SOLUTION BRIEF

Using media rotation with RDX® removable disk system

Best practices for full disaster protection and safeguard against virus and ransomware attacks

The RDX removable media system allows implementing data protection best practices by rotating cartridges to provide multiple layers of protection. A media rotation scheme allows you to meet disaster protection and compliance requirements.

Why media rotation is important

Backups are usually done to local devices like disks or network attached systems like NAS. This might work as long as there are no local disasters or virus and ransomware attacks. Local disasters could also destroy the backup on the local device. Virus and ransomware attacks can infect backup sets regardless of its location on the computer or network.

In both cases, backups should be kept off-site to have at least one copy of the backup accessible to recover from unforeseen events. Therefore, a set of multiple backup media should be used to be able to rotate the media between the datacentre and the offsite location.

RDX® removable disk system — rugged, removable and flexible

Overland-Tandberg's RDX technology is a removable disk system which simply attaches to laptops, desktops and servers via USB, SATA or iSCSI. It consists of a QuikStor system and a media. RDX is ideal for use in regular office environments. Because of its rugged design, there is no special care necessary. Unlike tape, there is no need for media replacements, maintenance and cleaning.

RDX combines the benefits of tape, like removability; and disk, like random access. This enables RDX to be used in backup scenarios with deduplication and compression features.

Benefits of media rotation

- Keeps backup sets and business critical data offsite
- Enables recovery from local disasters
- Enables recovery from virus and ransomware attacks
- If using deduplication, a simple rotation scheme with two to four media can be implemented, which reduces the number of media drastically in comparison to traditional tape backup

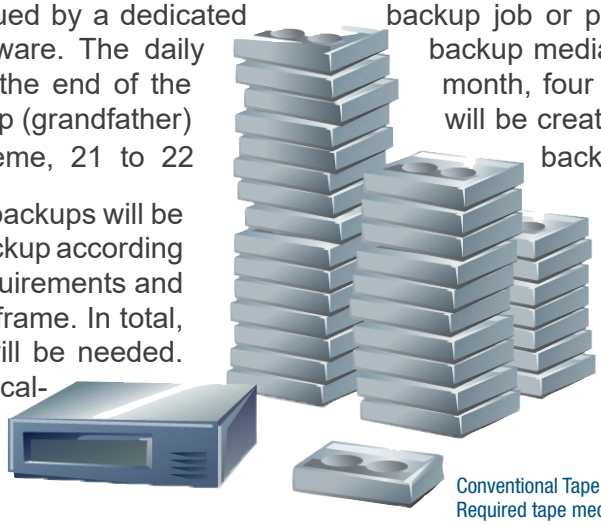
Benefits of RDX

- Provides removability to support media rotation and offsite storage
- Offers fast data access for fast restores
- Random access supports deduplication which drastically reduces the number of needed media
- Rugged design of RDX media, no special care required
- Low purchase cost and TCO optimises budget

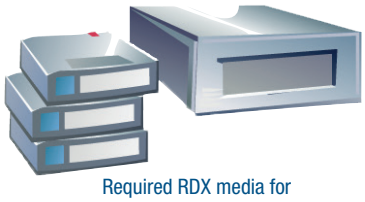
Traditional GFS (Grandfather-Father-Sun) backup scenario

Traditionally, backup media are rotated on a daily bases and also weekly and monthly backups are issued and kept off-site. This method is called GFS-rotation (Grandfather - Father - Son) scheme. Dependent on the business, five or six daily backups (sons) are performed on separate media. At the end of the week, a weekly backup (father) is either issued by a dedicated backup job or performed by a consolidation task offered by the backup software. The daily backup media will be reused from Monday until Friday (or Saturday). By the end of the month, four weekly backup media have been utilised and a monthly backup (grandfather) will be created which will end up in 12 media. For this GFS rotation scheme, 21 to 22 backup media are needed.

In some cases, the monthly backups will be consolidated into a yearly backup according to internal or compliance requirements and keep it for a mandatory timeframe. In total, up to 23 pieces of media will be needed. This amount can be drastically reduced by utilizing RDX removable disk systems as they support software features like deduplication.



Conventional Tape Backup: Required tape media and cleaning cartridges for the GFS rotation scheme

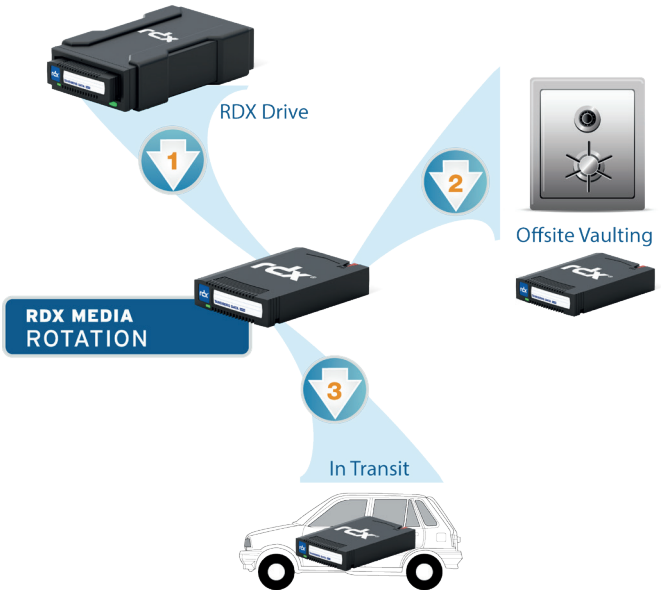


Required RDX media for the backup with deduplication for the same retention including offsite storage

Simple rotation scheme for deduplication

If backup software with deduplication feature is utilised, initial full backups are performed on each newly introduced backup media. Afterwards, only changed blocks, compared to the data existing on each media, will be written. This method saves a lot of space, so many backup versions can reside on one media and a longer retention time could, which reduces the number of concurrent media needed for the rotation scheme. Therefore, between two and four RDX cartridges may be needed, where one media would reside in the QuikStor system ready for the backup, one media is located offsite at an external location and optional, a third or fourth media is on its way either to or from the office.

With this method, not only the number of media can be reduced, purchase cost and operating cost will decrease drastically.



Backup method	Backup		Restore	
	Number of media	Duration	Number of media	Duration
Full backup	-	-	+	+
Incremental backup	+	+	-	-
Differential backup	+	-	+	-
Backup with deduplication	+	+	+	+

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