

Chapter 4 Customizing Your Installation

Overview

This chapter describes:

- Installation parameters
- How to add and delete users
- How to configure Palindrome SNMP messages
- How to add and delete other Backup Director installations
- How to access other installations

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Introduction

The default configuration settings for Backup Director general operations, user notification, and automatic operations are appropriate for most situations. However, Backup Director can accommodate the needs and preferences of a various environments. To customize your settings or to familiarize yourself with the parameters, refer to the tables in this chapter.

Before You Customize Your Installation

Backup Director is ready to run your automatic and custom backup jobs immediately after installation.

If you want to review these settings (or later review changes you have already made), you can print the Configuration Summary report. See chapter 7 for instructions on viewing and printing this report.

NOTE: You cannot access Configuration Manager while Backup Director is performing an operation. To access Configuration Manager while jobs are processing, select the **Halt queue** option. As soon as it finishes servicing jobs, it puts the remaining jobs in the queue on hold.

Configuration Manager Tool Bar

The Configuration Manager tool bar provides a short cut to commonly used operations:

Save Installation Changes—Save your changes immediately. The program also prompts you to save changes upon exiting the manager or closing an installation if any changes have been made.

System Configuration—Configure users, notification, concurrency and other system parameters.

Operations Configuration—Configure how the program performs backup operations.

Media Scheduling Configuration—Configure how the program performs automatic jobs.

Help—View on-line help for Configuration Manager.

System Configuration

The parameters in the General tab determine how the program accesses NetWare 3.x and 4.x servers in your Protected Resource List.

Bindery Auto Login

Name—The name of the auto login user defined on all of the 3.x servers on your Protected Resource List (and 4.x servers that are not a part of your installation's NDS tree) including the MHS mail server.

Password—The (optional) password for the auto login user.

Retype Password—Confirm the password by entering it in this field.

NDS Auto Login

Name—The auto login user defined on the NDS tree on your Protected Resource List. An auto login user is required if you are installing Backup Director on a NetWare 4.x server.

Password—The (optional) password for the NDS auto login user.

Retype Password—Confirm the password by entering it in this field.

SNMP Alert On

The following three fields indicate which type of message Backup Director sends to configured SNMP (Simple Network Management Protocol) management consoles. SNMP messages **do not** include every note, warning, or error message.

Notes—Provides status information which may be helpful to the user.

Warnings—Indicates that a potential problem requiring the user's attention exists.

Errors—Indicates that Backup Director requires the user to correct a problem.

Installation Name—The name of the Backup Director installation. By default, this is the server/volume location and directory path of the System Control Database.

Configuring Palindrome SNMP Notification

If you have not already configured your servers to send SNMP messages to the appropriate SNMP management console, follow the procedure below. Refer to your message system's documentation for configuring SNMP workstations.

To configure SNMP management consoles

1. Copy the file PALINDRO.MIB from the installation directory (by default, this is the /PAL directory) to the appropriate directory on the management console. For example, when using Novell's NMS, copy the file to the NMS\SNMPMIBS\CURRENT directory on the SNMP management console.
2. Compile the PALINDRO.MIB using the SNMP management console's MIB compiler.
3. Edit the TRAPTARG.CFG file located on the \ETC directory of the SYS: volume of your Backup Director installation server using any text editor.
4. Type the IPX addresses of the SNMP management consoles that will receive the SNMP messages in the "Protocol IPX" section.

bbbb If you are targeting a UNIX client, type the IP address in the "Protocol UDP" section and load TCP/IP on the server.

NOTE: If your SNMP management console receives SNMP only through IP protocol, you must also load TCP/IP on your Backup Director installation server. In the TRAPTARG.CFG file, type the IP address and load TCP/IP.

5. Run the system message software from at least one of SNMP management consoles.
6. At the server console prompt, type:
LOAD SNMP TRAP= <<name of trap community defined on the SNMP server>>.
The SNMP management consoles receive a message that SNMP.NLM has been loaded. Use "TRAP=" to name any trap community.
7. On the General tab in Configuration Manager, select the levels of message severity the program should send to the SNMP broadcast server.

