

v5: How to schedule your backups

In this tutorial, we look at scheduling full, incremental and differential images as part of a regular backup cycle (this tutorial also applies to full, incremental and differential file & folder backups). In the second part of this tutorial we look at Disk Space Management, this is where we can delete old or surplus backup sets so our backup drive does not get full.

In previous tutorials we created full and incremental backup images of 2 partitions including drive C. We also saved the options we used as XML backup definition files. In this tutorial the following will be covered:

- understanding what a backup cycle is
 - how to schedule disk images in a backup cycle so that they run automatically
 - how to utilize the disk space management options in Reflect so you never have to worry about running out of storage space your backup drive
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What is a backup cycle?

A good backup cycle is essential to optimize use of available storage space and to protect your computer from sudden failure as well as giving you the ability to recover historical data.

Example 1

1. A standard incremental back up routine could follow a seven-day cycle, starting on a Monday at 18.00.
2. The specified partition(s) or disk would be fully Imaged on Monday evening (or full file/folder backup).
3. On Tuesday evening at 18.00 a scheduled task would run and backup any sectors on disk changed since the previous day's backup (Incremental).
4. The same procedure (c.) would then follow for Wednesday, Thursday, and Friday evenings.
5. At the beginning of the next week, the preceding Monday's image will be deleted along with all the incrementals (which are now invalid) and a new full image added to the destination directory.

v5: How to schedule your backups

6. The cycle is then repeated.

This example is quickest to execute from Tuesday to Sunday and uses less storage on these days as only changes since the previous day are saved. There is however, an increased exposure on Tuesday, as at that point only one day's backup can be restored. If you need to go back to the previous Friday, for example, then unfortunately this is not possible.

Example 2

Example 1 could be modified not to delete the previous full image but to delete the full image from the Monday before that. Therefore this would keep a minimum of 7 Days of data and a maximum of 14 Days (or 30 and 60 days for a thirty-day-cycle).

The obvious disadvantage of this method is that double the amount of disk storage is required. But, if the storage is available, then this is a more comprehensive solution.

We can use the previously created backup definition files for the full Images of the 2 partitions and implement the 7-day-cycle example above

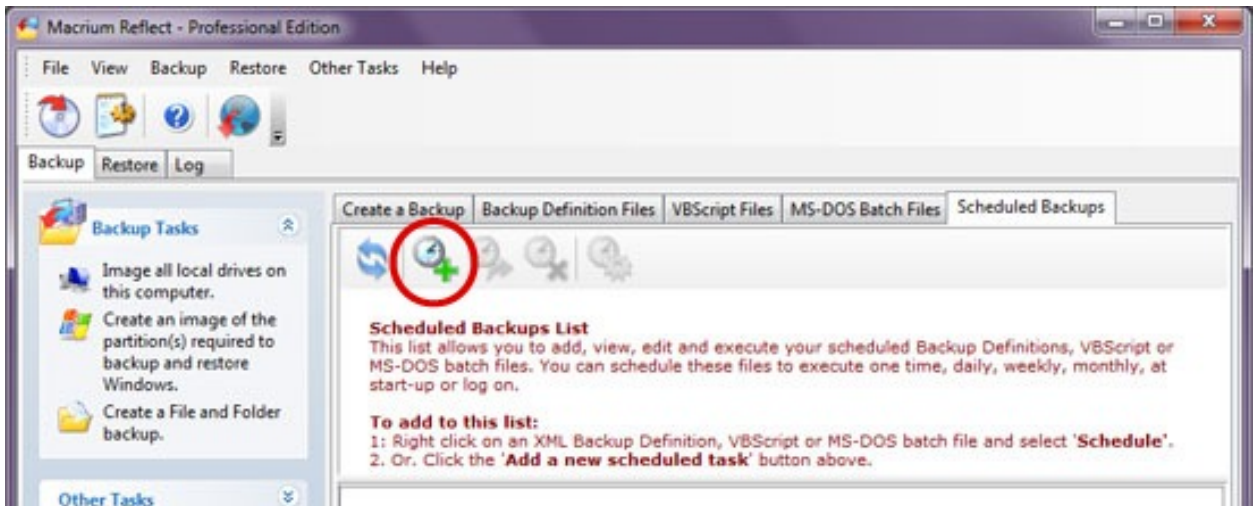
The first step is to schedule a full image to run on all Mondays at 18:00. Before you start this tutorial, you must have created an XML definitions file. (See '*How to create a disk Image*' tutorial)

1.

