Creating a local and off-site backup strategy for your MDaemon server using BackupAssist.

Products used:	BackupAssist for Windows & MDaemon email server
Author:	Neil Perry (Senior Technical Consultant)
Date created:	17/12/09

Zen Software Ltd

Web: www.zensoftware.co.uk
Email: sales@zensoftware.co.uk
Tel: 0161 660 5738

Overview

This short guide aims to highlight how a small business using MDaemon email server, can benefit from the type of comprehensive backup solution more commonly associated with larger organisations, at a fraction of the cost and complexity by using BackupAssist.

Data loss can happen for a whole variety of reasons. Whether it's due to users deleting emails in error, or as a result of server hardware failure such as a crashed hard drive, we believe your business's backup strategy should provide a quick and easy way to recover your data while avoiding any disruption to service.

Another area you may wish to give some consideration is disaster recovery. How will you recover your company's data in the unlikely event there's a theft, fire or even a flood? If you're sending your backed up data to a location in the same office, is there the potential for that to be lost too? We think a good backup strategy should in most cases factor in a remote backup policy of some kind.

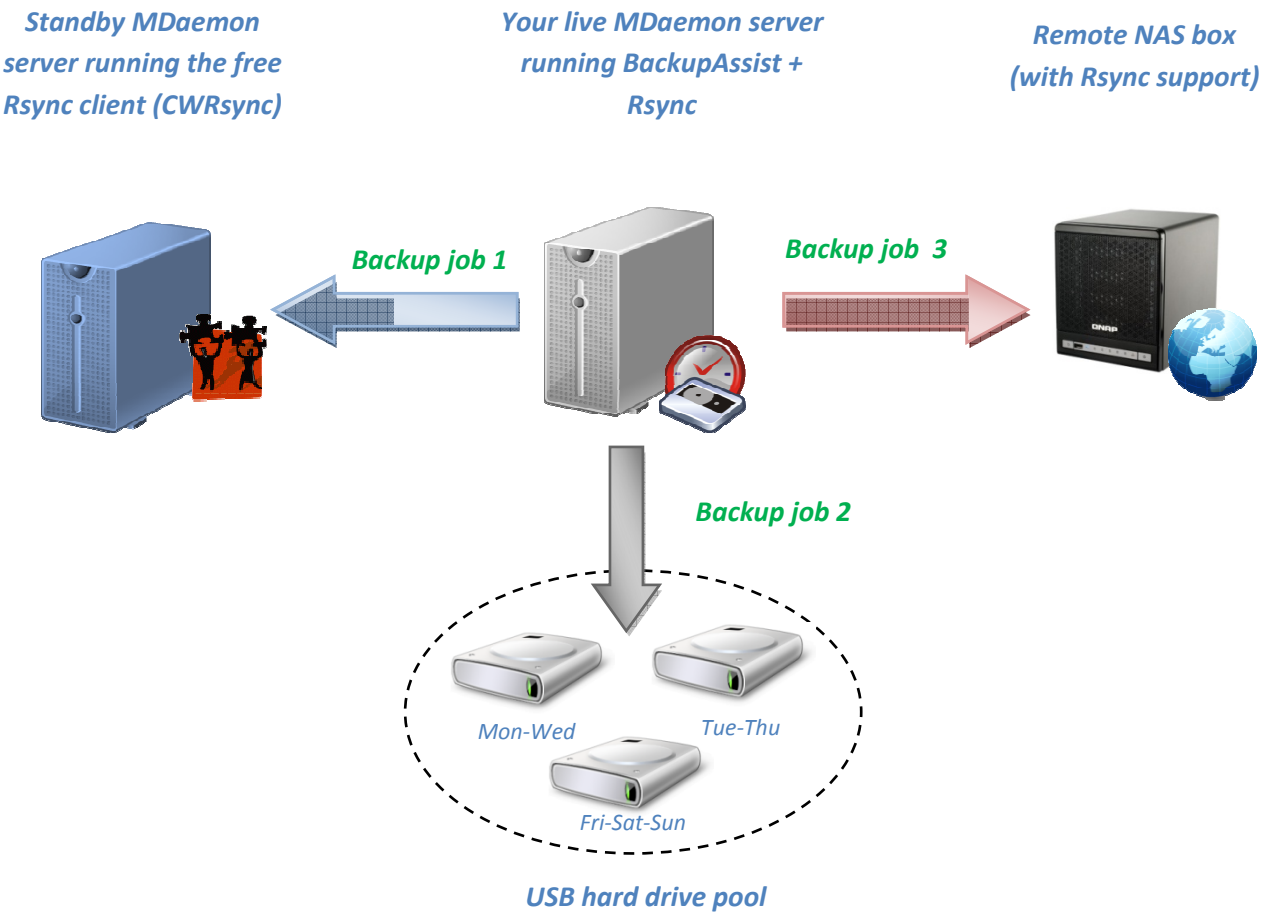
Fortunately with BackupAssist, by layering a number of different backup jobs, it's possible to quickly create a truly redundant backup policy that's comprehensive enough to recover your data in any of these situations.