NOTE: Palindrome SNMP messages appear in one of two forms. If you are using Novell's NMS (NetWare Management System), SNMP will display full message descriptions. If you are using another system, such as HP OpenView, the SNMP message indicates only that a message with a certain level of severity (such as a "Note," "Warning," or "Error") has been recorded.

Admin List Tab

Use this tab to define administrators and operators and the type of notification Backup Director will send them.

User/Server—Displays the user configured on a particular server.

<<User/Server>>—Indicates the status of the highlighted user.

Administrator—User has full access to all Backup Director applications.

Operator—User has access to File Manager and to Control Console.

Netware SEND Message On

SEND messages are NetWare SEND messages that appear as pop-up windows to the user. Select the types of message, notes, warnings, or errors that Backup Director will send to the highlighted user.

MHS Email Message On

The Email notification feature requires that you have Novell's MHS, or Message-Handling System, installed and properly configured. MHS is a software program that transfers electronic messages from one place to another. The user receives a general message concerning the status of a particular job.

Email Address—The address required to receive e-mail messages. The user's e-mail address should appear in this format:

"USER@WORKGROUP"

Example: JSMITH@PALINDRO

MHS Mail Path—To send e-mail notification to users, specify the host volume of an MHS Mail Server.

To add a user

1. Select the **Insert User** button and the list of servers on the network appears.
2. Click the server that the user logs in to. The list of users appears.
3. Click the user's name.
4. Choose a user type (**Administrator** or **Operator**).

To delete a user

1. Highlight the User/Server name.
2. Select the **Delete User** button. A prompt appears asking you to confirm the delete operation.
3. Choose **Yes**. The user is no longer on the list.

User List Tab

The User List tab allows you to configure users and groups of users for access to Backup Director's File Manager.

User—Individual end users

Group—Group of end users, such as EVERYONE.

To add a user (or group)

1. Click the **Insert User** (or **Group**) button.
2. Select a user from the Pick a User (or Group) dialog box. The user appears in the User List.

To delete a user (or group)

1. Highlight the user (or group) name.
2. Click the **Delete User** (or **Group**) button. Choose **OK** to confirm.

System Advanced Tab

The System Advanced tab provides parameters of interest to advanced users such as configuring the size of the System Messages database and the concurrency parameters.

System Message Settings

Backup Director automatically truncates the System Messages window based on the parameter (days or database size) that is most restrictive.

For example, you configure the program to retain messages for 30 days. If the size of the System Messages reaches the maximum value set in the **Maximum size of the Database** parameter before the oldest message is 30 days old, the program begins removing the oldest messages in order to make room for new messages.

Maximum Size of the Database—Retains the messages totaling up to the byte size you specify (the maximum is 100 megabytes), unless the database size exceeds the maximum age.

Estimated Number of Messages—Displays the estimated number of messages the System Messages will retain, based on the maximum byte size you specify

Number of Days to Retain Messages—Retains messages for the number of days you indicate (up to 91 days) unless the System Messages exceeds the maximum size (in megabytes).

Enable Text Error Log—This option creates a separate text file for current system messages. This file (PAL_LOG) is overwritten at every rotation.

NOTE: After you have used the product for a few weeks, you can turn off this unless you are troubleshooting.

Process Control

Concurrency refers to Backup Director's ability to simultaneously use multiple devices to:

- Perform backup operations on multiple resources simultaneously
- Perform backup jobs and restore and/or utility jobs simultaneously

To take advantage of concurrency, you must have:

- At least two devices configured.
- Eligible media loaded in each device.
- At least 2 MB RAM available on your server for each concurrent process (for example, if you have two backup devices you need at least 4 MB of RAM).

Concurrency does not apply to DOS workstation volumes. TSASMS.COM (on the workstation) can only communicate with one drive volume at a time. For example, the TSA prevents the program from backing

up a workstation's C: and D: drives, but the program can concurrently back up the C: drives of two different workstations. To back up concurrently, separate the order of the local drives from the same workstation in the Protected Resource List.

