

Automating Your Backup

Overview

If you find you are routinely performing the same backup operation, you may want to create a backup job containing all of your settings and file selections. There are two methods of creating Selection List/Jobs in Backup Exec:

- Automatic
- Manual

This section explains the manual method of creating a selection list/job. Automatic selection list and job creation is accomplished each time you perform an operation. For example, if you select data in the Backup Selections window and press Backup, you have the opportunity to enter any valid job name into the Job Name field and pressing the Save Job button. This creates a Job and Selection List with the same name.

Manual Selection Lists and Job Creation

Selection lists contain information about the specific drives, directories, and/or files you want to back up, archive, restore or verify. Each time you make selections from the Backup Selections window, a temporary selection list is created. To keep the list for future sessions, you can save the list using the following steps.

Creating Selection Lists

Backup and Archive Selection Lists contain selections from the Backup Selections window. Restore and Verify Selection Lists contain selections from the Tapes window. This example explains the creation of a Backup/Archive selection list.

1. Select the drives, directories, and/or files you want to back up or archive from the Backup Selections window first.
2. Click Select from the menu bar.
3. Click Save Selections.

The Save Selections window will open.

4. Enter the name for this Selection List.

The name used for the Selection List may contain up to 25 characters. If you want to overwrite an existing Selection List, use the scroll bar to select the name from the list. If you select or enter a name that already exists, you will be asked if you want to replace that list.

5. Click Save to save the new Selection List.

Using Selection Lists

1. From the main menu bar, click Select.
2. Click Use Selections.

The Use Selections window appears.

3. Click the Selection List you want to use.
4. Click Use or double-click the listing you want to use.

If you need to clear all selections before using a Selection List, use Uncheck All under Select in the menu bar.

The selections in the Backup Selections or Tapes windows are updated to reflect the selections described in the Selection List chosen.

Note: Selection Lists are cumulative. Each time you use a Selection List, its selections are added to the existing selections, after being prompted to clear the current selections. This enables you to use multiple Selection Lists to make selections.

5. ____ Click Backup (or select Archive under Operations on the menu bar).

This opens the Backup window (or Archive window). The Backup window (or Archive window) has the backup defaults selected. At this point, you can override the settings (making changes here does not affect your default settings). You can also provide a label for the Backup Set.

6. Click OK when you are ready to begin your backup.

If you are replacing information on the tape, you will be prompted before overwriting the tape. Click No if you do not want to overwrite the tape.

7. Click OK when the operation is completed.

Deleting Selection Lists

To delete a Selection List you are no longer using, follow these steps:

1. Click Select.
2. Click Delete Selections.

The Delete Selections window will open. The available Selection Lists are listed in this window.

3. Click the Selection List you want to delete and click the Delete button or just double-click on the Selection List you want to delete.

You will be prompted to confirm the deletion of the Selection List.

If the Selection List is being used by a Job, the name of the job will be included in the message. If the Selection List is not being used by a job, the message will only ask you to confirm the deletion of the Selection List.

4. Click Yes to delete the Selection List; click No to cancel the delete operation.

Editing Selection Lists

To edit Selection Lists, follow these steps:

1. Click Select in the menu bar.
2. Click Edit Selections.

The Edit Selection List window appears.

3. Click the Selection List you want to edit or use the down arrow button to display the list of available choices. Click your selection from the list.
4. In the Selection Rules section of the dialog box, click the rule you want to edit or delete.
5. Click Edit to open the Advanced Backup File Selection window; click Delete to delete the Selection Rule.

If you want to insert a new rule, click on any rule in the Selection Rules window and click Insert.

6. Click OK to save your changes and exit the Edit Selection List window. Click Cancel to exit the Edit Selection List window.

If you made any changes and click Cancel, you will be prompted to save or not save the changes.

Special Selection Lists

The following Selection Lists, created by Backup Exec, are provided for use in certain circumstances:

- Default Jobs
- Skipped
- Excludes

Default Jobs

The Selection List named Default Jobs, installed with the Backup Exec software, is used by the jobs named Full Backup, Differential Backup, and Incremental Backup. By default, Default Jobs selects all local drives.

You can make your own selections and save them to Default Jobs (overwriting the Default Jobs Selection List) so your selections are when using one of the default jobs.

