Case study: BackupAssist on SBS 2008

Superior protection compared to traditional tape backups, with none of the drawbacks

• Slashes recovery times • Simple email archiving • Internet offsite protection • Use one product, not multiple

"We're delighted to be able to offer a new solution that offers better protection at a better price, with no headaches!

It's far superior in every way!"

- Darren Webb, Webbtech Consulting

Webbtech Consulting is located in Point Cook near Melbourne, Australia.

Darren's background requirements

In the past, we had to use a whole different combination of products, programming and software like Symantec LiveState to backup up our clients' SBS 2003 servers. It was expensive and time consuming to deal with multiple products and vendors... and with 90% of our customers running Small Business Servers the frustration factor was phenomenal!

When we upgraded our clients to SBS 2008 this situation looked like it was about to get even worse! But then I started talking about better solutions with Linus Chang at BackupAssist.

Our clients have 4 main requirements:

1. Recovery from catastrophic failure – rebuild an entire machine quickly
2. Data backup and retention - keep weekly, monthly and quarterly backups using 10 tapes
3. Offsite protection - taking the backups offsite
4. Reduce costs

Below is the solution Linus helped us create:

About WebbTech

Since 2002, WebbTech Consulting has specialized in providing complete network, server and desktop support solutions for small to medium organizations.

With Microsoft Certified System engineers and specific expertise in Microsoft server operating systems and applications WebbTech Consulting is a leading one stop IT service provider for small to medium business.