It's worth noting that the range of supported media types within BackupAssist is extensive, however for the following example we'll walk through our recommended solution for a common MDaemon deployment using "Rsync" and "file replication".

Zen Software Ltd

Web: www.zensoftware.co.uk
Email: sales@zensoftware.co.uk
Tel: 0161 660 5738

Diagram 1 (three backup jobs comprising both local and off-site options)



Zen Software Ltd

Web: www.zensoftware.co.uk
Email: sales@zensoftware.co.uk
Tel: 0161 660 5738

Backup Job 1 (hourly mirrored copy sent to a local Rsync server)

The purpose of this job is to provide a standby MDaemon server ready for deployment in the event of a main server hardware failure.

This job replicates the whole MDaemon folder structure to a remote server using the Rsync service. The remote server stores a complete mirror of the MDaemon installation data and is then updated hourly with the Bit level changes to the email data. In the event of a server failure, this remote server can quickly be activated to take over the role of the main server until it is ready to resume operation.

When configuring the Rsync job, we ensure care is taken to maintain the same path on the remote server as this allows the MDaemon service to be started whenever with the configuration paths remaining valid.

The remote server would usually be located on the same LAN subnet so if required, it can take over the role of the primary MDaemon server simply by using the same IP address.

Benefits:

- Quick deployment of backup MDaemon server
- Data updated hourly
- Low system load on primary server
- Single MDaemon licence required (only a single server is operational at any one time)

For a detailed walkthrough guide on how to configure an Rsync mirror of MDaemon please see the knowledgebase article on our Web site here:-

http://www.zensoftware.co.uk/kb/article.aspx?id=10309&cNode=0E6M4T

Zen Software Ltd

Web: www.zensoftware.co.uk
Email: sales@zensoftware.co.uk
Tel: 0161 660 5738

Backup Job 2 (daily archive to USB hard drive pool)

The purpose of this job is to provide a daily archive with a retention period of at least 100 days from which you can restore any given user's email message in the event it's been deleted in error.

In this example, every day (usually during a quiet period), a copy of the MDaemon folder structure is replicated to one of three USB hard drives. Each USB drive is designated to two specific days with the exception of the third which covers three (we're making the assumption here that most offices have limited or no staff cover over the weekend). Drive one would span Monday-Wednesday, drive two, Tuesday-Thursday and then drive three, Friday-Saturday-Sunday.

The hard drives are labelled within BackupAssist as described above and as a result, each day the software will send an alert to a contact you can specify within the software to swap the USB drive, while the remaining two drives are then taken off site.