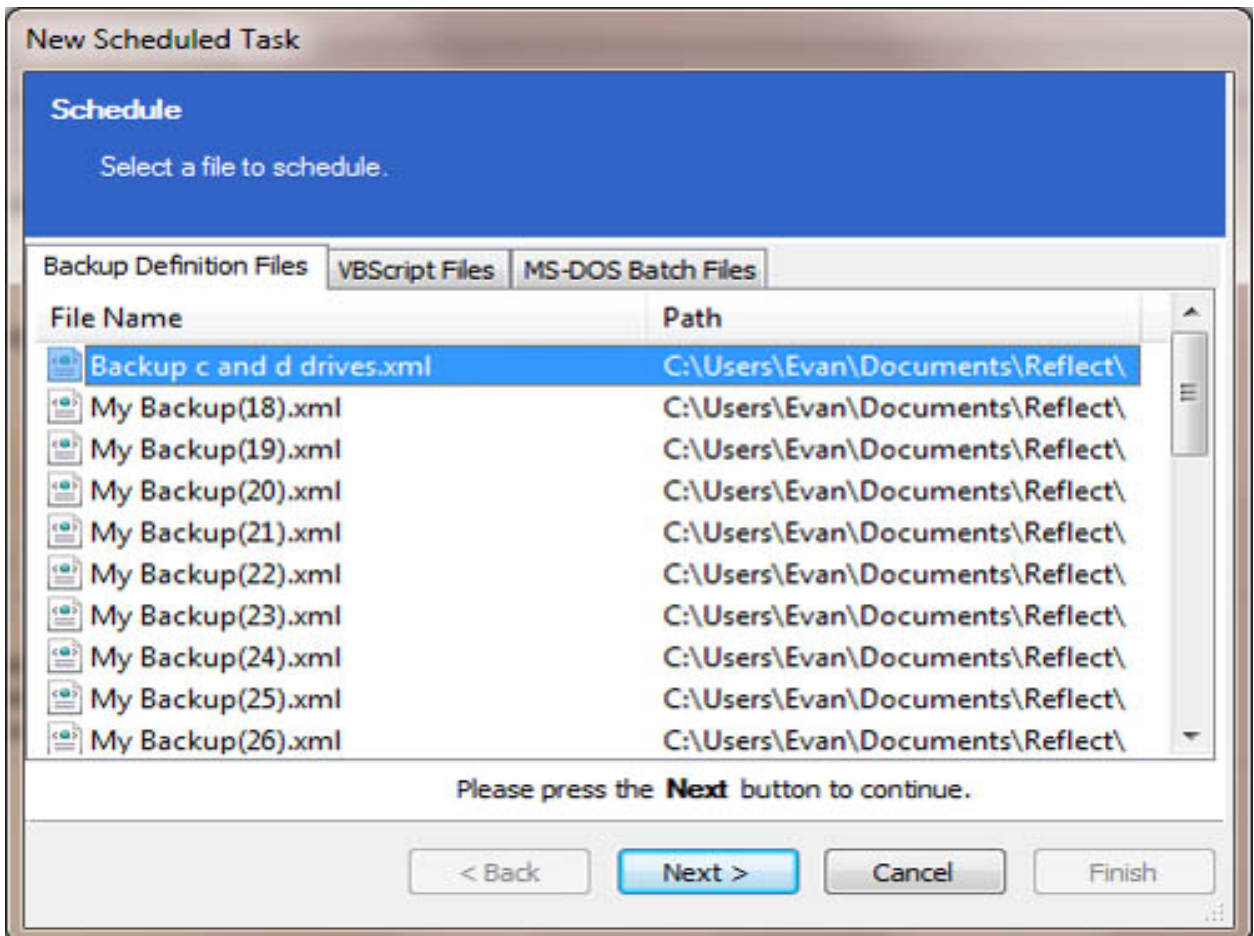
v5: How to schedule your backups

(Alternatively Right click an XML backup Definition file and select '**Schedule**' and go to Step 4.)

