

OnlineBackupVault.com

Whitepaper – In-File Delta

The screenshot shows the homepage of OnlineBackupVault.com. At the top, there is a navigation menu with links for Home, Backup Plans, Speed Test, Privacy, Downloads, Testimonials, FAQ, About Us, Reseller, and Awards/Certifications. The main banner features a woman on the left, a central blue box with the text "FREE Backup Software", and a "click Here for 30 day FREE Trial" button. To the right of the banner is a "MEMBER AREA" with fields for "User name:" and "Password:", a "Login" button, and a link for "New member? Signup Now Forget Password?". Below the banner, there are three columns of content: "Why Use OnlineBackupVault" with a list of 9 points, "How To" Tutorial Video with a "Watch videos now" button, and "Testimonials" featuring a quote from Michael Drew, LIHA Elmore Health Care. At the bottom, there are sections for "Business Services" and "Residential Services". The browser's address bar at the bottom shows "Internet | Protected Mode: On" and a zoom level of "100%".

OnlineBackupVault.com

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Home Backup Plans Speed Test Privacy Downloads Testimonials FAQ About Us Reseller Awards/Certifications

Please feel free to contact us at 1-877-45-VAULT

click Here for 30 day FREE Trial

FREE Backup Software

MEMBER AREA

User name:

Password:

Login

New member? Signup Now Forget Password?

Why Use OnlineBackupVault

1. 72% of businesses that suffer major data loss disappear within 24 months.
2. Encrypted and Secure Data Transfer, Exceeds SOX/HIPPA privacy laws.
3. U.S. businesses lose over \$12 billion per year because of data loss.
4. 100% of hard disks will die! (3-5 yr average life span)
5. Remote Installation and Log Monitoring available!
6. Redundant Offsite Secure Servers.
7. Easy Setup and Installation.
8. Custom Plans Available.
9. Best service and rates!

Read More

Click for Home Plan Click for Business Plan

How To' Tutorial Video

Watch videos now

Heard Us On The Radio?

Listen to us now

Our Famous 5 minute Installation Guide

View guide now

Testimonials

By using online backup you'll prevent your service time company a lot of time and effort which would have otherwise ended up with lost or corrupt files leading to time and money expense and unnecessary stress. We are glad we have you on board.

Michael Drew, LIHA Elmore Health Care

Just wanted to say thank you for the great service you offer. We receive a daily confirmation notifying us of status, not having the headache of rotating tapes makes our lives alot easier. Its a great relief knowing that our data is safe and secure. 7183388500

S. Bistrzyk, Quality HealthCare

Submit your feedback

Business Services

OnlineBackupVault.Com is your one source for online, offsite, secure data backup! We provide an easy automated encrypted solution for backing up all your data servers and workstations. Our business packages include

Residential Services

OnlineBackupVault.Com is your one source for secure online data backup! We provide an easy automated secure solution for backing up your all your residential needs. All our Residential Vault plans include our "Smart

Internet | Protected Mode: On 100%

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1 Introduction

With In-File Delta technology, it is now possible to backup very large files daily. There are two different modes of operation available (“Differential” and “Incremental”) for In-File Delta backups. Both modes will use approximately the same amount of disk space storage on the server.

1.1 Differential Delta Mode

“Differential Delta” will facilitate ease of restore. The delta is generated by comparing with the latest uploaded “Full” file so the delta file can grow daily and uses more bandwidth during backup. For restoration, the full file and a single delta file is required to restore the file to a specific point-in-time.

1.2 Incremental Delta Mode

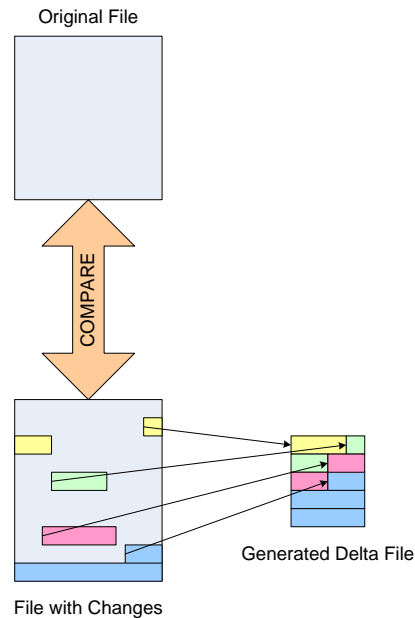
“Incremental Delta” will facilitate ease of backup. The delta is generated by comparing with the latest uploaded “Full” or “Delta” file so the delta file is the smallest possible and uses the least bandwidth during backup. For restoration, the full file and all delta files up to the required point-in-time is required to restore the file to a specific point-in-time.