Maximum Concurrent Backup Operations—The number of backup (including database maintenance) operations Backup Director can perform simultaneously within a single job.

NOTE: To implement concurrency, you must have at least two backup devices. The value of the parameter does not affect installations with one backup device. These installations will obtain the benefit of performing concurrent database maintenance operations.

Be aware that concurrent processing is dependent on environmental factors such as bandwidth, memory, and operations performed by other applications.

Maximum Concurrent Jobs—The number of different engines that can be loaded simultaneously.

NOTE: By default, the program can load the three different engines, backup, restore, and utility, to process three different types of jobs at the same time, unless there is a conflict. For example, if one of the jobs is a concurrent backup operation that is using all of the available devices, the program does not have a device available for another job such as restore.

TIP: To keep records of system messages, you can print the System Messages database periodically rather than maintain an excessively large System Messages database. See chapter 7 for printing instructions.

Operations Configuration

Backup Tab

The Backup tab provides parameters that determine how the program implements backup operations.

Backup Parameters

Preserve Backups—The **Preserve Backups** parameter allows you to extend the life of a backup session on media beyond the day when the program next rotates to that media set. Increasing this value usually requires additional media.

NOTE: To preserve backup sessions, enter the minimum number of days that you want evolving files to exist on the backup media. For example, if you want to preserve a backup session for a minimum of four weeks, set **Preserve Backups** to **28** (days).

Clear Archive Bits After Backup—This command indicates that Backup Director should clear a file's archive bit after it has been backed up. When this parameter is turned on, both full and incremental backups clear the archive bit after backing up a file (a differential backup does not clear the archive bit).

NOTE: Do not change this setting unless you have other applications that rely on the status of the archive bit.

Operations Advanced Tab

The Operations Advanced tab provides parameters to determine how Backup Director verifies that operations are written to media correctly, and whether the program ejects media following automatic operations.

CRC Data Verification Level for Backups—If you specify **Calculate** or **Verify**, Backup Director calculates the 32-bit CRC (Cyclical Redundancy Code) values for each file written to media and stores those values on media.

Backup Director uses these values when restoring (if the **User CRC Data Verification** parameter is turned on) and verifying media to confirm the integrity of the data.

Using the **Calculate** and **Verify** options increases backup time. The impact varies with the number of files, file size, processor type in the server, and the type of backup device you are using. For example, the **Calculate** option adds five seconds to the time required by a 386SX-based system to back up a 1MB file. Allow slightly more time to perform the **Verify** option.

Available Options:

None—Do not calculate or verify CRCs.

Calculate—Calculate and store CRC data. The program uses the calculations for verifying media which you can perform through Media Manager (Operation/*Verify*).

Verify—Calculate media CRC values and compare these with the media's CRC values during backup. If the values do not match the program, it writes the file to media but does not track the file in the database.

To ensure proper hardware setup, Palindrome strongly recommends that you verify the CRC values on media during the first week after installation. After the first week, set it back to **None**. Thereafter, verify CRC data periodically.

Use CRC Data Verification on Restore Jobs—When restoring files to disk, Backup Director verifies that CRC values match what was written to backup media. To use this option, CRCs must have been calculated when written to media.

Eject Media after Automatic Job—Ejects media after the day's automatic job is complete.

Retain File System Compression—On NetWare volumes supporting compression, Backup Director backs up and restores data.

NOTE: The only time you may want to change the default is to redirect data from a compressed volume to an uncompressed volume. If you turn off this option, Backup Director de-compresses compressed files when writing the data to backup media which affects performance.

WARNING: If you turn off the **Retain File System Compression** option and restore uncompressed data to a NetWare compressed volume, be sure the volume has ample space to accommodate the uncompressed data.

Media Scheduling Configuration

General Tab

The General tab provides parameters that determine how the program schedules the automatic jobs and vault storage as well as the label of the managed media sets.