2. Click the 'New Scheduled Task' icon to start the 'New Scheduled Task' wizard.

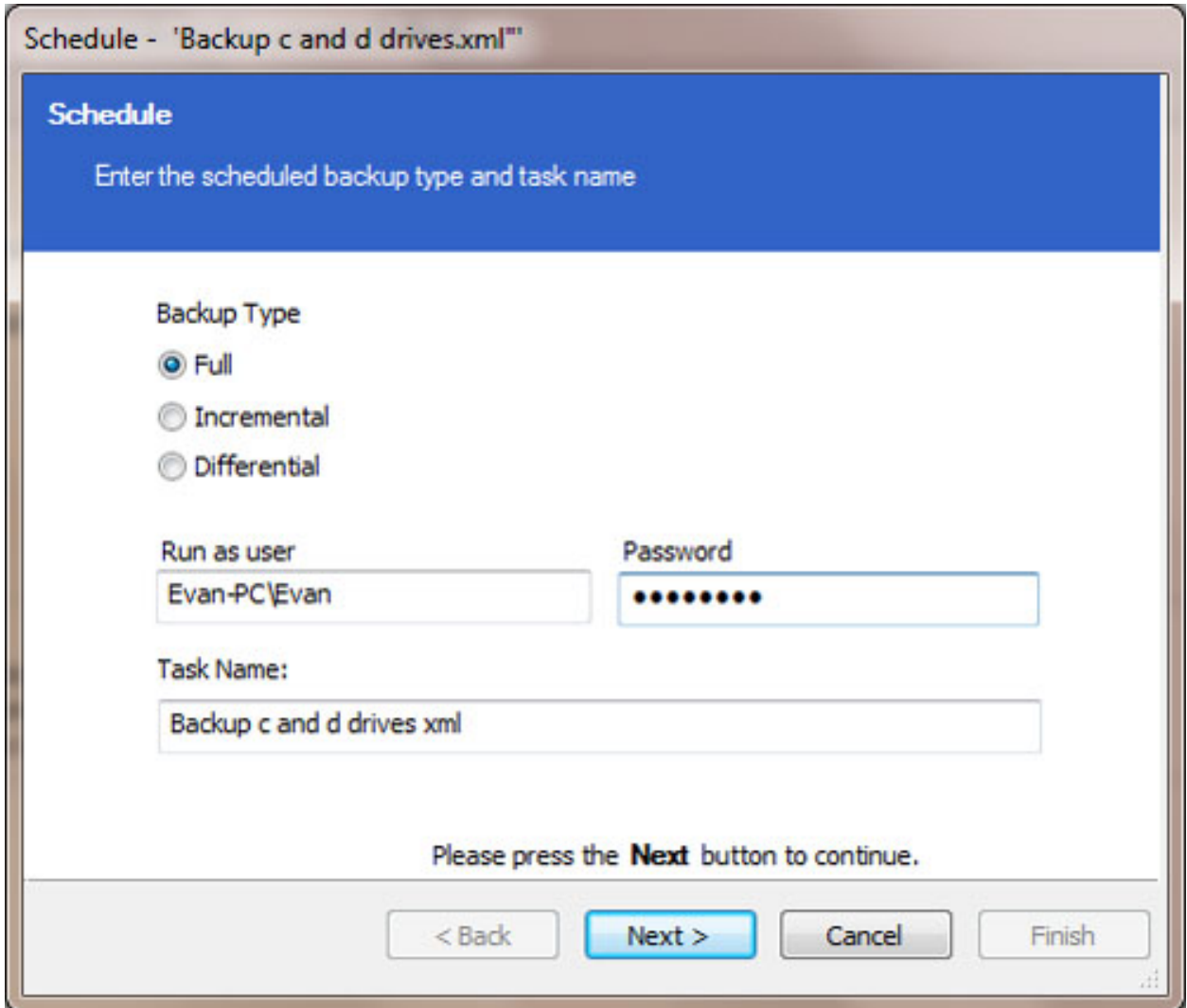


3. In the first dialog of the 'New Scheduled Task' wizard select the XML definition file you wish to schedule, then Click '**Next**'.