Skipped

If during your backup operation, any files are skipped because they are in use, a Selection List named Skipped is created. This Selection List selects those files that were in use and not backed up.

When a Skipped Selection List is created, a Skipped job is also created (if one does not already exist; if one exists, it is replaced) and is placed in the Jobs menu.

Excludes

The Excludes Selection List allows you to create a list of directories and files that you never want backed up. For example, you may have many temporary files residing on local disks, network disks, and agent disks that end in the *.TMP extension. By adding them to the Excludes Selection List, these files will not be backed up or archived. The Exclude Selection List creates an easy way for you to exclude specific files from a backup job.

Jobs

Jobs are pre-defined selections of data, selection lists, tape drives, and settings using any of the four tape operations (backup, restore, verify, archive). These job configurations are saved to a Job file that can be scheduled to run whenever you desire.

Jobs allow you to:

- Automate tape functions.
- Schedule tape operations to run at a user-specified time.
- Create job icons that are placed in the Windows NT Program Manager.
- Execute Multiple Instances of Backup Exec using specific jobs.

Clicking Jobs in the menu bar and clicking on Setup enables you to:

- Create jobs
- Edit existing jobs
- Delete existing jobs
- Run jobs
- Schedule jobs

The most important aspect of this section encompasses the idea of scheduling jobs. Being able to run jobs at predetermined, specified times during morning, afternoon, or evening hours allows you the flexibility and freedom to use your network resources in the most efficient manner possible.

Creating Jobs

To create a job to perform a particular backup, follow these steps:

If you are using a previously saved Selection List, go to step 2.

1. If you are going to create a Selection List for this job, select the drives, directories, and files you want to back up or archive, click Select and click Save Selections. Enter the name you want to call this Selection List. The name used for the Selection List may be up to 25 characters. If the list name you enter already exists, you will be asked if you want to replace that list.
2. Click Jobs.
3. Click Setup to open the Jobs – Setup window.
4. Click the Create button.

The Create a New Job window will open. In this window, you provide the following information:

| | |
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| Job Information | |
| Job Name | Enter a name for this job. The name can be up to 25 characters in length. This name will appear in the drop-down menu under Jobs. The name will also be used if you decide to create an icon for this job (refer to Make an Icon For This Job, described under Program Manager Options in this chapter). |
| Operation | Select the operation you want to use. The choices are Backup, Archive, Restore, Verify, Catalog, Retension, Format, Erase, or Eject. To make your selection, click on the down arrow button located to the right of the Operation field. Click on your choice. Important: If a Archive job is run from the command line or as a scheduled job, the Archive operation will back up the files, verify the data, and delete the data from the disk without user prompts. |
| Selection List | If you've chosen Backup/Archive or Restore/Verify/Catalog as an operation, select a previously saved selection file to be used with this job. To make your selection, click on the down arrow button located to the right of the Selection List field. Click on your choice. The Selection List will be filtered depending on the operation type chosen. |



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| Program Manager Options | |
| Make an Icon | On the left side of this option is a small check-box. To create an icon for this job, click on the check box. This option will create an icon for your job. You will be prompted to put this job icon into the group of your choice. To run this job, just double-click on the icon. |
| Minimize on Use | If you want to run this job in a minimized mode, click on the small box next to this option. |

Also, by clicking on the Options button in this window, you can:

- Choose to overwrite the tape
- Enter a tape name
- Enter a Label name
- Select the backup method (Normal, Copy, Differential, Incremental, or Daily)
- Select the hardware to be used (Device, Magazine, Group)

Click the Advanced button to:

- Verify after backup completes
- Enter a tape password
- Loader Option (Abort job at end of group)
- Select Compression (Hardware, if supported by your tape drive or Software)
- Skip open files
- Print Log File
- Eject the tape when finished (electronic eject tape drives only)
- Include catalogs
- Full or Partial cataloging
- Enter Commands (Before, After)

5. After making all of your choices in the Job Options window and/or the Advanced Options window, click OK.
6. After making all of your choices in the Create a New Job window, click OK.

If you selected Make an Icon For This Job, the Job Icon for Program Manager window will open that allows you to select the program group where you want the job icon placed.

Clicking on the down arrow on the right side of the Program Group box will display all of your program groups. You can select the group of your choice or accept the default.