Media Rotation Pattern—Backup Director determines the rotation schedule and the off-site media schedule based on the rotation pattern you select. See chapter 2 for a comparison of Tower of Hanoi and Grandfather-Father-Son rotation patterns.

Media Library Name—This parameter indicates the media library name, which becomes part of the media label of all managed media and is defined during installation. If you change the name, Backup Director retires the managed media library. You have then created a new active media library based on the new name. The formerly active media becomes available for restore operations only.

NOTE: Palindrome recommends that you create a new managed media library name at least yearly.

Operation Tab

The Operation tab provides parameters to determine which operations occur during automatic jobs. Except for the **Daily Media Change within Set** parameter, which it does not need, the GFS rotation pattern has the same operation parameters as the TOH rotation pattern.

Non-Rotation Options

Operation—The type of automatic backup operation the program performs on a given day when media sets are not rotated. Parameter choices are:

- **Diff** (Differential)
- **Incr** (Incremental)
- **Full** (Full)

Check for Deleted Files—With this option, on non-rotation jobs, Backup Director updates the File History Database to reflect files that were recently deleted from disk. If you select this option, the time required to process non-rotation jobs increases.

NOTE: If you are using weekly rotation and frequently delete files, you may want to turn on this option. This option prevents the program from restoring files that you recently deleted during a full resource restore operation.

Daily Media Change within Media Set—This parameter applies to TOH rotation only. <R>A different media in the same set is used each day. For example, the program requests a different media each day to perform the non-rotation operations. To change media every day within the current media set, turn on this option. For example, if you are sending your backup media off-site every day.

If you are using daily rotation (each day has its own media set), **do not turn on** this option.

TOH Scheduling Tab

The Scheduling tab provides parameters that determine when the program requests you to change managed media sets and the number of media sets in your managed media library. This schedule is based on the Tower of Hanoi rotation pattern.

Rotation Configuration

Rotation Day—The day(s) on which you want to rotate media sets. Backup Director automatically

prompts you to change media sets each day that you select for rotation to occur.

Rotation Time—The time at which Backup Director requests the next scheduled media set. If you turned on the **Daily Media Change within Media Set** option, the program requests the next scheduled media.

Number of Media Sets—The number of media sets rotated for automatic jobs. You can designate from two to 12 media sets in a single library. If you reduce the number of media sets in this parameter after the sets have been created, the program no longer schedules the least frequently used set(s).

GFS Scheduling Tab

The Scheduling tab provides parameters that determine when the program requests you to change managed media sets and the number of media sets in your managed media library. This schedule is based on the Grandfather-Father-Son rotation pattern. Because GFS automatically assigns seven of 32 possible media sets to daily media sets, you have 25 media sets to configure for weekly, monthly, quarterly, and/or yearly time periods.

NOTE: The program automatically rotates only one media set. If rotation days for multiple media sets coincide, the program requests the media set covering the broadest time frame.

For example, if the rotation day for weekly media sets is Friday, the program rotates to the weekly media on Friday and does not write to a “FRIDAY” media.

Number of Daily Sets—The number of media sets permanently configured for automatic jobs. You cannot configure this parameter.

Rotation Time—See the **Rotation Time** parameter in the above TOH Scheduling tab description.

Weekly Backup

Rotation Day—See the **Rotation Day** parameter in the above Scheduling tab.

Weekly Media Sets—The number of media sets that the program rotates on a weekly basis. Using the default value, each weekly media set corresponds to a week in the month. The program may request sets WEEK1 through WEEK5 or WEEK1 through WEEK4, depending on the month.

NOTE: If you set this parameter to a value other than **5**, the program schedules the weekly sets in a round-robin cycle.

In general, the program overwrites backup sessions more frequently with fewer sets and less frequently with more sets.

Retire Weekly Media Set—Removes the media set from rotation and preserves the backup sessions from being overwritten. The retired media sets are still available for restore operations.