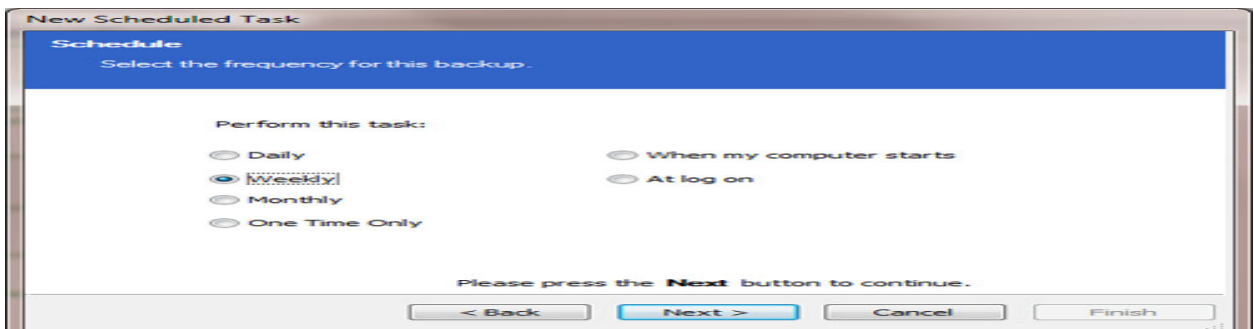


v5: How to schedule your backups

4. Since this is to be a weekly full backup, select the 'Full' backup type and ensure that the login details are set correctly, the password is your Windows login password.. In the 'Task Name' text box, enter a meaningful description that can be used to identify this task. Click **Next**

