SHARE Technology - Connections - Hourts

z/VM Goody Bag

Rick Barlow Nationwide Insurance

August 28, 2009 Session 9153





Disclaimer and Acknowledgement



The examples presented here are for demonstration only. While they are based on real experience, there is no assurance that they will be applicable outside the original use at Nationwide Insurance.

Thanks to my coworker and SHARE's Deputy Director of Operations Jim Vincent for the work he did to extract the information about the VM "gems".

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Sources

- "Free" stuff that came with VM aka "Hidden Gems"
- VM Download Packages web page <u>http://www.vm.ibm.com/download/packages/</u>
- University of Kentucky VM Workshop Tools <u>http://ukcc.uky.edu/~tools/</u>
- V/Soft Software <u>http://www.vsoft-software.com/downloads.html</u>
- Slippery Rock University Fran Hensler <u>http://zvm.sru.edu/~download</u>









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- Where are these "gems"? On MAINT's....
 - 193 disk "CMS system tools" a.k.a. "Samples disk"
 - the 493 disk is the "Test CMS system tools"
 - 194 disk "CP & DV object code"
 - 3B2 disk "CMS & REXX object code"
- Installation samples along with undocumented samples
- Everything from how to bake a cake to the benefits of having a cat for a pet...



SCRIPT F1 V 132 Trunc=132 Size=13 Line=0 Col=1 Alt=0 CAKE ====> |...+....1...+....2...+....3...+....4...+....5....+....6 00000 * * * Top of File * * * 00001 Cake Recipe 00002 00003 3 cups flour 00004 1 cup sugar 00005 2 cups pineapple 00006 2 eggs 00007 1 tbsp. oil 00008 1 tsp. baking powder 00009 1 tsp. baking soda 00010 1 tsp. salt 00011 00012 Mix all ingredients in a large bowl. 00013 Pour into a pan and bake at 350 degrees for 30 minutes. 00014 * * * End of File * * *



• A real "fish" story:

SEA F1 F 80 Trunc=80 Size=8 Line=0 Col=1 Alt=0 DEEP ====> |...+...1...+...2...+...3...+...4...+...5...+...6 00000 * * * Top of File * * * 00001 THAT REMINDS ME OF THE TIME I ALMOST 00002 CAUGHT THE 50-POUND FISH. 00003 IT WAS EARLY IN THE MORNING, AND I WAS ALONE. 00004 I HAD A SUDDEN BITE ON THE LINE, AND I 00005 BEGAN FURIOUSLY REELING IT IN. 00006 I HAD GOTTEN THE FISH ALMOST IN THE BOAT, 00007 AND IT WAS A BEAUTY! 00008 SUDDENLY, THE LINE WENT SLACK. 00009 THE FISH WAS GONE! 00010 * * * End of File * * *



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• And a definitive story about cats:

CAT TALES F1 F 80 Trunc=80 Size=8 Line=0 Col=1 Alt=0 ====> |...+...1...+...2...+...3...+...4...+...5...+...6. 00000 * * * Top of File * * * 00001 THERE ARE MANY KINDS OF ANIMALS TO CHOOSE FROM 00002 WHEN YOU ARE LOOKING FOR A PET. 00003 BUT MANY PEOPLE FIND CATS ARE AN EXCELLENT CHOICE. 00004 CATS ARE CLEAN AND DO NOT REQUIRE A LARGE LIVING SPACE. 00005 ALTHOUGH THEY ARE INDEPENDENT, CATS ARE ALSO VERY AFFECTIONATE 00006 AND DEVOTED TO THEIR OWNERS. 00007 SO, IF YOU ARE LOOKING FOR A FRIENDLY, FURRY ADDITION 00008 TO YOUR FAMILY, CONSIDER A CAT. 00009 * * * End of File * *



- Those files, among others, are 'samples' used to populate the SFS directory VMSYS:MAINT.CMSREXX.OBJECT when INSTPOOL EXEC is run to start the file pool servers during VM installation
- Why are they there? They were/are used with the CMS/Xedit primer

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Gems on Maint's 193/493



- 193/493 disk "CMS system tools" a.k.a. "Samples disk"
- The following are all found on those disks...

