

**SHARE**

Technology • Connections • Results

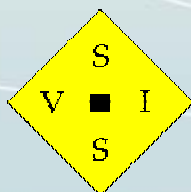
# VTAPE

Virtual Software Systems, Inc.

<http://www.vsoftsys.com/>

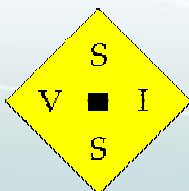
Session 9155

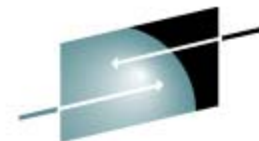
SHARE in Orlando - February 2008



# 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.



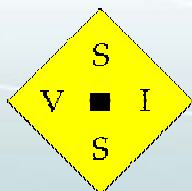


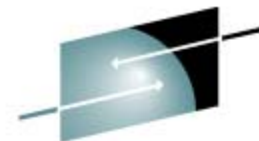
**S H A R E**

Technology • Connections • Results

## 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.



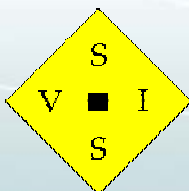


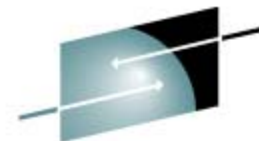
**S H A R E**

Technology · Connections · Results

## VTAPE Benefits (2 of 2)

- **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.



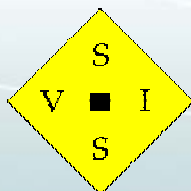


**S H A R E**

Technology · Connections · Results

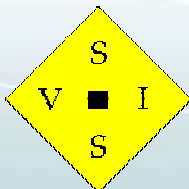
## VTAPE z/OS Uses Under z/VM

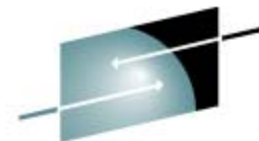
- Read tapes created by CMS or Linux.
- Create tapes for input to CMS or Linux.
- Create real tapes from virtual tapes.
- Backup disks.
- Any other tape use.



# 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.



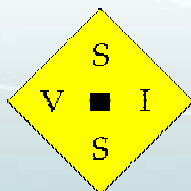


**S H A R E**

Technology · Connections · Results

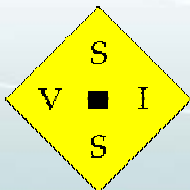
## VTAPE Specifications (1 of 3)

- 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)

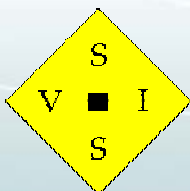
- Tape data is compressed.
- Multiple libraries can be opened for input or output.
- Multiple VM systems can share libraries.
- Online query for open libraries.
- Library reports generator.
- Library backup and restore.

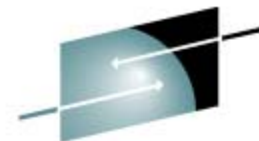




## VTAPE Specifications (3 of 3)

- 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.





**S H A R E**

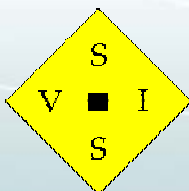
Technology · Connections · Results

# 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...

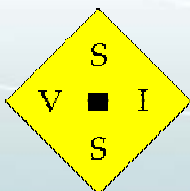
FMTBLOCK	EXEC	A1
LOCERM	EXEC	A1
PROFILE	EXEC	A1

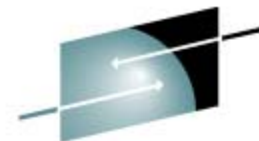
  
Ready;



## Sample CMS Session (2 of 3)

- **vset 118 desc 'A-disk execs'**
  - Desc for A118 set to A-DISK EXECS  
Ready;
- **tape rew (181)**
  - Ready;
- **def v3480 288**
  - TAPE 0288 DEFINED  
Ready;
- **vtm 288 scratch keep 90**
  - A119 mounted on 0288  
Ready;



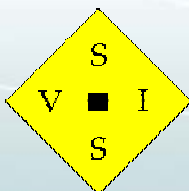


**S H A R E**

Technology • Connections • Results

## Sample CMS Session (3 of 3)

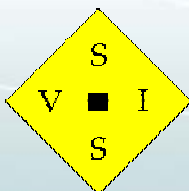
- copytape 181 288 (eot)
  - EOJ 2 tape marks processed  
Ready;
- tape rew (288)
  - Ready;
- tape scan (288)
  - Scanning...  
FMTBLOCK EXEC       A1  
LOCERM   EXEC       A1  
PROFILE   EXEC A1  
End-of-file or end-of-tape  
Ready;

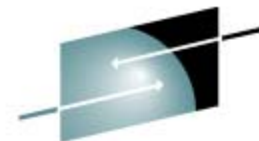


# VTAPE Internals

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





**S H A R E**

Technology • Connections • Results

# VTAPE

Virtual Software Systems, Inc.

<http://www.vsoftsys.com/>