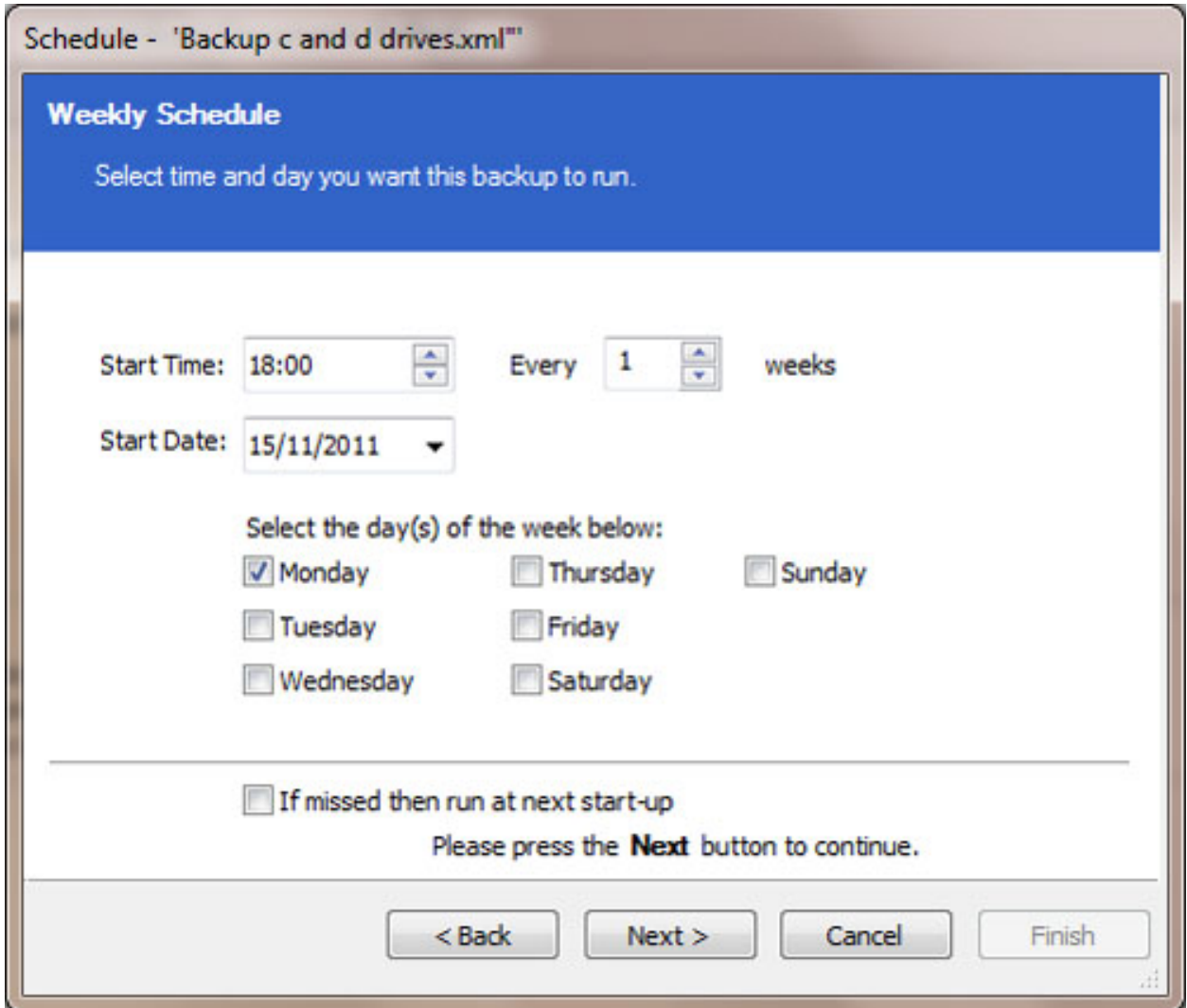


5. The next dialog asks when you would like the backup to be scheduled: daily, weekly, monthly etc. In this case, select '**Weekly**'. Click '**Next**'.

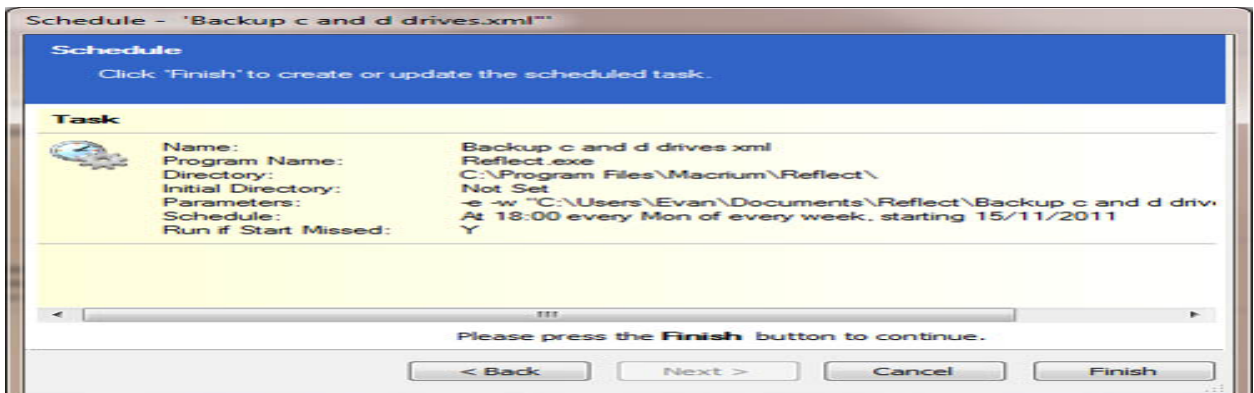


v5: How to schedule your backups

- Set the controls to ensure that the backup is run every '1 week' on a Monday at 18:00. In this demonstration, the checkbox at the button entitled 'If missed then run at start-up' was deselected but you may find it useful to select this checkbox. Click **'Next'**.



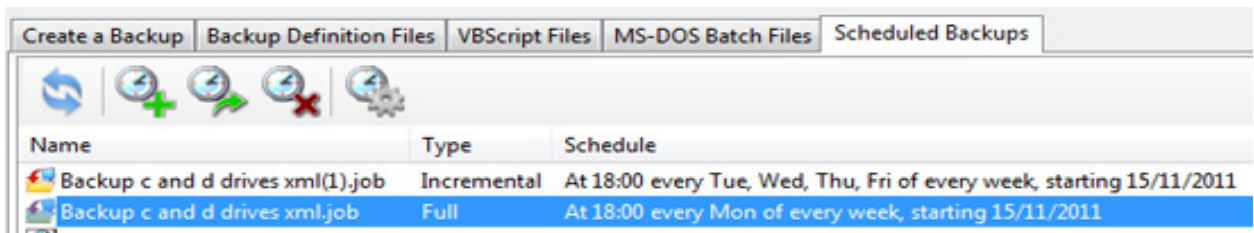
- A summary of the details is shown. Click **'Finish'**



v5: How to schedule your backups

You will note that the details of this task have been added to the main pane of the application under the 'Scheduled Backups' tab. You can use the controls above to add new scheduled tasks also delete and manage existing tasks.