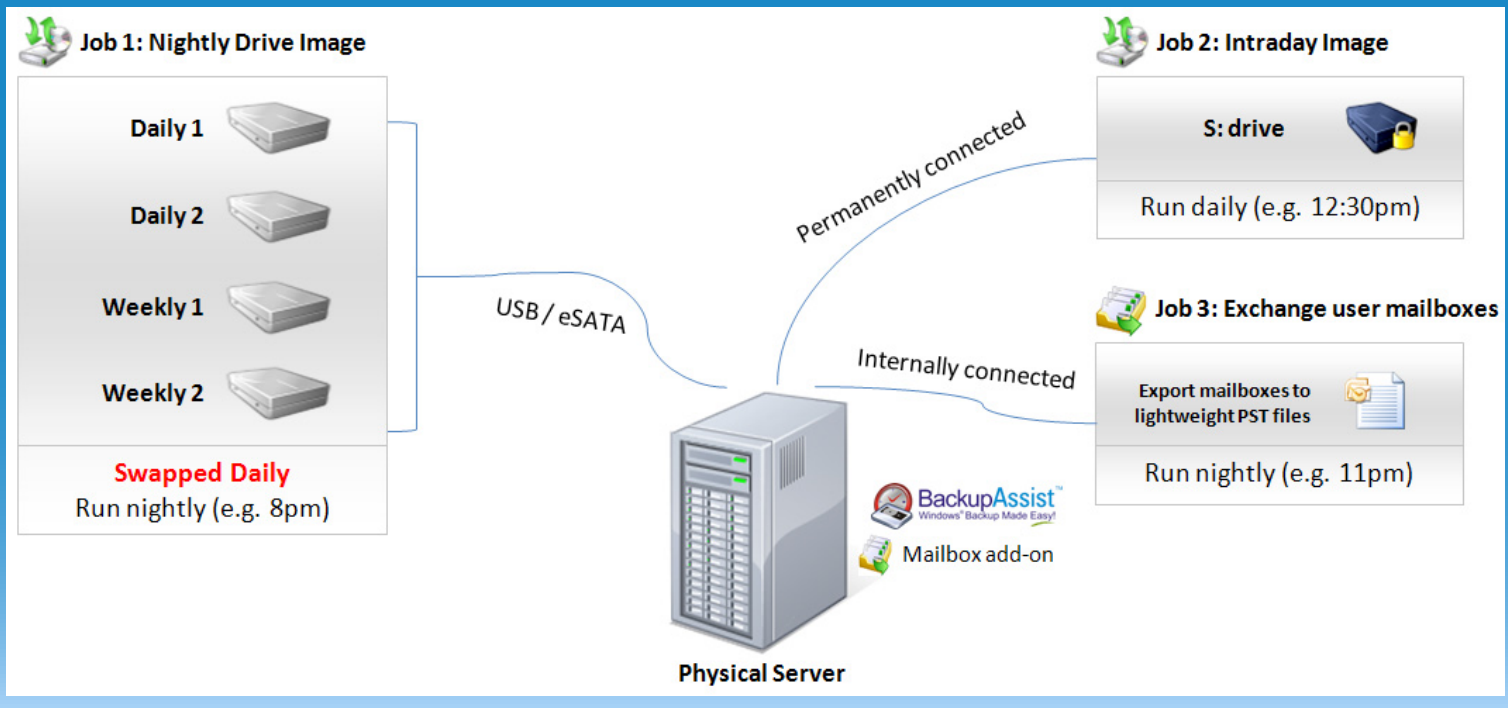
Linus' new disk-based solution

Requirement	Old solution - SBS 2003	New solution - SBS 2008	Advantages of new solution
Recovery from catastrophic failure.	LiveState image to NAS.	BackupAssist image the machine to USB HDD, with 5 USB HDDs.	Save $$$ on Livestate license. Fast bare metal restore to dissimilar hardware.
Data backup and data retention.	BackupAssist to backup data to tape drive, with 10 tapes.	Two images done per day, giving 2 restore points per day. Hundreds of days of history are kept thanks to the small incremental images. BackupAssist Mailbox Add-on to archive and backup individual emails.	Keep hundreds of days of history, not just 10 discrete restore points. Fast differential backups. Easy on-site restores. Email items are backed up and archived, helping with compliance circumstances.
Mailbox backup to lightweight PST files.	Expensive third party software required.	Use BackupAssist's Exchange Mailbox add-on.	Fast, simple and inexpensive (US $149.00). Runs on both 32 and 64 bit OS.
Offsite backups.	Take the tapes offsite.	Take USB HDD offsite.	USB notebook HDDs are cheap – US $119.99 for 500GB – and upgradable.
		Optionally: use BackupAssist for Rsync to transfer data to offsite Rsync server via Internet.	Client pays monthly fees for Rsync data hosting.
Reduce costs.	**Old cost**: US $3927.49.	**New cost**: US $1017.95.	Save approx US $2909.54.

The new strategy

Standard setup - appropriate for most SMBs

- **fast disaster recovery** - achieved through the drive imaging jobs - never lose more than 1/2 day of work
- **offsite protection** - taking the external HDDs offsite
- **recovery points** - recover from hundreds of backup points, thanks to the incremental drive images
- **Exchange mailbox protection** - export mail items to lightweight PST files for rapid recovery



Step - by - step instructions (familarity with BackupAssist is assumed)

1. **Connect your permanently connected 1.5TB HDD and format it**

   Connect the 1.5TB hard drive via eSATA, or USB. This is the permanently connected backup device, powered by its own power supply, for backup. Assign the new drive letter a label such as S: Image backups.

2. **Format each of the 2.5" USB HDDs**

   Connect them one-by-one, and make sure they have the same drive letter. For example, assign them the drive letter N:

3. **Set up the nightly drive image backup job**

   Choose to image the server to USB HDD at 8pm, using the Daily + Weekly scheme, with 2 daily drives and 2 weekly drives. You'll have 4 drives to swap:

   Daily 1 – every Tuesday and Thursday

   Daily 2 – every Wednesday and Friday

   Week 1 – every second Monday

   Week 2 – every second Monday

   (Another variation is to use 6 HDDs – 2 weekly drives and 4 daily drives).

   You can expect around 100GB per hour backup speed to 2.5" USB HDDs for full backups. Nightly incremental backups can be as fast as a few minutes.

4. **Set up the intraday drive image backup job**

   Set up another imaging job to run during the day to your permanently connected partition - one of the 750GB partitions created in Step 1. Backup to a local directory, choosing S:\ as the path, and set it to backup at say 12:30pm, or a time where load is lightest and most people are at lunch.