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SFS Tool: WHO EXEC



- WHO will sort the storage groups and output what users (who) are enrolled in each storage group.
- Very easy way to find out how much space everyone in a filepool is using
- Example: WHO VMBSYS (FILE

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SFS Tool: WHO EXEC



STORAGE GROUP REPORT FOR VMBSYS DATE: 02/19/09 TIME GENERATED: 23:34:57

USERS IN STORAGE GROUP 2

User	Storage Group	4K Block Limit 4K	Blocks Committed	l Threshold
BARLOWR	2	100000	41923-41%	90%
CFCONSOL	2	2000	13-00%	90%
DRUSER	2	5000	5-00%	90%
DRWEB	2	50000	167-00%	90%
HTTPD	2	5000	3663-73%	90%
MAINT	2	400000	169864-42%	90%
RSCSDNS1	2	1000	22-02%	90%
SOFTWARE	2	500000	447226-89%	90%
VINCENJ	2	150000	93849-62%	90%
and many m	many more			

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SFS Tool: TALLY EXEC



- TALLY will tabulate the amount of space which has been added to a storage group. It will show the amount of space being used and also show the amount of free space left. TALLY will also calculate the difference between the actual physical space and the logical allocated space.
- Example: TALLY VMBSYS (FILE

SFS Tool: TALLY EXEC



STATUS REPORT FOR VMBSYS

DATE: 08/17/09 TIME GENERATED: 18:03:30

FILE POOL INFORMATION

- 1000 MAXIMUM NUMBER OF STORAGE GROUPS
- 1000 MAXIMUM NUMBER OF MINIDISKS
- 2527232 POTENTIAL ADDRESSABLE 4K BLOCKS IN FILE POOL

CURRENTLY DEFINED MINIDISK INFORMATION

MINIDISK NUMBER	GROUP NUMBER	4K BLOCKS IN-USE	4K BLOCKS FREE
1	1	1772 - 99%	18
4	1	3567 - 99%	21
б	1	3582 - 100%	6
9	1	8769 - 98%	214
14	1	8173 - 91%	810
17	1	8953 - 52%	8122
21	1	3392 - 13%	23573
2	2	44944 - 100%	0
3	2	165926 - 92%	13878
5	2	47979 - 100%	22
7	2	17971 - 100%	3
8	2	17969 - 100%	5
10	2	198158 - 99%	1964
11	2	187429 - 94%	12693

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SFS Tool: TALLY EXEC



PHYSICAL/ALLOCATED BLOCK INFORMATION

GROUP NUMBER	# of USERS	PHYS. 4K BLOCKS	ALLOC. 4K BLOCKS	DIFFERENCE
1	0	70972	0	70972
2	93	2092310	5789280	-3696970
3	0	0	0	0
4	0	0	0	0
5	0	0	0	0
б	0	0	0	0
7	0	0	0	0
8	0	0	0	0
9	0	0	0	0
10	0	0	0	0
11	0	0	0	0

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SFS Tool: SFSTRANS EXEC



- Transfer ownership of all directories and files from one userid to another. This exec must be run on a userid with Shared File System Administrator authority. The target userid must already be enrolled.
- After this exec has completed, a DELETE USER command must be executed to delete the old userid from the filepool.
- Very easy way to transfer *everything* when a userid needs to be renamed, a person leaves and someone else needs the files, etc.
- Syntax: SFSTRANS userid1 userid2

SFS Tool: REGRANT EXEC



- This exec will regrant file and directory authorities for a user who has changed their userid.
- For example: if user WASME changed their userid to NEWME, all file and directory level grants to WASME would be changed to NEWME. All references to OLDID will then be deleted (revoked). This exec can be executed after a userid has been transferred using the SFSTRANS EXEC.

