Fully Wired Hot Topics #12 ½
Reloaded: MVS Free Tools and Tips Update!

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action figures sold separately; no preservatives added; slippery when wet; safety goggles may be required during use; sealed for your protection, do not read if safety seal is broken; call before you dig; not liable for damages arising from use or misuse; for external use only; if rash, irritation, redness, or swelling develops, discontinue reading; read only with proper ventilation; avoid extreme temperatures and store in a cool dry place; keep away from open flames; avoid contact with eyes and skin and avoid inhaling fumes; do not puncture, incinerate, or store above 120 degrees Fahrenheit; do not place near a flammable or magnetic source; smoking this presentation could be hazardous to your health; no salt, MSG, artificial color or flavoring added; if ingested, do not induce vomiting, and if symptoms persist, consult a physician; may cause drowsiness, alcohol may intensify this effect; use caution when operating a car or dangerous machinery; possible penalties for early withdrawal; offer valid only at participating sites; slightly higher west of the Rockies; allow four to six weeks for delivery; must be 18 to read; objects in mirror are closer than they appear; disclaimer does not cover misuse, accident, lightning, flood, tornado, tsunami, volcanic eruption, earthquake, hurricanes and other Acts of God, neglect, damage from improper reading, incorrect line voltage, improper or unauthorized reading, broken antenna or marred cabinet, missing or altered serial numbers, electromagnetic radiation from nuclear blasts, sonic boom vibrations, customer adjustments that are not covered in this list, and incidents owing to an airplane crash, ship sinking or taking on water, motor vehicle crashing, dropping the item, falling rocks, leaky roof, broken glass, mud slides, forest fire, or projectile (which can include, but not be limited to, arrows, bullets, shot, BB’s, shrapnel, lasers, napalm, torpedoes, or emissions of X-rays, Alpha, Beta and Gamma rays, knives, stones, etc.); other restrictions may apply; contest ends 12-31-98; contents measured by weight only, contents may settle in transit; May cause random outbursts of extreme violence, epileptic seizures, or whatever; actual presentation may differ from illustration on box.
You should have CD-ROMS and a handout

- Paper Copy of foils from this presentation which will also be available at the SHARE web site

**A** CBT CD-ROM #14 ¼ MVS freeware, tools, information of all kinds for mainframe craftsmen

**D** Volker’s MVS 3.8 Turnkey CD-ROM #3 for Hercules

**3** The *OpenCD* 1.4 Quality Open Source Software for Windows
OS/360 MVT CD(s)

OS/360 n. A small free operating system that took IBM to total dominance of the global computing market.

See Linux From http://www.isham-research.com/dd.html

- OS/360 Distribution by Rich Fochtman

These Can be ordered from cbttape.org CD Mailing program.

- Turnkey OS/360 MVT for Hercules by Jay Maynard
OS/360 MVT CD(s)
Getting started with CBT CD-ROM

The CD should automatically open CBT.htm in your default web browser from the CD when inserted on most Windows computers. If this does not happen or you are using Linux, Macintosh, etc you can open it manually.

The CD should be useable on most modern OS it is not limited to Windows although some of the PC freeware is Windows specific.

You may give the CD away but don’t assume because something is on the CD you have cart blanche to redistribute or resell. Respect copyrights and beyond legal necessities respect the author.
CBT CD-ROM #14 Contents

- CBT Tape V466 July - 25 - 2004
- CBT Overflow Tape V466 July - 25 - 2004
- Softcopy books from Bob Ducharme and Steve Samson
- PC Tools to work with XMIT files
- SeaGull Free FTP client free for personal or commercial use
- Historic OS(s) MVS 3.8 sources, VM/370 R6 distributions
- Hercules emulator and related resources
- Web sites from Lionel Dyck, David Alcock, others
- JES3 free tools and mods
- ZZSA Bootable mainframe rescue CD
- Explore for the CD for much more!
Hercules - What is it?

• Hercules is a System/370, ESA/390 and z/Architecture emulator which can IPL and execute most of the instructions defined for these architectures. It can also emulate CKD and FBA DASD, printer, card reader, tape, channel-to-channel adapter, and local non-SNA 3270 devices.

• Currently runs under Linux, Windows, Mac OS X 10.2 or later, BSD, and experimental ports for other platforms are underway

• Capable of running nearly all software written for S/370, ESA/390 and z/Architecture

• Included on the CBT CD, Volker CD

• Jay Maynard is lead maintainer and a recent status presentation is in www.conmicro.cx directory on CBT CD

Hercules Home Page
http://www.conmicro.cx/hercules
Hercules – Find out more?

Active User Community on Yahoo Groups
http://groups.yahoo.com/group/hercules-390

- Post message: hercules-390@yahoogroups.com
- Subscribe: hercules-390-subscribe@yahoogroups.com
- Unsubscribe: hercules-390-unsubscribe@yahoogroups.com
- List owner: hercules-390-owner@yahoogroups.com

Groups now include hercules-390, H390-MVS, turnkey-mvs, H390-VM, H390-DOSVS, H390-OSVS1, H390-music

New Users Documentation Effort for Hercules
http://www.kiyoinc.com/hercdoc.html

Hercules Home Page
http://www.conmicro.cx/hercules
Hercules – Windows GUI

http://home.sprintmail.com/~dtrout/Hercules/hercgui-index.html
Getting started with Volker’s MVS Turnkey CD #3

The CD supports installation under Windows and Linux. Use the web browser of your choice to open the file readme.html and then review the New User Cookbook.

This revision of the CD does not autoplay in Windows so nothing will happen when you insert the CD till you want to start the installation and run the setup program.
Doing work with Volker's MVS Turnkey CD #3

“Mainframe on a PC, its as easy as pie.” Edwin Handschuh

My current client hired me in January of this year (I won't mention names). I was tasked to develop a multi-threaded application which automates/facelifts FTP. My only problem was that I didn't have a userid for the mainframe (imagine writing Assembler without logging on!). I ordered the CD (Hercules is on the CD along with MVS 3.8.j), installed it, and began developing, assembling, linking, and testing the code. I was writing assembler code from early March all the way through to the end of June. In early July (when I got my id... I won't go into the many reasons why they weren't able to provide me with an id), I copied the code to z/OS 1.2, assembled it (without errors) and haven't looked back since. I'm not going to lie to you and tell you that the MVS 3.8.j "F" assembler is the most up to date assembler (HA!), but it didn't limit my ability to write 99% of what I had to write. All in all, the MVS 3.8.j OS provided on the CD is a very useable system. I highly recommend it for someone who's trying to learn the ropes and doesn't have access to a mainframe.
The OpenCD 1.4

- Open Source for Windows
- Open Office 1.1.1
- AbiWord
- GIMP
- Mozilla 1.6
- Filezilla FTP client
- VNC
- PuTTY
- Games
- 7-zip
- Links, Essays
- Revolution OS Movie Trailer
e-Books, e-Magazines, and other e-publications

"Using the Internet today is like trying to use a library where all the books have been dumped on the floor and the lights turned out."

One starting place http://www.cbttape.org/links.phtml
MVS Performance


z/OS Version 1 Edition available now. Steve updated this for z/OS R4 in July and made the updated version available free to those who purchased the z/OS upgrade.

Free version Good Resource especially for WLM COMPAT mode while it lasts and

You can buy the PDF for download for $50 or on a CD for a bit more at

https://www.setsystems.com/cgi-bin/buy-mvs

http://www.cbttape.org/samson.htm
The Operating Systems Handbook

The Operating Systems Handbook by Bob DuCharme

Released as a free e-book

"Working Knowledge of UNIX, VMS, OS/400, VM/CMS, and MVS."
Wouldn't that look great on your resume?

I wanted to call it "Fake Your Way Through Minis and Mainframes," but McGraw-Hill wanted something that sounded more respectable...

http://www.snee.com/bob/opsys.html
Advanced Assembler Source

Advanced Assembler Language and MVS Interfaces: For IBM Systems and Application Programmers, Second Edition

Carmine A. Cannatello
ISBN 0471361763
848 pages

Where to buy the book?

http://www.isbn.nu/0471361763

Source Code on CBT Tape File 69

I purchased the first edition and examples on diskette in 1991 for about $50 each
MVS Systems Programming
by David Elder-Vass
ISBN: 0-07-707767-9
Out of Print
Written in 1993 before OS/390

e-Book now available on the web at
http://www.mvsbook.fsnet.co.uk/
Reprint now available through Amazon.com or iuniverse.com
IBM Hot Topics

Published twice a year

Articles by IBM developers and others

Produced by IBM Publications in Poughkeepsie

Available in hardcopy at user groups like SHARE and on the web

Current and back issues on z/Favorites biz card CD-ROM

IBM Redbooks

IBM released a Redbook series entitled the "ABC's of Systems Programming" and is a "five-volume set that is designed to introduce the structure of an OS/390 and S/390 operating environment. The set will help you install, tailor, and configure an OS/390 operating system, and is intended for system programmers who are new to an OS/390 environment."


**UPDATE!** Being updated for z/OS and expanded to a 10-volume set! Some of the new volumes available now.
Online proceedings of conferences from previous years are now freely available to everyone. The full papers of the past twelve months are available only to USENIX members.
IBM References

IBM Internet Library
z/OS http://www.ibm.com/servers/eserver/zseries/zos/bkserv/

LOOKAT IBM tool to quickly lookup messages

IBM Catalog and VSAM Knowledge Base

was http://knowledge.storage.ibm.com

is no longer easy to find use http://tinyurl.com/2sclt
IBM References Cheaper

IBM Library Kits on CD or DVD

IBM recently reduced the price to USD $20 of both

• z/OS V1R5 and Software Products DVD Collection (SK3T-4271-12)

• z/OS V1R5 CD Collection (SK3T-4269-12)

Order here http://tinyurl.com/fgzc or

Magazines

technical SUPPORT

Archives 1996 - 2004
http://www.naspa.com/tsyellow.htm
http://www.naspa.com/ is home site for NaSPA

MAINFRAME MONTH

http://www.xephon.com/mfm/
Free Xephon monthly email newsletter focused on IBM mainframes

TSO Times

Sponsored by Chicago-Soft an old favorite has returned
http://www.tsotimes.com

PROCESSOR.COM
EETIMES.COM
Free Magazines

http://www.zjournal.com/

Bob Thomas (Founder ESJ) is back.


http://www.eservercomputing.com/mainframe/
More out there

http://dmoz.org/Computers/Software/Operating_Systems/Mainframe/IBM/z-OS/

dmoz Open Directory Project is the largest, most comprehensive human-edited directory of the Web

http://www.xephon.com

Free backs issues of Xephon MVS, DB2, RACF, CICS, and other Update publications from prior to 1998. Now a weekly email newsletter is available which has been well received.
On-Line Computer Dictionaries

- IBM® Terminology
  http://www.ibm.com/ibm/terminology/

- FOLDDOC
  Free On-Line Dictionary Of Computing
  http://www.foldoc.org

This standard one is handy and no pop-up ads!

http://www.m-w.com
Why Tools?

The difference between an amateur and a professional is often mastery of the tools of the trade. If you take the time to prepare and grow comfortable with your tools when required you will be able to quickly and efficiently accomplish tasks that others consider impossible or too large to complete in the available time.

"Whatever tools you have, learn to use them. Over and over. Better and better. You'll surprise yourself if you are patient, stick to an organized schedule, and keep working at it." Sam Golob
Free Software

“Sharing of software was not limited to our particular community; it is as old as computers, just as sharing of recipes is as old as cooking. But we did it more than most.” Richard Stallman

SHARE: “It’s not an acronym. It’s what we do.”

New CMG phrase from Dallas agenda take home and use
Bring home the Tools!

Take home at least one tool and solve a problem. Many conferences attended by managers and others are boondoggles so they are not prepared to believe what you put into a user group like NaSPA, SHARE, or CMG and what you can get out of it!

*take home and use what you hear today*
Internet Formats

- ZIP
- ZIP is standard for compression in most of the non-unix world
- Commercial ZIP utilities on PC such as PKZIP [http://www.pkware.com](http://www.pkware.com) or WinZIP [http://www.winzip.com](http://www.winzip.com) or RAR [http://www.rarlabs.com](http://www.rarlabs.com)
- Info-ZIP is a freeware utility available at [http://www.cdrom.com/pub/infozip/Zip.html](http://www.cdrom.com/pub/infozip/Zip.html) for a large number of platforms including native OS/390 and OS/390 USS
- 7-zip is GPL freeware for Windows [http://www.7-zip.org](http://www.7-zip.org)
- XMIT
- Using the TSO XMIT command is a convenient way to package data into standard FB records for safe transmission of the internet
- XMIT + ZIP
- XMIT packaged data sets which are then compressed with a ZIP utility such as PKZIP work especially well and are becoming a popular choice to distribute MVS software over the internet
- ASCII vs. EBCDIC
How to download and restore XMIT + ZIP

Frequently files are packaged on MVS for transfer using the TSO transmit (XMIT) command to transmit them into a data set. This is done to turn PDS(s) and other odd files into nice FB 80 files which will FTP nicely to PC and UNIX systems. These files are downloaded to a PC and then compressed with PKZIP to reduce the size since disk space is limited and most people have limited bandwidth to download. The convention of files suffixed .XMI packaged in XMIT format is becoming common.