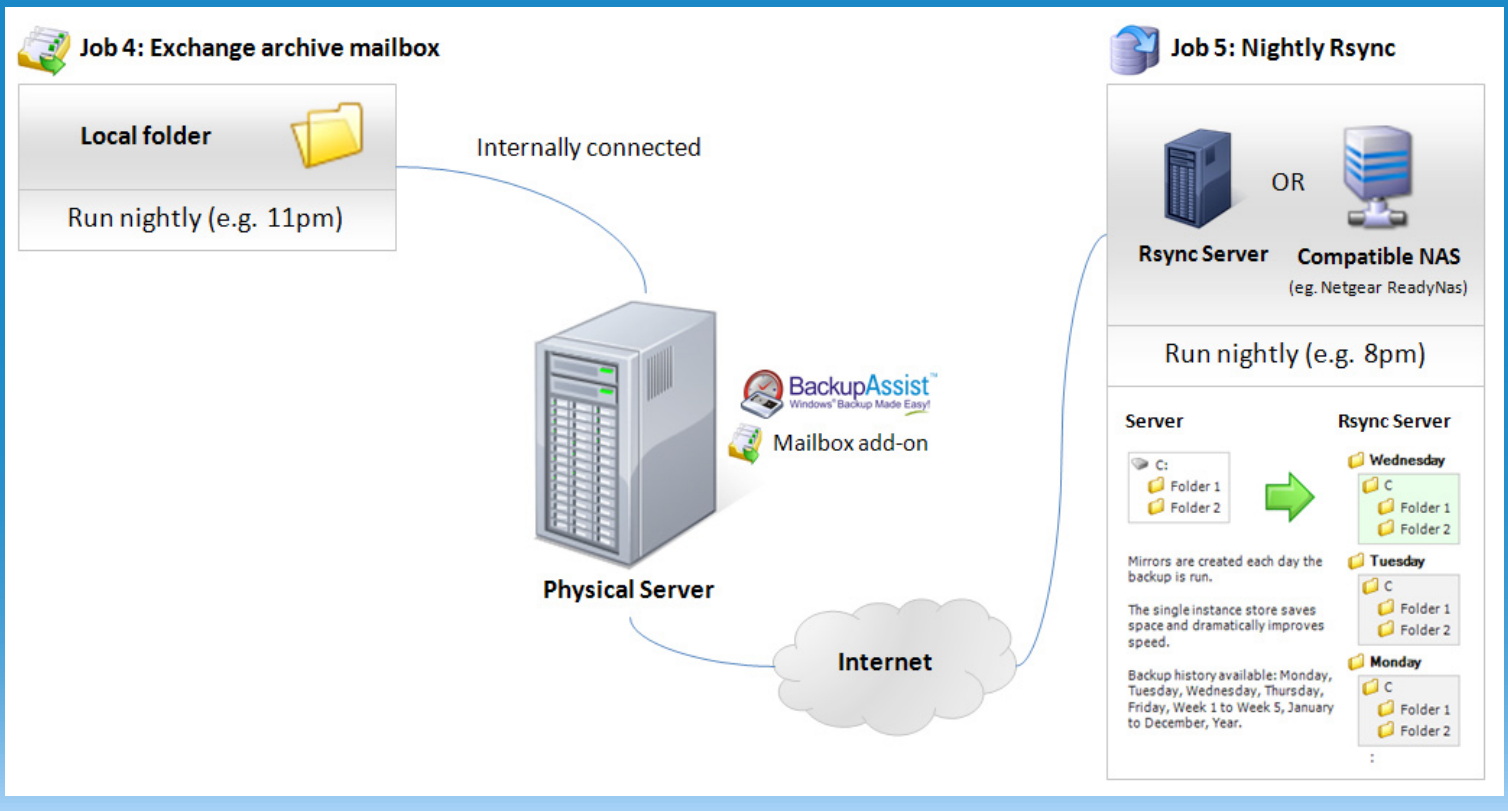
5. **Set up the Exchange Mailbox job – user mailboxes**

   Set up an Exchange Mailbox backup job to export all users' mailboxes to PST on a daily basis.