To complete the schedule outlined in Example 1, create a new task that performs an incremental backup every weekday night at the same time. Select 'Incremental' at step 4 and then a 'Weekly' backup only on Tuesday, Wednesday, Thursday and Friday. You should end up with two tasks as shown below.



Managing Disk Space using DSM

These backups will now continuously run every weekday of every week. However, the drive that hosts your backup directory will soon run out of disk space. Fortunately we can automatically purge old backups to make room for the latest.

There are two methods:

- a. Full backups can be deleted along with their associated Incremental/ Differentials older than a stated number of days or weeks
- b. A maximum number of full backups and their associated Incrementals / Differentials are kept, the removal of excess backups being undertaken before or after the next full backup is executed

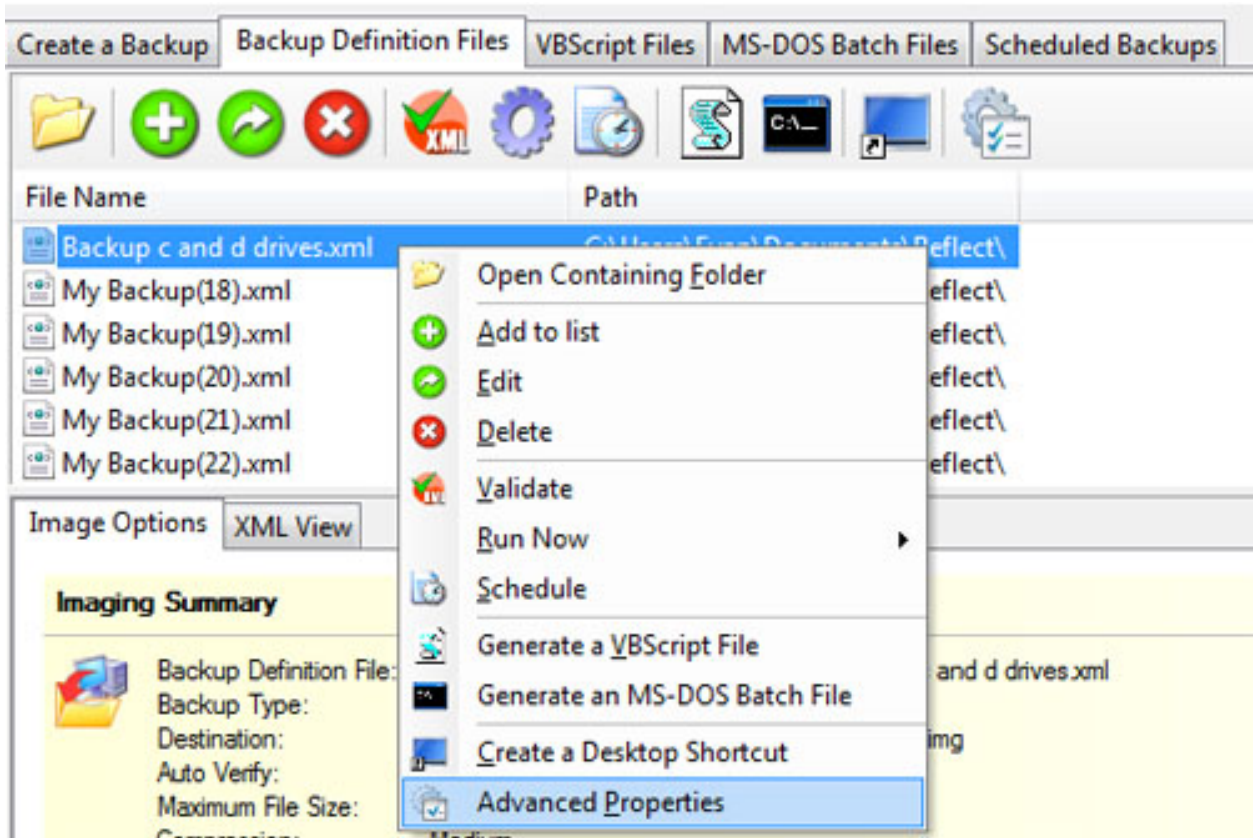
You can also undertake Disk Space Management with file & folder backups