Editing Jobs

The Edit Job feature gives you the tool needed to change the properties of a job without having to recreate the entire job. This feature allows you to change such things as the job's name, its operation, its associated selection list, etc.

To edit a job, follow these steps:

1. Click Jobs.
2. Click Setup.

The Jobs - Setup window appears.

3. Click the job you want to edit and click Edit or double-click on the job.

The Edit a Job window appears.

The Edit a Job window allows you to:

- Change the job's name
- Change the job's operation
- Change the job's selection list
- Make an icon for the job
- Minimize on use

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 - Skip open files
 - Print Log File
 - Eject the tape when finished (electronic eject tape drives only)
 - Include catalogs
 - Full or Partial cataloging
 - Enter Commands (Before, After)
4. After making all of your choices in the Job Options window and/or the Advanced Options window, click OK.
 5. Click OK to exit the Edit a Job window.

Deleting Jobs

The Delete Job function allows you to quickly remove unwanted or outdated job files from your disk.

To delete a job, follow these steps:

1. Click Jobs.
2. Click Setup.

The Jobs - Setup window appears.

3. Click the job you want to delete.
4. Click Delete.

You are prompted to confirm you want to delete this job.

Note: In this example, the window shows the job called Job1 is about to be deleted. The name of the job you are deleting will be displayed instead of the name Job1.

5. Click Yes to delete the job or No to abort the delete operation.
6. Clicking Close exits the Jobs - Setup window.

Job Options

Depending on the operation selected, you will see different job category dialog boxes. For example, clicking the Options button while creating or editing a job opens the Backup dialog box.

In this window, you can specify the options for the backup operation. All of these options default to your settings under Settings in the menu bar.

| | |
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| Backup Information | |
| Job Name | This is the name of the job being created or edited. |
| Overwrite the tape | Check this box if you want to overwrite the tape, otherwise, the new information will be appended to the tape. |
| Tape Name | Fill in a tape name of your choice. The name may be up to 50 characters. |
| Label | Enter a label name of your choice. The name may be up to 50 characters. This label is placed on all sets backed up with this job. |

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| Backup Options | |
| Method | Here you can select the backup method you want to use. The choices are Normal, Copy, Differential, Incremental, or Daily. To make your selection, click on the down arrow button located to the right of the Method field. Click your choice. |

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| Hardware | |
| Device | Allows you to choose a tape drive, whether it be a stand-alone tape |

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| | drive or a loader. |
| Magazine | Allows you to select a magazine to be used with the loader. |
| Group | Allows you to specify a group of tapes within a loader's magazine to be used for the backup job. |

Click the Advanced button to open the Advanced Backup Options window. In this window, you can specify the advanced options for the backup operation. These options also default to your settings under Settings in the menu bar.

| | |
|-------------------------------|--|
| Advanced Options | |
| Verify after backup completes | If you want to perform a Verify operation after your backup is complete, click on the check box next to this option. A password may be entered, if desired. The password entered applies to the tape and not to the job. If the job overwrites the tape, the password is applied to the tape. However, if the job is to append to the tape, and the tape is password-protected, then the password will be used to authenticate the existing password to gain access and complete the job. If an incorrect password is entered for the appended tape, the job will fail to complete. |
| Password | |
| Loader Option | |
| Abort at end of group | You can select to abort the job at the end of the group. This will allow Backup Exec to abort an unattended Backup or Archive operation when the job reaches end-of-media on the last tape in a selected group of tapes. This selection is especially useful during unattended operations when no one is available to supply a new continuation tape. |
| Compression | Hardware data compression is available only if it is supported by your tape drive. Tapes containing data compressed by your hardware may not be portable to other tape drives. If your tape drive does not support hardware data compression, this option is grayed out. Selecting Hardware Compression will compress all files selected, on all volumes selected, for Backup or Archive to tape. Software data compression is available by checking this box. Selecting Software Compression will compress all files selected, on all volumes selected, for Backup or Archive to tape. |
| Skip open files | You can select Yes to skip open files, No to wait to back up open files, or Wait x number of seconds. The default is determined by Settings Backup in the menu bar. If you select Wait, you can specify the amount of time to wait for the files to close. If the file is still |



unavailable after the wait time expires, the file will be skipped. The default wait time is 30 seconds.

