02	Backup	Complete
bill	NewTestProfile	04/30/1999 15:05:01	Backup	Abort by request
root	Incremental	04/29/1999 23:00:02	Backup	Complete
bill	NewTestProfile	04/29/1999 15:05:01	Backup	Abort by request
root	Incremental	04/28/1999 23:00:02	Backup	Tape position
root	Incremental	04/27/1999 23:00:03	Backup	Tape position
bill	NewTestProfile	04/27/1999 15:05:01	Backup	Aborted due to erro...
root	Incremental	04/26/1999 23:00:03	Backup	Aborted due to erro...

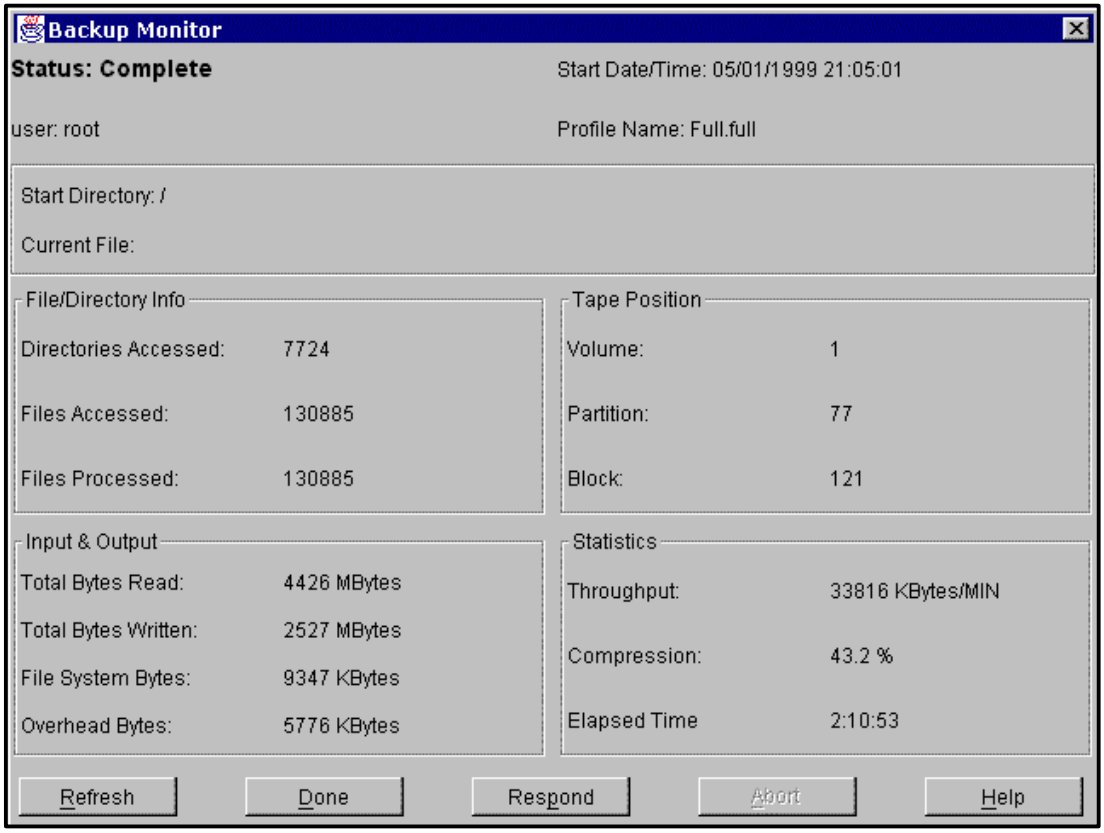
The backup information, displayed on the monitor screen, can be sorted by any field simply by clicking on the column header. If no backups have yet been run, no records will be displayed under the headings.

To display detailed information on any given backup, double-click on the desired backup record, or select the record, and choose File-Open.

This will display the Monitor Detail screen. →

Monitor Detail Screen

The Monitor Detail screen displays statistics relevant to the selected process.



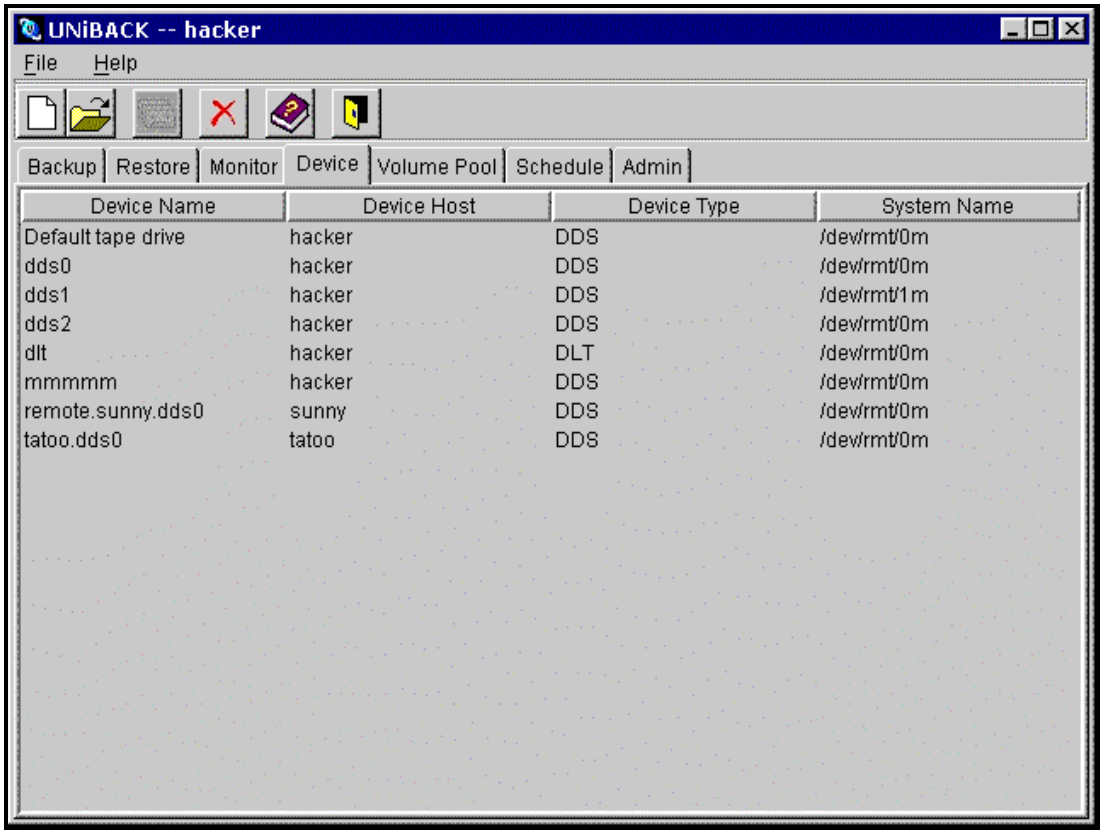
If a prompt or a message requires an action, click on the Respond button. A new window will display the message details. Backup mount requests, as well as messages pertaining to problems that have occurred during the backup (disk i/o errors, tape problems, etc.) will appear on the Respond message box.

When you are finished viewing the results, click on the Done button to return to the Main Menu.

From the Main Menu, select the Device menu tab to view the Device screen. →

Main Menu, Device Screen

When the Device tab is selected from the Main Menu, the previously defined Device profiles, and information related to each profile, are listed for viewing or modification. The information displayed in the four columns here includes the Device name, Device Host, Device Type, and System Name.



The following information is displayed in the four columns on this screen:

Device Name: The name of the device to be used throughout the system.

Device Host: The name of the system on which the device resides.

Device Type: The type of device (DDS, DLT, Reel, etc.).

System Name: The name used for this device on the UNIX system (e.g.: /dev/rmt/0m).

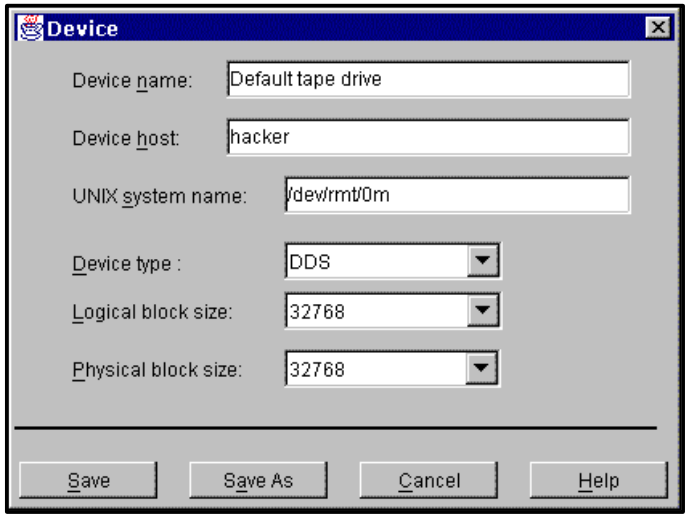
By moving the mouse over the desired profile, and either double-clicking the mouse, or selecting File-Open, the Device Characteristics screen may be displayed.

This will open the selected profile, bringing up the Device Characteristics screen. →

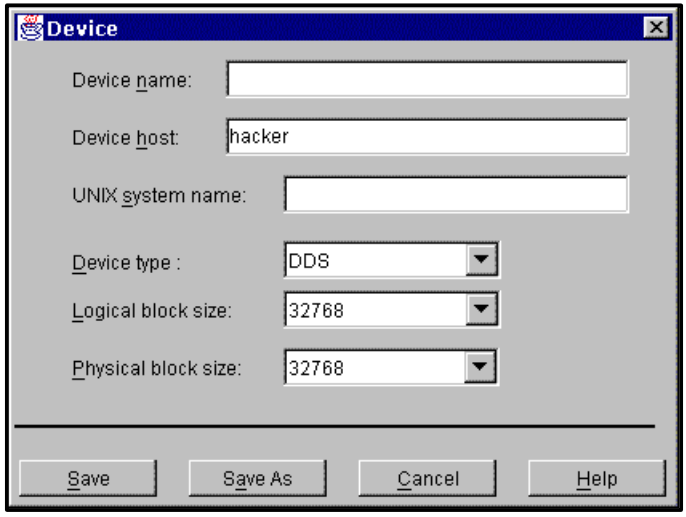
Device Characteristics Screen

The Device Characteristics screen is used to view, define, or modify the basic information pertaining to each tape drive device.

When a device profile is selected, the data related to the selected drive is displayed.



When File - New is selected from the Main Menu, Device screen to create a new device profile, the Device Characteristics screen is displayed with no data in the six fields.



The Device Characteristics screen presents six fields for the display, entry, or editing of the following device information.

- **Device Name:** The name used, or to be used, for this device throughout the system.
- **Device Host:** The Host name of the system on which this device resides.
- **Unix System Name:** The name used for this device on the UNIX system (e.g.: /dev/rmt/0m).
- **Device Type:** The type of device (DDS, DLT, Reel, etc).
- **Logical & Physical Block Size**: The size, in number of bytes, of a single read or write operation is preset based on the device type *.

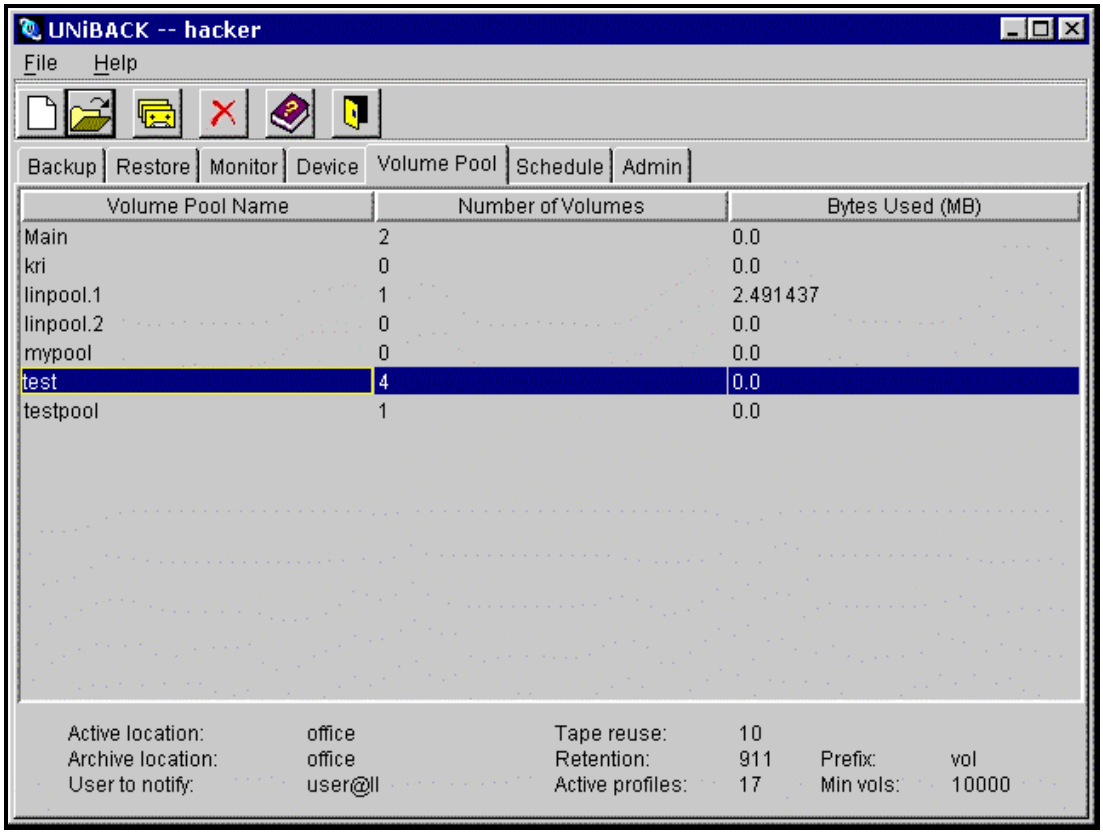
Note: Do not change this value unless requested by ORBiT Technical Support.