Download \textit{name.ZIP} file to PC as using your web browser or an FTP client.
How to download and restore XMIT + ZIP

Extract *name.XML* or *name.DAT* file from *name.ZIP* file on PC. You will need a small utility program to do this.


Freeware Unzipping programs are almost as good and many can be found by searching PC Freeware web sites such as NoNags [http://www.nonags.com](http://www.nonags.com)

For Windows 7-zip is a good one you can download from [http://www.7-zip.org](http://www.7-zip.org)
How to download and restore XMIT + ZIP

Upload *name.XMI* files to MVS using a binary file transfer method (no CRLF or ASCII translation) and that the MVS dataset created is LRECL=80,RECFM=F,DSORG=PS Note that you can upload into a PDS if you want as long as it is FB80.

Receive the *name.XMI* file on MVS

Issue command: TSO RECEIVE INDATASET(*name.XMI*)

When prompted by message "INMR906A Enter restore parameters or 'DELETE' or 'END' +":

Enter: DA(*name.of.your.library*) UNIT(*unit*) VOLUME(*volume*)

Note: The UNIT() and VOLUME() operands are optional but shown in case your installation puts RECEIVE files on work packs by default like mine does
If you are having trouble downloading try to find out if you are behind a firewall. If you are behind a firewall and you cannot get your network folks to configure it to allow you to download using a web browser try getting an FTP client like the free Seagull FTP or WS_FTP that has a few firewall friendly options (PASV mode) that might help. Failing that download from home and email yourself the files or bring them in on a floppy as most are not that large.

More hints at http://www.cbttape.org/downloadtrouble.htm
Tape Tools

- Map contents
- Copy tapes
- Virtual Tape Images and utilities
- Examine data
- File Manipulation
The tape mapping program called TAPEMAP supplied as source on file 299 of the CBT tape, is widely used. It includes special support for mapping the CBT Tape and other common file formats. **64k blocksize supported**

Does not require BLP but BLP allows you to analyze a volume without changes to JCL or any prior knowledge of that tape volume.

Leonard Woren’s web page [http://www.best.com/~ldw/mvs](http://www.best.com/~ldw/mvs) has his original version of TAPEMAP. oco

```plaintext
//TAPEMAP EXEC PGM=TAPEMAP,REGION=6M
//SYSUDUMP DD SYSOUT=* 
//SYSPRINT DD SYSOUT=* 
//SYSPRNT2 DD SYSOUT=* 
//SYSUT1 DD DISP=OLD, 
//                      DSN=MOUNT.TAPE, 
//                      LABEL=(,BLP,EXPDT=98000), 
//                      UNIT=3490, 
//                      VOL=SER=(TAPEIN)
```
## TAPEMAP Output

**Sample Output:**

1VOL=OS360S  CART ANALYSIS PROGRAM (T A P E M A P) V2.1  TUESDAY NOV 03, 1998 (98.307) 14:14:03

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<th>PSWD</th>
<th>INFO</th>
<th>BLOCK</th>
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<td>00.000</td>
<td>LABELS VB</td>
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<td>32716</td>
<td>107</td>
</tr>
<tr>
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<td></td>
<td></td>
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<td>32716</td>
<td>107</td>
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<td>32714</td>
<td>26</td>
<td>N/A</td>
<td>2</td>
</tr>
</tbody>
</table>

**EOV:***

Lengths (L) are computed, (based on BLKSIZE, BLKCOUNT, and DENSITY), and are therefore only approximate.

---

1VOL-OS360S  CART ANALYSIS PROGRAM (T A P E M A P) V2.1  TUESDAY NOV 03, 1998 (98.307) 14:14:03

---

-0360S001 (FILE 0001) is a CBT973 compressed file: A-ADD C-CHANGE R-REPLACE > = SUBORDINATE NAME

-0

<table>
<thead>
<tr>
<th>FOLLOWING MEMBERS UNLOADED:</th>
</tr>
</thead>
</table>
The tape copying program called "COPYMODS" on file 229 of the CBT tape, is useful for making byte-for-byte copies of the CBT tape, and other tapes. Up to 10 copies may be made at one time.

COPYMODS is very reliable and is the recommended program for making copies of the CBT Tape.

Normal use requires BLP privileges.

*Updated by Sam Golob for 64k blocks and serious tape label manipulation!*
COPYMODS JCL

/** *
 COPYMODS IS A FREWARE TAPE COPIER WHICH CAN CREATE
 /** * MULTIPLE COPIES OF A TAPE IN A SINGLE PASS. IT CAN USE
 /** * UNLIKE DRIVES FOR INPUT AND OUTPUT E.G. 3480 <<-->> 3490
 /** *
 /** * WARNING!!!! THIS WILL OVERWRITE ANYTHING YOU PUT IN THE
 /** * OUTPUT DRIVE.
 /** *
 COPY EXEC PGM=COPYMODS,REGION=6M
STEPLIB DD DISP=SHR,DSN=IBMUSER.LOAD
SYSPRINT DD SYSOUT=* 
IN DD DSN=IBMUSER.INPUT.TAPE,DISP=OLD,LABEL=(,BLP),UNIT=3490,
// VOL=SER=INPUT
OUT1 DD DSN=IBMUSER.WRITE.TAPE1,UNIT=3480,VOL=SER=OUTPU1,
// LABEL=(,BLP,EXPDT=98000),DCB=TRTCH=COMP
OUT2 DD DSN=IBMUSER.WRITE.TAPE2,UNIT=3480,VOL=SER=OUTPU2,
// LABEL=(,BLP,EXPDT=98000),DCB=TRTCH=COMP

Tip: Use MOUNT command when running multiple jobs i.e.
 M uuu,VOL=(NL,INPUT),USE=PRIVATE
COPYFILE

• Copy and reorder files
• Previously used as part of the process to create a new CBT Tape
• Found on CBT Tape File 316 in source and a load module on CBT Tape File 35
AWSTAPE

- AWSTAPE format defined by IBM can be used on platforms with emulated I/O such as P390, Multiprise, Hercules. Sequential file seen as a tape by OS but only when seen through the emulated I/O layer. No native access on MVS, VM, etc.

- CBT Tape and many historic volumes available in AWSTAPE format often no longer distributed as real tapes

CBT Tape AWS Virtual Tape Library
http://www.cbttape.org/awstapeli.htm

- Utilities available for MVS, VM, VSE to create AWSTAPE files
  - Used as part of the process to create a new CBT Tape
AWSTAPE Utilities

• AWSUTIL
  • found on CBT tape file 477, released under the GPL by Brandon Hill
  • read a tape and create a binary archive in AWSTAPE format, output is formatted RECFM VB LRECL 4100

• VTT2* tools found on CBT tape file 533 in source and prebuilt load modules on CBT Tape File 35, written by Sam Golob released for free personal or commercial use
  • VTT2DISK read a tape and create a binary archive in AWSTAPE format, output is
  • VTT2TAPE read a AWSTAPE file and output a real tape on media of your choice so long as it is large enough
  • VTT2CNVU convert VB AWSUTIL to FB VTT2* format

• See Sam Golob December 2001 column in NaSPA technical SUPPORT magazine (CM0112DE CBT file 120)
AWSTAPE VTT2DISK

//AWSWRIT EXEC PGM=VTT2DISK
//STEPLIB DD DISP=SHR, DSN=IBMUSER.LOAD
//AWSOUT DD DISP=(NEW,CATLG), DSN=IBMUSER.C439MU, UNIT=SYSDA,
// VOL=SER=SCPV05, DCB=(RECFM=FB, LRECL=80, BLKSIZE=27920),
// SPACE=(CYL,(302, 10), RLSE)
//TAPIN DD DISP=OLD, UNIT=582, VOL=SER=C439MU,
// LABEL=(1, BLP, EXPDT=98000)
//SYSPRINT DD SYSOUT=* 
//SYSFILES DD SYSOUT=* 
//SYSTRACE DD SYSOUT=* 
//SYSMOVED DD SYSOUT=* 
//SYSUDUMP DD SYSOUT=*
AWSTAPE VTT2TAPE

//AWSREAD EXEC PGM=VTT2TAPE
//STEPLIB DD DISP=SHR,DSN=IBMUSER.LOAD
//AWSIN DD DISP=SHR,DSN=IBMUSER.TAPE
//TAPOUT DD DISP=OLD,UNIT=3420,VOL=SER=TTTTTT,
//        LABEL=(1,BLP,EXPDT=98000)
//SYSPRINT DD SYSOUT=*  
//SYSFILES DD SYSOUT=* 
//SYSTRACE DD SYSOUT=*  
//SYSMOVED DD SYSOUT=*  
//SYSUDUMP DD SYSOUT=*
System Doctor Tools

“What are the tools?”

William S. Mosteller
The Systems Programmers Problem Solver
## CDSCB

**EDIT E CSSJK.IDCAMS.CNTL**  
Command ===>  
**CSR**

<table>
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<th>Name</th>
<th>Size</th>
<th>TTR</th>
<th>Alias-of AC</th>
<th>AM</th>
<th>RM</th>
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<td>00069F03</td>
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<td>. EXPORT</td>
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<td>. LISTDATA</td>
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<td>RX</td>
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<td>. SETCAOFF</td>
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<td>000101</td>
<td>24</td>
<td>24</td>
<td></td>
<td>RX</td>
</tr>
<tr>
<td>. WTOENROL</td>
<td>00000090</td>
<td>000107</td>
<td>01</td>
<td>31</td>
<td></td>
<td>ANY</td>
</tr>
</tbody>
</table>

Someone has accidentally linked a load module into his JCL PDS… changing the attributes of the PDS itself.
The CDSCB (change DSCB) command modifies a data set's Format-1 DSCB in a VTOC.

Since the Format-1 DSCB contains information crucial to a data set's security and integrity, (and in fact to the whole system's security and integrity), this command must be restricted to systems support personnel.

CDSCB 'DSNAME' EXPDT(DATE) SHR VOL(VOLUME) UNIT(UNIT) CREATE(DATE) REFDT(DATE) DSORG(XX) RECFM(XX) LRECL(XX) BLKSIZE(XX) ALLOC(TR/CYL/BL) SPACE(SECONDARY-AMOUNT) PWR/PWW/NOP/RACF/NORACF ZAP(OFFSET VERDATA REPDATA)

REQUIRED - 'DSNAME'
DEFAULTS - NOTHING WILL HAPPEN IF NO CHANGES ARE SPECIFIED
CDSCB

CDSCB CSSJK.IDCAMSCNTL RECFM(FB) LRECL(80)

CHANGED

**Fixed!**

- CDSCB can be used to quickly repair data set attributes which users have unintentionally altered.

- CDSCB is found on [CBT Tape](#) File 300. A version modified by Michael Cleary to use RACF instead of an internal userid table is on CBT Tape File 301 or his web page.
The ZAP command is used to examine, dump, and modify any type of sequential, partitioned, or direct access dataset. Any RECFM is accepted. This command is the TSO interactive equivalent of IBM's service aid 'IMASPZAP' or 'SUPERZAP'. ZAP is found on CBT Tape files 134 (source) and 135 (load).

ZAP 'dsname' VOLUME('serial') CRT NOT3270
   TERSE/VERBOSE BLKSIZE('blksize')
   NOLOG/LOG
   FULLVOL

REQUIRED: 'dsname'
DEFAULTS:  TERSE, NOLOG
   No volume implies a cataloged dataset.

NOTE:  VOLUME keyword is required if dataset is not cataloged or if it is 'FORMAT4.DSCB'.
The ZAP command ZAP ‘FORMAT4.DSCB’ VOLUME(DEVL51) FULLVOL allows me to inspect and modify any location on the volume DEVL51.

Z A P

ENTER VALID COMMAND ABOVE OR ? FOR HELP

VERSION=3.2K 04JAN99

• ZAP can help you understand the formats of data sets by eliminating any formatting imposed by other viewers
• On-line help available by pressing “?” is enough to get you started
• Sam Golob’s columns on ZAP (CBT Tape file 120 or on-line) very helpful
File Delete Tools & Tips

When it’s time for spring cleaning deleting files one at a time by hand is not good enough.

You have to feel the delete. Be the delete.

