

Quick-start guide: BackupAssist Zip Engine



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QUICK-START GUIDE

BackupAssist Version 6

www.BackupAssist.com

1. Introduction

This quickstart guide is intended to assist BackupAssist v6 users with setting up Zip backup jobs. The BackupAssist Zip Engine is a file-based backup engine that works with both disk-based backup devices (e.g. external HDDs, CD/DVDs, REV drives, rdx drives, NAS, FTP servers, etc) as well as tape drives (with the BackupAssist Zip-To-Tape Add-on).

Backups created using the Zip Engine are stored as .ZIP file archives that contain all of the data selected for back up. ZIP files can be opened easily and restored from using the BackupAssist Restore Console, the built-in support for ZIP files in Windows¹, or any third-party software that supports the .ZIP format, many of which are free to download.

Using this guide

Refer to **section 3** for instructions on how to setup Zip Engine backups with BackupAssist. Instructions have been divided according to the type of backup device being used: tape drive **OR** a disk-based backup device, such as an external HDD, local HDD, CD/DVD, NAS, FTP server, or REV/rdx drives.

Refer to **section 4** for instructions on how to use the BackupAssist Restore Console to restore from a ZIP backup located either on a tape or on a disk-based device.

2. Zip Engine: advantages, features, limitations and requirements

Advantages

The BackupAssist Zip Engine offers a number of key benefits, including the following:

- ✔ **Open .ZIP format:** backups to disk-based devices are stored as .ZIP files, which is an open format supported by all Windows operating systems. Backup data stored in a .ZIP file can be accessed from any Windows-based machine using either the built-in support for ZIP files in Windows, or with one of the many free third-party software programs available that support the .ZIP format, such as [TugZip](#) and [7-zip](#). Backups to tape are also stored in an open 'ZIP' format, and data can be easily restored using BackupAssist's Restore Console.
- ✔ **Real-time software compression:** data selected for back up is compressed in real time, even to tape, which saves storage space and helps you can store more backups on each backup drive or tape.
- ✔ **AES encryption:** backups can be protected with a password using 256-bit AES encryption.
- ✔ **Unlimited backup size:** as the Zip Engine stores backups in the ZIP64² format there are no restrictions on the size of an individual backup, or on the number of files that can be stored in a single .ZIP archive.

BackupAssist Zip Engine features

The following features are unique to the BackupAssist Zip Engine and are not available in other third-party ZIP applications, such as WinZip or TugZip:

- ✔ **Multi-threaded compression:** on a multi-core or multi-processor computer, BackupAssist uses multiple threads to compress and encrypt files, which significantly reduces the time required to perform a backup.

¹ If you are using encryption to password-protect your .ZIP backup, you will not be able to use the Windows native .ZIP component to access your backup data.

² ZIP64 is only supported in the native ZIP component in Windows Vista, Windows 7 and Windows 2008 R2. To access ZIP64 backups on previous versions of Windows use the BackupAssist Restore Console.

- ✓ **VSS support:** Microsoft applications such as Exchange Server, SQL Server, SharePoint and Hyper-V are all fully supported, as well as any other VSS-aware application that uses standard VSS restore methods. Simply choose the VSS application you want to back up from the list of detected applications. You can even drill down and choose individual components (databases, storage groups, etc). Application restore is also easy using the BackupAssist Restore Console.
- ✓ **System State backup and restore:** easily backup and restore system settings in the event of a disaster
- ✓ **Full, Differential, Incremental and Copy backups:** configure your Zip jobs to run Full, Incremental, Differential and Copy backups. This means you can create your own personalized schedules.
- ✓ **NTFS security attributes:** the NTFS security attributes and alternate data streams of directories and files are stored within your ZIP backups. Both will be preserved if you complete a restore of your files and directories using the BackupAssist Restore Console.
- ✓ **BackupAssist Restore Console:** BackupAssist comes with its own Restore Console that helps you restore files and directories from a ZIP backup, including backups to tape. The Restore Console also allows you to search for specific files to restore within all your ZIP backup sets. You can even select which version of a file to restore if the same file is located in multiple backup sets.
- ✓ **Original paths:** the full original path of selected data is preserved in the ZIP backup.
- ✓ **Intelligent compression:** BackupAssist automatically determines the compression level for each type of file selected for backup. If a file is not compressible (a JPEG file, for example) BackupAssist will simply store it in the ZIP archive rather than attempt to compress it first. This reduces the backup time, as BackupAssist only compresses files that actually benefit from compression.