To set the disk management (DSM) for an XML definition:

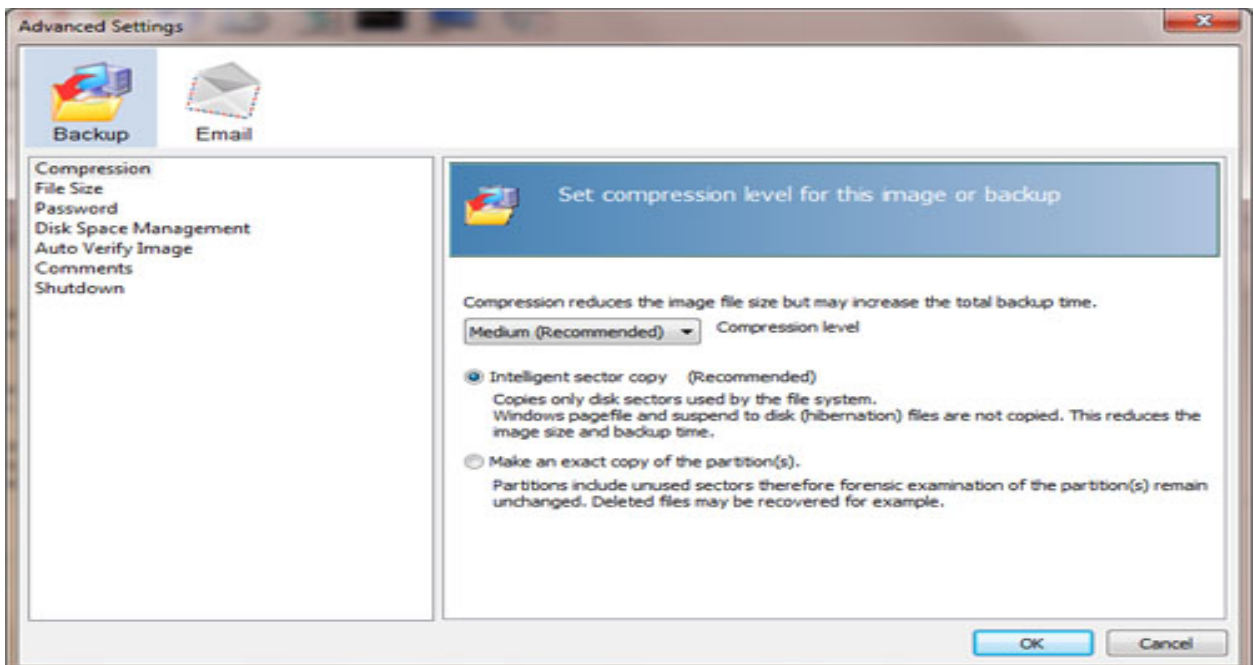
1. Select the 'Backup Definition Files' tab in the main window