When you are finished entering these criteria, click on the *Save*, or *Save As*, button to return to the Main Menu.

From the Main Menu, select the Volume Pool menu tab to view the Volume Pool screen. →

Main Menu, Volume Pool Screen

With the Volume Pool tab selected from the Main Menu, the Volume Pool profiles, and information related to each profile, are listed. The screens accessible from the Main Menu, Volume Pool selection may be used for creating a new volume pool, adding or deleting a tape volume from a pool, or modifying volume or volume pool information.

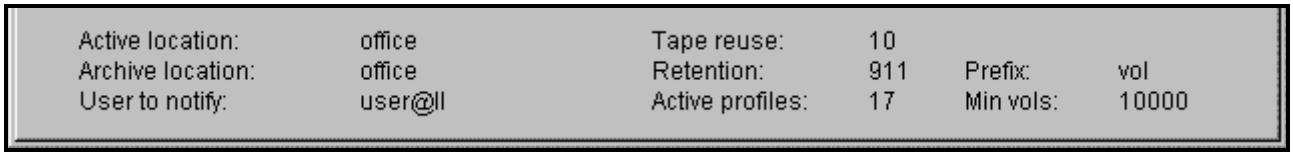


The Main Menu, Volume Pool screen presents a list of all of the defined, available Volume Pools in the three columns across the top of the screen. The three columns display information on each volume pool, while the eight fields at the bottom display only information for the selected volume.

The following fields are displayed in the three columns at the top of the screen:

- **Volume Pool Name:** The name assigned to this volume pool.
- **Number of Volumes:** The total number of volumes in this pool.
- **Bytes Used (MB):** The amount of tape storage, in megabytes, currently being used in this volume pool.

The following fields are displayed in the eight fields at the bottom of the screen:



- **Active location:** Name of the drive device location at the user's facility.
- **Archive location:** Name of the place where the media is stored for archival purposes.
- **User to notify:** The email address of the supervisor to whom problems during the run are reported.
- **Tape Reuse:** A count of the number of times that the tape has been used.
- **Retention:** The period of time that media is to be retained in archival storage.
- **Active profiles:** The number of backup profiles using the volume.
- **Prefix:** The volume ID prefix associated with this volume pool.
- **Min. vols:** The number of unprotected tape volumes to be available at all times (low tape limit).

From the Main Menu, Volume Pool, screen, a new volume pool may be created by clicking on File-New. The Volume Pool Detail screen is displayed with all fields clear for entry of the new volume information.

To view or modify an existing Volume Pool record, double-click on it, or select the record then File-Open. The Volume Pool Detail screen is displayed with all fields filled with information pertaining to the selected pool.

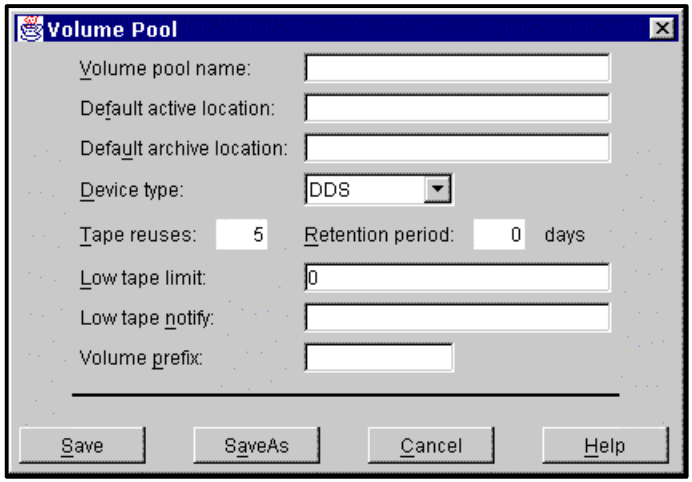
This will open the Volume Pool Detail Screen. →

Volume Pool Detail Screen

The Volume Pool Detail screen is used to view, define, or modify the basic information pertaining to each media pool.

When a volume pool profile is selected on the Main Menu, Volume Pool screen, the Volume Pool Detail screen is displayed with the data related to the selected volume pool.

When File-New is selected from the Main Menu, Volume Pool, screen to create a new volume pool profile, the Volume Pool Detail screen is displayed with no data in the nine fields.



The Volume Pool Detail screen presents nine fields for the display, entry, or editing of the following media pool information:

- **Volume Pool Name:** The name used to identify this volume pool.
- **Default Location:** A description of the location where current tape volumes are kept.
- **Default Archive Location:** A description of the location where archival tapes are kept.
- **Device Type:** The type of device used for this media pool. Select using the pull-down menu.
- **Tape Re-uses:** The maximum number of times a tape is to be used before removal from the cycle.
- **Retention Period:** The number of days the tape is to be stored before becoming available for reuse.
- **Low Tape Limit:** The number of unprotected tape volumes that are to be available at all times.

- **Low Tape Notify:** The name of the person to be notified once the low tape limit is reached.
- **Volume Prefix:** The leading volume ID characters automatically assigned to tape volumes.

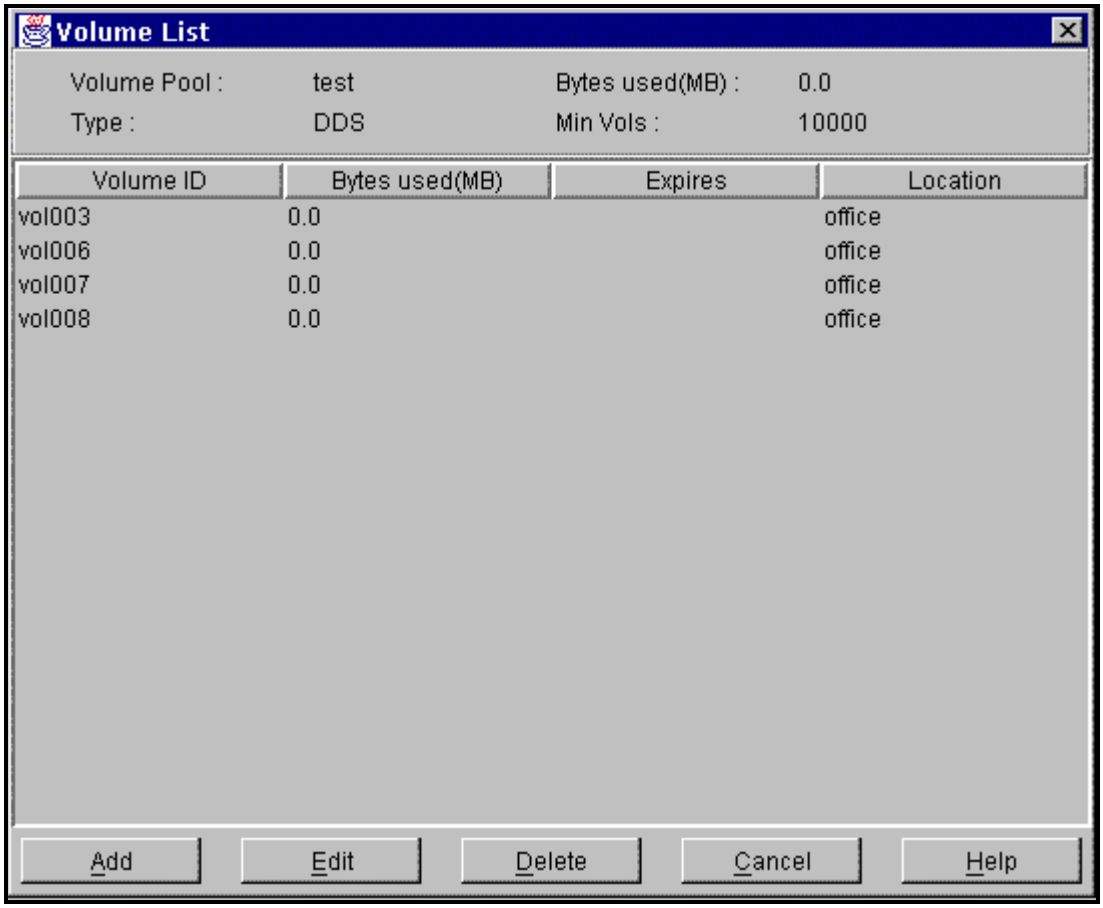
When these criteria have been entered, click on the *Save*, or *Save As*, button to return to the Main Menu.

To delete a volume from a volume pool, or to edit information regarding a specific volume, select the volume pool record and File-Volume.

This will open the Volume List Screen. →

Volume List Screen

Tape volumes may be added to or deleted from defined volume pools, and tape volume information may be edited, using the Volume List screen.



The Volume List screen presents volume pool information in the four fields at the top of the screen. Below, a list of the tape volumes assigned to the current volume pool is presented with the following information for each tape:

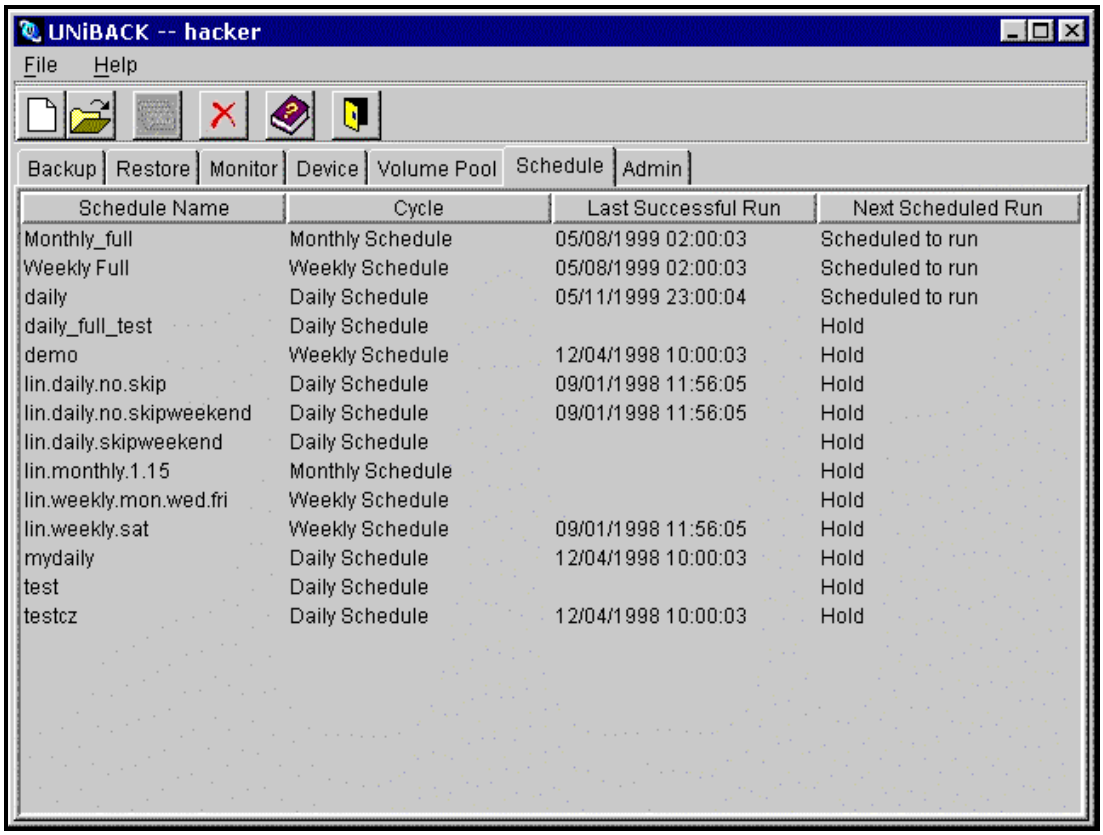
- **Volume ID:** The identifier assigned to the current tape volume.
- **Bytes Used (MB):** The amount of tape storage, in bytes, currently being used in this volume.
- **Expires:** Date and time that the tape will become available for reuse (scratch) and that data on the tape need no longer be preserved.
- **Location:** The place assigned for archival storage for this media.

To return to the Main Menu, Volume Pool screen, click on the *Close* button.

From the Main Menu, select the Schedule menu tab to view the Schedule screen. →

Main Menu, Schedule Screen

On the Main Menu, Schedule selection screen, a list is displayed of all backups scheduled on this host. This display can be sorted by clicking on any column title header.



Schedule Name	Cycle	Last Successful Run	Next Scheduled Run
Monthly_full	Monthly Schedule	05/08/1999 02:00:03	Scheduled to run
Weekly Full	Weekly Schedule	05/08/1999 02:00:03	Scheduled to run
daily	Daily Schedule	05/11/1999 23:00:04	Scheduled to run
daily_full_test	Daily Schedule		Hold
demo	Weekly Schedule	12/04/1998 10:00:03	Hold
lin.daily.no.skip	Daily Schedule	09/01/1998 11:56:05	Hold
lin.daily.no.skipweekend	Daily Schedule	09/01/1998 11:56:05	Hold
lin.daily.skipweekend	Daily Schedule		Hold
lin.monthly.1.15	Monthly Schedule		Hold
lin.weekly.mon.wed.fri	Weekly Schedule		Hold
lin.weekly.sat	Weekly Schedule	09/01/1998 11:56:05	Hold
mydaily	Daily Schedule	12/04/1998 10:00:03	Hold
test	Daily Schedule		Hold
testcz	Daily Schedule	12/04/1998 10:00:03	Hold

The following information is displayed for each schedule:

- **Schedule Name:** The name assigned to this schedule.
- **Cycle:** The frequency of the backup (weekly, monthly, daily).
- **Last Successful Run:** The Date this schedule last ran.

- **Next Scheduled Run:** The Date this schedule is set to run.

To display details about any given schedule, double-click on the desired schedule.

