



"After more than a terabyte, our tape backup became nonviable. Abacus gives us the best insurance for our data available in the industry today."

- Jaques Lapierre, President  
Bluestar Canada

## Enterprise Business Solutions for Offsite Data Backup and Recovery

**Abacus**

[www.abacusBackups.com](http://www.abacusBackups.com)

## Abacus at a Glance:

- Dramatically reduce time to backup
- Replicate data offsite
- Easy to Manage Web-based interface
- Cross-platform
- Fully scalable

### **Enterprise business solutions for offsite data backup and recovery.**

Since our inception in 1996, the data storage industry has witnessed the start of the shift away from sole reliance on tape backup, and more toward remote disk-to-disk backup solutions. And with good reason: According to a report by ESG, nearly one-quarter (24%) of companies say that twenty percent (20%) or more of their tape-based backups fail. Storage Magazine reported a higher failure rate at 50%. As such, dependence on tape backup alone represents an unacceptable level of risk.

Fortunately, advances in technology have made remote offsite and online backup more viable. Specifically this means the ability to complete a backup of larger data sets within tighter windows of time, and with less drain on the WAN. Centralized backup solutions like those from Abacus reduce the risk involved with a tape-only approach, and add an important layer of security to a company's DR planning. Abacus helps keep the responsibility of data backup where it belongs: with the experts at your central corporate data center, and not with the non-technical staff of your remote office.

### **Enabling a Disaster Recovery Plan that's Comprehensive.**

Abacus can be combined with your existing tape backup solution for a more comprehensive disaster recovery plan. Abacus is a disaster recovery solution that provides cost-effective business continuity for Microsoft Exchange, Microsoft SQL Server, Oracle, virtual systems, file servers, and many other applications. Features such as built-in bandwidth control and an unlimited recovery window allows data to be replicated to a remote source, far from harms way of a disaster such as hurricanes, tornadoes, and brown-outs. Likewise, data can be restored within minutes.

### **Reducing Time to Backup: How Abacus Works**

Abacus significantly reduces a backup job's cycle time. This is accomplished through Abacus' ability to backup data at the bit level. Abacus utilizes a binary patch technology to compare a modified file to its original counterpart, and extracts the differences between the two files into a third file, which we call a "delta file".

This "delta file" is compressed into what is known as a "Patch". The patch file is often 85% to 99.9% smaller than the original file.

As such, Binary Patching significantly reduces the time (and corresponding use of system resources [i.e.: bandwidth]) required to complete the backup.

## Binary Patching is "Totally Transparent Technology"

You might never notice, but ABACUS tracks (and lets you control) both how many times the delta file should be generated, and how large the delta file can grow, before another full backup of the original file is performed again.

Likewise, when you need to restore a file, just select the file and/or directory, and choose the archived, date-stamped version you require, and ABACUS does the rest.

Binary Patching is not new. Originally developed by software vendors as a way of keeping their commercial application downloads updated, it is used today by virtually every major software shop in the world.

### Binary Patch Statistics

The table below shows the effects (and benefits) of Binary Patching on various types of data. For each file category, we backed up an original file, and then made modifications to each. The results speak for themselves.

File Type	Orig. Size (MB)	Modification	New File Size (MB)	Delta Size (MB)	Savings % (Time)
BMP (8-bit)	307.5	Added text to center of image	308.2	2.6	99.15%
BMP (8-bit)	308.2	Added text to background of image	308.2	7.9	97.45%
PSD File	515.4	Added new layer and added text to new layer	524.7	4.5	99.15%
Plain Text	37.1	Added text to beginning, middle & end of file	39.1	1.3	96.72%
MS Word	431.6	Inserted clip art (35K); moved and added text	495.6	52.1	89.48%
MS Word	431.6	Copied text from middle and pasted at end	448.5	13.6	90.60%
MS Excel	108.5	Inserted new worksheet; created basic calculation and added 3D Bar-Graph	114.1	5.9	94.82%
MS Access	1,802.2	Added 3 new records	1,802.2	5.7	99.68%

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## Abacus Backups Technical Specifications:

**Summary:** Pre-configured NAS appliance for offsite replication for an entire network. Creates image snapshots and time-stamped file backups of database files, image and text. Web accessible management console, detailed email reporting. Three year warranty on parts and labor. Supports SQL, Exchange, Oracle, MySQL, Notes, Domino Databases, bare-metal restore.

Hardware Features	NBS	NBS 825	NBS 1625	NBS 4825	NBS 5290
<b>Storage Maximum</b>	3 TB	7 TB	10.5 TB	17.5 TB	5.25 TB
<b>Network</b>	Two Intel PRO / 1000	Two Intel PRO / 1000	Two Intel PRO / 1000	Two Intel PRO / 1000	Two Intel PRO / 1000
<b>Appliance Management</b>	Intel Server Management 8.0	Intel Server Management 8.0		Intel Server Management 8.0	Intel Server Management 8.0
<b>Bays (Hot Swappable)</b>	8	8	16	40	8
<b>Chassis Dimensions</b>	19" x 3.5" x 26.4"	19" x 3.5" x 26.4"	16 SATA 3U CHASSIS 650W REDUNDANT	8u: 24" x 18" x 33"	19" x 3.5" x 26.4"
<b>Power Supply</b>	2 x 500W Hot Swappable power modules redundant	2 x 500W Hot Swappable power modules redundant	2 x 500W Hot Swappable power modules redundant	2 x 500W Hot Swappable power modules redundant	2 x 500W Hot Swappable power modules redundant
<b>RAID</b>	X	X	X	Raid 5	X
Software Features	NBS	NBS 825	NBS 1625	NBS 4825	NBS 5290
<b>Host Connections (maximum)</b>	5	10	15	25	30
<b>"Bare Metal" Restore</b>	N/A	N/A	Option	Option	Option
<b>Time Mark</b>	30	30	Unlimited	Unlimited	Unlimited
<b>Client Platforms</b>	Windows, Unix, Linux, Novell, Mac, Sun	Windows, Unix, Linux, Novell, Mac, Sun	Windows, Unix, Linux, Novell, Mac, Sun	Windows, Unix, Linux, Novell, Mac, Sun	Windows, Unix, Linux, Novell, Mac, Sun
<b>Binary Patch</b>	✓	✓	✓	✓	✓
<b>Compression (Text)</b>	1:4	1:4	1:4	1:4	1:4
<b>Open File Backup</b>	Option	Option	✓	✓	✓

<b>Database Snapshot Agents</b>	SQL, Exchange, Oracle, MySQL, Notes, Domino	SQL, Exchange, Oracle, MySQL, Notes, Domino	SQL, Exchange, Oracle, MySQL, Notes, Domino	SQL, Exchange, Oracle, MySQL, Notes, Domino	SQL, Exchange, Oracle, MySQL, Notes, Domino
<b>Web Console Restore</b>	✓	✓	✓	✓	✓
<b>Simultaneous Backup &amp; Recovery</b>	✓	✓	✓	✓	✓
<b>Parity Bit Check</b>	✓	✓	✓	✓	✓
<b>Upgrades</b>	Include for 12 months	Include for 12 months	Include for 12 months	Include for 12 months	Include for 12 months
<b>Warranty</b>	3 years	3 years	3 years	3 years	3 years
<b>Email Reporting</b>	✓	✓	✓	✓	✓
<b>Telephone Support</b>	✓	✓	✓	✓	✓
<b>Phone Technician support one year</b>	✓	✓	✓	✓	✓