-Jeremy Werner and Brian Hales
XDELETE - REXX exec uses Catalog Search Interface to invoke DELETE against data sets matching a pattern mask. Another great tool by Gilbert Saint-flour

- CBT file #183  http://www.cbttape.org
- http://www.pobox.com/~gsf
- XDELETE generic_name EXECUTE
- Use without specifying EXECUTE for a preview

- generic_name i.e. SYS1.PARMLIB , SYS1.* , SYS1 or SYS1.** , **.LIST , AAA%*.B*%%%B

- documented in source, install in SYSEXEC or SYSPROC concatenation for easy use, can be run in batch TSO
DELETE w/ DFDSS

- DFSMSdss (IBM) is not free but is installed in the majority of installations.

```bash
//DELDNS EXEC PGM=ADRDSSU,PARM='TYPRUN=NORUN' <<= Remove to do
//SYSPRINT DD SYSOUT=*                  live instead of simulate
//DUMMY     DD DUMMY
//SYSIN     DD *
DUMP    DATASET(INCLUDE( -
   SYSS.I28SYT.**.HFS -
   )) -
OUTDD(DUMMY) -
DELETE
/*
```

- Many other OEM products also provide this functionality

- See past thread “Delete libraries” on ISPF-L Search web archives at http://listserv.nd.edu/cgi-bin/wa?S1=ispf-l A nice REXX exec by Steve Neeland demonstrates simple Roll Your Own solution using REXXX & ISPF services
Super Sleuth Tools

Who deleted my data set?

Where is this data set cataloged?

How does this Control Block work?
DAF Dataset Audit Facility

• DAF is the Dataset Audit Facility an SMF post processor for data set activity

• Reads standard IBM and some ISV SMF records, and based upon user supplied selection criteria, generates detailed data set audit trail reports

• Found on CBT Tape File 094 or Mike Cleary’s Web Page http://www.geocities.com/michael_cleary/

• Current version of DAF support PDS member level SMF data recorded at z/OS R4! Who deleted IEASYS00?

* Information on DAF is taken from the DAF source code and “DAF, GRS, and LPALNK” Session 2895 SHARE Conference - Winter 1998 by Michael Cleary
# DAF Supported SMF Records:

<table>
<thead>
<tr>
<th>SMF Record</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>014</td>
<td>INPUT or RDBACK Data Set Activity</td>
</tr>
<tr>
<td>015</td>
<td>OUTPUT UPDAT INOUT or OUTIN Data Set Activity</td>
</tr>
<tr>
<td>016</td>
<td>DFSORT Statistics</td>
</tr>
<tr>
<td>017</td>
<td>Scratch Data Set Status</td>
</tr>
<tr>
<td>018</td>
<td>Rename Data Set Status</td>
</tr>
<tr>
<td>022</td>
<td>Configuration</td>
</tr>
<tr>
<td>024</td>
<td>JES2 Spool Offload</td>
</tr>
<tr>
<td>036</td>
<td>Integrated Catalog Facility Catalog</td>
</tr>
<tr>
<td>042</td>
<td>DFSMS Statistics and Configuration</td>
</tr>
<tr>
<td>059</td>
<td>MVS/BDT File-to-File Transmission</td>
</tr>
<tr>
<td>060</td>
<td>VSAM Volume Data Set Updated</td>
</tr>
<tr>
<td>061</td>
<td>Integrated Catalog Facility Define Activity</td>
</tr>
<tr>
<td>062</td>
<td>VSAM Component or Cluster Opened</td>
</tr>
<tr>
<td>063</td>
<td>VSAM Catalog Entry Defined</td>
</tr>
<tr>
<td>064</td>
<td>VSAM Component or Cluster Status</td>
</tr>
<tr>
<td>065</td>
<td>Integrated Catalog Facility Delete Activity</td>
</tr>
<tr>
<td>066</td>
<td>Integrated Catalog Facility Alter Activity</td>
</tr>
<tr>
<td>067</td>
<td>VSAM Catalog Entry Deleted</td>
</tr>
<tr>
<td>068</td>
<td>VSAM Catalog Entry Renamed</td>
</tr>
<tr>
<td>069</td>
<td>VSAM Data Space Defined Extended or Deleted</td>
</tr>
<tr>
<td>073</td>
<td>RMF Channel Path Activity</td>
</tr>
<tr>
<td>074</td>
<td>RMF Device/XCF/OMVS/CF/Cache Activity</td>
</tr>
<tr>
<td>075</td>
<td>RMF Page/Swap Data Set Activity</td>
</tr>
<tr>
<td>077</td>
<td>RMF Enqueue Activity</td>
</tr>
<tr>
<td>080</td>
<td>RACF Processing</td>
</tr>
<tr>
<td>081</td>
<td>RACF Initialization</td>
</tr>
<tr>
<td>082</td>
<td>ICSF/MVS Record</td>
</tr>
<tr>
<td>083</td>
<td>RACF Audit Record for Data Sets</td>
</tr>
<tr>
<td>090</td>
<td>System Status</td>
</tr>
<tr>
<td>092</td>
<td>USS File System Activity</td>
</tr>
<tr>
<td>118</td>
<td>TCPIP Statistics</td>
</tr>
<tr>
<td>170</td>
<td>File-AID</td>
</tr>
<tr>
<td>201</td>
<td>SRS</td>
</tr>
<tr>
<td>241</td>
<td>DFHSM</td>
</tr>
</tbody>
</table>

Reporting from more than 34 different SMF record types!
DAF control statements

- Catalog name
- Dataset name
- Date (YYYYYDDD)
- Data definition name
- Execute Channel Program
- Group Identification
- Job name
- Logical Record Length
- Major enqueue name

- Member name
- Minor enqueue name
- Record type
- System identification
- Time - HH.MM.SS.HH
- User identification
- Volume serial
- VSAM volume dataset name
- Wait Time Max

Operators
- EQ, GE, GT, LE, LT, NE

• Like control statements utilize OR logic
  DSN EQ A with DSN EQ B
  Would find all data sets that begin with A or B

• Unlike control statements utilize AND logic
  DSN EQ A with JOB EQ B
  Would find all data sets that begin with A and from JOB B
**DAF Examples**

- What happened to that darn payroll file?
  
  DSN EQ PROD.PAYROLL.CLUSTER

- What was locking up the system at lunch time?
  
  TIME EQ 12

- What data sets were accessed on volume USER05?
  
  VOLUME EQ USER05

- What data sets are blocked poorly?
  
  BLKSIZ LT 4096

- Did the special job run on New Year’s Day?
  
  JOB EQ SPECIAL
  DATE EQ 2000001
**DAF Reports**

Dataset Audit Facility (DAF) - Level 2.0.6(20000306)

<table>
<thead>
<tr>
<th>Date</th>
<th>Time</th>
<th>SID</th>
<th>Job</th>
<th>User</th>
<th>RTY</th>
</tr>
</thead>
<tbody>
<tr>
<td>CSSJK3.ISPF.ISPPROF</td>
<td>2000066 01.41.29.96</td>
<td>PROD CSSJK</td>
<td>014</td>
<td></td>
<td></td>
</tr>
<tr>
<td>VOLUME=LS0003 DD=ISP16383 OPE=01.41.29.83 CRDT=00066 XPDT=00000 DISP=Shr BUFNO=1 DSORG=PS RECFM=FB BLKSIZE=256 LRECL=256 NVOL=1 EXCP=46 CTRI=ABSTR NTU=00002D00 NEX=1 NTA=4</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2000066 01.41.34.48</td>
<td>PROD CSSJK</td>
<td>017 VOLUME=LS0003 NVL=1</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

DAF Reports can quickly answer questions about dataset activity. DAF also generates detail logs and statistics about its processing and the SMF data analyzed.
LOOK

- TSO command to display virtual storage
- Optionally run APF authorized and display storage in any address space!
- Optionally customize (through DSECT assemblies) to format any control block
- Supports indirect addressing
- LOOK source is on File 264 of the CBT Tape and a pre-assembled load module is on File 035.

The valid commands are:

Iexp  24 bit indirect  |  Jexp  31 bit indirect
>    Forward           |  <    Backward
= sym Define current address as "sym"  |  , sym Redisplay core at "sym"
M0/M1 Flip between top and center    |  Lname Indirect thru control block field
Ocb  Format as "cb" control block    |  R    Refresh displayed storage
   "cb" may be NULL to show as hex    |

where 'exp' is of the form:
   <+/->hhhh<+/->hhhh<+/->hhhh...>>
and 'hhhh' is a 1 to 8 digit hex number.
LOOK

LOOK COMMAND - DISPLAY VIRTUAL MEMORY

DISPLAY ASID= 0024

ENTER CMD -
LAST CMD - I006000

54C9E340 >D4C9E340 C8C1E2D7 D5E4C340 D6E240F2 *>MIT HASPNUC OS 2*
54C9E350 4BF54BF0 40404040 40404040 40404040 *.5.0 *
54C9E360 40404040 01D10050 F6200000 C8D1C5F6 *.J.&6...HJE6*
54C9E370 F6F0F540 F0F261F2 F761F9F8 F1F14BF0 *605 02/27/9811.0*
54C9E380 F80096E0 0000F418 0000F6C0 0000F6E0 *8........4...6...6.*
54C9E390 E2D740F5 4BF34BF0 40404040 40404040 *SP 5.3.0 *
54C9E3A0 F6000000 000E58D0 0B001FD8 0AC5AFE0 *6...........Q.E..*
54C9E3B0 0B001FA0 00B3E6E0 01800000 000081A2 *.5..........W........*
54C9E3C0 01800000 0000C14E 01800000 0000C1B6 *......A+.......A.*
54C9E3D0 00000000 00009250 000092D8 0000D680 *.65&...Q..O.*
54C9E3E0 0000D874 0000CD6A 00EBB18 00EBB18 *.Q............*
54C9E3F0 000EBB5E 000EBBA4 0008F444 0000B482 *.....;......4.....*

1= HELP      2=           3= END        4=           5= REPEAT  6=
7= BACKWARD  8= FORWARD   9= HIST BWD  10= HIST FWD 11=       12=
# MXI as a storage browser

MXI - PROD - Control Block Mapping (00FD0BC0,CVT,R/W Nuc)  

<table>
<thead>
<tr>
<th>Offset</th>
<th>Field</th>
<th>Hex</th>
<th>Name</th>
<th>Len Value</th>
<th>EBCDIC</th>
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<tr>
<td>0</td>
<td>CVTTCBP</td>
<td>0000</td>
<td>00000218</td>
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<td>....</td>
</tr>
<tr>
<td>4</td>
<td>CVT0EF00</td>
<td>0004</td>
<td>00FDC560</td>
<td></td>
<td>..E-</td>
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<tr>
<td>8</td>
<td>CVTLINK</td>
<td>0008</td>
<td>00FD0B3C</td>
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<td>....</td>
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<tr>
<td>12</td>
<td>CVTAUSCB</td>
<td>000C</td>
<td>00FD11A8</td>
<td></td>
<td>...y</td>
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<td>16</td>
<td>CVTBUF</td>
<td>0010</td>
<td>00000000</td>
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<tr>
<td>20</td>
<td>CVTXAPG</td>
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<td>00FF8874</td>
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<tr>
<td>24</td>
<td>CVT0VL00</td>
<td>0018</td>
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<tr>
<td>28</td>
<td>CVTPCNVT</td>
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<td>CVTPRLTV</td>
<td>0020</td>
<td>00FE71AC</td>
<td></td>
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<tr>
<td>36</td>
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<td>0024</td>
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<td>40</td>
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<td>48</td>
<td>CVTSYSAD</td>
<td>0030</td>
<td>00F43858</td>
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<td>52</td>
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<td>00FE65B0</td>
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<td>0100065F</td>
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<tr>
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<td>00F3A000</td>
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<tr>
<td>68</td>
<td>CVTXITP</td>
<td>0044</td>
<td>00FF9958</td>
<td></td>
<td>..rì</td>
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<tr>
<td>72</td>
<td>CVT0EF01</td>
<td>0048</td>
<td>00FDC788</td>
<td></td>
<td>..Gh</td>
</tr>
</tbody>
</table>
A better file browser

ISPF Browse and Edit sometimes need a little help.

What we see depends on mainly what we look for.

- John Lubbock
• REVIEW is a Quick Viewer for almost any type of data on OS/390 including PKZIP and even some graphic formats

• REVIEW provides optionally formatted displays for SMF, LOGREC, VTOC, and more

• REVIEW is a TSO command processor and does not need ISPF.

• REVIEW source code is in CBT Tape File 134 and a ready to use load module is in CBT Tape File 135. Greg Price regularly updates REVIEW and has a great collection of other useful tools as well which can be found in the same files.
Update IKJSTO00 to make REVIEW authorized and it can quickly examine a VVDS instead of running Batch IDCAMS PRINT
REVIEW on-line SMF data

SYs1.PROD.MAN2 ON S3906R --------------------------------------------- LINE 475 COL 1 80
COMMAND ===>                                                   SCROLL ===> CS
1       10        20        30        40        50        60    70        80
+---+----+----+----+----+----+----+----+----+----+----+----+----+----+----+----+
75 14:45:01 00.063 PROD RMF 143E PAGE.VPAGE12.PROD.LOCA     1.1io/s    6.0xfr/s
78 14:45:01 00.063 PROD RMF subtype       2
15 14:45:01 00.063 PROD CSSJW    CSSJW.PS9932G.INSTLIB   B=6320 1 LS0022
77 14:45:01 00.063 PROD RMF subtype       1
72 14:45:01 00.063 PROD RMF pg 0  1167srv/sec
72 14:45:01 00.063 PROD RMF pg20   618srv/sec   129srv/sec   347srv/sec
30214:45:06 00.063 PROD RMF STC04053 IEFPROC  CPU-00:00:02 I/O----------2
14 14:45:09 00.063 PROD CSSJW    CSSJW.PS9932G.INSTLIB   B=6320 3 LS0022
30214:45:10 00.063 PROD FARLG    TSU04109 $TSFACCS CPU-00:00:05 I/O----------1027
80 14:45:12 00.063 PROD CSABS    CSABS    TSOHOLD  TPXGR244
62014:45:45 00.063 PROD CSSJK    SYS1.PROD.MAN1

REVIEW formats useful SMF information for
a quick review of recent past
Review Tips

Update your ISPF configuration table using the ISPCCONF dialog to allow ISPF to automagically invoke REVIEW for VSAM files.

