











External Hard Drive Backup • Higher cost than CD/DVDs

- Can be automatic process
- Cabling to PC
 Could be wireless NAS
- Stored where?

Common Backup Procedures

CD/DVD and external hard drive backups are effective for the assumed data losses

- hard disk failure
- PC failure
- Operator error



Common Backup Procedures

CD/DVD and external hard drive backups are usually located where the computer is.

Loss of one means the loss of both.



Off-site Backup

If you have a good highly available Internet connection, an Internet backup is highly recommended.

- Automatic backup
 You don't have to remember
- Located in a facility that is safe from any hazard that could destroy your facility(RV)
- Not that expensive

Internet Backup

How does Internet Backup work?

At the first startup, the data you choose to be backed up will be copied to the Backup Service (Good time to be on free Wi-Fi)

After that, any changed file you chose will be copied to the service.

The copy process can be immediately as a file is closed or on a scheduled basis (example: middle of the night).

The copy service usually can be suspended when necessary.

Internet Backup

How does Internet Backup work?

For most Backup Services, the online data is a mirror of your local data, i.e. any file deleted on your PC will be deleted from the online store during update process.

A file deleted by accident locally will be reflected in the online store eventually.

Some of the Backup Services are starting to delay deleting files from the online store to give you a chance to reconsider the deletion.

Internet Backup

Some of the Online Services are Archiving Services.

Archiving services will keep files deleted as well as generations of files. (i.e. as files are changed, the old and new versions are retained)

A consideration of archiving versus backup is online space. Depending on the Service, each version of an archived file may count against your online store allocation.

Another consideration is how many levels of versions are retained? 5 versions, all versions, for three days?

Internet Backup

Things to consider.

How much storage at the Backup Service will you use (GBytes)

Some services are unlimited storage Some charge by the Gbyte of storage used

Is your Internet service data upload monitored? Air-Card (5 GB per month)

Do you use an external disk drive?

Internet Backup

What to backup

 Data The irreplaceable stuff

What not to backup

- Programs
 Usually needs to be reinstalled in a recovery anyways.
- Keep you programs and OS CDs/DVDs in a place where you can find them!

Problems with Internet Backup

If you wrongly deleted a file and know it right away, you can retrieve it from the Backup Service. After the backup process catches up, the deleted file will also be deleted from the Backup Service. Not a issue with an Archive Service.

There can be files that are very large and are changed often. (example the tracking database for Picasa). If you are on a data traffic monitored Internet service, you might want to protect those files differently.

Your photos are not replaceable, the tracking database can be recreated.

Why worry about data?

Your data is:

- As valuable as diamonds
- As fragile as a tomato
- And you can't see it

It needs to be stored someplace safe, and in your RV is not the place.

Sample Pricing

| Brand | Link | | Storage | Multiple PCs | Annual | Ext Drive |
|---------------|---------------------------------|----|------------|-----------------|----------|-----------|
| Acronis | http://www.acronis.com | A* | 250GB | Yes | \$49.95 | Yes |
| Backblaze | http://www.backblaze.com/ | A* | Unlimited | Yes/\$ | \$50.00 | Yes* |
| Carbonite | http://www.carbonite.com/ | в | Unlimited* | No | \$54.95 | No |
| Carbonite Pro | http://www.carbonitepro.com/ | в | 20GB | Yes | \$120.00 | Yes |
| iBackup | http://www.ibackup.com/ | в | 10GB | Yes | \$99.50 | Yes |
| iDrive | http://www.idrive.com/ | A | 150GB | Yes* | \$49.95 | Yes |
| Mozy Home | http://mozy.com/ | в | Unlimited | No | \$54.45 | Yes |
| Mozy Home | http://mozy.com/ | в | 2GB | No | free | Yes |
| SOS Backup | http://www.sosonlinebackup.com/ | A* | 50GB | Yes | \$79.95 | Yes |
| SugarSync | http://www,sugarsync.com | А | 30GB | Yes | \$49.99 | No |

Considerations

How are file versions counted? In the cumulative space counted or just the size of the last version.

Are there other features available, like shared folders between the family $\ensuremath{\mathsf{PCs}}\xspace$

Is you data available via web access?

Can a smartphone be backed up?

If you use a local mail client (Outlook, Outlook Express, Thunderbird), is your mail file handled?

Discussion