



OpenVMS TapeReader for Windows

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OpenVMS TapeReader for Windows

The Problem:

- lots of OpenVMS BACKUP tapes (DLT/SDLT)
- 16 years worth of archived CAD data
- 70 TB of CAD data on OpenVMS BACKUP tapes

- OpenVMS infrastructure with Pathworks Server
- BRAVO CAD on Windows NT clients storing data on Pathworks Server

- moving away from OpenVMS infrastructure

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First Attempt:

- restoring BACKUP tapes on OpenVMS to Pathworks shares
- copy data to Windows system via Pathworks

- throughput: 4 GB/hour -> 2 years for 70 TB of data

- copy data to Windows via FTP
- need to scan huge FTP log files for possible errors
- all data still needs to be restored on OpenVMS first

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Alternatives:

CHARON-VAX or CHARON-AXP

- can handle native SCSI tape drives
- runs OpenVMS and can read/write OpenVMS BACKUP tapes
- data can be restored on demand even without VAX/Alpha infrastructure

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Alternatives:

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- References found during research in comp.os.vms from 2003 and 2005
- linked product page did not exist anymore

- former product of producer of CHARON-AXP Emulator
- obtained OpenVMS TapeReader for Windows on project basis for testing
- no support, no further development planned

OpenVMS TapeReader for Windows

Features:

- runs on Windows
- can read OpenVMS backup savesets on SCSI tapes
- can read OpenVMS backup savesets stored as files on Windows disk
- can dump SCSI tape contents to Windows disk file (.MTD)
- can list OpenVMS BACKUP saveset contents
- can extract files from OpenVMS BACKUP savesets (on tape or disk)

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Documented Restrictions:

- cannot process continuation tape volumes (BACKUP save sets spanning more than one tape)

Restriction found during Testing:

- cannot correctly obtain data from OpenVMS BACKUP save sets with large blocksize (> 32k)
A workaround has been developed.

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Workaround for large BACKUP saveset blocksize:

Data on ANSI Tape:

BOT – VOL1 – HDR1 – HDR2 *TM* backup-saveset-blocks *TM* - EOF1 – EOF2 ..

Tested with Cygwin for Windows:

```
Cygwin$ mount -f -b //./tape0 /dev/nst0
```

```
Cygwin$ dd bs=65024 if=/dev/nst0 of=fileN.bck
```

Execute dd multiple times until backup saveset has been copied. Increment ,N'

```

$ mount -f -b ../tape0 /dev/nst0
Hallev@ws_charon01 ~
$ dd bs=65024 if=/dev/nst0 of=file1.bck
0+3 records in
0+3 records out
240 bytes (240 B) copied, 3.837 s, 0.1 kB/s
Hallev@ws_charon01 ~
$ dd bs=65024 if=/dev/nst0 of=file2.bck
271+0 records in
271+0 records out
17621504 bytes (18 MB) copied, 28.723 s, 613 kB/s
Hallev@ws_charon01 ~
$ dd bs=65024 if=/dev/nst0 of=file3.bck
0+2 records in
0+2 records out
160 bytes (160 B) copied, 0.047 s, 3.4 kB/s
Hallev@ws_charon01 ~
$ dd bs=65024 if=/dev/nst0 of=file4.bck
0+2 records in
0+2 records out
160 bytes (160 B) copied, 0.046 s, 3.5 kB/s
Hallev@ws_charon01 ~
$ dd bs=65024 if=/dev/nst0 of=file5.bck
93+0 records in
93+0 records out
6047232 bytes (6.0 MB) copied, 9.486 s, 637 kB/s
Hallev@ws_charon01 ~
$ pwd
/home/Hallev
Hallev@ws_charon01 ~
$ ls -lia
total 23139
 281474976753779 drwxrwxrwx+ 2 Hallev Kein      0 Nov  2 12:02 .
 281474976753778 drwxrwxrwx+ 3 Hallev Kein      0 Nov  2 09:17 ..
 11258999906885751 -rw----- 1 Hallev Kein    2009 Nov  2 11:59 .bash_history
y
 281474976753781 -rwxr-xr-x  1 Hallev Kein    1150 Nov  2 09:16 .bash_profile
e
 281474976753780 -rwxr-xr-x  1 Hallev Kein    3116 Nov  2 09:16 .bashrc
 281474976753782 -rwxr-xr-x  1 Hallev Kein    1461 Nov  2 09:16 .inputrc
1383168035556168474 -rw-r--r--  1 Hallev Kein      240 Nov  2 12:01 file1.bck
1423137482249081784 -rw-r--r--  1 Hallev Kein 17621504 Nov  2 12:01 file2.bck
1799188051134519539 -rw-r--r--  1 Hallev Kein    160 Nov  2 12:02 file3.bck
2300494984656199658 -rw-r--r--  1 Hallev Kein    160 Nov  2 12:02 file4.bck
3180948711807134715 -rw-r--r--  1 Hallev Kein 6047232 Nov  2 12:02 file5.bck

```

VOL1
 HDR1
 HDR2
 TapeMark
 Saveset-1
 TapeMark
 EOF1
 EOF2
 TapeMark
 HDR1
 HDR2
 TapeMark
 Saveset-2
 TapeMark
 ...

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Solution: OpenVMS TapeReader for Windows

- can read OpenVMS BACKUP savesets even without OpenVMS infrastructure
- data can be read from tapes on demand

- available on project basis
- no support, no development
- workaround for large BACKUP saveset blocksizes available



Questions ?

Online demonstration will follow...