

# FDRDRP

## DISASTER RECOVERY

### z/OS Storage Management



*While “stacking” the daily incremental backups of multiple disks onto a single cartridge helps to utilize tape capacity to its fullest, this can cause serious contention problems when those same disks need to be restored at the same time, such as during a Disaster Recovery...*



#### Introducing FDRDRP

If you're creating incremental backups of your disks with FDRINC, the likelihood is that you are creating lots of relatively small backup files.

To continue to achieve optimum usage of your high-capacity tapes, you're probably “stacking” those individual FDRINC backups onto one, or maybe just a handful of tapes.

Unfortunately, when you need to recover your disks in a Disaster Recovery (test or real), you'll experience heavy contention, as multiple FDRINC volume recovery tasks fight to gain access to the same tape(s).

By automatically co-ordinating multiple concurrent FDRINC volume recoveries, FDRDRP reduces tape contention at restore time.

It achieves this by passing tapes between multiple restore tasks, and by ensuring that input tapes are mounted a minimum number of times – often only once.

Savings of up to 80% have been achieved when compared to a standard FDRINC recovery.



#### FDRDRP Benefits

With FDRDRP you can:

- Continue to enjoy the benefits of a reduced backup window and minimized application downtime achieved by taking incremental backups of your data.
- And you can continue getting optimum benefit from your high-capacity tapes by “stacking” your incremental backups onto fewer tapes.
- But you can then reduce *by up to 80%* the contention on those backup tapes when you do your disaster recovery!

FDRDRP is easy to implement because it does not require any changes to your existing FDRINC backup JCL.



#### User Experiences

*“We recently recovered 400 disk volumes, restoring from two days worth of FDRINC incrementals (Tue, Mon) and the weekend full backups. Using 8 3590 tape drives concurrently, FDRDRP completed the recovery in just 3½ hours...”*

*“With FDRDRP, we've cut our DR recovery time down from 20 hours to just under 9 hours... giving us another 12 hours of additional test time.”*

*“Before we had FDRDRP, the minimum recovery time was approximately 15 hours. We can now get everything restored in less than 8 hours...”*

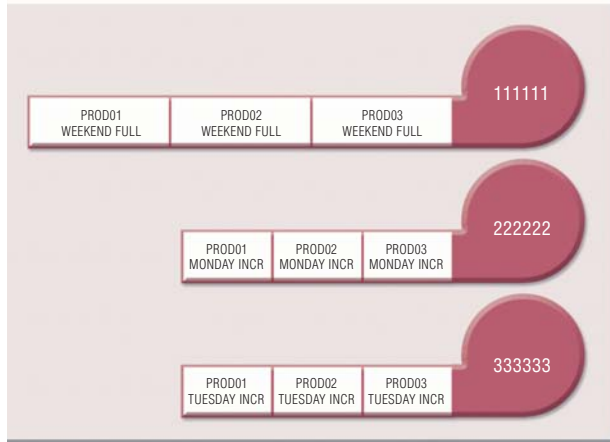
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### How It Works

The diagram below shows the backups of three DASD volumes – PROD01, PROD02 and PROD03. Full-volume backups of these disks were taken at the weekend and written to cartridge 111111.



Daily incremental backups were then taken on Monday and Tuesday evenings, written to cartridges 222222 and 333333 respectively.

At the start of a recovery process, FDRDRP would initiate a subtask for each of the 3 DASD volumes.

The subtask for PROD01 would dynamically allocate and mount cartridge 333333 and then start the restore from File 1 (PROD01's Tuesday incremental). The subtasks for PROD02 and PROD03 would wait for cartridge 333333.

When the PROD01 subtask finishes with cartridge 333333, the restore subtask for PROD02 would pick it up (without rewinding or dismounting it) and begin the restore from File 2, which is PROD02's Tuesday incremental.

At the same time, the restore subtask for PROD01 would then mount cartridge 222222 and start the restore from the Monday incremental.

PROD02's subtask would continue to restore from cartridge 333333 and then hand it over to PROD03's restore subtask, in turn picking up cartridge 22222 once PROD01's subtask had finished with it.

And so the process would continue until all the backup files on the three cartridges had been restored.



### Other Disaster Recovery Tools

The FDR Storage Management System contains a range of tools that can help you prepare for and implement your Disaster Recovery strategy...



#### FDRINC

FDRINC can reduce your daily backup times by backing up only the data sets that have changed since the last backup.

The powerful volume reconstruct process can restore entire DASD volumes from your incremental backups. When combined with FDRDRP, tape storage utilization can be maximized and FDRINC volume recovery restore times can be drastically reduced.



#### FDRAPPL

FDRAPPL can backup all the data sets from a single application, even when they are spread across many disk volumes. You can then restore either the whole application, or individual data sets, either to their original locations or to new disks.



#### FDRERASE

FDRERASE can quickly and easily erase the data you've restored during your Disaster Recovery test (or real disaster recovery), ensuring that no residual data is left behind for other people to access.

**Want to Know More About FDRDRP?** 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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