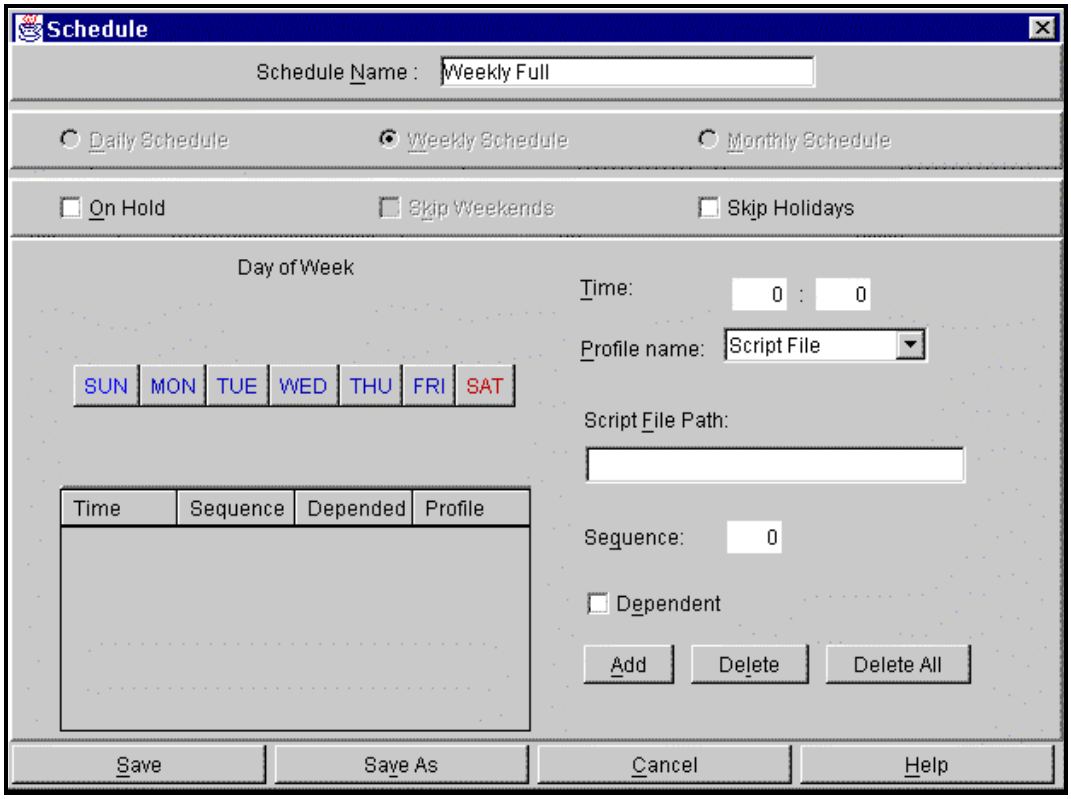
This will load the Schedule Maintenance screen. →

Schedule Maintenance Screen

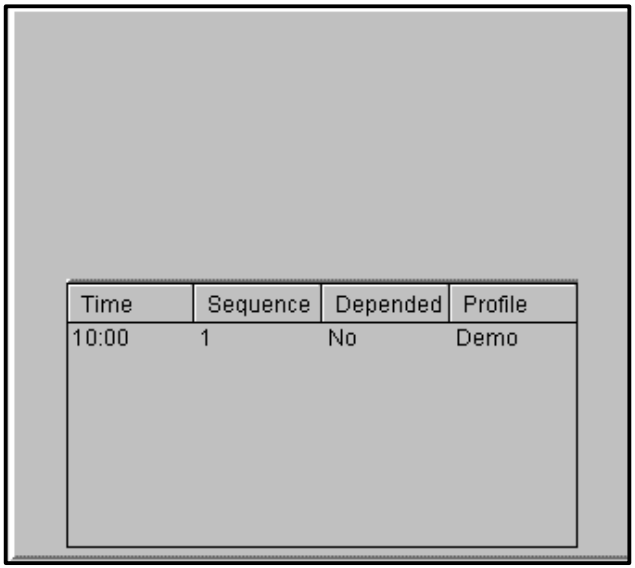
The Schedule Maintenance screen is provided for viewing existing backup schedules, or for creating new schedules. As Daily, Weekly, or Monthly schedules are selected, the screen appearance changes. The Daily view merely lists the existing daily job schedules, while the Monthly view displays a full monthly calendar with buttons for each day of the month. See the next page for Monthly and Daily views.

The Weekly view, shown below, presents buttons for each day of the week.

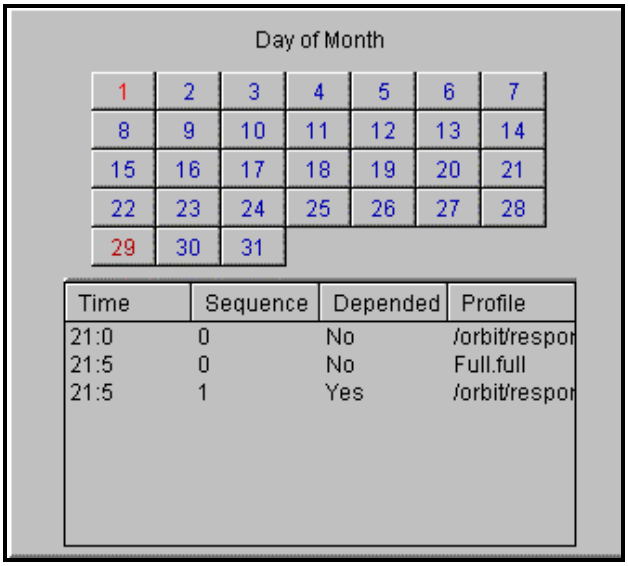
Weekly Schedule View:



Daily Schedule View:



Monthly Schedule View:



A day button, on the Weekly and Monthly views, is red if a job is scheduled for that day. When the user clicks on a day button, it is highlighted, and the jobs scheduled for that day of the week or month are listed below the column titles.

The following fields are used to define criteria for a backup schedule:

- **Schedule Name:** The name of the backup schedule is displayed or may be entered to create a new schedule.
- **Schedule Frequency:** The Daily, Weekly, or Monthly buttons display the frequency with which to execute the schedule.
- **Other Options:**

On-Hold …… The schedule will not run until the **On-Hold** status is deselected.
Skip Weekends … If selected, the schedule will **not** run on weekends.
Skip Holidays…… If selected, the schedule will **not** run on days specified in the Holiday List on the Administration screen.

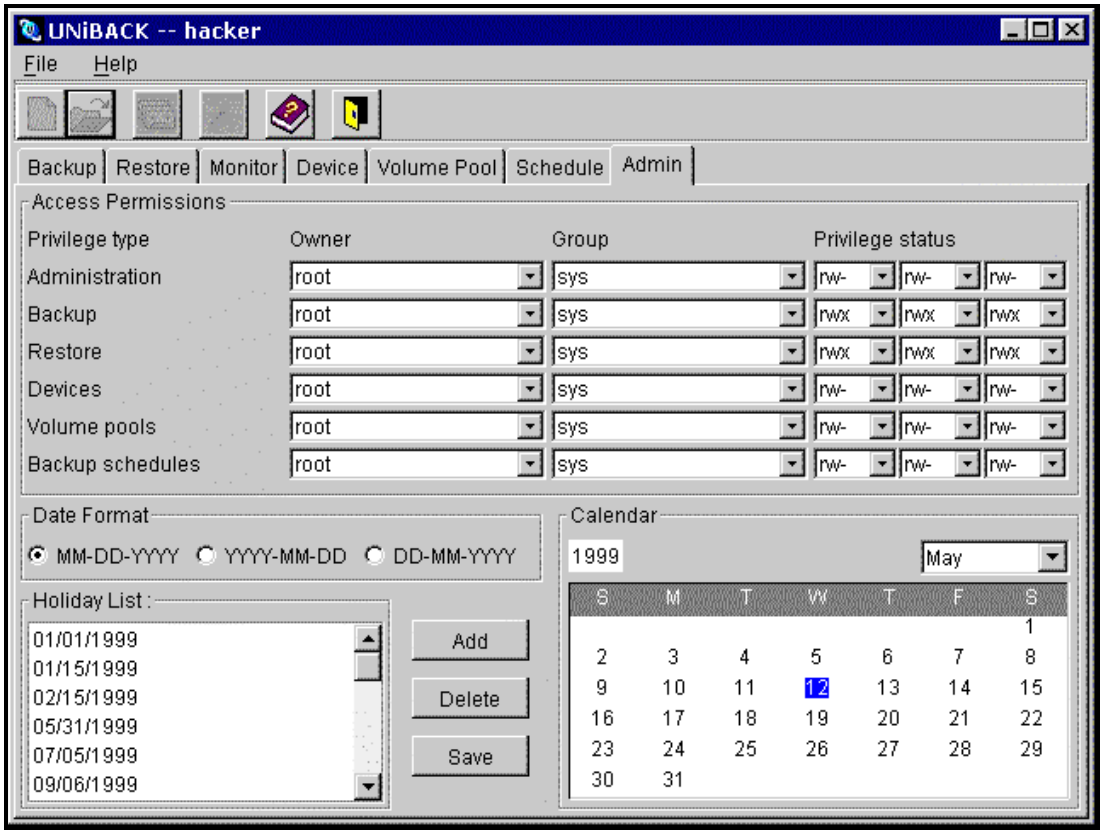
- **Time:** The Time (in 24-hour format) is displayed or may be entered to create a new schedule.
- **Profile Name:** The profile name is displayed or may be selected from the list of pre-defined backup profiles.
- **Day of Week:** The day-of-the-week and day-of-the-month buttons indicate the day the backup is to be executed (available for weekly and monthly schedules only).
- **Script File Path:** The full path-name of the file to be executed is displayed or may be entered.
- **Dependant**: This option displays a check mark if a previously scheduled backup action must be successfully completed before the new backup action will proceed.

The *Add* button is used to list a newly defined job in the schedule window. When all criteria have been selected or entered on the schedule screen, click on the *Add* button. The new schedule is displayed beneath the column titles: Time, Sequence, Dependent, and Profile Name.

The *Delete* and *Delete All* buttons may be used to remove one or all of the backup schedules in view. To remove a single record, highlight the record first, then click on the *Delete* button. To remove all records listed in the schedule window, just click on the *Delete All* buttons.

From the Main Menu, select the Admin menu tab to view the Administration screen. →

Main Menu, Administration Screen



The Main Menu, Administration screen is divided into four sections, and is used by the administrator to make the general settings described here:

- **Access Permissions:** Permissions for the Owner, Group, and all other users, may be assigned for the six “Privilege Types” corresponding to the administrative tasks for maintaining the backup system. The administrator can restrict or allow these functions based on regular, UNIX-type, security using the symbols: Unavailable (-), Read (r), write (w), or execute (x).

- **Date-Format:** The date format to be used throughout UNiBACK may be specified: month-day-year, year-month-day, or day-month-year.

- **Calendar:** The month and day of the month may be selected to define the specific dates of the holidays observed at your site. The year is automatically defined as the current year.

- **Holiday List:** The dates of holidays defined using the Calendar section are recorded in the Holiday List box at the left by clicking on the *Add* button. Holiday dates may be removed from the Holiday List by selecting the date then clicking on the Delete button.

IV. Chapter 4: Using UNiBACK To Perform Tasks

Where chapter three familiarized you with the menus and screens found throughout UNiBACK, chapter four will detail the steps a system administrator should follow to initially set up UNiBACK and to actually perform backups and restores.

Chapter four will cover these particular steps:

Step 1: Customizing UNiBACK
Step 2: Configuring the Backup Device
Step 3: Creating a new Backup Profile
Step 4: Executing the Backup Profile
Step 5: Verifying Tapes
Step 6: Performing a Restore
Step 7: Scheduling an Unattended Backup

Step 1. Customize UNiBACK

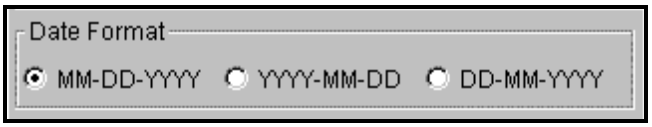
During the installation process, UNiBACK automatically configures the system for immediate use based on factory-set defaults and the installation settings. However, these parameters may be changed to customize the system to your company's needs using the Administration screen.

A. Select the Main Menu, ADMIN menu tab to modify the Administration screen fields.

B. Select the date format to be used throughout UNiBACK.

- Click on the month-day-year, year-month-day, or day-month-year field.

Date Format:



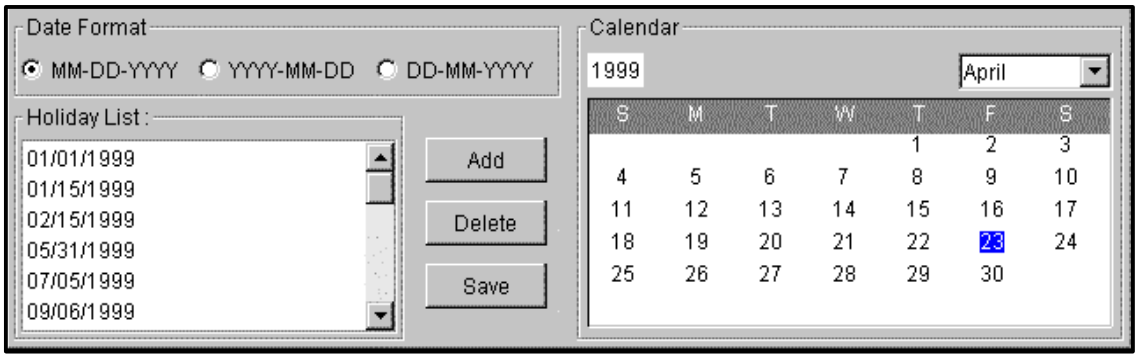
C. Specify the holidays observed at your site.

- For each holiday, select the month, click the desired date on the calendar, then click on the *Add* button.

  The current year is assigned by default.

- To remove a holiday, click on the specified date in the Holiday List, and then click on the *Delete* button.

