



**Hewlett Packard
Enterprise**

DMF 6: What's New?



Data Management | **DMF 6** What's New?

- Two releases in 2016:
 - DMF 6.6 (May)
 - OS support, user requests, optimizations and bug fixes
 - DMF 6.7 (August)
 - Focused on Zero Watt Storage enablement

Data Management | **DMF 6.6** What's New?

- Support for IBM LTO-7 devices, which optionally provide Logical Block Protection.
 - LTO-7 technology offers higher capacity and better resiliency
- New DMF Client support for Mac OS X Yosemite (10.10) and Mac OS X EL Capitan (10.11) for Intel.
 - installed location of DMF commands, header files, and the user library has changed for all Mac OS X clients
- Control over merging activity by restricting number of processes:
 - MAX_MERGE_GET_CHILDREN, MAX_MERGE_PUT_CHILDREN
- Cloud MSP now supports secure communication (https). New parameters:
 - CLOUD_PROTOCOL, CLOUD_REGION, CLOUD_SIGNATURE, CLOUD_BUFSIZE
- CACHE_DIR can now be a managed filesystem
- Various optimizations:
 - LOCAL_INTERFACE, SCAN_RETENTION, DUMP_XFSDUMP_TUNE, ZONE_SIZE_MULTIPLIER

Data Management | DMF 6.6 What's New?

- Logging and reporting
 - msplog.<yyyymmdd> file produced by the cloud MSP, disk MSP, DCM MSP, or FTP MSP now logs the per-child I/O rates for read/write and the average I/O rate for those children over the life of the MSP.
 - Note that this is the average rate of the individual children, not the average aggregate rate of the multithreaded MSP.
 - new command dmmspstat(8) displays MSP-related statistics for cloud, DCM, disk, and FTP MSPs.
 - run_daily_report.sh script now reports activity information for cloud, disk and FTP MSPs.
 - New dmlogger command lets you write a message to a DMF log.
 - These messages have a new severity level ("S" for "Site-specific") and are at message-level 0.
- New command options
 - dmhdelete command now accepts a list of VGs, MSPs, and or MGs.
 - new option (-i) was added to the dmattr command to display available inode and mountpoint information
 - new option (-0) was added to the dmmove command to accept null-terminated pathnames

Data Management | DMF 6.7 What's New?

- This release of the DMF server and parallel data mover software requires RHEL 6.8 or SLES 11 SP4.
- Support for the Zero Watt Storage (ZWS) System, which is the integration of DMF and secondary storage on JBFS-formatted, power-managed JBOD
 - JBFS format was upgraded to v2 (existing JBFS v1 formatted archives are supported). This format adds parity data that can be used to recover and autonomously heal intermittent read errors
 - Periodic scrubbing of ZWS volumes will be added as a patch
 - Drive and link stats are collected on mounts and unmounts and are reported via tsreport
 - OpenVault configuration is simplified using `ov_auto` command
 - Periodic enclosure health monitoring script
 - Sample configuration files for ZWS
 - ISSP 3.7 implements the ZWS system with high-density, high-throughput SGI InfiniteStorage IS490J 90-bay JBOD enclosures
 - Following the acquisition of SGI by HPE, the IS490J enclosure will be replaced with HPE's D6020 JBOD
- New parameter:
 - `CACHE_SPACE_PER_CHILD`
- dmstat improvements
 - f Displays a request summary report grouped by filesystem.
 - x Avoids searching for pathnames when the -r or -a option is specified.

Data Management | DMF 6.7 Other changes

– Multi-threaded xfsdump

```
# xfsdump -l 0 -a -z 1 -f /var/dump/file1 -f /var/dump/file2 -f /var/dump/file3 -f /var/dump/file4 \  
-S p1imapthds=8,nop3imap,dirthds=2 /mnt/dump
```

-l 0 level 0 dump

-a convert DMF dual-state to offline, do not backup data.

-z 1 do not dump files with data - do not use if you want to back up non DMF managed files.

-f ... name the files that hold the dump (one dumping thread is created per file name specified).

-S p1imapthds=8 : use 8 threads to perform inomap phase 1 - this phase builds the internal database (use 2 - 16). don't use a number larger than # of Ags.

nop3imap : skip inomap phase 3 and use algorithm to assign a inode range to a file dumping thread (or xfsdump calls streams). Best for DMF managed files (-a -z 1) dumps.

dirthds=2 : use 2 threads to dump directories and place the information in the first two specified dump files (-f file1 thru file2). The rule of thumb is use is 1 directory dumping thread for every 4 or 5 file dumping thread.





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Thank you



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