Limitations

- ⚠ **Compression and encryption compromises backup speed:** if both a high level of compression and the option to encrypt the backup with a password have been selected, the speed of backups may be compromised. If your backups take a long time to complete try lowering the compression ratio or disabling encryption in the **Zip options** section (more about **Zip options** in section 3).
- ⚠ **No support for spanning:** spanning a ZIP backup across multiple .ZIP files is not supported by the Zip Engine. The backup destination you choose for your backups must have enough free space to store the entire ZIP backup as a single file.
- ⚠ **No autoloader support:** the Zip Engine only supports backups to standalone tape drives. The use of autoloaders for multiple tape backup rotation is not supported. This may, however, change in future.
- ⚠ **No remote tape backups:** you cannot use the Zip Engine to back up to a tape drive located on another machine (i.e. remotely).

Requirements

Item	Description of requirements
Operating systems	Windows XP, Vista, Server 2003, SBS 2003, Server 2008, and SBS 2008.
Tape backups	<ol style="list-style-type: none"> 1. Only standalone tape drives installed on the same machine as BackupAssist are supported. You cannot use the Zip Engine for multiple tape backup rotation with an autoloader device, or on a tape drive located on another machine (i.e. installed remotely). 2. The tape drive you use must ship with its own set of drivers or Windows compatible drivers must be available for download on the manufacturer's website. BackupAssist does not provide its own driver set for your tape drive device. To our knowledge, all common tape drives meet this requirement.

Licensing	<ul style="list-style-type: none"> • Backup to tape: to backup to a standalone tape drive you need 1) a BackupAssist Zip-To-Tape Add-on license and 2) a BackupAssist license. • Backup to other disk-based devices: to backup to a disk-based device (e.g. external HDD, REV drive, etc) you need 1) a BackupAssist license.
Hardware supported	Tape, external HDD, optical disc (CD/DVD/Blu-Ray), REV drive, rdx drive, local directory, network location, and FTP server.

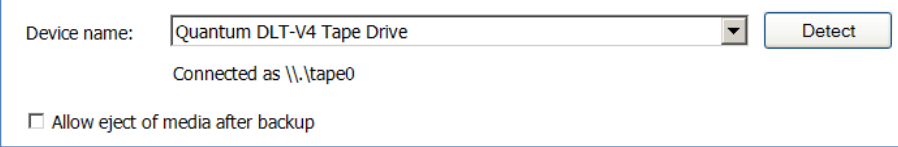
3. Setup instructions

Backing up to tape

The following instructions are for users who want to back up to a standalone tape drive device installed locally on the same machine running BackupAssist.

Important: to backup to your tape drive after the 30 day trial period you need to purchase a **Zip-to-Tape Add-on** license in addition to a base BackupAssist license.

1. Launch BackupAssist, click **File > New backup job** and select **Zip** under 'File backup'.
2. Select **Tape** as your back up destination and click **Next**.
3. Select an appropriate schedule and click **Next**.
4. Select the **Device name** of your tape drive from the available drop-down menu.



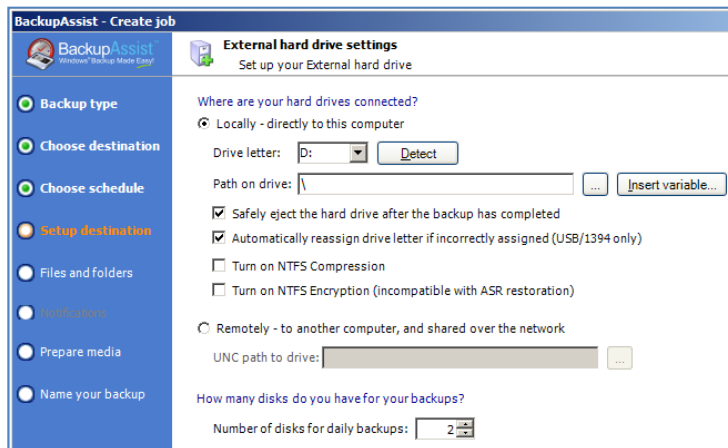
1. If you have more than one tape drive installed and want to back up to multiple drives, you will need to create a separate backup job for each drive (step 1).
2. If your tape drive is not listed in the drop-down menu click **Detect**; if the drive is still not detected make sure you have the default Windows drivers for your device.
5. Check **Allow eject of media after backup** if you want BackupAssist to automatically eject tape media after each backup has been completed. This will make sure that the data on the tape is not overwritten the next time a back up runs if you forget to insert the correct tape.
6. Click **Next** to select files/folders, VSS applications and the System State for backup to your tape drive.
7. Click **Next** and then prepare your tape media for use with BackupAssist. Click the blue help icon in the top right-corner of the window if you need help with media preparation.
8. Click **Next** once you have prepared your tape media and then name your backup job and click **Finish**.