Holiday List, Calendar, and Buttons:

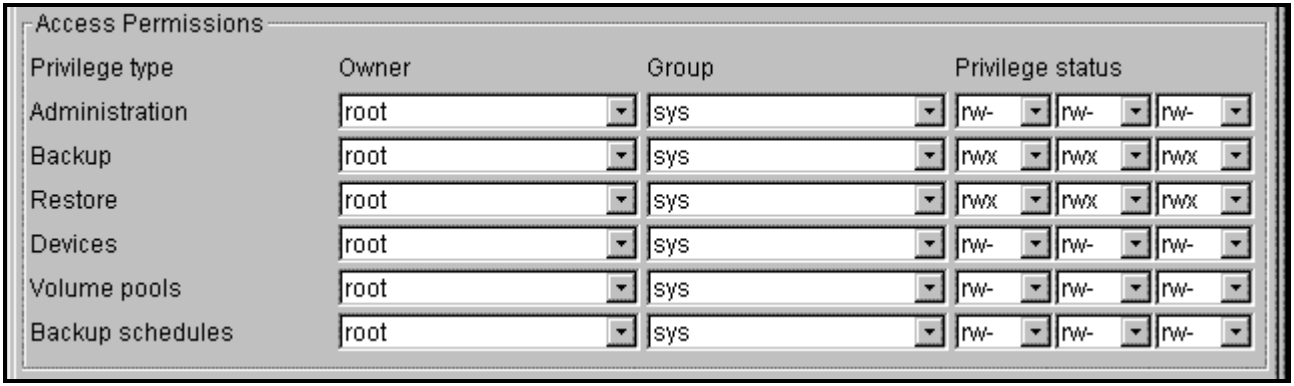


D. Indicate permissions for the six Privilege Types.

The Privilege Types correspond to the tasks associated with maintaining the backup system. The administrator can configure the access rights of users based on regular read-write-execute (r, w, x), UNIX-type security.

- Click on the drop-down menus in the Owner, Group, and Privilege Status fields, and select the desired criteria.

Access Permissions:



- Click on the *Save* button to apply the modified Administration screen settings to UNiBACK.

When you have finished customizing UNiBACK, proceed to the Device menu tab. →

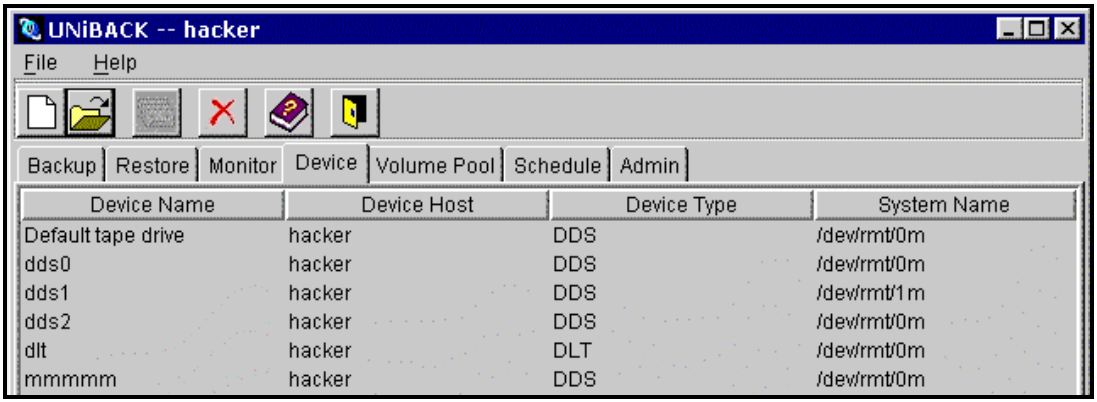
Step 2. Configure the Backup Device

When UNiBACK is installed, the system creates a "*default tape drive*" device, and automatically assigns this role to the device used as the source of the installation. If other devices are on the system, the user may add them to the device list, and may also change the "*default tape drive*" device assignment.

A. Select the Main Menu, Device menu tab.

A list of the configured drives on the system is displayed.

Main Menu Device:

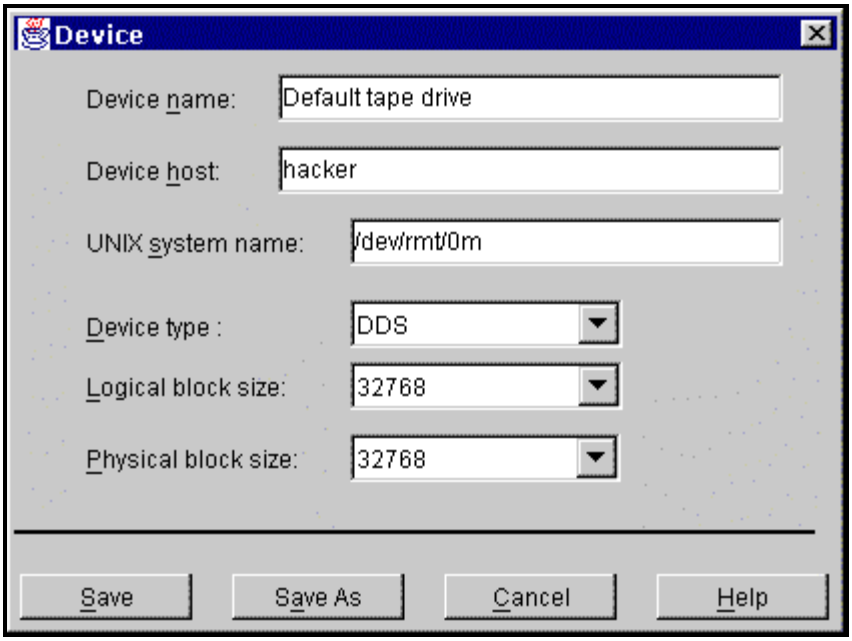


B. Check or change the criteria for the default device.

- Select the default device record, and double-click, or choose File-Open.

  The Device Characteristics screen appears displaying information about the selected device.

Device Characteristics:



- Type in any changes to the device characteristics information in the Device screen fields.
- Click on the *Save* button at the bottom of this screen to save the modified Device settings.

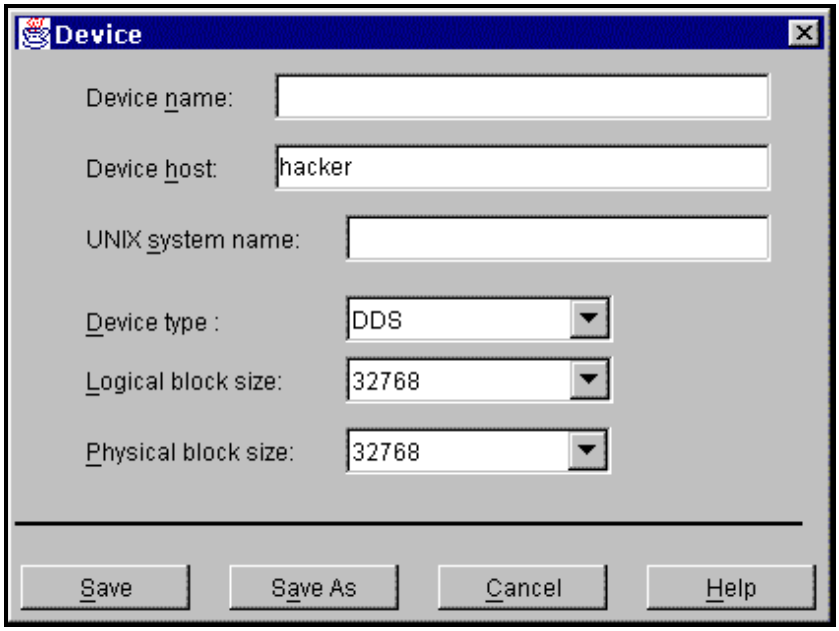
  The new criteria are applied to UNiBACK, and the Main Menu, Device screen is again displayed.

C. Enter information to add a new device to the UNiBACK device list.

- Choose File-New from the Main menu, Device screen, to open the Device Characteristics screen.

  The Device Characteristics screen appears displaying empty fields and default device criteria.

New Device Characteristics:



- Type the new device characteristics information in the Device screen fields.
- Click on the *Save* button at the bottom of this screen to save the new Device settings.

  The new criteria are applied to UNiBACK, and the Main Menu, Device screen is again displayed.

Once you have configured the target device(s), go on to select or create a backup profile. →

Step 3. Create a New Backup Profile

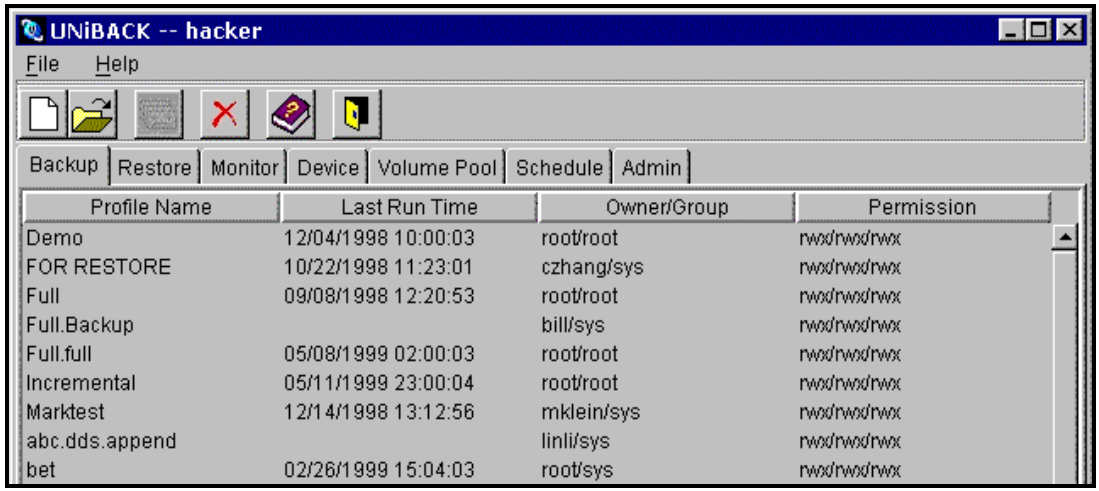
UNiBACK provides a selection of pre-configured backup profiles. However, new profiles may be created by selecting File – New, and then tabbing through the four Backup Profile screens, to check or modify the data in each field. When each Backup Profile screen has been completed, tab through each screen to double-check them. Next, click on the *Preview* button to run the backup program without writing to the disk or volume. The resulting statistics will be displayed in the monitor view. If the results are correct, click on the *Save* button to add the new backup profile to UNiBACK.

A. Open the General Backup Profile screen.

- Select the Backup menu tab on the UNiBACK Main Menu.

  The existing backup profiles will be listed in the data portion of the screen, as in this sample.

Main Menu Backup:



- To view or modify an existing backup profile, move your cursor over the profile, then double-click, or simply choose File-Open.

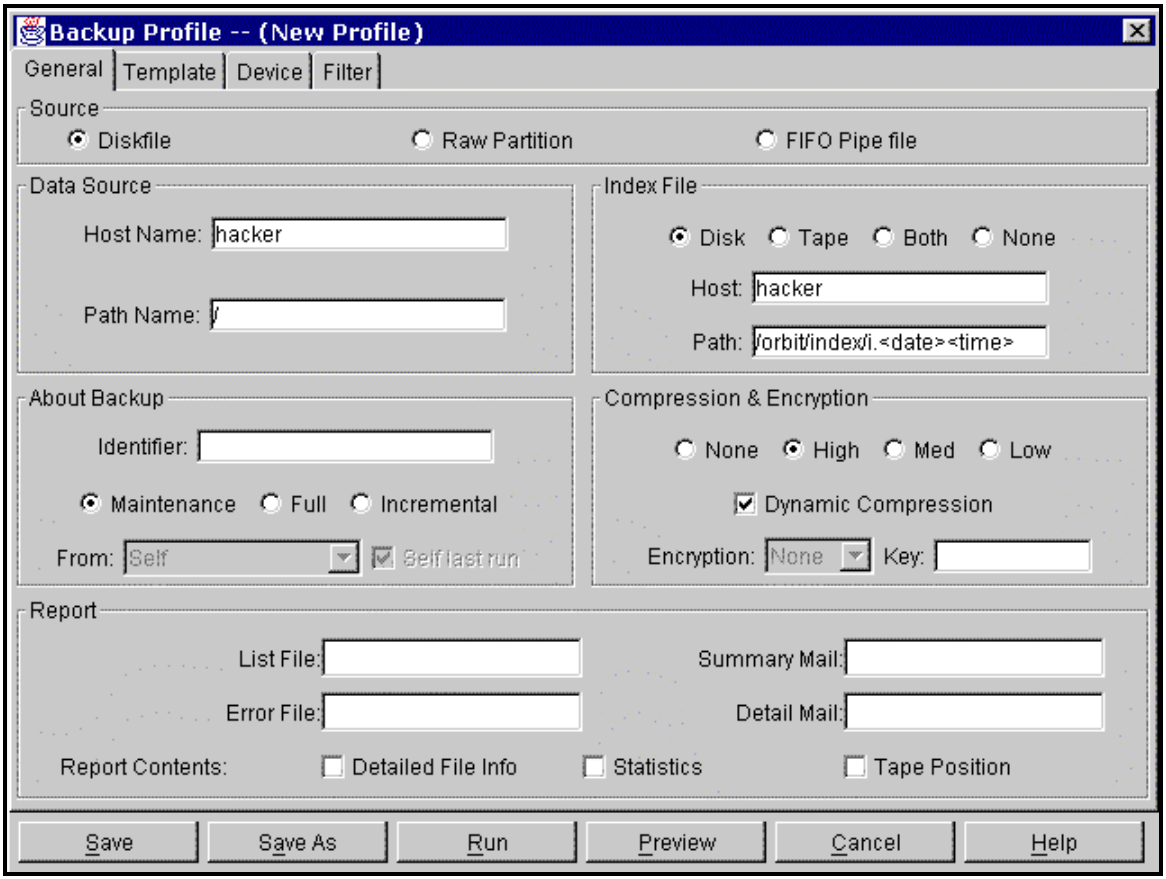
  The values of the selected backup profile are displayed in the General Backup Profile screen fields.