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| Other | |
| Print log | If you want to print the log file after your job is complete, click on the check box next to this option. |
| Eject tape at end | Rewinds and ejects the tape from the tape drive (electronic eject tape drives only - all other drives will rewind only) after the job has completed. |
| Include Catalogs | If you want to back up the catalogs on tape after the backup operation, click the check box next to this option; they are backed up in a separate backup set. |
| | |
| Catalog | You can select Full on-disk cataloging or Partial on-disk cataloging. The default is determined by your Backup Settings in the Menu Bar. |
| | |
| Commands | The two options, Before and After allow you to specify batch file commands that are invoked before a backup job starts and after it finishes. |
| | Backup Exec will launch the command, wait 15 minutes for the command to execute, and then process the backup job. If the command fails to launch after the 15 minute time frame, Backup Exec does not start the backup job. It then logs both the failed command and the backup job as an error in a log file. |
| | As an example, the Before field can be used to enter a command that will shut down a database. Backup Exec will then run a job backing up the database. Once the job completes, the After field can be used to enter a command that will start a database. The Before and After commands are saved along with other backup job options and are executed once the backup job launches. |

Tape Drive or Loader Not Available

If the Tape Drive or Loader selected in the Job Options windows is not available at the time the job executes, a Warning message appears.

Adding Jobs to the Program Manager

If the option Make an icon for this job is selected when creating or editing a job, the Job Icon For Program Manager window will open.

1. Using the down arrow located next to the Inserting Job field, click on the job you want to add to the Program Manager.
2. Using the down arrow located next to the Into Program Group field, click on the group where you want to the job entered.

Minimizing Jobs

If the option Minimize on use is selected when creating or editing a job, the window will shrink to an icon when the job is running. Jobs may run faster when minimized.

Adding Jobs to the Menu

When a job is created, it is automatically added to the Jobs menu. When you click on Jobs in the Menu Bar, a list of jobs will be displayed. Any job in the list can be run by simply clicking on the job or pressing its number (hot key) on the keyboard. If you delete a job, it is automatically removed from the Jobs menu.

Invoking a Job on the Command Line

Jobs can be started on the command line. For example, by typing this on the command line:

```
[c]:\[dirname]\bewinnt /j:"[jobname]"
```

Note: The quotes shown in the command line above are required if the job name contains spaces.

[jobname] will run as soon as Backup Exec starts. Substitute the correct *[drive designator]*, *[dirname]* (directory where you installed Backup Exec), and *[jobname]* (name of the job you want to run).

Jobs can also be run using batch files.

The Scheduled Jobs Window

The Scheduled Jobs window allows you review all jobs that have been scheduled for backup. To view this window, simply double-click the Scheduled Jobs icon found at the bottom of the main Backup Exec window.

The following information is available from the Scheduled Jobs description bar at the top of the screen.

| | |
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| Job Name | Presents the name of the scheduled job. |
| Job Type | Displays the type of job to run (Full backup, Incremental backup, Differential backup, etc.) |
| Device | Displays the device assigned to process the job. |

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| Start Time | Displays the time the job is schedule to start. |
| Schedule Type | Displays the repeat interval of the job. |
| Method | Displays the type of operation to be performed on the job (Backup, Archive, Restore, Verify, Catalog, Retension, Format). |
| Selection List | Displays the chosen selection list associated with the scheduled job. |

Scheduling Jobs

To schedule a job, follow these steps:

1. Click Jobs.

2. Click Setup.

The Jobs Setup window appears.

3. Click the job you want to schedule.

4. Click the Schedule button.

The Schedule a Job window appears:

5. Click the Add button.

The Schedule Options window appears.

Note: If the Email Setup button does not appear in this window, you do not have a valid MSMAIL account and password. If you intend to use the Email message capability, exit Backup Exec, log into MSMAIL (may log back out if desired), and restart Backup Exec.

