WHITE PAPER

Adept

CLOUD BACKUP

SYNOPSIS

The digital information aspects of any business are key to its functioning and, in most cases, its survival. This makes digital information paramount to all entities, from individuals to large-scale enterprises. Thus, a critical component of the successful business safety and recovery planning is to ensure that a comprehensive data backup paradigm is consistently in place.

The risks of not having a dedicated backup solution can be severe, even catastrophic. Given the adversity of the consequences related to loss of business-critical data, there are a number of vital aspects that entities ought to consider when scoping and sourcing a solution for their specific requirements.

Adept herein presents a series of cases and scenarios considered during the formation of our Cloud Backup solution, now available to all consumer and business clients. We also consider the reasons for selecting online backup, and present a ground strategy for implementing and maintaining it.

ESSENTIAL CONSIDERATIONS FOR BACKUP SOLUTIONS

KEY COMPONENT AND EASE OF ACCESS

Cloud backup forms a single, albeit large, cog in the wheel of offsite backup. The nature of the cloud, though, also allows for far better availability to data access, requiring only authorisation and sufficient connectivity. Furthermore, using cloud backup drastically reduces capital expenditure on infrastructure requirements.

SECURITY

Determining how much data security is required can be an onerous experience. There are a multitude of mitigating factors to take into consideration, and it is often impractical to attempt to make direct solutions comparisons. However, adopting a best-practise Enterprise-level approach to security is the most recommended course of action; current industry standards suggest 256-bit encryption. In addition, a comprehensive backup client should require a dedicated password for the program to open. This is to mitigate access to the program's functions through a compromised workstation or laptop.

VERSIONING AND RESTORING

The ability to perform full or selective restores is a core feature of an ideal backup solution. Unlike traditional storage, which is tantamount to little more than a standard folder on a physical or virtual hard drive, a backup offers a dedicated file versioning system. Furthermore, quality backup products incorporate function-specific software to enable and facilitate both the backup and restoration processes. Finally, backup versions allow for data rollback, in order to correct mistakes within the data itself or retrieval of erroneously deleted data.

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WIDE RANGE OF APPLICATIONS

Backup solutions will most often encounter an environment in which they need to operate on multiple platforms and across varying levels of infrastructure. It is thus a huge benefit to choose a solution which has the capability to be as inclusive as possible, minimising the need for additional resources, variations or idiosyncrasies. Within the backup scope, servers have separate needs to desktops, and different operating systems handle data in alternate ways. It is often up to the backup solution to bridge the gaps between these entities.

FIVE CASES FOR BACKUP SOLUTIONS

The statistics to the left go some way in illustrating why individuals and organisations should take note of common threats related to data loss. Moreover, they highlight the potential advantages of implimenting cloud backup solutions.

One should also consider that dedicated backup and straightforward storage are not the same. Online storage is used for ease of access, sharing and mobile access. It's a useful collaboration tool, but has its limitations. For starters, online storage does not usually encrypt the data itself, despite the storage server being encrypted. This means that the data, while usually behind a secure server, is still open for access to any with permission to that server. Furthermore, online storage typically requires the data in question to be in one overall folder, and users cannot simply select which folders to store online. Finally, online storage's sharing capability often means that sharing links are sent out and accessed without any authentication requirements – anyone with access to the URL can obtain the shared files.

Online backup addresses both the security and integrity concerns. By having the data encrypted on the local device and sent to the backup server via encrypted link, it guards against eavesdropping and compromised server risks. Backup software also normally requires a password to open successfully – this prevents unwanted persons from seeing what is backed up to begin with. Additionally, Most importantly, it also addresses connectivity concerns from a data perspective. The associated software only backs up changes to files and does not re-save the entire file, thereby cutting down on the amount of data required and intuitively keeping the versioning process ongoing.

01 THE HOME CONSUMER

Individuals or families have more personal needs when addressing the scope of a backup solution, and most often do not dedicate large amounts of resources towards implementing them due to cost restrictions.

A typical case would take into account more common backup requirements, such as important legal documentation, work-from-home files and visual memories. A more complete home backup approach would include the likes of visual memories, project/endeavour planning information and an assortment of private budgeting and financial information.

Cloud Backup offers the home user the experience of full control, all the backup-derived benefits and simple navigation through an intuitive commonly-used interface style.

02 THE GOVERNMENT CONSUMER

A state organ or division is usually tasked with one or another directive in applying procedures and upholding laws. As such, they are usually associated with a vast amount of documentation: policies, processes, amendments and all the records that go along with these documents.

It is critical for such an entity to have proper backups in place; the citizenry and economy at large depend on the ability of a government's divisions to perform efficiently and effectively. The Cloud Backup solution not only permits easy retrieval of data, but also mitigates errors in data processing through the version rollback feature.

03 THE STARTUP COMPANY

Startups are by their very nature fast-paced environments focused on growth and conservation of resources. In addition, their data is vital in ensuring business continuity. They are a primary area of growth for data backup services.

