Atman Backup - compare it with others

In an environment where best IT practices are applied, the "3-2-1" backup rule is used. This means that **three** backups should be made, using **two** different technologies (on different media), and **one** copy should always be kept outside the company's offices. Ambitious IT departments maintaining the highest standards apply the additional rule that **all data storage locations** are backed up, and the key business principles are **communicated clearly to users**. This means that users know how often backups are made and in what time window, and from which past time point data will be restored if lost.

Irrespective of how closely the "3-2-1" rule is followed at a given organization, when selecting a tool the pragmatic question always needs to be asked: Which of the choices will suit my situation best? Let us therefore take a look at four frequently used methods of making backups, and their respective advantages.

DIY

do-it-yourself: you purchase server(s) yourself, and install, configure and maintain the backup system or software yourself. The system may be of open/free type or a commercial product (popular examples include Bacula, Dell Avamar and Veritas NetBackup).

Appliance

a server containing space for data storage, with an integrated backup system. Installed and maintained within the organization by IT employees or outside consultants. Examples of suppliers of such devices include Ctera and Barracuda.

Cloud backup

data is stored in the cloud (e.g. Dropbox, Google Drive, mega.co.nz), and backup tasks are automated with the help of software used by the IT specialist. Recently the S3 protocol has been the most popular (example tools: s3cmd, rclone).

Backup as a Service

a full end-to-end service performed by an outside service provider at a specific data center. The service provider supplies a data storage and software platform, as well as overseeing the hardware, software and processes.

Atman Backup is a solution in the BaaS category – the best choice for organizations looking for a backup system with such features as:

- 1. The ability to "set it & forget it"
- 2. Ease of extension and modification
- 3. Encryption and replication of data certainty of recovery



Four professional backup methods: DIY, appliance, cloud backup, BaaS

uo	DIY	Appliance	Cloud	BaaS	
Location	In-house	In house	External	External	
Human error mitigation	Immediate during normal operation Greatly impaired in case of system problems, requires time and effort from specialists	Immediate during normal operation Greatly impaired in case of appliance problems, requires intervention from the manufacturer	Immediate during normal operation Possibly impaired in case of system problems, may require time and effort from specialists who developed the backup software. May be hindered due to the location (e.g. unavailability of Internet service)	Immediate during normal operation The whole system is an organism designed so that any problems are invisible to the customer. May be hindered due to the location (e.g. unavailability of Internet service or private connection with the service provider)	Speed of access to data
rror	Limited	Moderate	Moderate	High	
oversizing Human e	Normally limited because redundant architecture, which increases reliability, is normally not installed, and free/open software, lacking support, is often used	Good, because assistance can be requested from the manufacturer	Hardware faults are invisible to the customer; the service provider supplies a storage system with redundant com- ponents	Hardware faults are invisible to the customer; the service provider supplies a whole backup system based on redundant components	Hardware failure Abi mitigation majo
yer 🛑	Applies	Applies	Does not apply	Does not apply	Ability ajor gr
of o	Limited	Limited	Very good	Very good	owt r
flexibility	Limited (depends on budget and specialists' available time)	Limited (depends on the system integrated with the appliance)	Limited (depends on budget and specialists' available time)	Usually very good (depends on the system offered by the service provider)	Ability to react to major growth in data
	Usually high, assuming that the solution was designed and deployed by specialists working for the organization	Usually high – requires initial investment of time in learning the system	Very high – enables the workload to be shifted to software, with no need to deal with the data storage system	Highest – the user focuses on using the system, specia- lized servicing is additionally available from the service provider	Ease of use
knowledge	Highest – full understan- ding of every system component	High	Lower	Lowest – high degree of outsourcing to the service provider	
. <u>차</u>	Usually lowest, but subject to compromises on reliability, functionality and flexibility	Moderate	Low	Moderate, but provides good opportunities for optimization to reduce costs	Cost