VSAM_BROWSE_ENABLED = YES
VSAM_BROWSE_COMMAND = REVIEW /

• REVIEW can be interrupted during a long browse down
• See REVNOTES member, the source code (now more than 30K line!), and Greg’s web site for more information

The CBT CD includes an offline copy of Greg’s web site.
Partitioned Data Set (PDS)

A data set in direct access storage that is divided into partitions, called members, each of which can contain a program, part of a program, or data.
PDS 8.5 Update 25

PDS was originally written in 1972 at Fireman's Fund Insurance. Bruce Leland, Steve Smith, and others built PDS into the utility “Battle Wagon” that it is today.

John Kalinich has worked to keep PDS alive and continues to enhance it. PDS 8.5 is the current version of this most popular, free PDS utility.

PDS incorporates functions from IBM ISPF Options 3.2, 3.4 3.14, Utility programs IEBCOPY, IDCAMS, and much, much, more! PDS has been extended to integrate many other free tools such as DSAT, VTOC, MXI, COMPARE, REVIEW, and more.

PDS member UNDELETE enhancements

available now on

the CBT Tape web site
CMD --------------------- MEMLIST Source Member List 1 ------ Row 1 to 16 of 34
COMMAND ==> SCROLL ==> CSR
Enter an ISPF command, a PDS subcommand or a special control code:
   8 View log   1 Suspend ISPF   6 MEMLIST all   F Find       R Recall
   LV Lista     4 Sublist =      7 Output table   L Locate     SO Sort
   LV Listv     5 Check aliases  9 Swap panels     O Options    X Above/Below/All
- DSN=CSSJK.UTIL.CNTL,VOL=SER=LS0008  MEM=CBT/

<table>
<thead>
<tr>
<th>CMD</th>
<th>NAME</th>
<th>DATA</th>
<th>VER.MOD</th>
<th>CREATED</th>
<th>LAST MODIFIED</th>
<th>SIZE</th>
<th>INIT</th>
<th>ID</th>
</tr>
</thead>
<tbody>
<tr>
<td>CBT$ANY</td>
<td>01.42</td>
<td>95/07/25</td>
<td>00/02/28 10:13</td>
<td>278</td>
<td>208</td>
<td>CSSJK</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CBTAUDIT</td>
<td>01.00</td>
<td>00/02/28</td>
<td>00/02/28 10:46</td>
<td>445</td>
<td>445</td>
<td>CSSJK</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CBTBXMI</td>
<td>01.01</td>
<td>98/10/16</td>
<td>98/10/16 13:36</td>
<td>23</td>
<td>13</td>
<td>CSSJK</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CBTF1</td>
<td>01.09</td>
<td>00/02/28</td>
<td>00/02/28 13:38</td>
<td>38249</td>
<td>38249</td>
<td>CSSJK</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

PDS MEMLIST is where you will probably spend most of your time. PDS 8.5.22 the “V” command now invokes ISPF View rather than the VERIFY command. VE invokes VERIFY.
PDS 8.5 LISTF Options

CMD ------------------ Build LISTFILE using VTOC command ------------------
OPTION ===>

Enter volume list for VTOC
VOLUMEs====> LSMS ===>

Catalog search for each DSNAME ===> NO (Yes/No)

Optional filtering:
LEVELs ===> OMVS
More LEVELs====> ===>
Containing ====> ===>
Ending ====> ===>

Strings for the above filtering must conform to dataset naming conventions. The userid will not be appended, do not use quotes.

Carol Srna say’s PDS 8.5 is “AWSOME!! I LOVE IT!!”
PDS 8.5 LISTF

<table>
<thead>
<tr>
<th>CMD</th>
<th>C</th>
<th>V</th>
<th>DATA/MSG</th>
<th>DO</th>
<th>REC FM</th>
<th>LRECL</th>
<th>BLK SI</th>
<th>VOLUME</th>
<th>DATA SET NAME</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Y</td>
<td>HF</td>
<td>U</td>
<td></td>
<td>0</td>
<td>0</td>
<td></td>
<td>LSMS02</td>
<td>OMVS.DEV.NFS</td>
<td></td>
</tr>
<tr>
<td>- Y</td>
<td>HF</td>
<td>U</td>
<td></td>
<td>0</td>
<td>0</td>
<td></td>
<td>LSMS03</td>
<td>OMVS.DEV.UCD-SNMP.NFS</td>
<td></td>
</tr>
<tr>
<td>- Y</td>
<td>HF</td>
<td>U</td>
<td></td>
<td>0</td>
<td>0</td>
<td></td>
<td>LSMS01</td>
<td>OMVS.S390R4.DCEASHFS.USR</td>
<td></td>
</tr>
<tr>
<td>- Y</td>
<td>HF</td>
<td>U</td>
<td></td>
<td>0</td>
<td>0</td>
<td></td>
<td>LSMS01</td>
<td>OMVS.S390R4.DFSHFS.GLOBAL</td>
<td></td>
</tr>
<tr>
<td>- Y</td>
<td>HF</td>
<td>U</td>
<td></td>
<td>0</td>
<td>0</td>
<td></td>
<td>LSMS01</td>
<td>OMVS.S390R4.DFSHFS.LOCAL</td>
<td></td>
</tr>
<tr>
<td>- Y</td>
<td>HF</td>
<td>U</td>
<td></td>
<td>0</td>
<td>0</td>
<td></td>
<td>LSMS01</td>
<td>OMVS.S390R4.ECN.ECN</td>
<td></td>
</tr>
<tr>
<td>- Y</td>
<td>HF</td>
<td>U</td>
<td></td>
<td>0</td>
<td>0</td>
<td></td>
<td>LSMS01</td>
<td>OMVS.S390R4.EPH.EPH</td>
<td></td>
</tr>
<tr>
<td>- Y</td>
<td>HF</td>
<td>U</td>
<td></td>
<td>0</td>
<td>0</td>
<td></td>
<td>LSMS01</td>
<td>OMVS.S390R4.HFS.DCEBASE</td>
<td></td>
</tr>
</tbody>
</table>

PDS 8.5 is one of the most frequently recommended free tools on IBM-MAIN
PDS 8.5 Old but still Hip!

- PDS100I PDS -- VERSION 8.5.23
  - A “good” promptinitialization message from a user interface perspective

UPDATE 23 included
- AMODE64 support in several areas
- bypass RESERVE for COPY to output LOAD LIBRARY PDSE
- ADDED NRETRIEV and REFLIST LOGIC in several areas
- CONTROL: MODS DISPLAYS THE MOST RECENT PDS MODIFICATIONS
- VIEW: Subcommand to invoke ISPF VIEW. The VIEW log command
  is now called SHOW. "V" is the short form of VIEW and "VE"
  is the short form of VERIFY. (#22)

- Added %PDSE Rexx exec to simulate a MEMLIST for a PDSE.
  Invoke PDS on your PDSE dataset. Suspend ISPF. Invoke Rexx
  exec "%PDSE DSN PATTERN". After returning to ISPF, enter *
  or MEMLIST * to display the members in the MEMLIST function. (#22)
My mainframe is dead

The emergencies you train for almost never happen. It's the one you can't train for that kills you.
- Ernest K. Gann, advice from the 'old pelican'
My mainframe is dead

Unplanned outages will occur but you can plan on how to react!

- Conduct Postmortem a.k.a. Nameless Rankless Debrief a.k.a. Root Cause Analysis
- Do you have a post crash Standard Operating Procedure (SOP) ?
- Examples
  - WAIT state 03C AUX Storage Full
  - Corrupted ROOT HFS
  - Storage Overlay
My mainframe is dead

18:38:13.48 *IRA200E AUXILIARY STORAGE SHORTAGE

IRA204E 00% AUXILIARY STORAGE ALLOCATED TO DB2RDBM1
IRA204E 54% AUXILIARY STORAGE ALLOCATED TO DSS37ZQ0
IRA204E 04% AUXILIARY STORAGE ALLOCATED TO DB2PDBM1
IRA204E 03% AUXILIARY STORAGE ALLOCATED TO OMVS

18:41:45.55 *IRA201E CRITICAL AUXILIARY STORAGE SHORTAGE

IRA200E occurs at 70% utilization of page space.
IRA201E occurs at 85% utilization of page space.
These thresholds cannot be adjusted by customers.

WAIT03C results when MVS cannot continue
My mainframe is dead

IRA204E 54% AUXILIARY STORAGE ALLOCATED TO DSS37ZQ0

DSNUTILB EXEC
PGM=DSNUTILB,PARM='DB2P,RPCBBPAD',REGION=0M

. . . The work data sets were defined similar to this

//*
//DATAWK01 DD SPACE=(CYL,(500,200),RLSE),UNIT=VIO
//DATAWK02 DD SPACE=(CYL,(500,200),RLSE),UNIT=VIO
//DATAWK03 DD SPACE=(CYL,(500,200),RLSE),UNIT=VIO
//DATAWK04 DD SPACE=(CYL,(500,200),RLSE),UNIT=VIO
//*

//SORTWK01 DD SPACE=(CYL,(500,200),RLSE),UNIT=VIO
//SORTWK02 DD SPACE=(CYL,(500,200),RLSE),UNIT=VIO
//SORTWK03 DD SPACE=(CYL,(500,200),RLSE),UNIT=VIO
//SORTWK04 DD SPACE=(CYL,(500,200),RLSE),UNIT=VIO
//*
My mainframe is dead

An example taken from System-Managed Storage Migration Planning Guide Document Number GG24-1606 of *implementing a VIO storage group*.

Storage Group Name  .  .  VIOMAX

Storage Group Type  .  .  VIO

Description ==> VIO DATA SETS ARE MANAGED IN MEMORY AND THE PAGING SYSTEM

==> LARGE DATA SETS WILL BE DISALLOWED FROM VIO BY MAXSIZE

VIO Maxsize  .  .  0005000  (8 to 2000000)

VIO Unit  .  .  3390  (DEVICE TYPE)

Almost a full dozen action items followed root cause including updates to site SFM Policy, Standalone dump configuration and procedures.
My mainframe is dead again

- Very poor I/O performance noticed during an IMS 8 upgrade event
- Escalated as it becomes clear all I/O on z990 is degraded
- IMS 8 upgrade canceled and systems IPLed
- IPL does not complete
- This reads like a hardware problem RMF, Monitors, operator display commands show nothing useful IBM check CEC and DASD remote indicates no trouble
My mainframe is dead again

Unplanned Power On Reset performed at the direction of senior IT management which resolves the problem?

Why? Test z/VM crashed entered WAIT STATE much earlier not noticed due to low system activity.