- To create a new profile, select File-New.

  The General Backup Profile screen is displayed, having most fields pre-configured with default values. (See the next page.)

B. Establish the General Backup Screen field values for the new backup profile.

Backup General:



- Click on each desired field to enter new values or change the default settings.

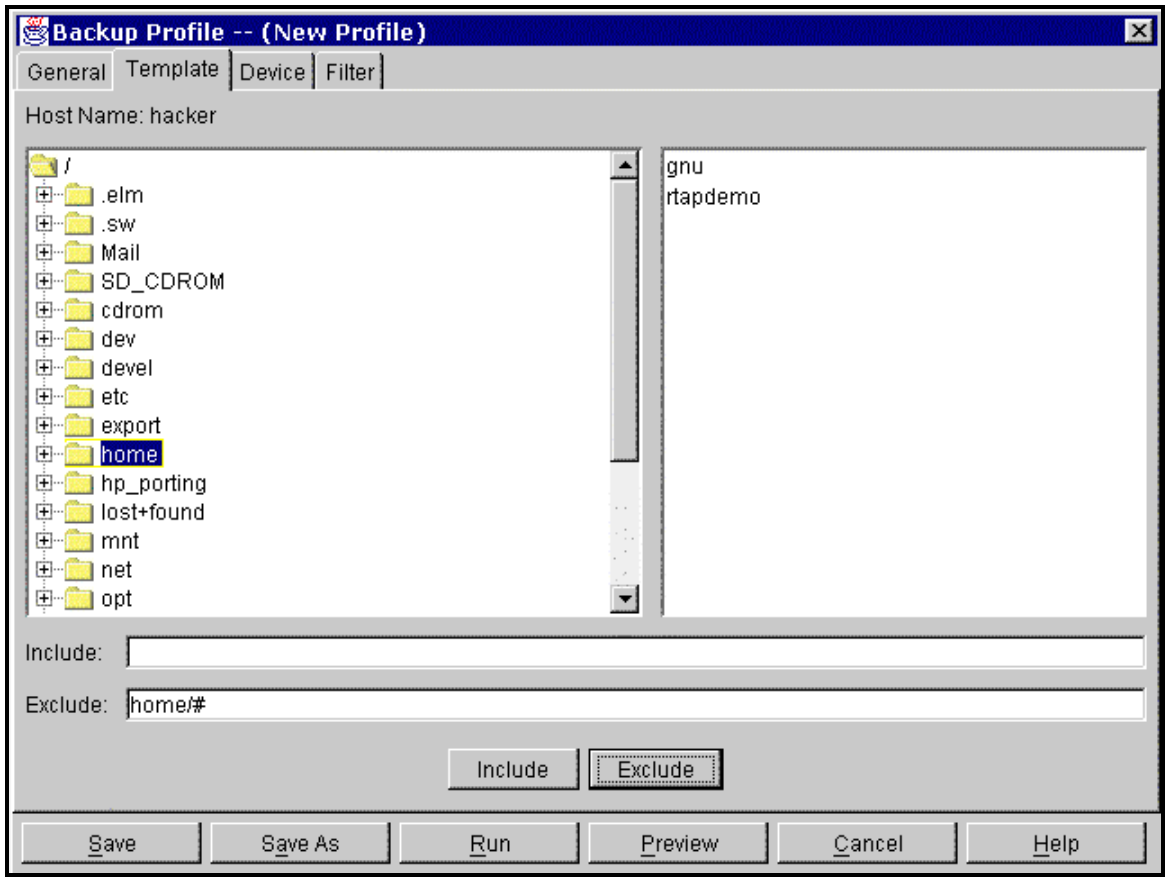
- Continue until you are satisfied with the settings on the General Backup Profile screen.

C. Assign directories and files to the new backup profile using the Template screen.

- Select the Template menu tab on the Backup Profile screen to open the Template Backup Profile screen.

  The directory tree is displayed on the left while the files of a selected directory are displayed on the right.

Backup Template:

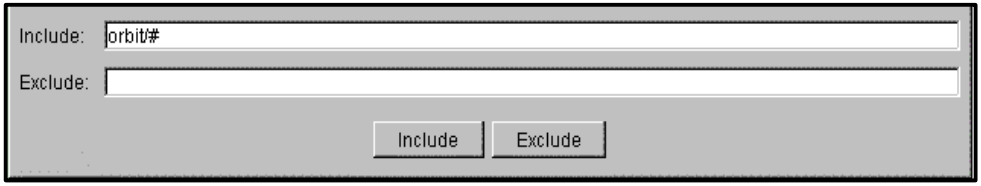


- View the files within a sub-directory by clicking on a sub-directory folder at the left of the screen.

  The files will appear on the right half of the screen.

- Add a directory or file to the backup, by selecting it with the mouse, and clicking the Include button.

  The directory or filename, as well as the wildcard character, "#", will appear in the Include box as shown here.



  NOTE: Multiple directories can be included in the backup. The above example will backup all files in the */users/orbit* directory.

- Exclude a directory or file from the backup by selecting the file, then clicking the Exclude button.

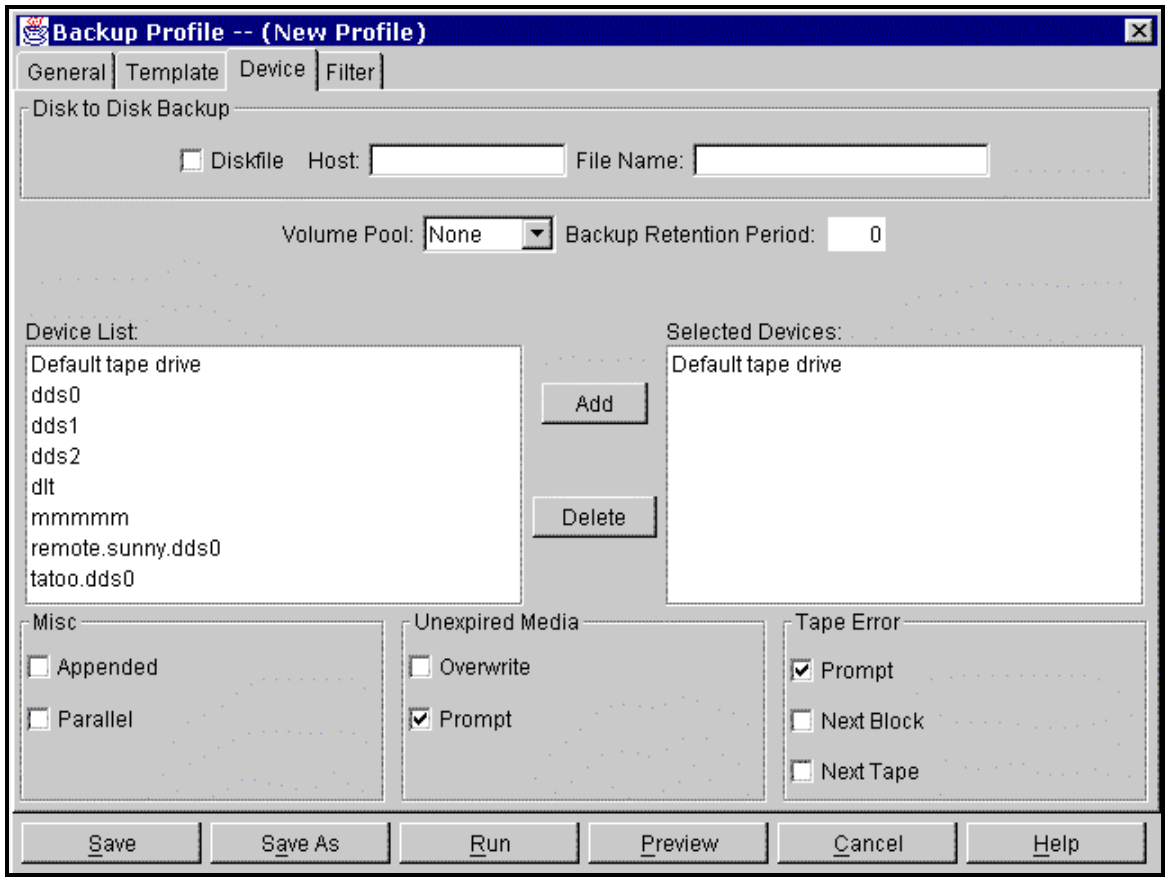
When you are finished selecting directories and files, proceed to the Device Selection Screen. →

D. Indicate the backup target disk or device(s).

- Select the Device menu tab on the Backup Profile screen.

  The Device Backup Profile screen is displayed.

Backup Device:



- If data is to be stored to the disk, select Diskfile, and enter the Host name and full path name in their fields at the top of the screen.

- To select another drive as the backup device, click on a device name in the Device List at the left of the screen, and then click on the *Add* button.

- To backup to multiple devices, select the Parallel option, select the devices in the Device List, and click on the *Add* button.

  This will add the selected devices to the Selected Devices List at the right of the screen.

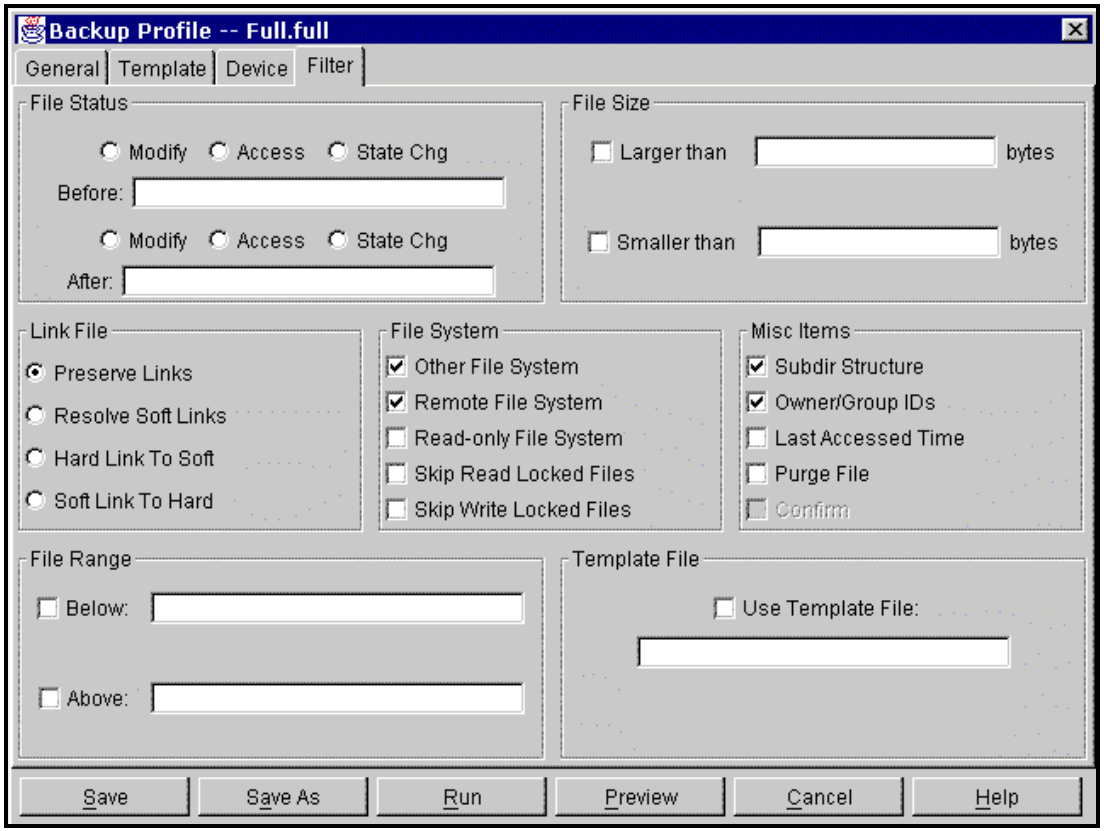
Once you have selected the target device(s), proceed to the File Filtering menu tab. →

E. Indicate the backup file filtering parameters desired.

- Select the Filter menu tab to open the File Filtering Backup Profile screen.

  The File Filtering backup screen is displayed with default settings in the various fields.

Backup Filter:



- Click on each File Filtering field to enter new values or change the default settings, as needed, and continue until you are satisfied with the settings.

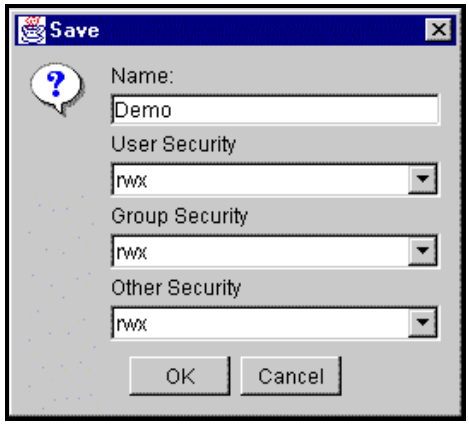
  For a detailed explanation of these settings, refer to Chapter 3 of this guide.

F. Review for accuracy each screen and field used in creating the new backup profile.

- Click on each screen tab key in turn to view each backup screen, examine each field and, if necessary, modify the values.

- If all is accurate, click on either the *Save* or *Save As* button to save the profile.

  The **Save As** dialog box is displayed to prompt the user for a profile name and security options (access permissions) selection.



- Type in the name of the new backup profile.

- Select access permissions in the User, Group, and Other Security drop-down menu boxes.