The major differences are summarized in the following table:

In-File Delta Technology	Pros	Cons
<u>Differential</u> Always use the latest uploaded “Full” file to generate the delta file.	For restore, just need the full and a delta to recover to a specific point-in-time.	The daily delta file will be larger than incremental delta and needs more bandwidth to upload.
<u>Incremental</u> Always use the latest uploaded file (whether “Full” or “Delta”) to generate the delta file.	Daily delta file only shows the difference between the current file and previous upload file. The incremental delta file will be smaller than the differential delta file and so should upload faster.	For restore, need to use the full and all deltas up to the point-in-time to recover to a specific point-in-time. If any delta file is corrupted, the file can only be recovered up to the point-in-time before the corrupted delta.

2 Delta Generation

The delta is generated by extracting the differences between the latest file to backup and the original file stored on the server. Both files are divided into individual blocks using the same block size and the blocks compared to determine whether they're the same or different. The differences are extracted into the delta file.



3 Block Size Setting

Using a different block size setting can affect the speed of generation and size of the generated delta. Generally speaking, the relationship between the block size setting and the delta generated is as follows:

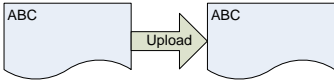
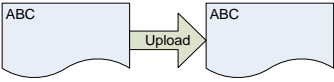
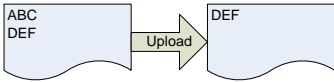
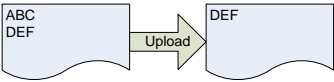
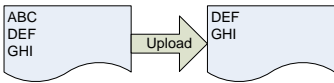
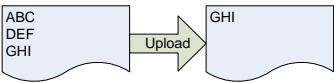
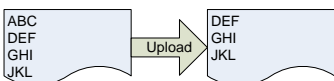
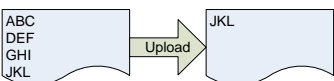
- The smaller the block size, the delta file generated will be smaller but takes longer to process.
- The larger the block size, the delta file generated will be larger but is faster to process.

The block size setting available are Auto, 1K, 2K, 4K, 8K, 16K, 32K, 64K, 128K, 256K, 512K and 1M. With "Auto", the block size used will be initially set using the backup file size according to the table below:

Initial Full File Size	Auto Block Size Used
> 15G	64K
> 8G ≤ 15G	32K
> 2G ≤ 8G	16K
> 500M ≤ 2G	8K
≤ 500M	4K

4 During Backup

Assume the initial full file is 100MB and grows daily by 10MB. The files uploaded to the server and the approximate storage space required is as follows:

#	File Size	Daily Upload to Server		Storage Space Required (MB) [*]	
		Differential	Incremental	Differential	Incremental
1	100 MB	 <p>Full File = 100MB</p>	 <p>Full File = 100MB</p>	<u>(Full) 100</u> Total = 100	<u>(Full) 100</u> Total = 100
2	110 MB	 <p>Delta = 10MB</p>	 <p>Delta1 = 10MB</p>	(Full) 100 <u>+ (Delta) 10</u> Total = 110	(Full) 100 <u>+ (Delta1) 10</u> Total = 110
3	120 MB	 <p>Delta = 20MB</p>	 <p>Delta2 = 10MB</p>	(Full) 100 <u>+ (Delta) 20</u> Total = 120	(Full) 100 + (Delta1) 10 <u>+ (Delta2) 10</u> Total = 120
4	130 MB	 <p>Delta = 30MB</p>	 <p>Delta3 = 10MB</p>	(Full) 100 <u>+ (Delta) 30</u> Total = 130	(Full) 100 + (Delta1) 10 + (Delta2) 10 <u>+ (Delta3) 10</u> Total = 130

* Storage space is approximate

5 During Restore

Assume restoring the various files backed up above.