WSC WP100447 (see Flash for complete advice)

• Know the state of your LPARs

• IBM has indicated accepted as defect to engineering for FICON microcode correction no MCL yet

ibm.com/support/techdocs

Business is Combat
James D. Murphy
ISBN: 0060988290

- Keynote at last SHARE
- Really useful

Free DVD and more
http://www.afterburnerseminars.com
Recovery Tools

IBM Hot-Topics Issue 7
“Outage number five: No back-up system”

“In peace prepare for war, in war prepare for peace. The art of war is of vital importance to the state. It is a matter of life and death, a road to safety or to ruin. Hence under no circumstances can it be neglected. . . .” Sun Tzu
ZZSA
Standalone Utilities from Jan Jaeger

IPL from tape, disk, card reader, CD-ROM, or VM saved system

Free, Fast, OCO

http://www.cbttape.org/~jjaeger

CBT CD-ROM boots to ZZSA in HMC using Load from CD-ROM

- Sense and list all devices in the IOCDS or assigned to the logical partition IPL-ed with this program
- Browse MVS sequential dataset or PDS member
- Edit MVS sequential dataset or PDS member (inplace update only)
- List VTOC of a DASD volume
- List PDS directory
- Display DASD volume serial
- Dump any DASD record
- Alter any DASD record
ZZSA How to IPL CD-ROM

Use Single Object Operations from CPC Recovery for the processor that has the LPAR you want to IPL
ZZSA How to IPL CD-ROM
ZZSA pwd is ZZSECRET

Enter Password:

>>> _
## ZZSA Stand Alone Utilities

**Option ===> _**

<table>
<thead>
<tr>
<th>Option</th>
<th>Description</th>
<th>Location</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>ListDev - List all devices</td>
<td>Console</td>
<td>0010/3278</td>
</tr>
<tr>
<td>1</td>
<td>Browse - Browse dataset or member</td>
<td>IPL Device</td>
<td>000D/3505</td>
</tr>
<tr>
<td>2</td>
<td>Edit - Edit dataset or member</td>
<td>IPL CPU</td>
<td>0000</td>
</tr>
<tr>
<td>3</td>
<td>ListVTOC - List Volume Table Of Contents</td>
<td>IPL CPU</td>
<td>0000</td>
</tr>
<tr>
<td>4</td>
<td>ListPDS - List PDS directory</td>
<td>CPU Version</td>
<td>00</td>
</tr>
<tr>
<td>5</td>
<td>DispVol - Display DASD volume label</td>
<td>CPU Serial</td>
<td>000611</td>
</tr>
<tr>
<td>6</td>
<td>Dump - Dump DASD record by CCHHR</td>
<td>CPU Model</td>
<td>3090</td>
</tr>
<tr>
<td>7</td>
<td>Zap - Alter DASD record by CCHHR</td>
<td>Date (TOD)</td>
<td>19/08/2002</td>
</tr>
<tr>
<td>X</td>
<td>Exit - Terminate program</td>
<td>Time (TOD)</td>
<td>21:38:46</td>
</tr>
</tbody>
</table>

Jan Jaeger - Version 12/07/98-12.15

03/014
ZZSA sense all devices

<table>
<thead>
<tr>
<th>SCH</th>
<th>DEV</th>
<th>CHP</th>
<th>C/T</th>
<th>D/T</th>
</tr>
</thead>
<tbody>
<tr>
<td>0000</td>
<td>0000</td>
<td>00</td>
<td>2821-01</td>
<td>3505-01</td>
</tr>
<tr>
<td>0001</td>
<td>030E</td>
<td>03</td>
<td>2821-01</td>
<td>1403-01</td>
</tr>
<tr>
<td>0002</td>
<td>0010</td>
<td>00</td>
<td>3274-1D</td>
<td>3278-02</td>
</tr>
<tr>
<td>0003</td>
<td>0131</td>
<td>01</td>
<td>2841</td>
<td></td>
</tr>
<tr>
<td>0004</td>
<td>0132</td>
<td>01</td>
<td>2841</td>
<td></td>
</tr>
<tr>
<td>0005</td>
<td>0133</td>
<td>01</td>
<td>2841</td>
<td></td>
</tr>
<tr>
<td>0006</td>
<td>0134</td>
<td>01</td>
<td>2841</td>
<td></td>
</tr>
<tr>
<td>0007</td>
<td>0135</td>
<td>01</td>
<td>2841</td>
<td></td>
</tr>
<tr>
<td>0008</td>
<td>0136</td>
<td>01</td>
<td>2841</td>
<td></td>
</tr>
<tr>
<td>0009</td>
<td>0140</td>
<td>01</td>
<td>3830-02</td>
<td>3350</td>
</tr>
<tr>
<td>000A</td>
<td>0148</td>
<td>01</td>
<td>3830-02</td>
<td>3350</td>
</tr>
</tbody>
</table>
| 000B| 0152| 01  | 3830-02   | 3330-01 | VOL=HASPOC
| 000C| 0160| 01  | 3830-02   | 3340    |
| 000D| 0161| 01  | 3830-02   | 3340    |
| 000E| 0170| 01  | 3880-03   | 3375-02 | VOL=WORK01
| 000F| 0180| 01  | 3880-03   | 3380-02 | VOL=WORK02
| 0010| 0190| 01  | 3990-C2   | 3390-02 | VOL=WORK03
| 0011| 0191| 01  | 3990-C2   | 3390-02 | VOL=MVSCAT
| 0012| 0240| 02  | 3830-02   | 3350    |
| 0013| 0248| 02  | 3830-02   | 3350    |

Once you have done this you can refer to volumes by VOLSER
ZZSA Edit

SYS1.PARMLIB (IEASYSOO)

**Top of Data**

HARDCPY=(SYSLOG, ALL, NOCMD),
WTOBFRS=100,
CYIO,
CSA=400,
MAXUSER=20,
PAGE=(SYS1.STARTER.PAGE.CENTER, SYS1.STARTER.PAGE.CENTER,
     SYS1.STARTER.PAGE.CENTER)

**Bottom of Data**
Resurrection System

IBM recommends in Hot Topics Issue 7 that

For emergency recovery capabilities, it is recommended that every installation have a small isolated “Get-Well” system to help in situations of finger checks or corrupted shared system data sets.

*IBM does not tell you how to build one of these*

*IBM does not supply by default a starter system although one can be ordered with ServerPac and other offerings*
Resurrection System

Who tells you how? Other systems programmers!

- David Alcock Dave’s MVS Tips at http://www.planetmvs.com
  JCL and instructions

- Thierry Falissard  CBT Tape File 432 provides his JCL for a one pack "Rescue system", called MINISYST. Also on his web site http://os390-mvs.hypermart.net/minisys.htm

- Mark Zeldan http://home.flash.net/~mzelden/mvsutil.html
  ONEPAKZ3 and TWOPAKZ3 in CBT Tape File 434

- Kevin Mitts  CBT Tape FILE 657: z/OS 1.4 RESCUE system build
FDR and DFSMSdss provide stand-alone restore tools

Do you have a copy ready to run?
Have you practiced with it?
Does the current version you installed work?

• FDR install tape can be IPLed.
• multiple LOAD commands required to bypass SL
• FDRSARLR utility can prepare tape or disk to IPL SAR

• DFSMSdss BUILDSA command builds IPL text for tape, disk, or card reader
Other things to try

• TSSO to run SUB=MSTR with freeware PDS

• LOGON PROC with no datasets to reach TSO READY quickly when trouble strikes ($RESCUE)

• LOGON PROC with only IBM vanilla ISPF ($IBMISPF)

• TSO to LOGON under MSTR without JES using Ed Jaffe’s CBT Tape File 377

You need to be prepared with what David Elder-Vass called in his excellent book on systems programming ‘belt and braces’.
Avoid the outage with Health Checker

30 minute project!

Free, Fast, IBM

IBM Health Checker for z/OS and Sysplex V3.01 (October 2003)

Download from IBM
Upload to MVS and RECEIVE
APF load library and allocate a single data set
Optionally customize and execute the Health Checker!

'Belt and Braces' is a Britishism.

In the USA Braces hold your teeth in place as you grow up and suspenders hold up your pants.

In the UK braces hold your trousers up - just like your belt does. (Pants are under your trousers, suspenders hold up ladies stockings.

So 'belt and braces' is a British term for pessimistic planning. It describes a design or plan that has several ready made alternate parts and if any one of them works then the whole works as well.

Source: http://c2.com/cgi/wiki?BeltAndBraces
Passwords

- Strong nee obscure Passwords can be troublesome
- Too many passwords can be difficult for users to remember
- Forced frequent changes may Increase risk of unsafe behavior
- Password files include the MVS RACF database vulnerable to Password cracking tools

A survey commissioned by Rainbow Technologies found 2/3 of respondents admitted they had written down their passwords, and 8 percent said they always wrote them down “because they are too complicated to remember”.

Subscribe to Information Security magazine
www.infosecuritymag.com
it doesn’t stink....

UPDATED: Acquired by Tech Target hopefully the past quality will continue

Don't write your password on this!
Password Safe

- Free
- Open Source
- Blowfish Algorithm
- Windows, Pocket PC, more to follow
- New Release 2.0!
  - Export!
  - Tree View
  - Open URL in Notes
  - Looks Cool!
- Improved Help

http://passwordsafe.sourceforge.net/
The latest version of PasswordSafe, 2.04, has a new feature, "lock on workstation lock", that causes problems with unsaved data changes in the database.

Specifically, if you change (modify, add or delete entries) the database, and the program "locks" before you saved your changes, the changes will be lost. In the worst case, if you save without unlocking the database, the *entire* database will be lost.

Until we fix this (in the next release), the workaround is simple:

If you use the "lock database on workstation lock" (enabled by default), then enable Manage->Options->Misc->Save database immediately after Editor Add.
Security

CRYPTO-GRAM Newsletter by Bruce Schneier

• http://www.counterpane.com/crypto-gram.html
• Free, security and cryptography news and reviews LOTS of FUD busting!

Use Tools like the bad guys...

metasploit.com

http://blackhat.com
• multimedia archives free of charge as a service to the world wide computer security community
PC Tools for Dinosaurs

A personal computer is a necessary evil for most of us. A few good tools can help make it more useful.

If you say Java again I'm going to puke.
-Dave Winer
V – The File Viewer


- Open from DOS “V Filename”, or Explorer
- similar in functionality to LIST - the classic DOS program
- Fast!
- Support for EBCDIC improved with the current Beta
- Inexpensive but not free $20
- SHAREWARE allows free evaluation of full product for 60 days
- Author of V Charles Prineas has been very responsive
- Ruler and Line numbers
- Handles large files I mean LARGE!
- Extract from archive files
- HEX support
- Read Only optionally do not lock file

http://www.fileviewer.com
EBCDIC Support

- V Version 7 tries to auto-detect whether a file is ASCII or EBCDIC
- V will try to determine the format of the EBCDIC file. It will usually get the format right for RECFM=V/VB files and some RECFM=F/FB files.

- Carriage Control is supported

More Features

- Rulers
- Work with Columns

Free upgrades to date

Look in /V directory on CD for latest version
V - The File Viewer

19.08.27 JOBC3321

--- MONDAY, 14 JUL 2003 ---

19.08.30 JOBC3321

IRROLDI USERID PPAO IS ASSIGNED TO THIS JOB.

19.08.30 JOBC3321

@HASP375 PPAO STARTED INIT 31 CLASS 5 SYS ASYS

19.08.30 JOBC3321

PAPAO STARTED. TIME=19.08.30 DATE=2003.195 ASYS

19.08.31 JOBC3321

*** STEPO01 ENCPARM *** RETURN CODE 0000 *** PGM=IEBGENER JOB=PAPAO

19.08.32 JOBC3321

*** STEPO02 ESPRMD *** RETURN CODE 0000 *** PGM=IESPRMDD JOB=PAPAO

19.08.35 JOBC3321

*** STEPO03 CYBENCOR *** RETURN CODE 0000 *** PGM=CYBRM210 JOB=PAPAO

19.08.38 JOBC3321

*** STEPO04 PAPDO100 *** RETURN CODE 0004 *** PGM=UTYPSYM JOB=PAPAO

19.08.39 JOBC3321

*** STEPO05 PAPDO105 *** RETURN CODE 0004 *** PGM=UTYPSYM JOB=PAPAO

19.08.39 JOBC3321

IE233A M 0862_PRIVAT_SL.PPAO,PAPDO10,PAPE.0110.A09G301

19.08.40 JOBC3321

IEC0701 DENSITY IGNORED 0862.SYSUT2.SL_COMP.PPAO,PAPDO10.PAPDO1.PAPE.0110.A09G301

19.08.41 JOBC3321

IEC0701 TAPE ON 0862.K49480.SL.NOCOMP.PPAO,PAPDO110.PAPE.C1.PAPE.0110.A09G301

19.08.42 JOBC3321

T00102I Unit 0862 volume K49480 job PAPAO dsn PAPE.0110.A09G301

19.08.42 JOBC3321

T00107I Tape recording to volume will be changed from IDRC to normal unit 0862 volume K49480

19.08.42 JOBC3321

T00191I VOLUME K49480 record not written. Enque was stolen by PAPAO on 07/14/2003 19:08:42

19.08.42 JOBC3321

T00229I Code path flags: FEIA0600 B0150000 60F01B400 special PTFs: NNNNNN

19.08.45 JOBC3321

@HASP375 PPAO ESTIMATED LINES EXCEEDED

19.08.49 JOBC3321

@HASP375 PPAO ESTIMATE EXCEEDED BY 10000 LINES

19.08.52 JOBC3321

@HASP375 PPAO ESTIMATE EXCEEDED BY 20000 LINES

19.08.56 JOBC3321

@HASP375 PPAO ESTIMATE EXCEEDED BY 30000 LINES

19.08.59 JOBC3321

@HASP375 PPAO ESTIMATE EXCEEDED BY 40000 LINES

19.09.02 JOBC3321

@HASP375 PPAO ESTIMATE EXCEEDED BY 50000 LINES

19.09.05 JOBC3321

@HASP375 PPAO ESTIMATE EXCEEDED BY 60000 LINES

19.09.07 JOBC3321

@HASP375 PPAO ESTIMATE EXCEEDED BY 70000 LINES

19.09.11 JOBC3321

@HASP375 PPAO ESTIMATE EXCEEDED BY 80000 LINES

19.09.14 JOBC3321

@HASP375 PPAO ESTIMATE EXCEEDED BY 90000 LINES

19.09.17 JOBC3321

@HASP375 PPAO ESTIMATE EXCEEDED BY 100000 LINES

19.09.18 JOBC3321

IEA995I SYMPTOM DUMP OUTPUT

SYSTEM COMPLETION CODE=2fF REASON CODE=00000022
TIME=19.08.42 SEQ=00805 CPU=0000 ASID=005C
PSW AT TIME OF ERROR 070C1000 950961DC ILC 2 INTC 0D
NO ACTIVE MODULE FOUND
NAME=UNKNOWN
DATA AT PSW 159361D6 00181510 0A0DD52B 6002905C
GR 0 00000000 042FF000
2 00000022 95899A78
4 106999D0 0007FEC8
6 7F769920 7F7F818
8 7F7F6A08 009C45CC
A 00C0CD10 B 1599F930
C 15993570 D 009C5710
E 80C33728 F 00000022
END OF SYMPTOM DUMP
IBM Softcopy Reader

• The recent releases (current 3.5) no longer require the Sun Java Runtime Environment (JRE). This release has been repackaged to link the Java Runtime functions with the Softcopy Reader code, building it into a Windows executable instead of a .jar file. This eliminates the Softcopy Reader prerequisite for the JRE on the client machine. **If you have problems check your video card drivers!**

• Get the 40 MB Download here: http://www.ibm.com/software/office/bkmgr/softcopyread.html

• The new release shows a significant improvement in runtime performance. New! Improved! Faster! Less Warts!