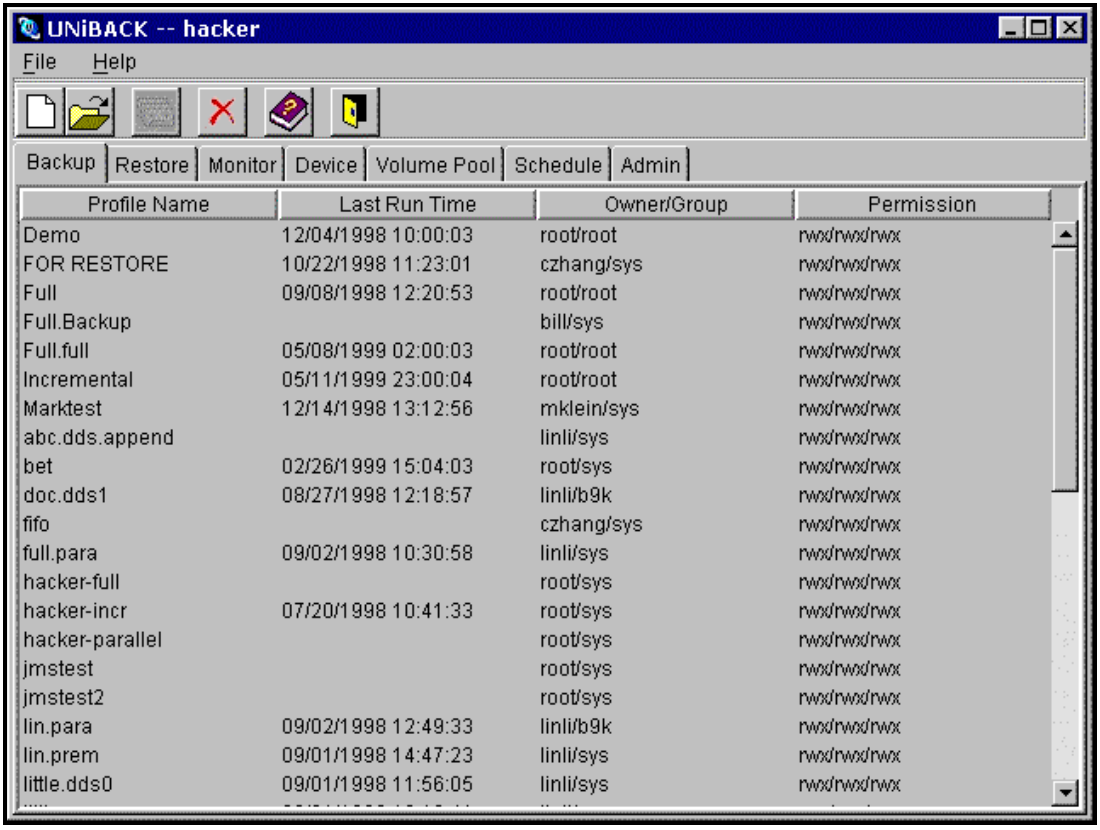
- Click on the OK button.

  The new backup profile is added to the profile list, and is confirmed with a message box.

- Click on the OK button on this **Save As** message box.

The Main Menu, Backup screen is displayed with the new backup profile listed at the bottom of the ist.

Main Menu, Backup:



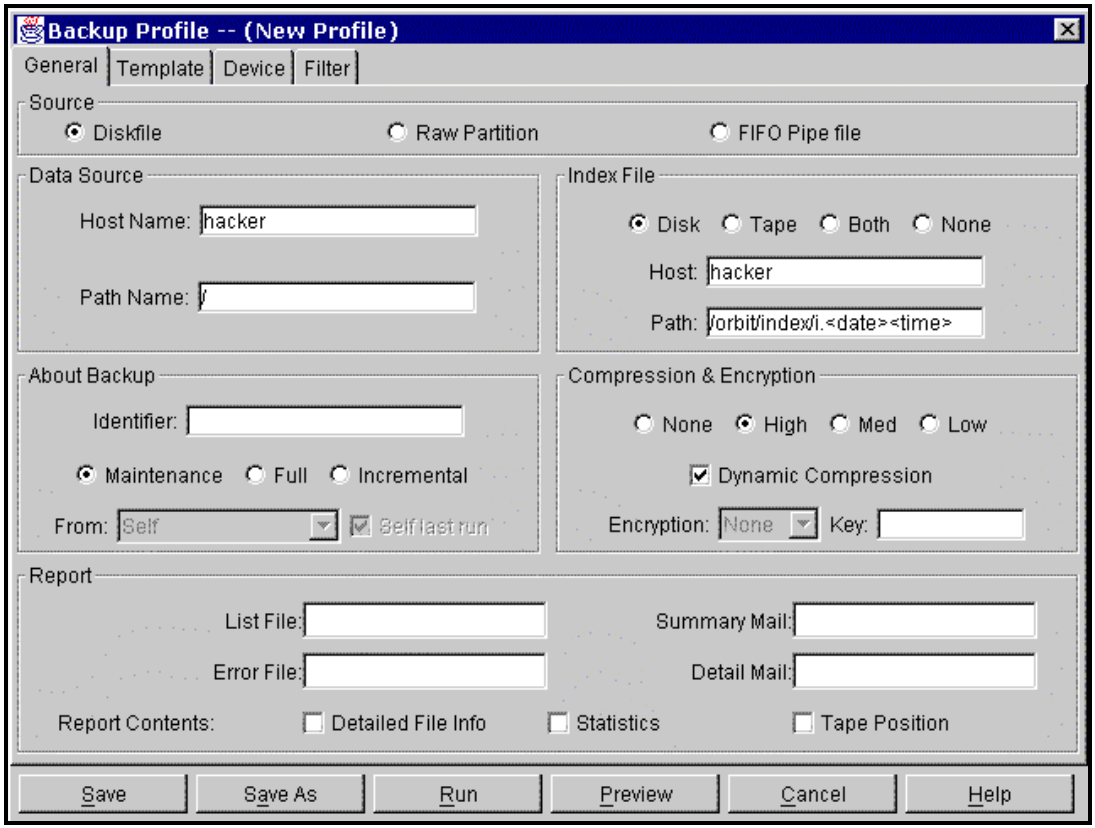
Profile Name	Last Run Time	Owner/Group	Permission
Demo	12/04/1998 10:00:03	root/root	rwx/rwx/rwx
FOR RESTORE	10/22/1998 11:23:01	czhang/sys	rwx/rwx/rwx
Full	09/08/1998 12:20:53	root/root	rwx/rwx/rwx
Full.Backup		bill/sys	rwx/rwx/rwx
Full.full	05/08/1999 02:00:03	root/root	rwx/rwx/rwx
Incremental	05/11/1999 23:00:04	root/root	rwx/rwx/rwx
Marktest	12/14/1998 13:12:56	mklein/sys	rwx/rwx/rwx
abc.dds.append		linli/sys	rwx/rwx/rwx
bet	02/26/1999 15:04:03	root/sys	rwx/rwx/rwx
doc.dds1	08/27/1998 12:18:57	linli/b9k	rwx/rwx/rwx
fifo		czhang/sys	rwx/rwx/rwx
full.para	09/02/1998 10:30:58	linli/sys	rwx/rwx/rwx
hacker-full		root/sys	rwx/rwx/rwx
hacker-incr	07/20/1998 10:41:33	root/sys	rwx/rwx/rwx
hacker-parallel		root/sys	rwx/rwx/rwx
jmstest		root/sys	rwx/rwx/rwx
jmstest2		root/sys	rwx/rwx/rwx
lin.para	09/02/1998 12:49:33	linli/b9k	rwx/rwx/rwx
lin.prem	09/01/1998 14:47:23	linli/sys	rwx/rwx/rwx
little.dds0	09/01/1998 11:56:05	linli/sys	rwx/rwx/rwx

G. Preview the new backup profile.

- To view or modify a backup profile, double-click on the profile, or simply choose File-Open.

  The values of the selected backup profile are displayed in the General Backup Profile screen fields.

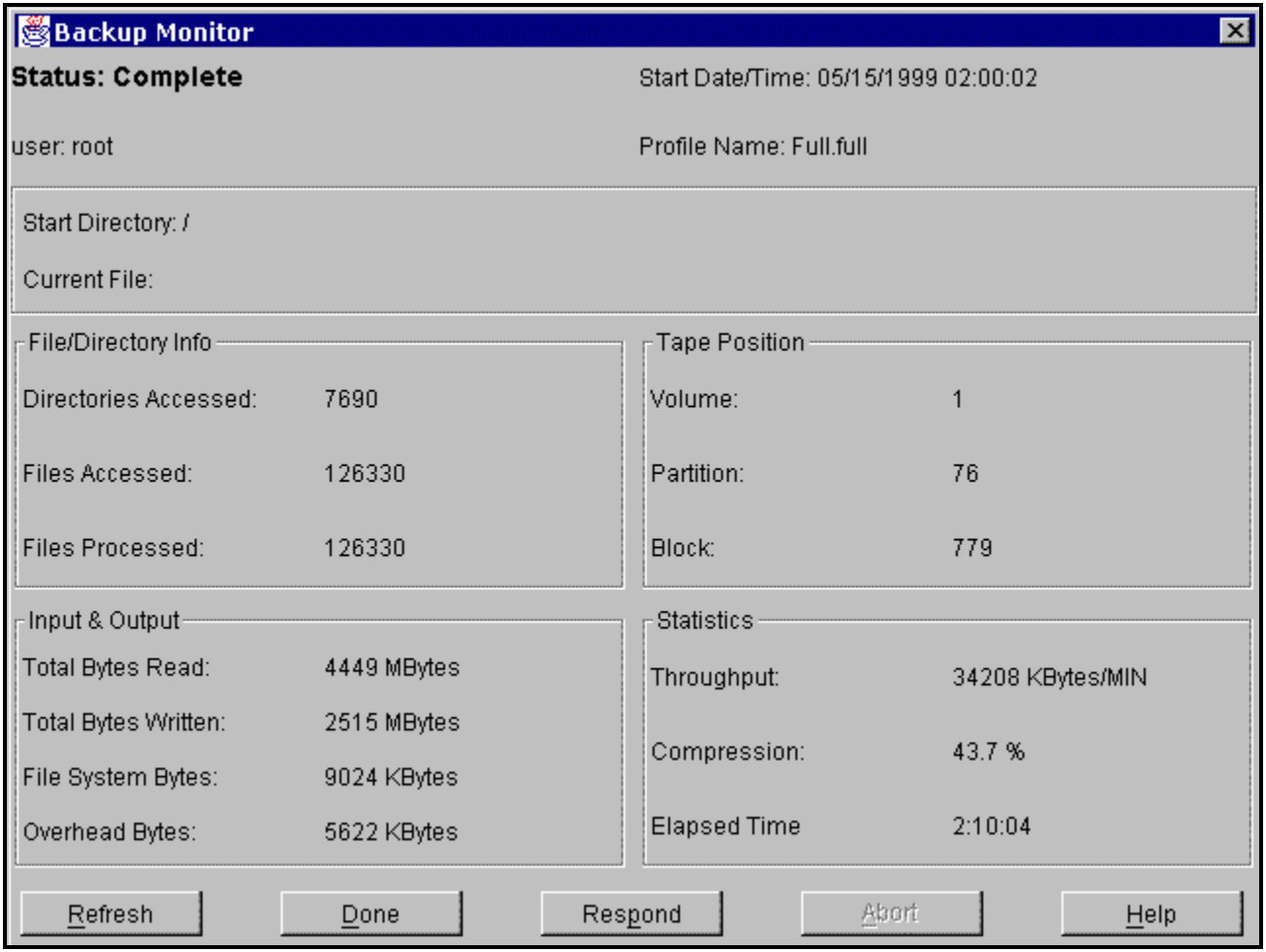
Backup Profile General:



- Click on the Preview button to run the backup program without writing to the disk or volume.

The Backup Monitor screen is displayed, progressing through the Starting, Running, and Complete phases.

Backup Monitor, Complete:



- Check the statistics displayed in the monitor view as the job is being run.
- Click on the done button to return to the Backup Profile General screen.