Backing up to disk

The following instructions are for users backing up data to a disk-based device, such as an external HDD, optical disc, REV drive, rdx drive, local directory, network location, or an FTP server, using the BackupAssist Zip Engine.

1. Launch BackupAssist, click **File > New backup job** and select **Zip** under 'File backup'.
2. Select the appropriate disk-based device for your backup destination and click **Next**.
3. Select an appropriate schedule and click **Next**.

- Configure destination settings for your backup device and then click **Next**. The following screenshot shows the device settings available for external HDD backups.

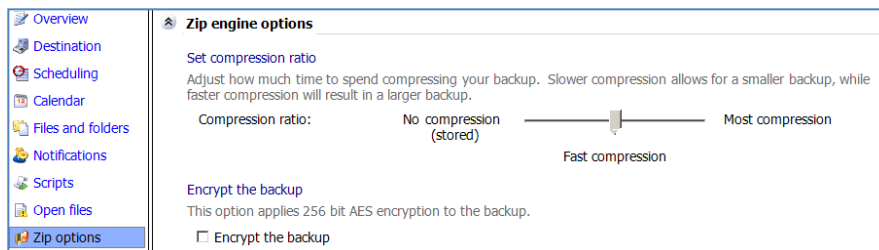


- Click the blue help icon in the top right-corner of the window if you need help with device settings.
- Select the files and folders you would like backed up to your disk-based backup device and click **Next**.
 - If you have selected a portable media device as your backup destination, such as an external HDD, a REV drive, an rdx drive or an optical disc drive, you will be asked to prepare your backup media for use with BackupAssist. Select appropriate **Media tracking** options and then click **Next** once you have prepared your backup media.
 - Name your backup job, confirm your settings, and then click **Finish**.

Configuring additional Zip Engine settings

To access Zip Engine specific settings:

- Click **Zip options** from the left menu:



- Set compression ratio:** drag the slider to “No compression” for faster backups but larger backup size, or to “Most compression” for smaller backup size but longer backup times. We recommend choosing “Fast compression” if compression is required.
- Encrypt the backup:** here you can choose to have your backup encrypted with a password using 256-bit AES encryption. It is important that you use a password that you can easily remember.

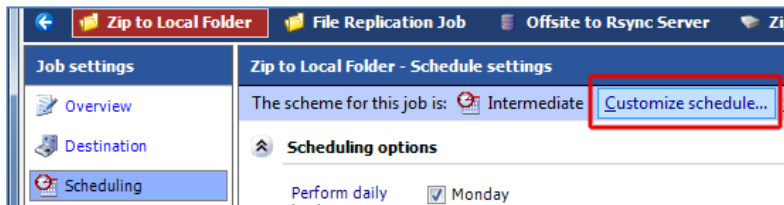
Important: if the password used to encrypt your backup is forgotten, you will not be able to recover your data. Passwords cannot be retrieved by the BackupAssist team or any third-party.

- Specify the number of compression / encryption threads:** on a multi-core or multi-processor computer, BackupAssist can use multiple threads to compress and encrypt files, which significantly reduces the time required to perform a backup. You should only modify this setting if you experience performance issues when a backup runs.
- Copy NTFS attributes and alternate data streams:** by default BackupAssist will store NTFS security attributes and alternate data streams of directories within your ZIP backup. Doing so means you are able to restore exact copies of your original data, including all security information.

Scheduling Full, Differential, Incremental and Copy backups

Zip jobs can be configured to run Full, Incremental, Differential and Copy backups. When a backup runs BackupAssist will check the archive bit of each file to determine if it has changed and needs to be backed up.

1. Select **Scheduling** from the left menu:
2. Click the **Customize schedule...** link near the top of the 'Scheduling settings' window.