**Don’t Ignore Softcopy Reader’s half brother Softcopy Librarian V4 which also got a makeover**

http://publib.boulder.ibm.com/epubs/df/ebrsclwj.exe

Stolen shamelessly from SHARE in Long Beach
Session 2897 z/OS Product Documentation Update
Seagull FTP

Seagull FTP is a mainframe friendly Windows FTP client from SEAGULL Software which is free for personal or commercial use.

You may bypass registration if you choose and it does not expire. You may register your email address to get a key to get rid of the registration splash screen.

You can purchase a SSL enabled version from SEAGULL

MVS Features
• MVS list formats

VM Features
• BFS support
• SFS support
• Minidisk support
Download current release from SEAGULL Software
http://www.seagullsw.com/  and it’s on CBT CD!
FileZilla is a fast FTP client for Windows with a lot of features available as GPL (free distribution source and binary) software.

http://filezilla.sourceforge.net/

The latest release is 2.2.8d September 26th, 2004

- Security Updates
- MVS Support

You should download the latest release from the project page. The previous 2.2.x releases had several bugs with MVS support.

Watch this tool! It is FREE as in BEER and as in SOURCE == SPEECH
FileZilla is a fast FTP client for Windows with a lot of features available as GPL (free distribution source and binary) software.

http://filezilla.sourceforge.net/ or on CD /FilezillaFTP
What is Xmit Manager?

Xmit Manager is a Free Windows based utility which decodes IBM Mainframe based Xmit files and allows for viewing or extraction of the content data.

Supports PDS, SEQ content, FTP to MVS or Internet, Zipped files. Written by Neal Johnston-Ward

It is on the CBT CD & Web Site too!

Xmit Manager Home Page

http://www.data-aid.co.uk
Xmit Manager

NEW SUBCOMMANDS

- NONE

CHANGES AND IMPROVEMENTS

- YEAR 2000 SUPPORT IN XRLIST, IF, ATTRIB, HISTORY, LIST, AND TIME SUBCOMMANDS.
- ADDED MEMBER PEGDSCHL TO ASSEMBLE POS WITH THE HIGH LEVEL ASSEMBLER.
- INCORPORATED GREG PRICE'S NODES (FILE 1.34) TO PEGDSCHL AND PEGINTO SO REVIEW . AND PRINTER : PROCESS THE WHOLE DATA SET ONCE, RATHER THAN EACH MEMBER INDIVIDUALLY.
- ADDED PANEL PEG50CWA AS AN ALTERNATIVE TO THE PEG50WP PRIMARY POS PANEL. ADDED CUA CODE UTILIZING ISP5000 VERSION 4.X REFERENCE LISTS ON THE ACTION BAR. ADDED PANEL.

Data read ok.
Ftp2Jes

What is Ftp2Jes?

• Ftp2Jes is a Free Windows based utility which provides a GUI interface to submit jobs and view the output using FTP.
• Currently uses level 1 interface so jobnames are limited to userid + 1 but Neal is planning on enhancing it to use the newer, more flexible interface

Written by Neal Johnston-Ward
It is on the CBT CD & Web Site too!
http://www.data-aid.co.uk
AWS File Browser

Rob Story wrote a nice Windows utility to browse the contents of an AWSTAPE file. This is handy freeware to manage your virtual tape library.

• Delphi Source Included
• Public Domain
• Download from http://www.cbttape.org/awstape.htm
Quick Picks PC Tools

VNC - Virtual Network Computing
• Free remote control software
• http://www.realvnc.com/

LDAP Browser/Editor
• User-friendly Windows Explorer-like interface to LDAP directories with tightly integrated browsing and editing capabilities. It is entirely written in Java
• Often recommend on MVS-OE list
• http://www-unix.mcs.anl.gov/~gawor/ldap/

Where to find other Windows tools
• http://www.tinyapps.org “Small is beautiful”
• http://www.nonags.com “no disabled features, nags, time limits”
Quick Picks PC Tools

THE - The Hessling Editor  http://www.lightlink.com/hessling/
• XEDIT like with more ISPF features being added
• Open Source, Freeware

UltraEdit  http://www.ultraedit.com
• shareware (you must register and pay $35 after 45 day trial period)
• Best Windows editor I have found

Other TN3270 clients (shareware, not Free)
• Vista http://www.tombrennansoftware.com
• QWS3270 Plus http://www.jollygiant.com/
Anything but Windows

Why?

• Network Tools, Professional Growth, Power User CLI, just for fun

UNIX Tools on Windows

• Cygwin (GNU) Easy way to get started http://www.cygwin.com/

• Windows Services for UNIX 3.5 http://www.microsoft.com/windows/sfu/

Linux

• IBM resources http://www.ibm.com/linux

• Information Centralized http://www.linuxdoc.org/

• I often buy mine here http://www.cheapbytes.com

BSD

• OpenBSD http://www.openbsd.org

• It’s UNIX-like very UNIX-like and secure too

SFU was $99 NOW it is FREE!!
Anything but Office

Why?

• $$$$$, Platform independence,

OpenOffice.org 1.1.1 included on TheOpenCD

• Word Processing, Spreadsheet, HTML authoring, Presentations,

• http://www.openoffice.org/

• Free, open source, community enhanced and supported, 20+ million downloads, 1.1 currently available at openoffice.org

Star Office

• Commercial product from Sun basis of OpenOffice.org

• Standard software support available

• http://wwws.sun.com/software/star/staroffice/6.0/index.html
MVS/SCP Project (MVSE) Project
MVS Program

The MVS/SCP Project is concerned with the System Control Program (SCP) of the z/OS operating system. Included are services and functions around the SCP, such as:

- Installation and maintenance of z/OS (including deliverables like ServerPac)
System Information Tools

Several tools provide so much information they let you quickly map out an OS/390 system.
SHOWMVS

• One Stop shopping for system configuration information. The format allows you to quickly review everything on-line or in Batch. Output weather in batch or on-line is monolithic with all data produced all the time.

• Originally developed by Gilbert Saint-flour

• The Source code for SHOWMVS can teach you a lot! STRING macro is EXCELLENT formatting tool for assembler programs.

• SHOWMVS currently maintained by Roland Schiradin on CBT Tape file 492 and a very active development and beta test team

• Future development plans being explored include a TCP/IP client, SMF recording, and a menu to make the output more accessible in ISPF

SHOWMVS 6.30 & 7.09 (current) are on the NaSPA CD
SHOWMVS (Short)

Operating System:

OS/390 02.06.00       CVTOSLVL: FF FF F0 00 00 00 00 00

DFSMS/MVS 1.4.0       Dynamic Linklist is supported
                      Dynamic LPA is available
                      DFSMS Loader Fork Exit is present

JES2 Level: OS 2.5.0   NJE Node: JES2MVS       DSNID: 01

Last IPL:

Date: Monday 2000-02-07 (25 days ago)   Time: 19.23   Julian: 2000.038
From: S3906R/1209     NUC Id: 1       Type: Cold Start   CVTUSER: 00000000
SYSPLEX name: DEVL52   SYSPLEX ID: OD   OpenMVS available: YES
Timezone: W 05.00.00
SHOWMVS displays two different types of data:

• Data related to the MVS operating system
  • Operating System Release and status, Subsystems, XCF, GRS, DAE, DASD, Linkage Index (LX) Table, more...
• Data related to the current address space
  • TCB Tree, TSO Information, REXX Environment, more..

SHOWMVS can be invoked as a program, as a TSO command, or as an edit macro and can run authorized or non-authorized. Some of the displays are only produced when SHOWMVS runs authorized.
SHOWMVS many displays!

MVS LEVEL, DFP LEVEL, OSLVL FLAGS, JES2 LEVEL
IPL DATE, TIME, VOLSER, NUC-ID, CLPA, CVTUSER
Date and time of last CLPA (auth)
Time Zone, Primary sub-system name and type
Software Level: TSO/E, ISPF, DSS, HSM, RACF, VTAM, SORT,
DSF, DB2, CICS, MQ Series
Run-time Environments (CBL, PLI, FORTRAN, C/370, LE)
SMF Information: SID, JWT, data sets, exits
SMS Configuration: SCDS, system names, last update
GRS Configuration
XCF Configuration (auth)
PATH data
Coupling Facility Data
External Time Reference (ETR)
Hardware configuration
  Central Processing Complex Node Description (CPC ND)
  On-line CPUs and storage
Performance (SU/sec, estimated MIPS)
  Service Processor data
  I/O configuration Definition (IODF)
LPAR configuration
VM host information (auth)
VIRTUAL STORAGE MAP (CSA, SQA, LPA, etc)
SRM data (IPS/ICS/GPT, AFS, etc)
WLM data (MODE, ETC)
Resource Recovery Manager (RRS)
Automatic Restart Manager (ARM)
OPEN catalogs
PAGE data sets in use
Dump data sets status and dump options
Dump data sets date, time and title (auth)
Automatically-allocated dump data sets (auth)
DAE Parameters (auth)
GTF status and options
Initialization Parameters (IPA)
Master JCL (IEEMSJCL)
Sub-system vector table with functions processed
Primary Sub-system JCL (auth)
TSO PARMLIB data (IKJTSOxx)
TSO Exits and Tables
TCAS parameters (auth)

RACF options, data sets and tables
Address space usage:
  Batch Jobs
  TSO users
  Started tasks
JES2 Initiators and corresponding jobs
Link-list data sets, with creation date
LPA-list data sets, with creation date
List of authorized libraries
Dynamic Exit Facility
Static system symbols
LLA parameters and managed libraries (auth)
ACTIVE LPA QUEUE
Svc Table with name of the corresponding module
T1, T2, T3 and T6 ESR tables
Linkage Index (LI) Table (auth)
Program Properties Table (PPT) (auth)
I/O Appendage Table
Resource Manager List (IEAVTRML)
Device Classes and corresponding unit names
On-line devices, with unit-name, VOLSER, owning job, use attribute, storage group
System consoles, with status & Route code list
Message Processing Facility (MPF)
Command Prefix Table (CPFT)
Device Allocation Defaults (ALLOCxx)
Addresses of selected global control blocks
JCL information for current JOB/STEP
RACF profile (from ACEE)
TSO profile (from PSCB & UPT)
REXX environments, host cmd tables and func pkg directories
Allocated Data sets (from TIOT, SWA, TCT)
TCB tree and PRB chain
Attention Routines
Enhanced view of the JPAQ and Load-lists
Recovery exits and timers
Addresses of selected local control blocks
MORE!!!!
MXI Version 4.3 released to public