Now, go on to run the backup profile. →

Step 4. Run the New Profile

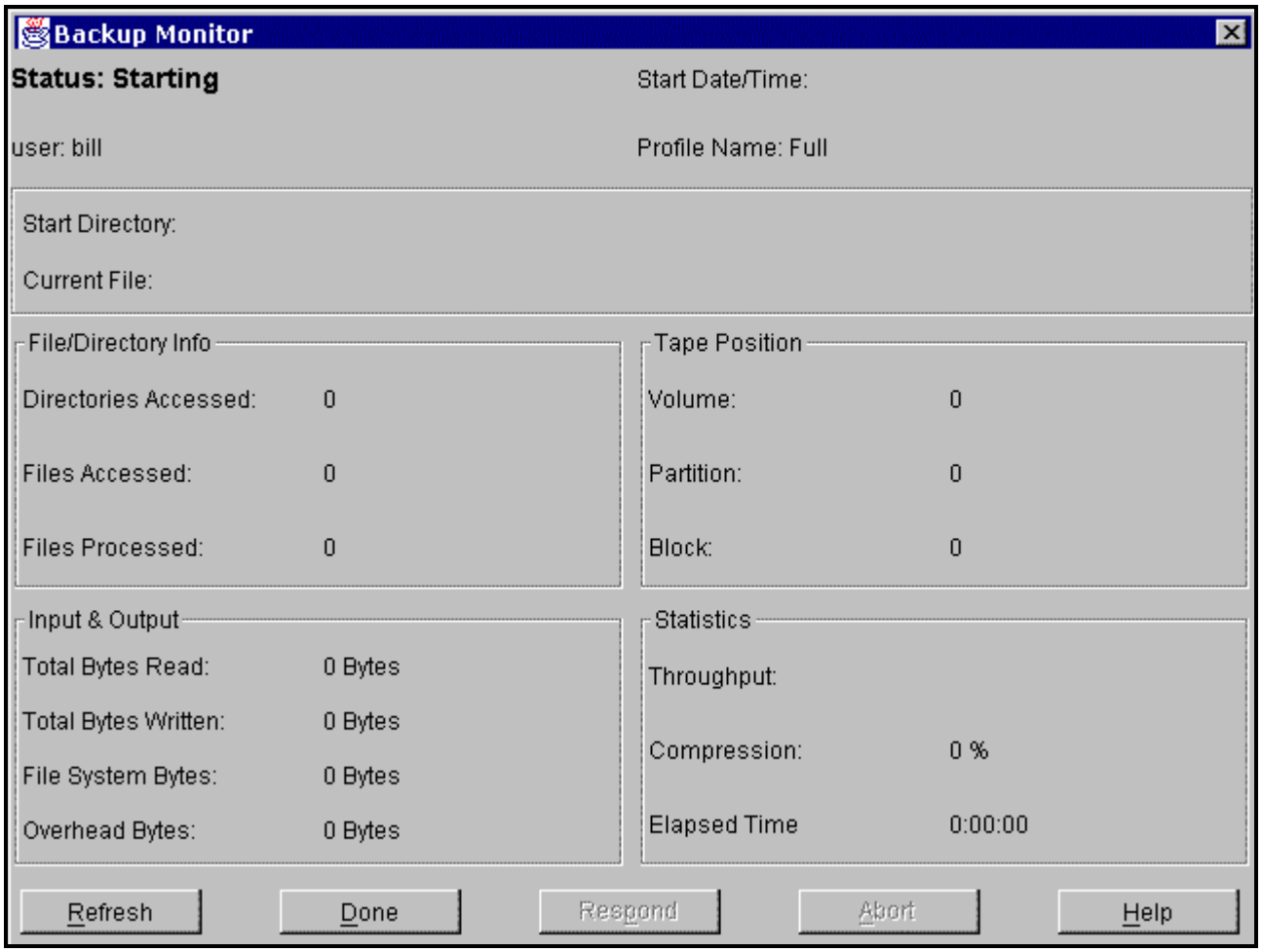
When a new profile has been created, take the following steps to run the Backup profile:

- Mount a tape in the target tape drive specified in the new backup profile.
- Move your cursor to the new profile on the Backup screen, and double-click on it, or click once and choose File-Open.

  The new backup profile is displayed in the General view.
- Look over the field settings once more in each of the four tabbed Backup Profile views (General, Template, Device, and Filter), then hit the Run button.

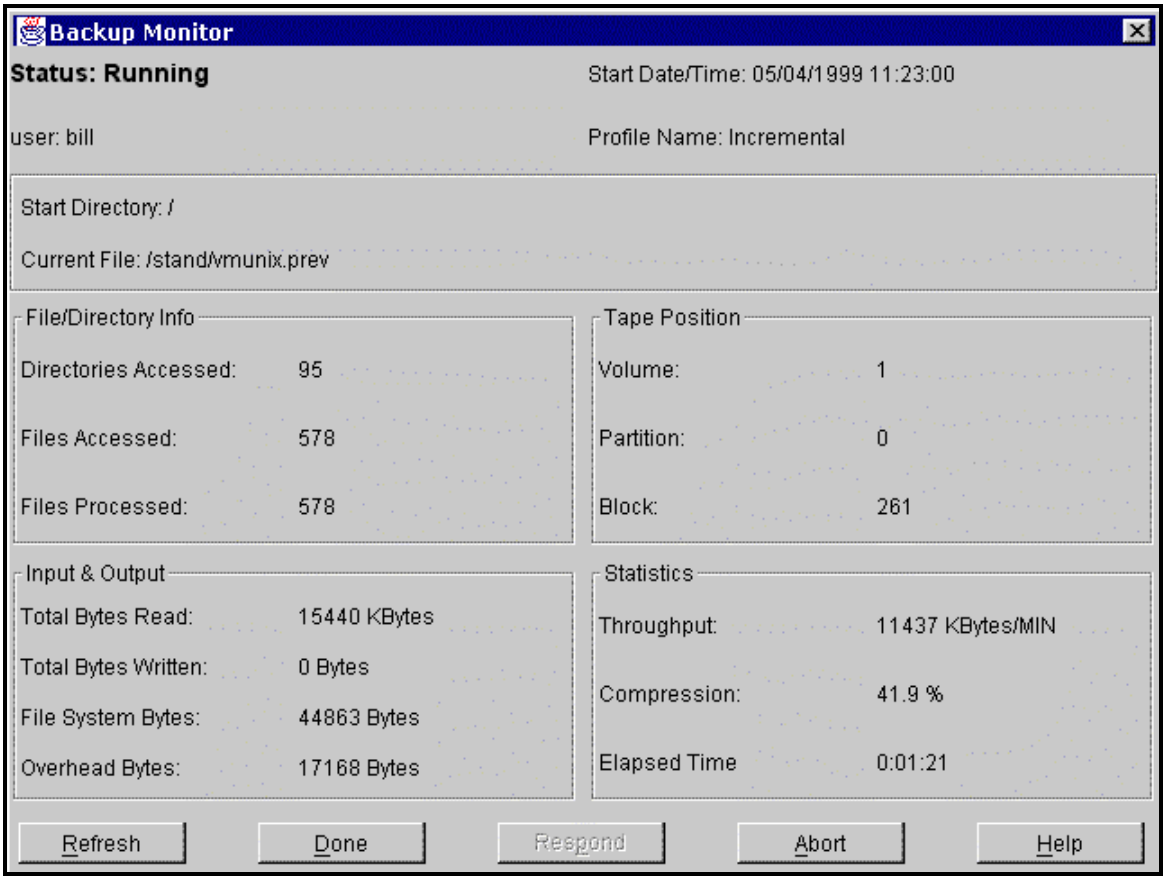
  This will begin the backup process, and open the Monitor screen, which will progress through Starting, Running, and Complete status phases. All field values in “Starting” status are zero.

Backup Monitor, Starting:



As the backup proceeds, various statistics describing the speed and efficiency of the backup are shown, as well as a count of the number of directories and files that have been written to tape. These values are constantly changing in "Running" status. The final statistics are presented when status is "Complete".

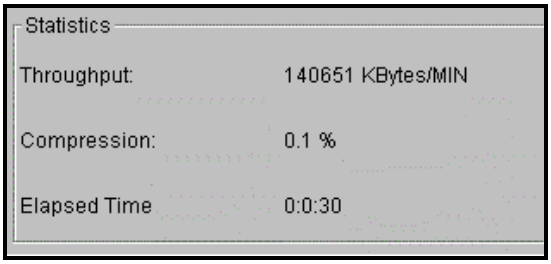
Backup Monitor, Running:



When the backup operation has run to an end, the Status field in the top left corner changes from "Running" to "Complete".

Statistics presented in the lower right of the Backup Monitor screen are of particular note:

Backup Monitor, Statistics Sector:



Throughput: This is the actual rate of transfer from your system to the device, in kbytes / minute. Throughput rates vary depending on the system, work-load, device, etc.

Compression: This shows the rate of compression you are achieving based on the settings of the profile and the "compressibility" of your data.

Elapsed Time: This is the actual time it took to backup your data, including dead time.

For an explanation of the statistics, refer to the ***UNiBACK User Manual.***

- To return to the Main Menu, click the DONE button.

Next, we will consider the steps taken to perform a Restore operation. →

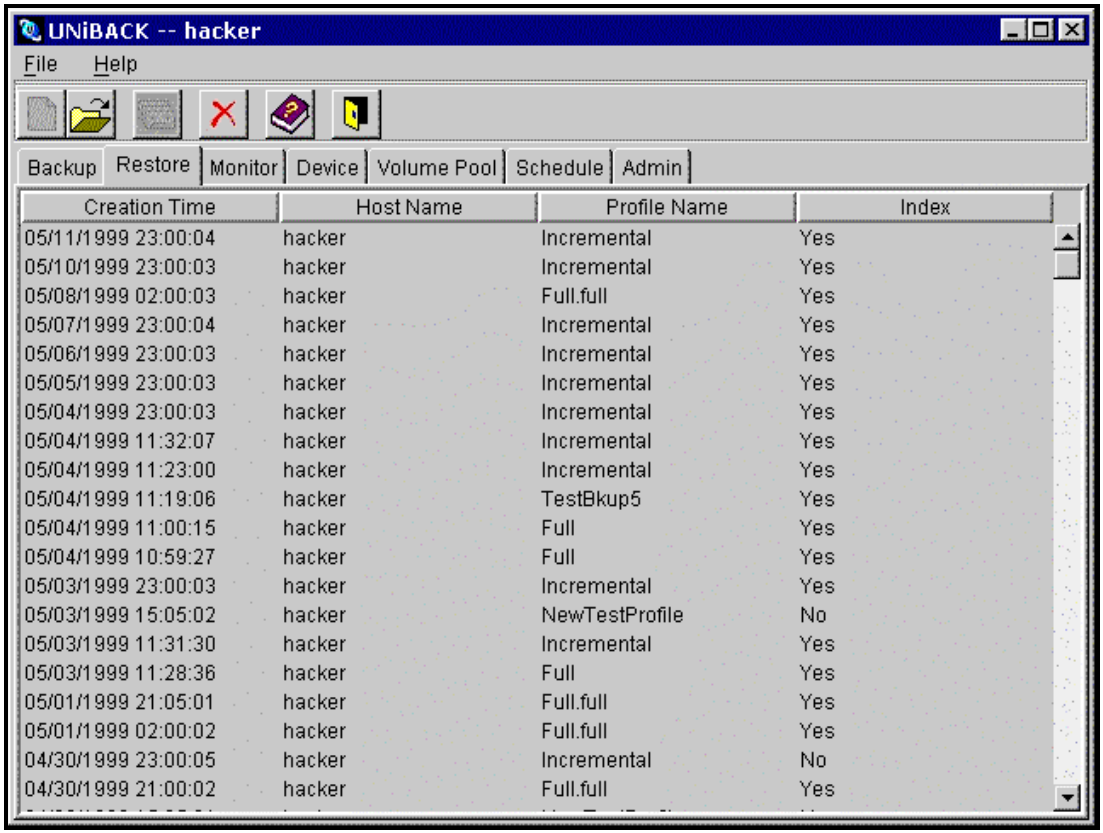
Step 5. Perform a Restore

Restoring files using UNiBACK is fast and easy. UNiBACK tracks files which have been backed up and allows you to restore any instance of a file, or to restore groups of files based on common characteristics. The display may be sorted by any column title (Host Name, Creation Time, or Profile Name) to help locate the backup profile you wish to restore.

- From the Main Menu, select the Restore menu tab.

  UNiBACK will display the Main Menu, Restore screen.

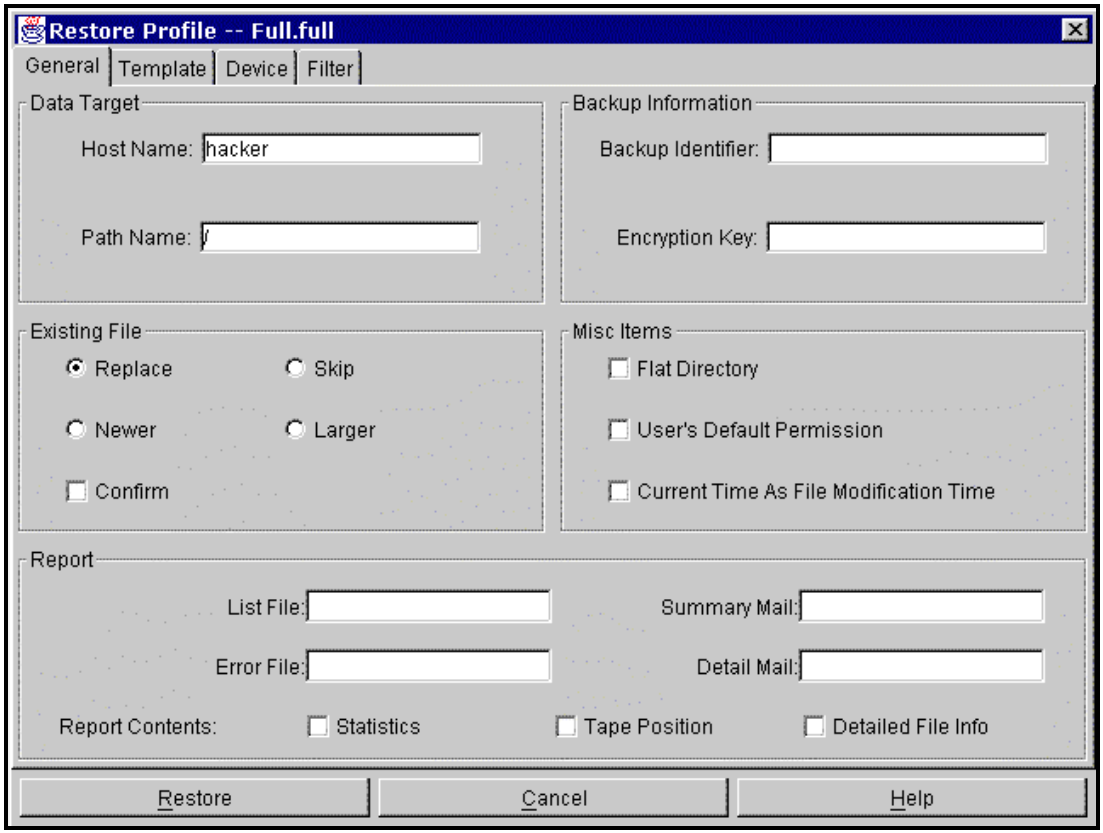
Main Menu, Restore:



- From the Main Menu, Restore screen, scroll through the list of backup records to select the backup set on which the *restore* is to be based. Then either double-click on the record or click once and select File-Open.

  The Restore Profile screen is displayed with the General tab selected.

