



Why utilise the Paranoia family of backup and archive encryption products?

A whitepaper from DISUK Limited

By Paul Howard

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Executive Summary

The increase in legislation and increased public awareness to the risk of their personal data being lost by financial institutes, retailers, government departments etc. has led to many companies reviewing their own security.

The need for ensuring that any data leaving their sites is securely encrypted is understood but the path to meet this need is not so clear. It is clear that many senior people feel that the "security requirement" is in fact just impacting their ability to do business so tend to be avoided. If the solutions and procedures brought in by management are seen as complex then staff will work out ways to circumvent them in order to make their own lives easier.

For this reason it can be seen that any solution or procedure needs to be simple to understand and use and must impact on the day to day running of the business as little as possible.

The Paranoia Family

The Paranoia family was designed to allow for simple, straightforward and efficient implementation and use regardless of the platform and backup procedures already in place. The Paranoia units are transparent to the system so no changes are required to integrate the units and hence no special training is required.

The approach to encrypt the tapes can be considered in two ways. If you already have tape drives that are doing what you need then why change the tape and drive technology? By utilising the Paranoia2 in-line encryption products you continue using your existing drives and the media you already own. If you are concerned about the archive of tapes you have already written then, by utilising our off-line copy solution, these tapes can be easily converted to encrypted tapes without the need to utilise your precious system resources.

If you are considering upgrading your existing tape drives then perhaps you might consider the SafeTape products. These are built using the same basic electronics from the Paranoia2 but include an LTO-3 tape drive built into the unit. This has the advantage of a high capacity tape drive (400 Gbytes uncompressed) that can read LTO-1, LTO-2 and LTO-3 tapes but also write to LTO-2 and LTO-3 tapes in encrypted or unencrypted modes. SafeTape is supported by all major backup software and can even be used on the iSeries where it appears as a standard IBM 3580-TD3 drive. Both the Paranoia2 and SafeTape products use a three key method; this allows the keys to be stored off site in a non-electronic format so simplifying the restores in case of a disaster.

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Many iSeries users may be considering the LTO-4 drive as a solution; there are some points to take into account. Because this solution relies on a single key for a tape this key is very important and needs guarding very carefully. IBM therefore changes the keys for each tape to minimise this weakness but that means a complex and involved key management solution is needed. This means that IBM recommends two separate servers to hold these keys as their loss would mean loss of access to the data. This also means that you will need a similar configuration at the DR site in order to recover the data. Another consideration with LTO4 is, in a disaster recovery scenario, you must rebuild your system to a point where you can begin to recover your data. As Paranoia does not rely on any system resources, SAVSYS (IBMs full-system backup) is still supported. By using SAVSYS the system can be rebuilt from a bootable tape saving days in recovery time.

About the Author

Paul Howard is joint founder and managing director of DISUK Limited. Mr. Howard was trained in the Royal Air Force where he specialized in cryptography. During his time with the RAF, Mr. Howard served both in Europe and the Middle East as well as a tour at HQ Strike Command. After leaving the RAF, Mr. Howard played key roles within major UK Electronics Groups. Founded in 2004, DISUK Limited is a British company specialising in design and manufacture of electronic data storage encryption systems.

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