

## DATA BACKUP TECHNICAL SPECIFICATION

<b>Data transfer methods</b>	
<p>Amanda backup agent, suitable for:</p> <ul style="list-style-type: none"> <li>Daily offsite tape backups of Linux servers</li> <li>Data archiving of Linux servers</li> </ul>	<p>A client agent (Amanda) is installed on each server that is to be backed up. Configuration occurs either by Anchor or the client.</p> <p>Amanda compresses all data on the client server before transmitting it to the backup server.</p> <p>Amanda automatically schedules either a full or incremental backup to occur each day.</p> <p>Databases are dumped to the file system prior to the commencement of the backup process to ensure data is backed up in a consistent state. Depending on database size up to 3 copies of databases are maintained on the local file system.</p>
<p>Disc image, suitable for:</p> <ul style="list-style-type: none"> <li>Daily offsite tape backups of Windows Servers</li> <li>Data archiving of Windows servers</li> <li>Onsite backup of Windows servers</li> </ul>	<p>A disc image of the server is created locally first using NT Backup. The image is copied to backup server via a network file share. The data is then copied on to tape.</p> <p>Database dumps are performed using MS SQL maintenance plan to ensure data is backed up in a consistent state.</p>
<p>FTP/Rsync, suitable for:</p> <ul style="list-style-type: none"> <li>Daily offsite tape backups of Windows and Linux servers</li> <li>Data archiving of Windows and Linux servers</li> <li>Onsite backup of Windows and Linux servers</li> </ul>	<p>A user account is provided on the backup server. The client is able to use ftp or rsync to copy data to or from the server at any time. Any data stored on the backup server during the backup window is copied to tape each day.</p> <p>The client is responsible for ensuring the data to be backed up has been copied to the server each day.</p>
<b>Backup network specifications</b>	
Speed	100 Mbps
Network addresses	Manual allocation on a private IP range. Configured on a separate VLAN to Internet traffic.
<b>Backup Window</b>	
Copying of data to the backup server	Commences from 1am onwards. Target completion time is 6am. Depending on the size of backups the window may extend beyond the target finish time.
Dumping databases to the file system	Windows systems perform database dump to the file system at 11pm, Linux systems at midnight
Disc image	Windows creates an image of the drive to a file on the file system at midnight.
<b>Data Restoration</b>	
Daily offsite tape backup	<p>Restoration of data must be requested by contacting Anchor support. The data can be restored from any day within the defined tape rotation scheme.</p> <p>Restoration of data from tape takes 4 to 8 hours due to the time required to spool through the tape set to locate data within the backup set.</p> <p>Restoration of data is provided under Anchor Custom Support</p>
Onsite data backup	The client is provided with remote access to the

	backup server. Data can be retrieved at any time with the need for consent or assistance from Anchor.
Data archiving	Restoration of data must be requested by contacting Anchor support.  Restoration of data takes between 4 and 8 hours depending on the size of the data set.  Restoration of data is provided under Anchor Custom Support
<b>Data storage methods</b>	
Daily offsite tape backup	Tapes are stored in a secure storage room at the Anchor NOC.
Onsite data backup	Data is stored on a large shared drive array incorporating RAID, onsite spares and hot swap redundant power supply.
Data archiving	Three alternatives are provided for tape storage. Offsite in a secure storage room at the Anchor NOC, transported to the clients offices as specified monthly, or housed in an external specialist tape vault facility.
<b>Tape rotation</b>	
Monday – Friday	Tapes are rotated offsite and stored securely at the Anchor NOC.
Saturday & Sunday	Tapes are rotated automatically via robotic tape changing device. Tape storage remains onsite over the weekend.
<b>Measurement of data backup volume for billing purposes</b>	
Daily offsite tape backup	Billing is based not on the cumulative volume of data backed up but rather the largest daily backup requirement on any given day each month.  Linux backups occurring via the Amanda client will base the backup volume on the compressed data set size from the largest full backup.  Backups occurring via the ftp/rsync method will be based on the amount of space requested by the client irrespective of the actual volume backed up.  Windows backups will be based on the size of the largest disc image backed up during the month. Disc images are compressed.
Onsite data backup	Billing is based on the size of the storage space on the backup server requested by the client irrespective of the actual volume of data stored during a given month.  The storage space is restricted in size to prevent more data being stored than has been requested.
Data archiving	Billing is based on the size of the tape required to accommodate the data set.