3. To change the backup method for a single media item use the drop-down menu in the **Method** column.



Tuesday	Tuesday.zip	Incremental	Overwrite
Wednesday	Wednesday.zip	Full	Overwrite
Thursday	Thursday.zip	Differential	Overwrite
		Incremental	Overwrite
		Copy	Overwrite
		and Incremental	Overwrite

- **Full:** all data selected is backed up and each file is marked as having been backed up. To restore all your data you only need the most recent Full backup.
 - **Differential:** only data that has changed since the last full backup is copied to the backup device. You will both the last Full backup and last Differential backup to restore all your data.
 - **Incremental:** only data that has changed since the last backup (any type) is copied to the backup device. You will need the last Full backup as well as the all Incremental backups since the last full backup to perform a complete restore.
 - **Copy:** the same as a full backup except that files are not marked as having been backed up. Copy backups are useful if you have multiple jobs and need to back up certain files between Full and Incremental backup runs.
4. Once you have customized your schedule click **OK** and then click **Apply changes**.
 5. Select **Calendar** from the left menu to verify that your schedule is configured correctly

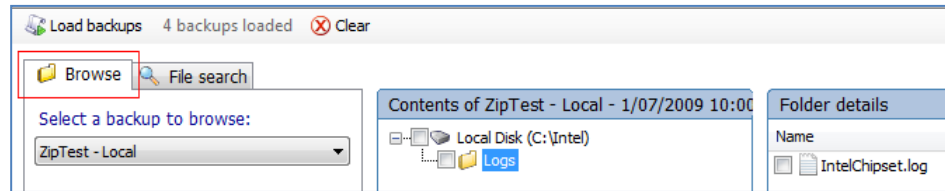
4. Restore instructions

The following section outlines how to restore from a Zip backup using BackupAssist's Restore Console.

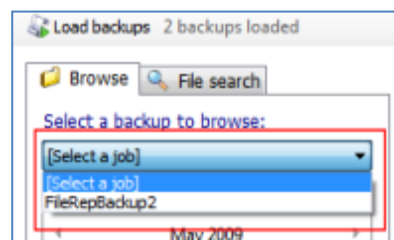
Whenever a ZIP backup runs a file catalogue is also created for the backup. The catalogue contains a list of files that were backed up, as well as the location where they were backed up from, and the destination they were backed up to. Catalogues are stored on both the local machine where BackupAssist is installed, and on the destination where the ZIP backups reside. Once catalogues have been loaded, you can browse the contents of your ZIP backups in the same way that you might browse your file system using windows explorer.

1. Click  **Restore** in the top navigation bar and then click  **BackupAssist Restore Console**.
2. The Restore Console will launch and you will be prompted with the **Load backups** screen:
 1. **Load all known backups:** this will load all catalogues located in the BackupAssist settings folder. Depending on the number of catalogues present, this may take some time to complete.
 2. **Load known backups:** this will load a specific number of the most recent backup catalogues.
 3. **Load backups from tape:** use this option to browse your tape drive for backup catalogues.

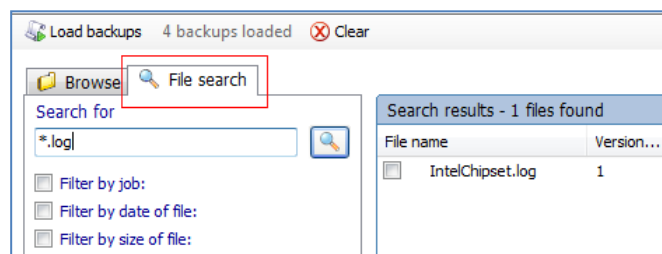
4. **Browse for backups:** use this option to browse to the path where ZIP backups are stored on a disk-based device (i.e. not a tape drive). This is useful if the catalogues are not available locally
3. Once your backup catalogues have loaded you can choose to either:
 1. **Browse:** if you know the date of the backup you wish to restore data from, or if you need to restore an entire backup set.



1. Use the drop-down menu to choose the job that corresponds to the ZIP backup that you want to restore from:



2. Use the calendar to select the date of the ZIP backup you want to restore from.
3. Use the middle panes to expand the loaded backup set and select the files, applications, System State, or mailboxes that you would like to restore.
2. **Search:** use Search if you want to restore a particular file, and you know the name of the file. The facility will search across all the ZIP backup catalogues that you have loaded. The search function also accepts wild card searches, such as *.log or *.doc.



1. Enter your search term in the available field.
2. (Optional) apply one or more search filters: by job, by date of file, or by size of file.
3. Click the **Search** button to perform your search.
4. A list of search results will be displayed to the right. Select the files and folders you would like to restore.
4. Once you've selected the files you wish to restore click **Restore to** at the bottom right of the window.
5. You will then be taken to the Restore confirmation screen where you can choose where to restore your files to: their original location or an alternate location.
6. Click **Restore** at the bottom right of the window to restore your data. Once the restore is complete the result will be printed to the left of the window. Click the blue link to view the restore report.