• MXI (MVS eXtended Information) is an ISPF-based application that enables the MVS Systems Programmer to display important configuration information about the active MVS system.
• Although primarily used online, MXI can be run in batch and also has a REXX interface.
• Most of the displays can be filtered using ISPF-like masking characters and many display fields are 'point-and-shoot'.
• Some displays only available if MXI is authorized
• Internal or SAF based security
• MXI is very easy to install but does not include source OCO
• Some displays clearly tied closely to system internals
• Rob Scott’s solid code and an active and persistent Beta test team continues to field stable releases but it is not perfect.
• Current level is MXI 4.3 Genlevel 040902 still being updated still free
• MXI does more than just look if you run it authorized you need to secure it
• CBT Tape Files 409, 410 (Rob also has MORE utilities on file 411) or

http://www.mximvs.com
<table>
<thead>
<tr>
<th>Command</th>
<th>Primary Information</th>
<th>Command</th>
<th>Primary Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>AGRP</td>
<td>SMS Aggregate Group Information</td>
<td>MPF</td>
<td>MPF Information</td>
</tr>
<tr>
<td>APF</td>
<td>APF List Dataset Information</td>
<td>NTKO</td>
<td>System Name/Token Information</td>
</tr>
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<td>ASID</td>
<td>Address Space Usage Information</td>
<td>NUC</td>
<td>Display System Nucleus Modules</td>
</tr>
<tr>
<td>CAT</td>
<td>Catalog Information</td>
<td>OMVS</td>
<td>OpenEdition Configuration</td>
</tr>
<tr>
<td>CA1</td>
<td>CA-1 Configuration Information</td>
<td>PAGE</td>
<td>Page Dataset Information</td>
</tr>
<tr>
<td>CDE</td>
<td>JPAQ and TCB loaded modules</td>
<td>PARM</td>
<td>Active PARMLIB Information</td>
</tr>
<tr>
<td>CF</td>
<td>Coupling Facility Information</td>
<td>PEEK</td>
<td>Show ISPF Screens</td>
</tr>
<tr>
<td>CHP</td>
<td>Online Channel Paths</td>
<td>PID</td>
<td>OpenEdition Processes</td>
</tr>
<tr>
<td>CPF</td>
<td>Command Prefix Table</td>
<td>PLEX</td>
<td>Display Sysplex Information</td>
</tr>
<tr>
<td>CPU</td>
<td>CPU and LPAR Information</td>
<td>PPT</td>
<td>Program Properties Information</td>
</tr>
<tr>
<td>CS</td>
<td>Common Storage Usage</td>
<td>RACF</td>
<td>RACF Information</td>
</tr>
<tr>
<td>CSR</td>
<td>Common Storage Remaining</td>
<td>RCLS</td>
<td>RACF Class Information</td>
</tr>
<tr>
<td>DA</td>
<td>Active Address Space Information</td>
<td>RL</td>
<td>RACF Profile Information</td>
</tr>
<tr>
<td>DAE</td>
<td>Dump Elimination Information</td>
<td>RS</td>
<td>Real Storage Usage Information</td>
</tr>
<tr>
<td>DASD</td>
<td>Online DASD Information</td>
<td>SCLS</td>
<td>SMS Storage Class Information</td>
</tr>
<tr>
<td>DCLS</td>
<td>SMS Data Class Information</td>
<td>SGRP</td>
<td>SMS Storage Group Information</td>
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<td>DDNS</td>
<td>Allocated Dataset Information</td>
<td>SMF</td>
<td>SMF General Information</td>
</tr>
<tr>
<td>DEV</td>
<td>DASD Activity</td>
<td>SMFD</td>
<td>SMF Dataset Information</td>
</tr>
<tr>
<td>DS</td>
<td>Personal Dataset List</td>
<td>SMS</td>
<td>SMS Configuration Information</td>
</tr>
</tbody>
</table>
# MXI remote display

Logged onto PROD display from remote SYSA

NEW in v4.1

<table>
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<tr>
<th>Type</th>
<th>Slots</th>
<th>Used</th>
<th>%Use</th>
<th>Volser</th>
<th>Dataset</th>
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<tbody>
<tr>
<td>PLPA</td>
<td>17999</td>
<td>14551</td>
<td>80</td>
<td>PAGE12</td>
<td>PAGE.VPAGE12.SYSA.PLPA</td>
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<tr>
<td>Common</td>
<td>71999</td>
<td>050</td>
<td></td>
<td>PAGE10</td>
<td>PAGE.VPAGE10.SYSA.COMMON</td>
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<td>Local</td>
<td>53999</td>
<td>000</td>
<td></td>
<td>PAGE12</td>
<td>PAGE.VPAGE12.SYSA.LOCAL1</td>
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<td>Local</td>
<td>53999</td>
<td>000</td>
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<td>PAGE10</td>
<td>PAGE.VPAGE10.SYSA.LOCAL2</td>
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<td>Local</td>
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<td>PAGE11</td>
<td>PAGE.VPAGE11.SYSA.LOCAL3</td>
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<td>Local</td>
<td>161999</td>
<td>000</td>
<td></td>
<td>PAGE10</td>
<td>PAGE.VPAGE10.SYSA.LOCAL4</td>
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<tr>
<td>Local</td>
<td>599759</td>
<td>000</td>
<td></td>
<td>PAGEA1</td>
<td>PAGE.VPAGEA1.SYSA.LARGE</td>
</tr>
</tbody>
</table>
**MXI LLA command**

LLA command uses LLA exit LLA EXIT CSVLLIX1 to get statistics. Useful, Interesting, no problems running on every system in my sysplex. **NEW in v4.1**

<table>
<thead>
<tr>
<th>Module</th>
<th>Alias</th>
<th>Size</th>
<th>LF</th>
<th>LastDur</th>
<th>PGMF-Req</th>
<th>PGMF-Avg</th>
<th>LLAF-Req</th>
<th>LLAF-Avg</th>
</tr>
</thead>
<tbody>
<tr>
<td>CSQNL28E</td>
<td>CSQ3ECMX</td>
<td>930</td>
<td>LLA</td>
<td>0.028</td>
<td>248</td>
<td>2.600</td>
<td>1593</td>
<td>0.027</td>
</tr>
<tr>
<td>CSQ3ID00</td>
<td></td>
<td>558</td>
<td>LLA</td>
<td>0.052</td>
<td>177</td>
<td>100.485</td>
<td>547</td>
<td>0.244</td>
</tr>
<tr>
<td>IEFIB600</td>
<td></td>
<td>B670</td>
<td>LLA</td>
<td>0.290</td>
<td>11</td>
<td>5.646</td>
<td>507</td>
<td>0.114</td>
</tr>
<tr>
<td>CSQBSRV</td>
<td></td>
<td>3780</td>
<td>LLA</td>
<td>0.104</td>
<td>14</td>
<td>111.808</td>
<td>495</td>
<td>0.214</td>
</tr>
<tr>
<td>IKJEFD30</td>
<td>ALLOC</td>
<td>D400</td>
<td>LLA</td>
<td>0.211</td>
<td>101</td>
<td>4.403</td>
<td>416</td>
<td>0.156</td>
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<tr>
<td>CSQBCON</td>
<td></td>
<td>2E30</td>
<td>LLA</td>
<td>0.096</td>
<td>12</td>
<td>3801.330</td>
<td>357</td>
<td>9.078</td>
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<tr>
<td>CEEPLPKA</td>
<td></td>
<td>1C4680</td>
<td>LLA</td>
<td>9.063</td>
<td>11</td>
<td>5830.649</td>
<td>353</td>
<td>16.938</td>
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<td>CEEEV003</td>
<td></td>
<td>3201F0</td>
<td>LLA</td>
<td>16.835</td>
<td>11</td>
<td>8.132</td>
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<td>0.039</td>
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<td>IEFNB903</td>
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<td>FB90</td>
<td>LLA</td>
<td>0.299</td>
<td>10</td>
<td>8.132</td>
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<td>IEANTRT</td>
<td></td>
<td>48</td>
<td>LLA</td>
<td>0.311</td>
<td>111</td>
<td>169.159</td>
<td>242</td>
<td>0.289</td>
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<td>CEEBINIT</td>
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<td>ECB8</td>
<td>LLA</td>
<td>0.311</td>
<td>111</td>
<td>169.159</td>
<td>242</td>
<td>0.289</td>
</tr>
</tbody>
</table>
MXI - PROD - Allocated Dataset Information: JES2

Command ===> Scroll ===> PAGE

<table>
<thead>
<tr>
<th>DD</th>
<th>Cat</th>
<th>Volume</th>
<th>EXCP</th>
<th>Dataset</th>
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<tbody>
<tr>
<td>Name</td>
<td>Seq</td>
<td>Unit</td>
<td>Serial</td>
<td>Count Name</td>
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<tr>
<td>STEPLIB</td>
<td>+00</td>
<td>1209</td>
<td>S3906R</td>
<td>0</td>
</tr>
<tr>
<td>PROC00</td>
<td>+00</td>
<td>122A</td>
<td>S3906T</td>
<td>460</td>
</tr>
<tr>
<td>PROC00</td>
<td>+01</td>
<td>1209</td>
<td>S3906R</td>
<td>14</td>
</tr>
<tr>
<td>PROC00</td>
<td>+02</td>
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</tr>
<tr>
<td>PROC00</td>
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<td>SYS00001</td>
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<td>$SPOOL1</td>
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<td>141A</td>
<td>SPOOL1</td>
<td>0</td>
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</tbody>
</table>

- Peek into other ASID(s) and look at I/O same as OEM MVS Monitors
- Displays the current allocated DDNAMEs and their associated data sets.
- Command Syntax: DDNS dd-mask JOB(jobname) ASID(asid)
### MXI Common Storage Usage

**MXI - PROD - Common Storage Usage**

<table>
<thead>
<tr>
<th>Active</th>
<th>JES2</th>
<th>Jobname</th>
<th>JobID</th>
<th>Date</th>
<th>Time</th>
<th>CSA</th>
<th>E-CSA</th>
<th>SQA</th>
<th>E-SQA</th>
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</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Job Started</td>
<td></td>
<td>Storage Allocated</td>
<td></td>
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<td></td>
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<tr>
<td></td>
<td></td>
<td>Date</td>
<td>Time</td>
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<tr>
<td><em>TOTAL</em></td>
<td></td>
<td></td>
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<tr>
<td><em>MASTER</em></td>
<td></td>
<td>2000/02/07</td>
<td>19.25.27</td>
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<tr>
<td><em>SYSTEM</em></td>
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<td>DSN6MSTR</td>
<td>STC09981</td>
<td>2000/02/07</td>
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<td>RACF</td>
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<tr>
<td>JES2</td>
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<td>CATALOG</td>
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</tr>
</tbody>
</table>

- *Uses IBM Common Storage Tracking Data* (PARMLIB DIAGxx)
- *Same information as RMF III and OEM MVS Monitors*
MXI 4.3 New Features

• Version 4.3 is GA with significant new capabilities
  • Complete rewrite of the menu system allows menu customization
  • Add the ability to protect all MXI commands
  • Global settings to enable/disable authorized functions
  • A set of new DB2 displays
  • Point and Shoot sorting of columns
  • Further exploitation of IBM Common Storage Tracking Data. GQE command to display common storage Getmain Queue Elements

• Some MXI HIPER fixes resulted from aggressive testing using IBM DIAGnostic traps

• MXI acquired by Rocket Software “Rocket to the Rescue!”
  http://www.rocketsoftware.com/portfolio/mxi/download.htm
• Different but both have unique strengths. I use both!

• Both are updated frequently so stay current to have access to the latest features and information specific to the most recent z/OS releases.
What is a mailing list and how do I find mailing lists?

- A mailing list is a free service you subscribe to that allows you to exchange email with others on a topic of mutual interest. For more information check out popular resources like Internet For Dummies® ISBN: 0-7645-0700-1.

- There are several catalogs of lists available on the web.
  - My list http://www.cbttape.org/internet.phtml
  - Catalog of many lists including some other list servers i.e. majodomo, listproc, and listserv. http://www.liszt.com
Mail Lists

“To sum it all up, SHARE is now 365 days a year rather than 4 times a year.” Melinda Varian in “VM and VM Community: Past, Present, and Future” speaking about VMSHARE. VMSHARE is gone but lives on in spirit in the discussion groups which stretch across the globe using the Internet.
Mailing Lists

- Almost everyone knows how to send email so networking through email is a natural use for the Internet.

- A big part of networking is finding other people interested in the same things you are especially those who might be willing to help you. Mailing lists help people interested in the same thing exchange email.

- A mailing list works by allowing people to join the and then send a single email message that is relayed to all the list members. Responses to messages are also relayed to all list members.

- A list server program does the work of keeping track of list members and relaying the email messages. A real human being administers the list server and helps to resolve problems.
How do I join or leave a mailing list?

• To join a LISTSERV mailing list you start by sending the list server an email message asking to be subscribed with the text “subscribe listname Joe User”
• So to join the IBM-MAIN mailing list I send a message like this one:

To: LISTSERV@bama.ua.edu
From: Sam Knutson <sknutson@cbttape.org>
Subject: listserv

subscribe ibm-main Sam Knutson

To stop the mail from the list just send an email to LISTSERV@bama.ua.edu with the text signoff ibm-main
Posting

Just send an email to the list..
To: IBM-MAIN@bama.ua.edu
From: yourname
Subject: How do I enable SMS data set stripes?

Soon you may receive lots of helpful replies! A caveat is that once you stop lurking and decide to post you reveal your email address to everyone on the list and on UseNet (which is LOTS of people). You may receive unsolicited junk mail some of which may be offensive to you. This is often called SPAM. You can use services like HotMail or Juno to create throwaway accounts from which to post messages.

Note: Hormel Foods has opened the SPAM Fan Club fanclub.spam.com for lovers of the infamous processed meat product!
Ms. Manners on “Netiquette”

- Mailing lists just like any other social organization have an etiquette all their own. You will pick it up pretty quickly but here are a few tips.

- A good web site dedicated to Net etiquette is http://www.etiquette.net which includes links to the complete on-line copy of book *Netiquette* by Virginia Shea

- DO read others posts for a week or two to get the flavor of the list before trying to post anything yourself. The list got along fine for years without your help it can get along for at least another week.

- DON’T ever send an attachment to the list.