Applying Cloud Backup to a startup means that backup costs are kept to a minimum, and virtually no technical expertise is required. This is a boon in such an environment, as startups often do not enjoy the technical resources of larger organisations. Cloud Backup thus helps focus resource allocation towards speedier growth, and is perfectly scalable to the future requirements associated with that growth.

Startups are also often flexible with regards to work location and time; hence a backup solution that allows access from any connectivity source is beneficial.

04 THE ENTERPRISE

Larger high-level organisations with a variety of divisions typically display a wide range of working applications, spread over a system of mixed hardware, operating systems, databases and storage mechanisms. This complexity often works against backup requirements, as trying to source data from a myriad of sources and in different formats can be an onerous requirement to fulfil.

At the Enterprise level, a backup solution should be able to work as a blanket system, covering the needs of all associated data structures with no added infrastructure for personnel to worry over. Furthermore, the backups should be of a high enough operational standard to enable the organisation to proceed functioning and developing further, without risking integrity or security of their data on any platforms.

05 THE FINANCE INSTITUTION

Businesses involved in the finance sector will often bear additional security concerns. Apart from the associated legal aspects, personal and company financial data are essential to protect. Furthermore, fraud and other crime prevention are paramount in the finance fields.

Given these requirements, financial institutions need to pay especially close attention to their choice of backup and recovery solution. Having a best-practise industry-standard approach can prevent potential security concerns from developing into problems with far-reaching consequences. South African laws dealing with data and personal information protection virtually demand that companies safeguard their data and take careful steps to prevent its loss.

STRATEGIC CONSIDERATIONS TOWARDS ONLINE BACKUP

Backup strategies will differ from entity to entity, but a generic idea of how to go about it is a useful starting point. Ideally, the security and process points should be tested and reviewed once each year.

SECURITY ASPECTS

Risk assessment and risk analysis should be performed on the backup process at fixed intervals, accompanied by comprehensive reporting. The risk analysis should address the level of data sensitivity, to both ensure the correct protective measures and to comply with any external regulatory requirements.

Backup software needs to be properly patched to current levels, in order to protect from known vulnerabilities. Furthermore, encryption and access passwords should not be saved in a digital format such as emails, documents or password software.

When backing up data, whenever possible perform the process directly from the data source. This is to prevent clashes with external software and backup job schedules.

PROCESS ASPECTS

Commence by defining and identifying the key stakeholders – the security owners, the system owners and the information owners. Following this, identify the sensitive and valuable data, keeping in mind that the backup schedules are going to be based on how often this data needs to be backed up.

It is vital to set backups with strong and secure authentication and encryption passwords. Ideally, these passwords should be split between the security and system owners. Set multiple backup schedules as required, and remember to compensate for other timeframes such as maintenance and system update windows. Schedule the backups to be completed before these other changes.

Ensure that reporting is set to notify stakeholders of both backup successes and potential problems. Finally, make certain that the data restoration process is well-documented and regularly tested.

CONCLUSION

Having had the opportunity to thoroughly examine the scenario tested against the developed service, we contend that our Cloud Backup services address the majority of possible requirements. As such, Adept is confident in offering an Enterprise-level service, coupled with the flexibility of no fixed-term backup contracts for our defined packages, to cater for ever-changing needs.

Whether an entity's data is purely for record-keeping, day-to-day functionality or for mission-critical analyses, the onus is on data developers and processers to ensure its safety, viability and integrity, using appropriate means. Cloud Backup ticks all the vital boxes and should be given serious consideration as a feasible approach to data management.

Adept

FEATURES

COMPANY PROFILE

Adept ICT was launched in January 1996 in Stellenbosch, and is today one of the oldest independent service providers in South Africa. To be *Adept* is to be proficient and expertly accomplished. This is what we strive for and have achieved in all our services. Many of our solutions are tailor-made, in order to perfectly suit each client's individual requirements. We thus ensure that our approach is personal and conforms to exactly what is needed in order to be successful.

CLOUD BACKUP KEY FEATURES & ADVANTAGES

FEATURE	DETAILS
Flexible backups	- File-based: choose precisely what and when to back up - User-managed: individuals have the say on all backup options - Fully automated: once desired options are set, user input requirement is minimal - De-duplication technology keeps backup sizes to a minimum
Familiar directory-style user interface	- Intuitive menus - Extremely simple to navigate - Allows full user control
Direct restoration process	- Easy restore process: select and go - Quick restores with local cache enabled - Full version control as part of the restore functions
Advanced preferences	- Choose desired file compression settings to suit your system's abilities - Manage file type exclusions to fine-control backup size - Select backup speeds to balance connectivity requirements - Back up different data sets for different backup profiles, e.g. daily or weekly (server editions only)
Logging and notifications	- Taskbar access for current status monitoring - Customisable email notifications of backup activities (plugin required)
Security	- Backup data encrypted with 256-bit AES GCM technology - Backups are secured off-site

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