In the Schedule Options window, you can set the following schedule parameters:

| | |
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| Job Name | The name of the job you selected is displayed in this field. You can click on the down arrow on the right side of this field if you want to select another job. |
| Current Date and Time | The current date and time are displayed here. |
| Repeat Interval | <ul style="list-style-type: none"> • Only Once - Select this option to have the scheduled job run only once. • Every x Minutes, Hours, Days, Weeks - This option allows you to select a repeat interval that repeats every X amount of time. The amount of time is based on minutes, hours, days, or weeks; available repeat interval values range from 1 to 99. Simply pick a value between 1 and 99 and assign it one of the four available time periods. • Day of the week - Selecting this option will open another box immediately below the Repeat Interval box. In this box, you can select the day(s) of the week you want this job to run. To select the day(s), click on the check box next to the day. |

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| | <ul style="list-style-type: none"> • Week of the month - Selecting this option will open another box immediately below the Repeat Interval box. In this box, you can select the week(s) and/or day of the week you want this job to run. To select the week(s), click on the small box next to First, Second, Third, Fourth, or Last. To select the day, click on the down arrow located to the right of the day field, underneath Day of the Week. A drop-down menu containing the days of the week will appear. Select the day of your choice. • Day x of every month - Select the day you want the job to run. For example, select 5 for the job to run on the 5th day of every month. |
| Day of the Week | Appears when Day of the Week is selected above in Repeat Interval. Select the days of the week to schedule the operation. |
| Week of the Month | Appears when Week of the Month is selected above in Repeat Interval. Select the week of the month to schedule the operation. |
| Start Date/Time | Select the date you want this job to start running and the time of day you want the job to run. |

The Email Button

- **Email Setup** - If you have a valid MSMAIL account and have logged into MSMAIL already, the Email Setup button will appear in the Schedule Options window. The Email message capability can only be used when performing a scheduled backup. When you press the Email Setup button for the first time (or the first time you have a new password), you will be prompted for your password. Your user name is automatically filled in with your name as it appears in your MSMAIL account file. After supplying the proper password, the Email Confirmation window is displayed.

In the Email Setup window, you can select to:

- Enable Mail (when the operation is completed)

Select one of the above choices. Select Address. Enter the address to which the mail is to be sent. The Email Server must be operational for the Email message capability to be available.

You also have the option of including a message with the Email. Put your cursor in the message box and type your message. In addition, if you are keeping logs, you may attach the log generated by the job to the message by clicking on the check box next to Include Log File.

When the Email Confirmation is received, the Subject field will include the job name followed by a status comment (Success or Fail). The Email message will contain warnings (if any), the user-supplied message (if any), followed by the log file, (if one was attached to the Email).

6. After making all of your choices in the Schedule Options window, click OK.
7. Click Close to exit the Schedule a Job window.
8. Click Close to exit the Jobs - Setup window.

Changing a Job's Schedule

To change a job's schedule, follow these steps:

1. Click Jobs.

A drop-down window will display all previously created jobs.

2. Click Setup.

This will open the Jobs - Setup window.

3. Click the Schedule button.

This will open the Schedule a Job window.

4. Click the scheduled jobs you want to change.

5. Click the Change button.

The Schedule Options window appears.

In this window, you can change the schedule parameters.

6. After making all of your choices in this window, click OK.
7. Click Close to exit the Schedule a Job window.
8. Click Close to exit the Jobs - Setup window.

Removing Jobs From the Scheduler

To remove a job from the schedule, follow these steps:

1. Click Jobs.

A drop-down window will display all previously created jobs.

2. Click Setup.

This will open the Jobs - Setup window.

3. Click the Schedule button.

The Schedule a Job window appears.

4. Click the Scheduled Job you want to remove.

5. Click the Remove button.

The Removing a Scheduled Job window will open.

6. Click Yes to remove the job or click No to leave the job in the scheduler.

7. Click Close to exit the Schedule a Job window.

8. Click Close to exit the Jobs - Setup window.

Jobs Created During Installation

When you install Backup Exec for Windows NT, three jobs are created for you. They are:

- Differential Backup
- Full Backup
- Incremental Backup

Differential Backup

The job Differential Backup will perform a Differential backup, use the Selection List called Default Jobs, and Append to the information on the tape.

Full Backup

The job Full Backup will perform a Normal backup, use the Selection List called Default Jobs, replace the information on the tape, and verify after backup.

Incremental Backup

The job Incremental Backup will perform an Incremental backup, use the selection file called Default Jobs, and Append to the information on the tape.