v5: How to schedule your backups

2. Right click on the definitions file you wish to manage and select **Advanced Properties:**



3. In the **Advanced Settings** dialog select 'Disk Space Management' in the left pane.

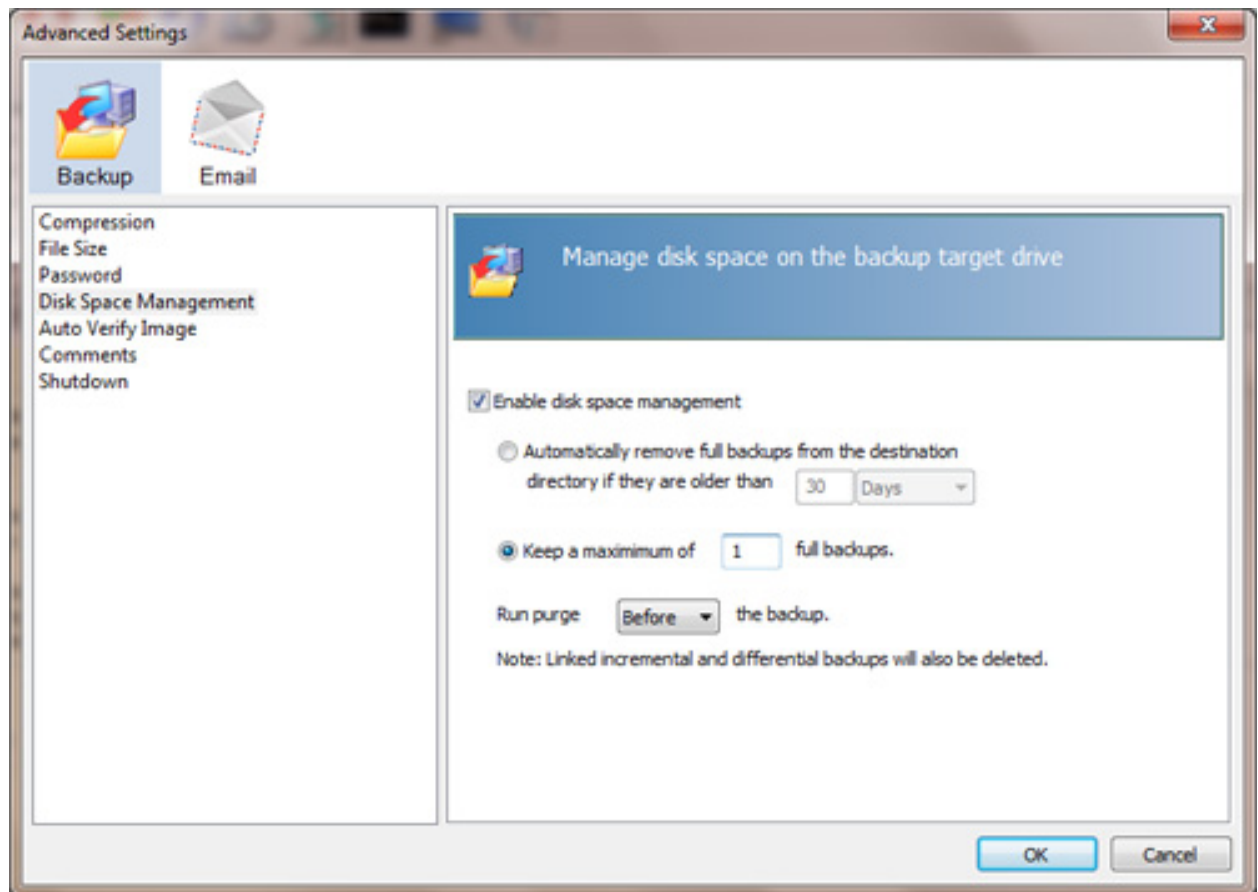


v5: How to schedule your backups

- For this example, in the right pane select the '**Keep a maximum of 1 full backups**' check-box, by also changing number of full backups to 1. Then you can select to purge the backups before or after a backup has taken place, in this example '**Run Purge Before backup**' is selected.

(In this pane you can either remove any backups associated with the current XML definition file after a given number of days or keep a maximum number of full backups).

Click **OK**.



The backup definition XML file will now be displayed with Disk Space Management included.

Notes:

- The purge works by deleting backup files in the destination directory of the backup task. It is therefore important that you organize different backup types into their own directory structure if your purge requirements are different. e.g. you may want to keep

v5: How to schedule your backups

14 days history for images of drive C and 30 days history for drive E.

- The current backup set (the one you are creating or incrementing) is never purged.
- The above example assumes that you want to retain a maximum of 1 historical backup plus the one currently due to be created. When a full backup is deleted, any linked incremental or differentials are also deleted.
- Had the option '**Automatically remove full backups from the destination**' at step 4. above been chosen, the minimum number of day's history kept is the purge number of days less the backup cycle period. So for a weekly cycle involving keeping at least two full backups you should set the purge days to 21. This will retain 3 full backups (and incrementals/ differentials) for some of the time, reducing this to 2 when a purge is successful.
- Option '**Keep a maximum of 1 full backups**' with '**Purge Before**' enabled you to keep one historical set and the current backup.
- All file deletions are logged in the log window. Click the 'Log' tab and select dates in the calendar tree to display relevant logs.

If you are unfamiliar with backup routines then this has probably appeared quite a lengthy topic. However, the operations in Reflect have been nothing more than a few clicks. Once it is set up you don't need to do anything else to keep your PC protected.

Search terms

tag:backup

tag:image

tag:file

Macrium KB

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