BackupAssist™
Windows® Backup Made Easy!

Advanced setup - providing extra offsite protection and email archiving

- **simple Exchange archiving** - capture every incoming & outgoing and export to lightweight PST
- **fully automated offsite** - thanks to the bandwidth efficient Rsync job



Step - by - step instructions (familarity with BackupAssist is assumed)

1. **Set up the Exchange Mailbox job – archiving**

   Set up an Exchange Mailbox backup job to export the Archive mailbox to PST, and delete the original. Refer to our Exchange Archiving Cheat Sheet for more details.

2. **Set up the nightly Rsync backup**

   Set up an additional job, using Rsync, to transfer critical data offsite. Select the client's important data. You may also choose to Rsync the Exchange database by selecting the Mailbox folder. If choosing to backup Exchange, we recommend that you activate the VSS Writers (in the Open Files tab) and choose a Copy backup. (The Exchange logs will be retained in the Rsync backup, but will be deleted by the drive image jobs.) You can also select the PST files (created by the jobs in steps 6 and 7) for remote backup.

3. **Seed the Rsync backup to a USB HDD**

   Seed your Rsync backup to a USB HDD. This will copy data to your USB HDD, which you can then physically transport and connect to your Rsync server. Then you can connect it to your Rsync server and run a script to load the data onto the server. (See the Rsync White Paper for more details).

Recovery scenarios overview

Scenario	Solution
Server stolen / fire destroys office	Bare metal restore of system from last USB HDD offsite image backup (generally from the previous night). Where possible, update the data on the system from the last Rsync backup to minimize data loss. Maximum data loss: 1 day.
Hardware failure, hard drives wiped	Restore system from the last image backup – either the nightly USB HDD backup, or the intraday backup to the permanently connected HDD. Maximum data loss: ½ day.
User accidentally deletes a file	Look for a shadow copy that may contain the file. If not found, restore from the File Replication backup. You can search for files in your backup set, and also find unique versions of files, going back hundreds of days. If not found, restore from the image backup.
User sabotage – gradual or sudden deletion of files and emails	**File protection:** the image backups will record the state of your file system every time the backup is run, for hundreds of days (depending on space on backup disk and the amount of daily changes). Files that were deleted 90, 50, or 5 days ago will still be in the backup from those points in time. Simply locate them and copy the files back. **Email protection:** users who engage in sabotage will be caught out by the PST mail backups. Every incoming and outgoing email will be captured by the Archiving job set up in step 7, meaning that if a user deletes emails, it will still be captured by Exchange Journaling.
Virus corruption	Restore system from drive image backup to the point in time before the virus hit.
Exchange Server Corruption	Restore Exchange Server from the last good backup.
Individual mailbox or mail items deleted	Copy the last PST for the user in question to the desktop of that user, open the PST in Outlook and drag 'n' drop the items back.
Natural disaster – server and all onsite / offsite backups destroyed	Rebuild your server and network. Restore your data from the Rsync backups. For this situation, we recommend storing your Rsync backups in a different city, state or country.

Example price comparison (prices are in US dollars)

Old solution - indicative pricing

Symantec LiveState (Backup Exec System Recovery) SBS Edition	$812.11
BackupAssist	$249.00
NAS	$599.99
HDD 1 TB	$87.99
LTO-2 Tape Drive	$1385.95
10 tapes + cleaning tape	$463.45
SCSI controller	$329.00
Total	$3927.49

New solution - indicative pricing

BackupAssist plus Exchange Mailbox Add-on	$378.00
USB / eSATA HDD 1.5TB	$159.99
2.5" USB HDD x4	$479.96
Total	**$1017.95**

Optional extras for remote backup via Internet

BackupAssist for Rsync	$129.00
Rsync hosting	$50 to $100 per month

Need help designing your own backup solution?

If you're in a similar situation to Darren and you need help designing your own custom solution, drop Linus an email at AskLinus@BackupAssist.com with your requirements and contact details and he'll be happy to see if he can help.

BackupAssist™
Windows® Backup Made Easy!