Virtual Tape

WAVV-2004

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Definition

- Virtual tape is a file containing a tape image
- 2 file types
  - VSE/VSAM ESDS file residing on the VSE/ESA host
  - Remote file on a Linux, UNIX, or Windows server
- Format of file is sometimes referred to as AWSTAPE format

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Defining the Tape Device

- A virtual tape must be added to the system like a physical tape
  - ADD cuu,3480
- Device type can be 3480, 3490, or 3490E

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VTAPE Command

- Virtual Tape Support is started and stopped with the VTAPE START and VTAPE STOP commands
- Can be issued from either static or dynamic partitions
- Can be issued from REXX via ADDRESS JCL

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Components

- Virtual Tape Simulator
- Virtual Tape Data Handler
- Virtual Tape Server

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Virtual Tape Simulator

- Part of VSE/ESA and ready for use after installation
- Controls processing of virtual tapes independent of where data resides (VSAM or remote)
- Receives incoming requests and sends them to the Virtual Tape Data Handler for processing and provides status

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Virtual Tape Data Handler

- Part of VSE/ESA and ready for startup after installation
- Handles read and write to virtual tape
- VTAPE START command causes release of job TAPESRVR from the Power reader
  - This job starts the Data Handler ($VTMAIN) in a partition (default class R)

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Virtual Tape Data Handler

- Skeleton SKVTASTJ in library 59 to load job into reader queue
- VTAPE STOP command frees the partition

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Virtual Tape Server

- Required for remote virtual tapes only
- Workstation counter part of Virtual Tape Data Handler
- Communicates via TCP/IP
- Installed on a workstation with a JAVA platform

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Run Time Considerations

- SDAID trace program does not support virtual tapes
- DITTO/ESA does not support ERASE TAPE function for virtual tapes
- Multivolume tape files not supported
- Alternate tapes (ALT option of ASSGN) is not supported

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Run Time Considerations

- File for containing virtual tape is created automatically in case of remote virtual tape
- You must manually create the file for VSE/VSAM virtual tape
- Remote virtual tape behaves like physical tape when reading and writing
- VSE/VSAM virtual tape behaves differently when writing

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Run Time Considerations
VSE/VSAM

- Write can only start at the beginning
- No rewrite or overwrite possible except from the beginning of tape
- To write to virtual tape more than once, file definition must include the REUSE option or VTAPE START must use SCRATCH option

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VSE/VSAM Virtual Tape

- Define the ESDS file
- VTAPE START,UNIT=cuu,LOC=VSAM,FILE='vsamfilename',SCRATCH

- Run job to create tape
- VTAPE STOP,UNIT=cuu

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Remote Virtual Tape

- VTAPE START,UNIT=cuu,LOC=ipaddress:portnumber,FILE='filename'
- VTAPE STOP,UNIT=cuu

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Sample LIBR Backup

```
// JOB BACKUP
VTAPE START,UNIT=480,LOC=9.164.186.20:2285,
           FILE='D:\VSE BACKUP\PRD2.001'
MTC REW,480
// EXEC LIBR
   BACKUP LIB=PRD2 TAPE=480
/*
VTAPE STOP,UNIT=480
/&
```

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