

# FDRINC

## VOLUME INCREMENTAL BACKUP

### z/OS Storage Management



The FDRINC Volume Incremental backup system allows you to take frequent “managed” backups of your z/OS DASD volumes without having to backup every dataset every day.

The savings compared to a full backup can vary depending on how much data is updated each day (the FDRQUERY reporting tool can provide a good estimate of the expected savings).

Incremental backup typically saves around 50-70% in backup elapsed time and z/OS resources (CPU, EXCPs). Reducing your backup times may also help to reduce application downtime, for example if the applications have to be taken down while the backups are being taken.



#### Key Benefits

- Reduce your backup elapsed times by only backing up the datasets that have changed since the last backup.
- Reduce your z/OS resource usage, such as CPU, I/Os and Tape, by reducing the amount of data you backup each day.
- Reduce tape usage even further by utilizing the de-duplication feature within your VTS.
- Reduce your application downtime by ensuring that your backups run as fast as possible, with the minimum disruption to users.
- Further reduce application downtime with FDRINSTANT (see separate sheet).
- Improve your restore facilities with automated dataset and full-volume restores (see over).



#### Performance

The FDRINC Volume Incremental Backup system consistently outperforms its competitors, as seen in this recent test of an incremental backup of 280 VSAM datasets occupying over 100,000 tracks.

As you can see FDRINC used 93% less CPU and 84% less elapsed time compared to DFSMSHsm:

Product	Elapsed Time (Minutes)	CPU Time (Seconds)	Tape EXCPs	Disk EXCPs	GB Dumped
ABR V 5.4/75 with RTC=YES	0.84	6.01	7,368	7,542	5
z/OS V1R12 DFSMSHsm	5.19	80.76	299,746	20,356	5
% Difference	84%	93%	98%	63%	

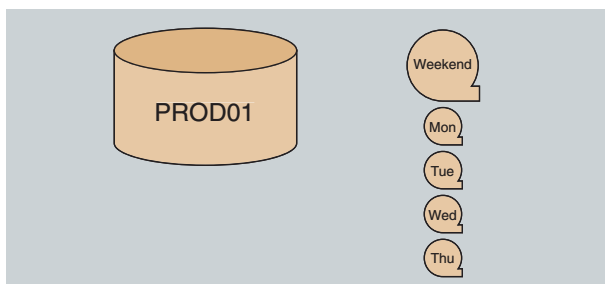
A full set of the benchmark results is available on request.



#### Volume Incremental Backups

A typical FDRINC Volume Incremental Backup system consists of:

- Full-volume backups (usually taken once per week) where all data on a volume is backed up.
- Incremental backups (usually taken once per day) where only the changed datasets are backed up.



# FDRINC

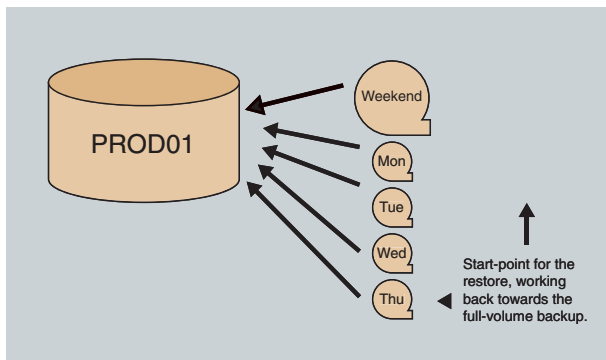
## VOLUME INCREMENTAL BACKUP



### Managed Backups, Flexible Restores

The volume backups created by FDRINC are fully “managed”. This means they are recorded and tracked by an automated recording mechanism. From those managed backups, either the whole volume or individual datasets can be easily restored.

- **Restoring individual datasets...**The most recent copy of a dataset can be restored by specifying just the dataset name. Additional options are available to allow older copies of the dataset to be restored, if required.
- **Recreating entire DASD volumes...**If one or more volumes have been lost, perhaps due to hardware problems or as a consequence of a disaster, these volumes can be automatically recovered from a combination of their full and incremental backups.



The FDRINC volume incremental backup system is the ideal tool to use if you need a comprehensive backup of some or all of your z/OS DASD volumes. Those backups can be used to provide both home-site restores & Disaster Recovery protection.

### Related Modules

The following modules within the FDR FAMILY can be used alongside the FDRINC Volume Incremental Backup system to provide additional performance and functionality:

- **FDRINSTANT**—*Retain near 24/7 data availability for your applications, but still take regular FDRINC full and incremental backups. When used in conjunction with FDRINSTANT, FDRINC backups can be run against duplicate offline volumes created by DASD Subsystem features like IBM FlashCopy, EMC TimeFinder, Hitachi ShadowImage and Oracle StorageTek SnapShot Copy.*
- **FDRCRYPT**—*Protect your FDRINC full and incremental backups against unauthorized access by encrypting the backup data.*
- **FDRDRP**—*Enhance your disaster recovery procedures by reducing tape contention.*

### User Quotes

*“With the FDRINC Volume Incremental backup system, we can now recover our data well within the timeframe allowed, and we can easily bring it back to any point up to the most recent backup...”*

*“The unthinkable occurred one day – just before taking our full volume backups, we were forced to evacuate our computer center. Within hours we were able to recover hundreds of DASD volumes at our disaster site from FDRINC incremental backups. FDRINC recovered the volumes as if we had done full backups the night before.”*

**Want to Know More About FDRINC?** For a No-Obligation FREE Trial or to request a FREE Concepts & Facilities Guide, ask your local sales representative or visit: <http://www.innovationdp.fdr.com>



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