VTAPE

Virtual Software Systems, Inc.

http://www.vsoftsys.com/

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VTAPE Description

- VTAPE: Virtual Tape Drives for z/VM Guests
- VTAPE provides tape drive simulation and tape data libraries to z/VM guest virtual machines.
- Virtual Tape drives can be defined and used, as if they were real tape drives, by any guest operating system, i.e., CMS, Linux, z/OS, VSE, TPF, etc.
VTAPE Benefits (1 of 2)

• Efficiency. Datacenter efficiency is improved by eliminating many operator tape mounts.

• Productivity. Programmer productivity is improved because tape drives are always available for testing and tape mounts are automatic.

• Throughput. Job throughput is improved because Virtual Tape is faster than real tape. Virtual Tape I/O is buffered and many operations, such as Forward and Back Space, Locate Block and Rewind, are direct access operations.
• Availability. Data availability is improved because a tape can be processed by multiple guests and in different operating environments at the same time.

• Cost. The incremental cost of adding tape drives, with VTAPE installed, is $0.00. Many more drives can be made available to reduce scheduling problems.
VTAPE z/OS Uses Under z/VM

- Read tapes created by CMS or Linux.
- Create tapes for input to CMS or Linux.
- Create real tapes from virtual tapes.
- Backup disks.
- Any other tape use.
VTape Sys Programmer Uses

- SPXTAPE backup and restore of all spool file types.
- Maintaining product installation and maintenance tapes
- Backing up datasets or minidisks prior to maintenance.
- Backing up datasets or minidisks for disk reallocation.
VTAPE Specifications (1 of 3)

- Supports all levels of z/VM
- Provides 3420, 3480, 3490 and 3590 virtual tape drives.
- Up to 24 libraries can be defined.
- Up to 256 disk volumes per library.
- Up to 32,640 tape volumes per library.
- Variable size autoloaders.
VTAPE Specifications (2 of 3)

• Tape data is compressed.
• Multiple libraries can be opened for input or output.
• Multiple VM systems can share libraries.
• Online query for open libraries.
• Library reports generator.
• Library backup and restore.
VTAPE Specifications (3 of 3)

- Full, incremental and Differential library backups.
- Tape descriptions can be set, queried and searched.
- Dummy tape can be used when output data is not needed.
- Maximum tape volumes per user can be restricted.
- Variable tape sizes.
Sample CMS Session (1 of 3)

- define v4380 181
  - TAPE 0181 DEFINED
    Ready;

- vtmount 181 scratch
  - A118 mounted on 0181
    Ready;

- tape dump * exec a
  - Dumping…
    FMTBLOCK EXEC A1
    LOCERM EXEC A1
    PROFILE EXEC A1
    Ready;
Sample CMS Session (2 of 3)

- vset 118 desc ‘A-disk execs’
  - Desc for A118 set to A-DISK EXEC
    Ready;

- tape rew (181
  - Ready;

- def v3480 288
  - TAPE 0288 DEFINED
    Ready;

- vtm 288 scratch keep 90
  - A119 mounted on 0288
    Ready;
Sample CMS Session (3 of 3)

• copytape 181 288 (eot
  • EOJ 2 tape marks processed
    Ready;

• tape rew (288
  • Ready;

• tape scan (288
  • Scanning…
    FMTBLOCK EXEC A1
    LOCERM EXEC A1
    PROFILE EXEC A1
    End-of-file or end-of-tape
    Ready;
VTAPE Internals

VTAPE Internals include the following components:

- VM CP modules
- Modifications to IBM VM CP modules
- CMS modules
- Modifications to IBM CP commands
- CMS Execs for installation and maintenance
- Documentation: product installation and user reference
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