NOTE: Because media is used only once, your library will require more media when this option is turned on.

Monthly Backup

Day—Backup Director requests a new media set to rotate on the last day of the “monthly” interval. The program writes the sessions to the appropriate media set.

NOTE: The options available at this list box are:

Last—Indicates the last day of any month as the day for monthly media set.

1-31—Indicates the numerical day of each month that you want the program to rotate to the scheduled monthly media set for an automatic job.

For example, to rotate to the monthly media set on the 15th day of the month, set **Day** to **15**. Backup Director rotates to your monthly media set for an automatic job on the 15th.

Monthly Media Sets—The number of media sets that the program rotates on a monthly basis. Using the default value, each monthly media set corresponds to a month on a calendar month.

NOTE: If you set this parameter to a value other than **12**, the program schedules the monthly sets in a round-robin cycle.

For example, under the default, you would use the DECEMBER media set for rotation in December. If you set **Monthly Media Sets** to **4**, you would rotate media set MONTH4 in December. In this last example, the backup session does not remain on the media as long as it would with the default value. The session remains on media only three months compared with 12 months in the default example.

Retire Monthly Media Set—See the **Retire Weekly Media Set** parameter.

Quarterly Backup

Month—The month in which the first quarterly backup operation occurs. The remaining quarters are calculated from this value. Quarters are based on calendar months and not the monthly periods you have defined for monthly media set rotation.

Quarterly Media Sets—The number of media sets that the program rotates on a quarterly basis. If you set this parameter to a value other than **4**, the quarterly rotations will still be performed every three months, but will not correspond to a 12-month period.

Day—See the **Monthly Backup/Day** parameter.

Retire Quarterly Media Set—See the **Retire Weekly Media Set** parameter.

Yearly

Month—The month in which the yearly automatic job occurs.

Yearly Media Sets—The number of media sets that the program rotates on a yearly basis. The program schedules the yearly sets in a round-robin cycle.

Retire Yearly Media Set—See the **Retire Weekly Media Set** parameter.

Day—See the **Monthly Backup/Day** parameter.

NOTE: In GFS rotation, once the program has created all of the configured media sets, you can only add a media set group that covers a larger

time period than currently exists in your library.

For example, if you have created daily, weekly and quarterly media sets and attempt to add monthly media sets, the program prompts you for a new library name. However, you could add the yearly media set without changing the library name.

TOH Off-Site Media Tab

The TOH Off-Site Media tab provides parameters used to determine the schedule for storing managed media sets off-site. Palindrome recommends that you follow the off-site storage schedule displayed in the Off-Site Media Advisor window in Control Console. The Off-Site Media Advisor window reflects where your managed media sets **should be located** if you actually implemented the schedule. The program has no mechanism for actually tracking the current location of your media sets.

Number of Media Sets On-Site—The number of media sets kept on-site at any given time. Backup Director automatically excludes the most frequently rotated sets from being rotated off-site.

NOTE: **Do not** make this parameter greater than or equal to the total number of media sets. This is to ensure that at least one set of data exists in the vault.

Notice Required for Retrieving Off-Site Media—The number of days' notice prior to the rotation day that the program recommends that you take media from the off-site storage to the work site.

NOTE: Based on the number of days' notice you require, Backup Director displays the media set in the **Retrieve from off-site storage** field on the Off-Site Media window in Console Manager. If you are following the recommended off-site media schedule, be sure to view the Off-Site Media Advisor window regularly. A description of the Off-Site Media Advisor window appears in chapter 7.

TIP: To eliminate the risk of any data loss due to on-site disasters, you can copy the managed media to non-managed media. Use the *Copy* menu option in Media Manager and move the duplicate media to the vault. For more information on this feature, see chapter 10.

GFS Off-Site Media Tab

The GFS Off-Site Media tab provides parameters used to determine the schedule for storing managed media sets off-site. Palindrome recommends that you follow the off-site storage schedule displayed in the Off-Site Media Advisor window in Control Console. The Off-Site Media Advisor window reflects where your managed media sets **should be located** if you actually implemented the schedule. The program has no mechanism for actually tracking the current location of your media sets.