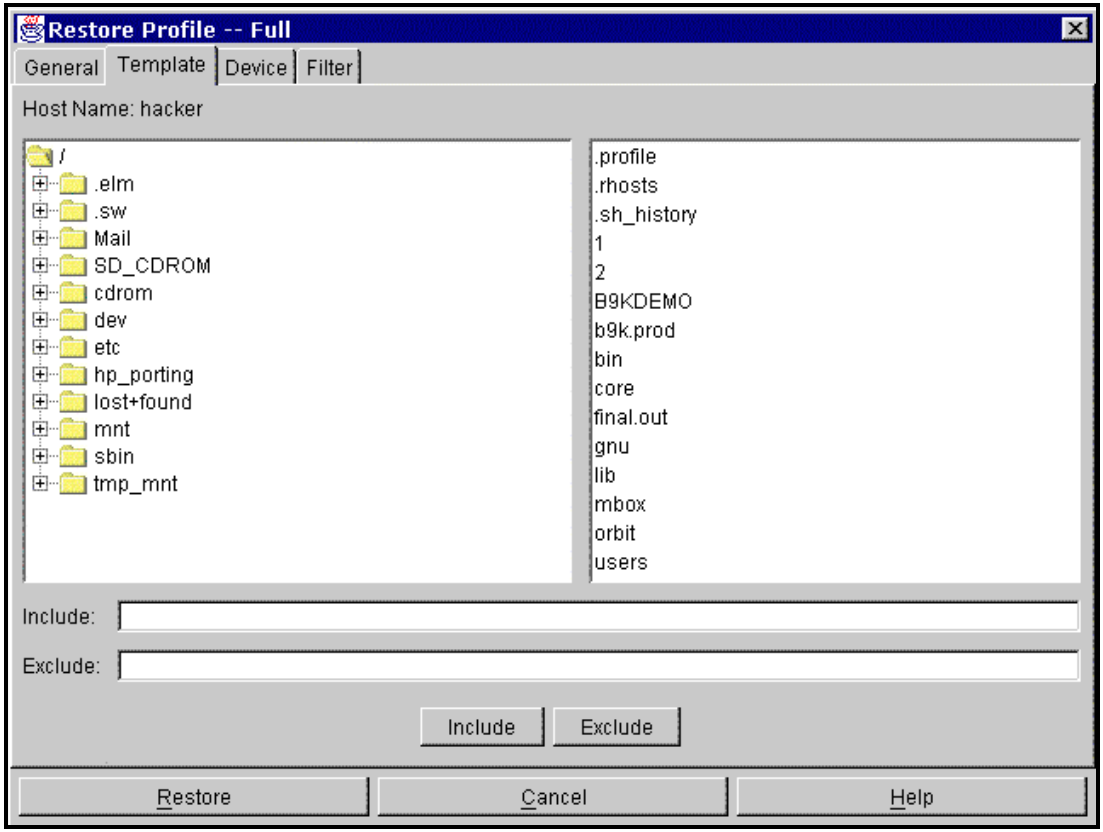
Restore Profile, General:



- Click on the Template menu tab to display the directory tree from the selected restore backup set.

  The Restore Template screen is displayed with the directory tree from that specific backup.

Restore Template:



- Configure the restore by highlighting the directories or files you wish to restore and then clicking on the Include button to list the desired files and directories in the Include box.

  As in the Backup screen, you may include and/or exclude files by directory or by individual file.

- Once you have included the files you wish to restore, verify that the options on the other restore screens are correct.
- If you wish to run the restore without writing to the disk, click on the List Only button.

  The Monitor screen appears and displays statistics regarding the restore operation in "Starting," "Running," and then "Complete" status.

- Mount the tape containing the backup data required for the restore operation.

  If you wish to use the default settings, you may begin the restore by clicking on the Restore button.

- Hit the Restore button.

  Now you will be presented with the Monitor display for that restore.
  Once the status displays "Complete," the restore has finished.

- Check the statistics to verify that the correct number of files were processed.

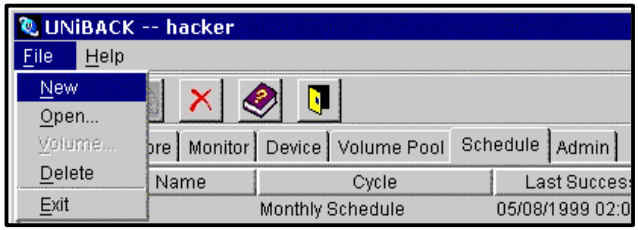
Now you are ready to create a Scheduled Backup →

Step 6. Schedule a Backup

UNiBACK comes with a fully functional scheduler which can be used to launch backups at any time. The scheduler can also be used to execute shell scripts both before and after the backup. Essential tasks like shutting and restarting a database can be performed without operator intervention. The scheduler also allows the user to define how to act on holidays and weekends.

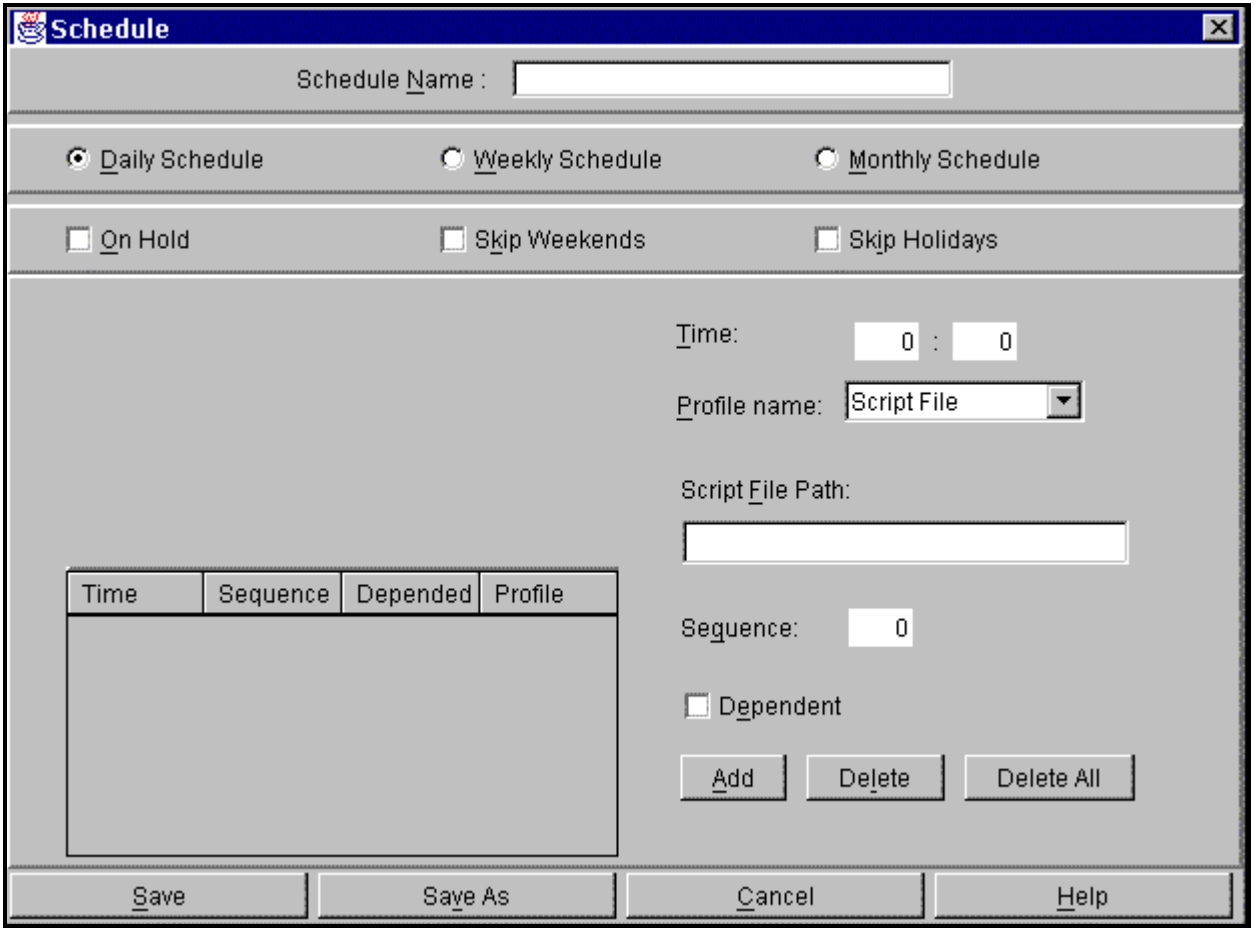
To create a new schedule use the following steps:

- Select the Schedule menu tab, then click on File-New.



The Schedule screen is displayed with all fields empty.

Schedule:



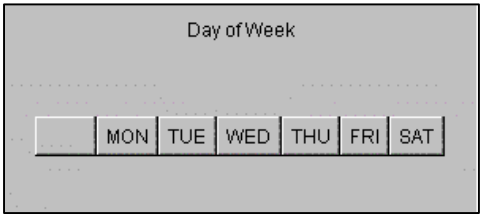
- Enter the schedule name in the Schedule Name field at the top of the screen.

  It is recommended that you use a name that easily identifies the type of backup, and the system name of the machine that you are backing up (e.g.: “Daily Fullback”).

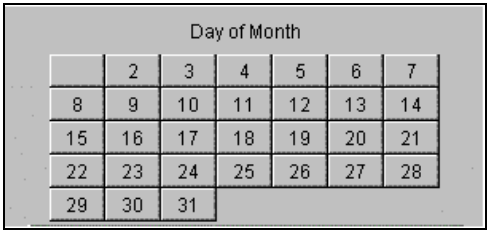
- Indicate whether the backup should be performed Daily, Weekly or Monthly by clicking on the appropriate radio button labeled Daily Schedule, Weekly Schedule, or Monthly Schedule.

If daily, the screen remains the same.

If weekly, a display of the seven days of the week appears.



If monthly, a 31-day calendar is presented.



- Indicate if the backup schedule is to remain on hold or is to run and skip holidays, and / or skip weekends by clicking on the On Hold, Skip Weekends, or Skip Holidays check boxes.

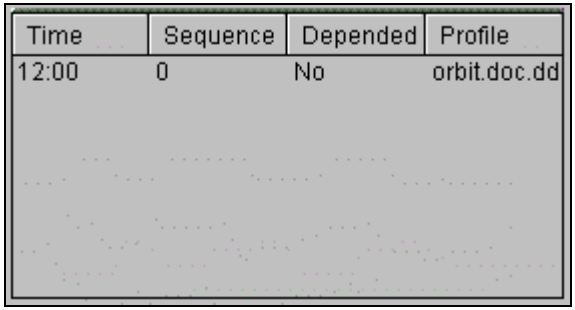
  Use this option to tell UNiBACK how to act on weekends and holidays or to prevent the program from running.

- Indicate the time of day the backup operation is to begin by clicking on the *Time:* field and typing the time (using the 24-hour clock).

- Select the Profile name from the pull-down list of previously created backup profiles.

- If this schedule is a Weekly or Monthly event, click on the day of week you want the action to occur, then click on the *Add* button to add the event into the schedule and display it in the schedule list area of the screen.

Schedule List Sector:



- Now, select *Save* or *Save As* to retain the settings.

  The Main Menu, Schedule screen is displayed with the list of current schedules for this host. The new schedule should appear in the listing.

- If you are finished setting up your backup and restore properties and schedules, click on File-Exit to exit the system.

  As long as the *backsched* process is running, the backups will initiate at their scheduled time.

V. Chapter 5: Advanced Features

In this section, the uses of compression, as well as other settings to improve backup performance, are explained. Many other UNiBACK settings are available and are discussed in more detail in the ***UNiBACK User Manual***.

Compression Settings

Finding the best compression rate for your system can increase the performance of your backups.

Three different levels of compression (Low, Medium, and High) are available within UNiBACK.

Low …… Best setting for systems with heavy loads, or when backups are run during the day with users on the system. Backups run faster and take more tape space.

Medium …… Best for regular systems with slower devices.

High ……..…… Best for over-night backups or when users are off of the system. Uses more CPU than other options, but sends less data across the network.

The Dynamic feature is also available to increase the speed of backups.

Dynamic …… This feature can be used along with any of the other compression rate levels.

Dynamic compression ensures that data written to the output device will be compressed as long as the device is not waiting. If the device becomes ready before a buffer of compressed data is ready to write, a buffer of uncompressed data is written. This method may use more tape, but in most cases will be faster. Use this feature if time is of importance.

Optimizing Performance

With the correct configuration, the number of tapes used may be reduced, and user access to the system during backup operations may be maximized.

Use the following chart to determine which level of compression fits your system best:

Slow device	Fast CPU	……	Use high compression
Slow device	Slow CPU	……	Use low compression w/ dynamic
Fast device	Any CPU	……	Use dynamic compression
Data-Compression device	Any CPU	……	Use dynamic compression

Experimentation may be needed to determine the best compression algorithm to use. The amount of compression achieved may be observed in the Compression field on the Backup Monitor screen during or upon completion of the backup.

In addition to finding the optimum compression rate for your system, other methods for increasing backup performance include using different media and devices, such as DLT's, and using multiple devices in parallel.

VI. Appendix 1

Troubleshooting Methods

This section provides information on what to do when UNiBACK is not functioning correctly.

- **Logfiles**

  Various logfiles are created when problems arise. These files can be found in the /orbit/log directory.
  To view the most recent entries of a logfile, use the UNIX *tail* utility.

- **Error files**

  UNiBACK may be configured to write reports of backup problems into an error file. To turn this setting on, see the section "Reporting Options".

- **unishutdown**

  It is sometimes necessary to shutdown the server and kill any processes which are running.
  The *unishutdown* utility is provided to cleanly shut down the database and *daemons*.
  To execute this program, simply type "/orbit/unishutdown" from the shell.

- **uniipcrm**

  Occasionally, system resources become locked. The *uniipcrm* program is used to clean-up any UNiBACK resources.
  To execute this program, simply type "/orbit/uniipcrm" from the shell.

Technical Support

Telephone support is available from ORBiT during regular working hours, 9am - 5pm PST.

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Support is also available via email at support@orbitsw.com.

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