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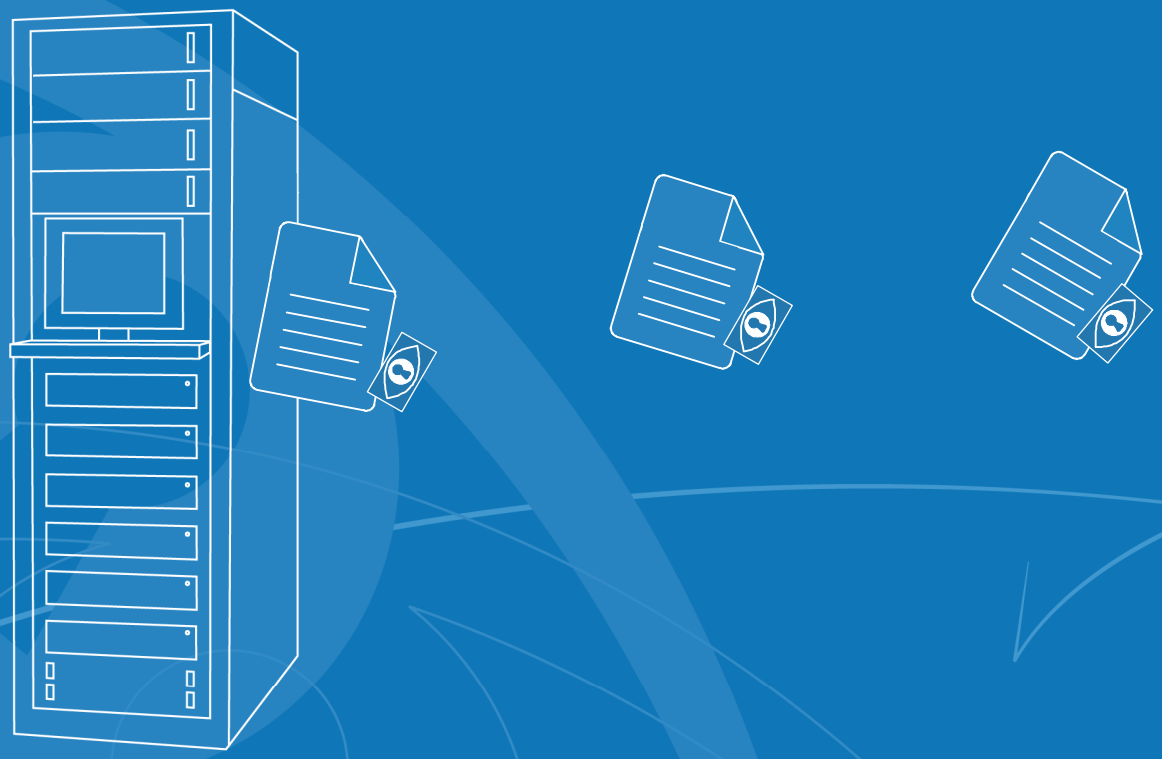
Benefits of DAP Over Full Disk Encryption



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Executive Summary

A significant number of Data Breaches result from Lost or Stolen laptops. Often, in a brute-force response to security concerns, corporations will implement Full Disk Encryption (FDE) software without weighing all of the associated costs & risks.

DAP is a more complete Data Management solution. It provides a cost effective and complete solution for protecting corporate data wherever it resides and provides a particularly effective solution for protecting valuable data on laptops.

This white-paper outlines the benefits of DAP over FDE in the following areas:

- Security
- Performance
- Tracking
- Logging
- Cost

Any security policy is only as good as far as it can be followed and maintained. FDE software comes with significant IT challenges and associated costs. FDE requires a set of passwords and keys in order to limit access. This raises an entire set of questions regarding ownership and management of passwords and keys. For example, what if an employee leaves? How do you ensure that you have their FDE password without which you risk losing the information that exists on their laptop? How do you enforce password policies, or prevent employees from writing down the passwords?

With DAP, Key Management and User Authentication is taken care of via seamless integration into existing Windows Authentication technology. Users aren't required to remember a different password, and regular corporate password policies are enforced. With no extra passwords, IT management issues, or security policies required, security is enforced automatically, with no extra overhead or introduced weak points.

Finally, DAP allows for the timed destruction of protected files after a set period. This means even if encrypted data disappears on a lost laptop, it can be destroyed automatically.

Performance

FDE works, as its name suggests, by encrypting the **entire** disk. This means that all files, including heavily used yet unimportant system and temporary files need to be encrypted and decrypted constantly.

Analysis shows that file access times increase by 40%-189% after FDE is implemented.[1] This adds a noticeable sluggishness to the system and has a serious impact on employee productivity. The other 2 major performance hits that result from FDE are: 1. further degradation in file access time with increased fragmentation. 2. Slowdown in virtual memory due to encryption of virtual memory space.

DAP on the other hand, only encrypts the small subset of files that are deemed important enough to be protected. This means that gigabytes of operating

[1] Study posted on http://www.full-disk-encryption.net/blog/index.php?action=viewtopic&id=250

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system and program files are left unencrypted, leaving system performance almost on par with an unprotected system while still protecting important data.

For encrypted files, DAP uses the Blowfish encryption algorithm, the fastest strong symmetric encryption algorithm available.

Tracking

DAP comes with standard tracking of protected data. This means any business owner can figure out from a central location where a given file exists, what files a user has been using, or what files exist on a given computer. The last one is most significant in terms of mitigating the risk of a stolen laptop.

With FDE, a company can be assured that all important data on a lost laptop is encrypted.

With DAP, a company can be assured that all important data on a lost laptop is encrypted, and know exactly what data was on the laptop.

Logging

FDE is limited to encryption of data. With DAP, a company gets Encryption, Tracking & Logging of data. DAP provides a company centric view of who has been accessing what data, and what they've been doing with it. This not only allows a company to further develop data security policies, it can also be used to provide data auditing and evidentiary trails.

Cost

The cost of commercial FDE software is on par with DAP client software, and offers only a very limited subset of the data protection and management capabilities of DAP.

Summary

This paper outlines several key areas where DAP has clear benefits over full disk encryption schemes. The most obvious direct advantage is performance. A slowdown in computer performance can have a costly effective on employee productivity. Beyond that, DAP offers many advantages which cannot be had by stand-alone encryption. This includes tracking, logging, automatic backups, and data sanitization.

DAP offers a more complete solution for data protection and data management.

Web: www.softection.com
Email: fde@softection.com
Phone: +61 2 9816 3433

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