By utilising BackupAssist's file replication engine which includes "Single Instance Store" technology, many full file backups of the MDaemon folder structure can fit comfortably on relatively small and low cost USB hard drives. On a typical MDaemon server we estimate that on average only 5% of the data actually changes daily so if the MDaemon installation was 30GB you'd be able to fit more than 100 full backups onto a 100GB USB hard drive! With smaller MDaemon installations you may even find that some of the larger USB pen drives may be sufficient.

Benefits:

- Minimum of 100 day archive
- Low cost USB Hard drives (100GB in example)
- Off site of previous weekday backup
- Easy access to data on any PC (BackupAssist not required)

For a detailed walkthrough guide on how to configure a file replication job to create daily archives of the MDaemon data, please follow this knowledgebase article:-

http://www.zensoftware.co.uk/kb/article.aspx?id=10310&cNode=0E6M4T

Backup Job 3 (daily copy to remote Rsync NAS)

The purpose of this job is to provide an off-site, seven day archive of the MDaemon server. This provides true disaster recovery against a main site catastrophe.

Historically, solutions that enabled remote backups would often be both complex and expensive, meaning that on the whole they were limited to the larger organisations. With BackupAssist it's possible for the smallest of companies to also enjoy that same peace of mind provided by automatic off site backups.

In a typical small business, the remote storage location really doesn't need to be an expensive dedicated hosting platform. One common solution is to use a member of staff's (typically a senior member of system administrator) home location. BackupAssist's Rsync engine makes it possible to utilise a low cost broadband connection and NAS device to run full daily backups in minutes.

Dedicated NAS devices offer a great low cost solution to remote storage and even relatively large 1TB raid NAS servers can now cost as little at £300. For an even less expensive solution it is possible use a remote PC; however we'd recommend choosing the NAS option for both simplicity of installation and overall performance.

There are no shortage of NAS boxes available on the market today, however when you're choosing a device, the important feature to look for is support for the Rsync protocol, ideally with SSH for secure connections (recommended but not essential). For reference, we've found that devices from QNAP offer some of the best options at the low end, with the NetGear ReadyNAS range coming a close second.

Seeding data

Once an Rsync job is created, the first time it runs it's likely it will need to transmit a large amount of data across your Internet connection while it takes the first full copy of your data. This may not be a problem if you schedule the job out of hours, however it's worth being aware that it can take quite some time depending on the amount of data and may also use a significant amount of bandwidth on both your local and remote internet connections.

To tackle these potential issues, BackupAssist offers the option to seed your first full backup to a local USB hard drive. Once complete, it can be taken to the remote site and copied manually to the NAS device over a much faster connection. Another option if your NAS device is portable, is to configure it on the local business network initially, run the first seed job while you're able to make use of the faster local transfer speeds and then move the device to its remote location (changing the job location to reflect the remote or local IP details).

This job replicates the whole MDaemon folder structure to a remote server using the Rsync service. The remote server then stores a seven day rotating archive of the MDaemon installation and is

updated daily to reflect any changes to the email data. By utilising BackupAssist's "single instance store" feature, the remote Rsync server can retain seven full daily backups of the MDaemon data but using only a fraction of the space you'd expect. On a typical server only 5% of data changes daily so seven day's worth of backups would take up less space than two full backups.

In the event of a major incident such as theft, fire or flood, a new server can be quickly built from this remotely held backup of your data. It's worth noting that the remote archive can also be used to recover specific user's data should the local archive be damaged in any way.

Benefits:

- Seven day archive of data changes
- Fast recovery of a large amount of data
- Easy recovery of specific files and folders
- Full off site solution to protect against disaster recovery
- High security as remote data is at trusted location
- Low cost for large amount of storage

To find out in more detail how to set up an Rsync job to archive MDaemon to a remote Rsync server, please feel free to take a look at our knowledgebase walkthrough article:

http://www.zensoftware.co.uk/kb/article.aspx?id=10311&cNode=0E6M4T

Want to know more?

For more information on BackupAssist or MDaemon, including free 30 day trials of both visit www.zensoftware.co.uk or call us on **0161 660 5738.**