

Fujitsu Software BS2000 FDDRL V21.0

Fast Disk Dump and Reload

Physical data backup and restore

FDDRL is a physical data backup and restore product for magnetic disks and pubsets. FDDRL runs as a subsystem under BS2000.

In a physical data backup run using FDDRL, all the data required for an operational and consistent pubset (disk label, file catalog, files, paging files, IPL capability) is saved; this also is the case with private disks (DUMP).

All disks of a pubset can be saved or restored with one statement (DUMP-PUBSET resp. RELOAD-PUBSET). Similarly, several private disks can be collected as a "disk set" and thus saved as a whole with one statement.

For dump/restore runs to/from tape it is also possible to use magnetic tape cartridges (MTCs), as well as the mounting aids supported by BS2000 (stackers, Fujitsu Software BS2000 ROBAR).



Topics

Functional Description

FDDRL offers the following functions:

- **DUMP:** backs up disk data (single disks or all disks of a pubset or a disk set of several private disks) to magnetic tapes or cartridges.
- **RELOAD:** rewrites data saved on magnetic tapes to a magnetic disk or to several disks (for a pubset), each disk of the same type as the corresponding backup disk.
- **COPY:** copies disk data to a second magnetic disk of the same type.

Disks must be in BS2000 format, i.e. initialized by VOLIN, unless they are specified via the MNs of the output disks (Disaster Recovery). Backup tapes or cartridges used by FDDRL must be labeled in accordance with DIN 66029; this can be done with the INIT function under BS2000. If the backup-up disk on tape and the magnetic disk do not match during a RELOAD operation, the attributes of the backed-up disk are displayed.

For reduction of the tape volumes used for physical disk backup along with the huge capacity of modern tape cartridges, FDDRL stores several disks of a pubset or of a disk set on one "tape set" (backup tape with continuation tapes).

FDDRL exploits the high data rates of modern tape cartridges by processing two or four disks in parallel towards one tape (multiplexing) with backup and respectively with reload.

When the MAREN tape management product is used, the backup tapes generated by FDDRL are archived by MAREN, and can be differentiated by storage locations. The saved data can be used to restore the same disk volume on another disk of the same type (RELOAD). If the copy function (COPY) is used, the backup copies can be used directly as replacement disks.

FDDRL offers the user a modern SDF interface. In a single FDDRL run, several tape units can be used side by side by means of parallel subtasks in order to reduce backup times.

For backup runs the user can choose four tape formats with different compatibility and performance: V15-Format with big tape blocks or V16-Format with big tape blocks and 2 disks or V17-Format with big tape blocks and 4 disks on a tape set with multiplexed operation. Tapes generated with earlier FDDRL versions can be used with this version to restore data.

To reduce outage times due to backup activities, FDDRL supports backup from mirrored disks split-off during operation.

If the HOME Pubset has no mirror disks and a shutdown of the system is undesirable, the HOME Pubset can be backed up with FDDRL during operation (online backup).

Program Description

An entry in the subsystem catalogue is required for FDDRL. Like other programs for manipulating magnetic disks, FDDRL may be used only by operators with TSOS privilege. FDDRL is started with the START-FDDRL statement. All statements for an FDDRL run can be entered before the run is initiated.

An FDDRL run can be executed in dialog or batch mode or as a procedure. FDDRL orders and the current status of ongoing FDDRL orders can be displayed at the command level.

During the FDDRL run, status messages are output to report on the progress of the backup and indicate the time frame. In addition, a log is generated once all the statements have been completed.

The run is monitored by the monitor task. Several subtasks with a selectable maximum number are also possible, offering parallel processing for a number of disks, one per subtask. With V16-/V17-Format, each parallel subtask processes several disks as a disk set or as a subset of the pubset. The jobname of subtasks are created depending of the save entity or, from FDDRL V20.0, can be freely chosen or taken over from the maintask.

The customer can modify the priority of FDDRL processing either to optimize the overall FDDRL run time or to prevent the performance of applications running in parallel from being degraded (poorer response times).

FDDRL in cooperation with MAREN

When FDDRL is used in combination with the Fujitsu Software BS2000 MAREN tape management product, they work together to coordinate requests for free tapes, assign tape release dates and administer the FDDRL backups in the tape archive (MAREN catalog). Management functions in this archive include administering the date of the FDDRL backup, the saved disk volume or pubset, and the correct sequence of the data media (tapes or cartridges) used in a disk backup. Output tapes (scratch tapes) can be requested by their storage location, input tapes can be specified by their MAREN file name.

FDDRL on SE Server

On SE Servers FDDRL is integrated into the BS2000 Backup Monitor on SE Manager – on the SE Manager an overview of the current backup jobs (FDDRL and HSMS) of all BS2000 systems in a SE infrastructure is available and a detailed overview of the status of the backup jobs.

The report file that is provided by FDDRL at the end of a job, the FDDRL job protocol as well as the collected SYSOUT protocols of the FDDRL subtasks can also be displayed on the BS2000 Backup Monitor.

Technical details

Requirements	
Technical requirements Hardware	Fujitsu Server BS2000 SE Series
Technical requirements Software	BS2000 OS DX V1.0
Requirements for the user	Knowledge of BS2000
Installation and operation	
Operating mode	Dialog and batch operation
Implementation language	Assembler
User interface	Commands english, message texts in German/English
Installation	By the customer according to the User Guide
Documentation and training	
Documentation	The manuals or Release Notices for FDDRL are available on the manual server .
Training	See course offer (German)
Reference and delivery	
Conditions	This software product can be leased by the customer in accordance with the conditions for the use of software products.
Ordering and delivery information	The software product can be obtained from your local Fujitsu regional office.

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2022-06-30 EM EN

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