Media Sets to Remain On-Site—Indicates which media set groups are kept on-site at any given time. Backup Director automatically specifies that daily media sets remain on site.

Select one or more media set levels whose number of media sets is less than the number archive copies required for full protection.

NOTE: Since the objective of off-site storage is to prevent data loss, the number of media sets that remains on site must be less than the total number of media set levels that have been built. A prompt appears if the number is too great. This ensures that at least one set of data is safely off site.

Notice Required for Retrieving Off-Site Media—See the description in the above Off-Site Media tab (TOH).

Installing Other Palindrome Products

You can add value to your Palindrome Backup Director installation with additional software options on the *Install* menu:

- AutoLoader Software
- Multi Server Software

To install additional Palindrome software products

1. Load the product diskette in a drive and select the appropriate *Install* option in Configuration Manager.
2. Enter the location of the install disk.

AutoLoader Software

Palindrome AutoLoader Software provides support for the ultimate in automated storage management: the autoloader (also referred to as a stacker, autochanger, or jukebox).

AutoLoader Software completely integrates the autoloader with Backup Director operations to provide unparalleled automation for all backup and restoration tasks.

AutoLoader Software enables the program to perform the following functions:

AutoLoader Software allows you to control the autoloader through the Backup Director's Windows interface. This product allows you to:

- Control the robotic arm of the autoloader
- Retain information about the contents and status of the autoloader
- Provide Backup Director with automatic access to all media in the autoloader.

AutoLoader Software is available in a single- or multiple-drive license.

Multi Server Software

Multi Server Software allows you to upgrade your installation from the base Backup Director license, which supports only one server, to an installation that supports multiple servers. If you originally purchased Backup Director as a Multi Server version, this license was automatically activated during the Backup Director 4.0 installation process.

Enterprise Setup

If you have multiple Backup Director installations, you can provide access to the other installations. You can only configure other installations through the *Enterprise Setup* menu option. This feature is also available in File Manager for configuring end users. For information on configuring end users, see chapter 9.

NOTE: In 4.x installations, any user who needs access to File Manager must be logged in to the tree where Backup Director is installed.

To access other installations

1. From Configuration Manager, open the Configure menu and select *Enterprise Setup*. The Installation Configuration dialog box appears. If you have just installed the program, this dialog box should display only the installation server.
2. Select the **Insert** button. The New Installation dialog box appears.
3. Click the list box arrow in the **Installation Server** list box to display the list of all Backup Director installations on your network.
4. Highlight an installation you want to add. The dialog box automatically displays the description and installation description of the selected installation.

bbbb Your installation's administrators and operators can access another installation that you add to the Enterprise Setup if they are defined as administrators or operators by that installation. If administrators are not logged in to that server, when they select the installation, the program prompts them to enter a login name and password defined on that installation. See chapter 4 for procedures on accessing another installation.

5. Choose **OK** to save the installation change.

At a later time you may need to deny users access to other Backup Director installations.

To remove an installation

1. Open the File menu and select *Enterprise Setup*.
2. Highlight the installation you want to remove.
3. Select the **Delete** button. The Installation Delete dialog box appears. The dialog box automatically displays the job queue and installation path of the selected installation.

WARNING: The **Delete physical queue** option will also remove servicing jobs as well as those waiting in the queue.

4. Choose **OK** to save this change. The installation no longer appears in the Installation Selection dialog box.

To select another installation

1. From any manager, open the File menu and select *Open Installation* (Select *Open Resource* in File Manager). The Installation Selection dialog box appears.
2. Highlight the installation you want to view and choose **OK**.

bbbb If you are not logged in to the selected installation server as an administrator or operator, the Session Information dialog box appears. Enter a name and password defined on the selected installation's Admin List. This username must be supervisor-equivalent in order to perform operations.

3. Choose **OK**. The title bar indicates the selected installation.