- DON’T forward off-topic email like jokes or the latest hoax email chain letter to the list i.e. WARNING DO NOT OPEN ANY EMAIL WITH THE SUBJECT ____________

- A good site for information on hoaxes is http://www.vmyths.com Also most of the major Anti-Virus sites provide some information on hoaxes.

- DON’T use automated out of office reply messages unless you take steps to make sure they don’t go back out to mailing lists
Ms. Manners on “Netiquette”

• DON’T send commands for the LISTSERV to the list. Be sure you send SET xxxx, SIGNOFF xxxx to LISTSERV@listaddress

• DON’T respond to inappropriate messages i.e. listserv commands and all the others things you know better than to send to the list. The only thing worse than reading a useless post is reading a useless post and 20 replies. The list manager will take care of this type of thing if it is really a problem. If you absolutely have to say something respond to the person’s private email not to the list.

• DO send PLAIN text email to the list not Rich Text or HTML. Many people use email programs which don’t display this type of content and it appears as useless attachments or garbage to them. Microsoft Outlook and Microsoft Exchange are two programs which frequently send Rich Text mail without the send being aware.
Common abbreviations

- IIRC - If I remember correctly
- AFAIK - As Far As I Know
- YMMV - Your Mileage May Vary
- IMHO - In My Humble Opinion
- RTFM - Read the manual - you could have and should have looked it up yourself
- OTOH - On The Other Hand
- BTW - By The Way
- TIA - Thanks in advance
- FWIW - For What Its Worth
- ISTR - I Seem To Remember
- PFCSK - Pimple Faced Computer Science Kids or Pimple Faced Client Server Kids
IBM-MAIN Archives

- You can also read and search on past messages on IBM-MAIN. This is a fabulous research tool easily as valuable as IBMLink even for those who do not care to follow the list antics on a daily basis.
- LISTSERV web interface an University of Alabama
  http://bama.ua.edu/archives/ibm-main.html

- You can also read and search on past messages on IBM-MAIN using email and the SEARCH command i.e. Search IBM-MAIN “IGD0099E”

- Last and perhaps best you can use Google™ Groups to search the archives of bit.listserv.ibm-main (Hint this link is on the CBT links page)

  http://groups.google.com/groups?oi=djq&as_uigroup=bit.listserv.ibm-main
IBM-MAIN

- Topic: IBM S/390 Computing almost anything
  Name: IBM-MAIN
  Type: LISTSERV
  Listserv: LISTSERV@bama.ua.edu
  List: IBM-MAIN@bama.ua.edu
  Web: http://bama.ua.edu/archives/ibm-main.html
  News: bit.listserv.ibm-main
  Weekday Message Volume: 100 - 200 (High consider setting DIGEST option)
  More information: David Alcock’s excellent Unofficial IBM-MAIN FAQ
      Sam Knutson’s LISTSERV Page http://www.cbttape.org/internet.phtml
      and IBM-MAIN page http://www.cbttape.org/ibm-main.htm

- Notes: 20% - 40% off topic posts are not unusual i.e. high signal to noise ratio, however, the remaining content is great!
“Thanks to all for the great replies. Having such talent available and willing to help is the best thing since sliced bread!”

Fred Schmidt
Posted Wed, 6 Dec 2000 on IBM-MAIN

Jerrie Stewart (IBM) quoted posts to IBM-MAIN in SHARE session 2412 in Nashville z/OS Announcement Review to demonstrate customer experience. IBM-MAIN is not an official channel to IBM but clearly they do listen.
MVS-OE

• Topic: IBM's UNIX on MVS a.k.a OpenEdition a.k.a USS a.k.a. OE a.k.a OS390 Unix System Services
  Porting to OS390, Utilities, Shell, C, Perl, Domino Go Webserver, Security, misc.
Name: MVS-OE
Type: LISTSERV
Listserv: listserv@vm.marist.edu
List: MVS-OE@VM.MARIST.EDU
Web: http://www.marist.edu/htbin/wlvindex?MVS-OE
News: n/a
Weekday Message Volume: 20 - 50
More information: n/a
Notes:
DB2-L

Topic: IBM DB/2 database
Name: DB2-L
Type: LISTSERV
Listserv: LISTSERV@WWW.IDUGDB2-L.ORG
List: DB2-L@WWW.IDUGDB2-L.ORG
Web: http://www.idugdb2-l.org/archives/db2-l.html
News: bit.listserv.db2-l
Weekday Message Volume: 50 - 75
More information: http://www.idugdb2-l.org (FAQ)
Notes: Moved to IDUG 11/2003
ASSEMBLER-L

- Topic: Assembler programming on S/390
- Name: ASSEMBLER-L
- Type: LISTSERV
- Listserv: LISTSERV@LISTSERV.UGA.EDU
- List: ASSEMBLER-L@LISTSERV.UGA.EDU
- Web: n/a
- News: comp.lang.asm370 (same topic different messages)
- Weekday Message Volume: 5 - 20
- More information: Dave's unofficial HLASM web page
  at http://www.planetmvs.com/hlasm/index.html

Notes:

```
LA    R0,WRKDSECT_LEN
STORAGE OBTAIN,
    LENGTH=(0),
    RELATED=RELEASE_WRKDSECT
LR    R13,R1
LR    R0,R1
LA    R1,WRKDSECT_LEN
SLR   R15,R15
MVCL  R0,R14
USING WRKDSECT,R13
MVC   WRKS_SAVEP,=C'F1SA'
```
CICS-L

- Topic: IBM CICS
  Name: CICS-L
  Type: LISTSERV
  Listserv: listserv@vm.marist.edu
  List: CICS-L@VM.MARIST.EDU
  Web: http://www.marist.edu/htbin/wlvindex?CICS-L
  News: bit.listserv.cicsl-l
  Weekday Message Volume: 15 - 45
  More information: n/a
  Notes:

http://www.yelavich.com/

Great Site for CICS folks!
MVS Posting Boards

Posting Boards provide a web friendly bulletin board experience. Several are available that cater to MVS folk.

Make sure you post your notice in the right spot (e.g., if you are selling your golf clubs, advertise at the local golf course).
MainFrameForum

Mainframeforum http://www.mainframeforum.com

• Launched May 29, 2001 it's free
• Mainframeforum currently has no ads but watch this space
• You will need to register. Information needed is minimal, mostly optional.
• The forum software offers many features including a powerful search engine.
• Many topics are covered with the Administrator dividing the board into many pre-defined topic areas
• Recently added USENET archives
<table>
<thead>
<tr>
<th>Author</th>
<th>Thread</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Koenig</strong></td>
<td>Renaming a gdg base. Is it possible?</td>
</tr>
<tr>
<td>Junior Member</td>
<td>I don't know where to put this so I chose the TSO subject.</td>
</tr>
<tr>
<td>Registered: Jun 2001</td>
<td>Let's say I have a simple GDG base with no datasets yet associated. Is there a way to rename it easily or do I have to delete it and redefine it?</td>
</tr>
<tr>
<td>Location: Canada</td>
<td>The RENAME and ALTER don't seem to work.</td>
</tr>
<tr>
<td>POSTS: 5</td>
<td>Thanks.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Bob Richards</strong></th>
<th>GDG BASE Name Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Junior Member</td>
<td>You have to delete and redefine it. Otherwise, all the GDG datasets underneath it...</td>
</tr>
</tbody>
</table>
MVSHELP

MVSHELP http://mvshelp.com/

• Arrived early
• growing following including many from IBM-MAIN
• Free, does include ads
• Requires a simple registration to use
• Less finely defined topics, lots more activity
• Appears to be the pick of the litter in this type of facility
<table>
<thead>
<tr>
<th>Author</th>
<th>Topic: FREE=CLOSE on SORTOUT</th>
</tr>
</thead>
<tbody>
<tr>
<td>John Mindock</td>
<td>From the DFSORT manual (July, 2000):</td>
</tr>
<tr>
<td>Sr. Member</td>
<td>When using DFSORT applications, FREE=CLOSE cannot be used on any DD statements except DFSPARM</td>
</tr>
<tr>
<td></td>
<td>We have some JCL with this on it, on the SORTOUT dataset. The SORTOUT is actually going to SYSDOUT.</td>
</tr>
<tr>
<td></td>
<td>Is FREE=CLOSE simply being ignored?</td>
</tr>
<tr>
<td></td>
<td>Any caveats to leaving it there?</td>
</tr>
<tr>
<td></td>
<td>Thanks</td>
</tr>
<tr>
<td></td>
<td>John</td>
</tr>
</tbody>
</table>

| Frank Yaeger  | If I remember correctly, with FREE=CLOSE the ddname is deallocated when the data            |
| Moderator     | is written to the DDNAME.                                                                  |
• Experts like Mark Zelden!
• Cookies
• Registration Required
• Busy
Google™ groups is a web site which allows you to read newsgroups with a web browser instead of using special newsreader software and finding a news server. You can also search the web for text, images, news, and use a Yahoo™ style directory.

Google™ [http://www.google.com](http://www.google.com) fast, good, unbiased search engine
Google™ Groups [http://groups.google.com](http://groups.google.com)

In order to post messages to many of the lists through these sites you still need to subscribe to the mail list and set to “nomail” if you don’t want email.

Google™ toolbar is an enhancement for your MS Internet Explorer web browser and I find it a highly useful one. It does not currently support anything other than MSIE. Find it here [http://toolbar.google.com/](http://toolbar.google.com/)
Personal Search Tools

• Google™ recently introduced a Desktop Search
  • Free, search Outlook, Files, more
  • http://desktop.google.com

• Microsoft’s acquisition
  • Free, search Outlook, Files, IM, more
  • http://www.lookoutsoft.com/Lookout/
Who me? Contribute to the CBT Tape or CD-ROM? Why not!

Send contributions to the CBT Tape to Sam Golob and call or email him. You can send contributions only suited for the CD-ROM or web directly to Sam Knutson.

Most contributions are now made via email over the Internet. To contribute, it is preferred that you make a PDS on an MVS system, including documentation member(s), put the pds into TSO XMIT OUTDSN format, download it in binary to the PC (if you need to), and attach it to an email to Sam at: sbgolob@cbttape.org

If the file is large, you can PKZIP it on the PC, before attaching it to the email. That's all there is to it!

If you want to send anything any other way, Sam Golob’s address is:

    Sam Golob, P.O. Box 906, Tallman, NY 10982-0906 USA
Q. What is the CBT tape?
A. The CBT tape is a collection of freeware almost all open-source distribution for the IBM mainframe MVS nee OS/390 nee z/OS operating system environment.

Q. What does CBT stand for?
A. This tape was established and previously edited for over 15 years, from Version 1 through Version 321 by Arnold Casinghino who worked at Connecticut Bank and Trust Company (CBT).

The CBT Tape is now being edited by Sam Golob. Our plan is to keep the initials "CBT" even though this tape is no longer supported at the Connecticut Bank and Trust Company, because those initials reflect how the tape should be properly and accurately referred to. For now, I'm calling it the "CBT" MVS Utilities Tape without the initials CBT meaning anything special. Various acronyms have been proposed including "Casinghino's Big Tape" but none yet accepted.
Q. What is a tape?

A. There are many kinds of magnetic media. IBM Mainframe magnetic data tapes have long been the home of the CBT Tape because this was the format used to store large amounts of information off-line and to move it from site to site. Today the CBT Tape is distributed in the real world on 3480 IDRC compressed cartridges as this is the current lowest common denominator we cater to. 3480(s) w/IDRC can be read on 3480 or 3490 drives and most shops have at least one of these. A 3480 tape looks like this

We don’t ship many real tapes anymore.
CBT Tape FAQ - 3

Q. Why do you still create tapes?

A. The CBT Tape is still distributed and released using a version system on tape for several reasons. Some shops still do not allow users to upload to the mainframe from the PC or to download from the internet. The "release" of a tape provides a consistent reference for everyone around the world. If you are told that utility xyz from file 555 will solve your problem and it was added at CBT tape V421 then you instantly know if you have it and where to get it. The tape/version distribution provides persistence that a simple on-line download area does not. The tape is copied (usually several thousand of any given version are circulated worldwide) and distributed widely so that it is unlikely it would ever be completely lost if something were to happen to the people who are currently maintaining the tape and the web site. The tape format along with a system we use for making updates allows us to master a new tape at a friendly site using limited DASD. Lastly despite the growth of the internet not everyone has a big, fat pipe to internet and so the biggest bandwidth is still on the back of a Chevy Truck i.e. CTAM (we now also use us the more up to date PTAM or Plane Transport Access Method).
Just for fun!  (Fun with Flash)

A parody on an old classic…
Laugh out loud funny!

http://jibjab.com

http://brokensaints.com  Unique, Still Free, Disturbing, Cool…
Jaws in 30 seconds (and re-enacted by bunnies) and more…

http://www.angryalien.com/

flashesaver Windows utility $25  http://www.flash-screen.com
Have fun today!

Feel free to call me at
(w) 301.986.3574 or email me at
CBT  sknutson@cbttape.org  or
(w) sknutson@geico.com

Please send any additions or corrections.

Visit the CBT Home Page
http://www.cbttape.org

See you at SHARE in
Anaheim, CA
Feb 27th - March 4th 2005