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SFS Tool: REGRANT EXEC



- System Administrator authority is required
- Syntax: REGRANT
 - The routine will prompt for the userid(s) that need to be re-granted.

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CMS Pipelines



- Built in part of CMS
- PIPE MODULE on CMS 190 disk CMSPIPES DCSS
- Highly optimized, modular, application development tool
- Throw-away, stand-alone command line Pipes
 - Excellent for z/VM administration and automation
- Use from REXX
- User-written extensions in REXX, Assembler or compiled languages

CMS Pipelines



pipe CP Q DASD|split at ,|strip|specs /QUERY PAV/ 1 w2 nw|cp|locate /is an alias/|take
 10|cons

Device 30C0 is an alias Parallel Access Volume device whose base device is 3000 Device 30C1 is an alias Parallel Access Volume device whose base device is 3001 Device 30C2 is an alias Parallel Access Volume device whose base device is 3002 Device 30C3 is an alias Parallel Access Volume device whose base device is 3003 Device 30C4 is an alias Parallel Access Volume device whose base device is 3004 Device 30C5 is an alias Parallel Access Volume device whose base device is 3005 Device 30C6 is an alias Parallel Access Volume device whose base device is 3006 Device 30C7 is an alias Parallel Access Volume device whose base device is 3007 Device 30C8 is an alias Parallel Access Volume device whose base device is 3007 Device 30C8 is an alias Parallel Access Volume device whose base device is 3007 Device 30C8 is an alias Parallel Access Volume device whose base device is 3008

Pipelines Runtime Library

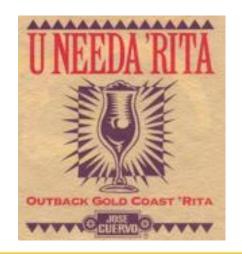


- This is the author's version of what has been included in the CMS distribution as CMS Pipelines feature. The Runtime Library contains the most current enhancements.
- The Pipelines Runtime Library was made available in response to a SHARE requirement "which requested IBM's permission for software vendors (including shareware vendors) to package a current version of the CMS Pipelines runtime library with their software products in order that they could use new features of Pipes in their products".
- http://www2.marist.edu/~pipeline
- See PIPELINE NEWS for the list of changes



"Lovely Rita, Meter Maid"

- Rita reports on the CPU utilization of a pipeline complex by stage and pipeline specification.
- Detailed output is written to a disk file, and a summary is displayed on the console.
- A MUST HAVE for anyone writing, debugging, and tuning CMS Pipelines!!





- The most current version of RITA can be found at: <u>http://www2.marist.edu/~pipeline/</u>
- Use RITA by replacing any "PIPE" command with "RITA"
- Example, change:

PIPE CP Q DASD|split at ,|strip|specs /QUERY PAV/ 1 w2 nw|cp|locate /is an alias/|take 10|cons

to

RITA CP Q DASD|split at ,|strip|specs /QUERY PAV/ 1 w2 nw|cp|locate /is an alias/|take 10|cons

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rita CP Q DASD|split at ,|strip|specs /QUERY PAV/ 1 w2 nw|cp|locate /is an alias/|take 10|cons Device 30C0 is an alias Parallel Access Volume device whose base device is 3000 Device 30C1 is an alias Parallel Access Volume device whose base device is 3001 Device 30C2 is an alias Parallel Access Volume device whose base device is 3002 Device 30C3 is an alias Parallel Access Volume device whose base device is 3003 Device 30C4 is an alias Parallel Access Volume device whose base device is 3004 Device 30C5 is an alias Parallel Access Volume device whose base device is 3005 Device 30C6 is an alias Parallel Access Volume device whose base device is 3006 Device 30C7 is an alias Parallel Access Volume device whose base device is 3007 Device 30C8 is an alias Parallel Access Volume device whose base device is 3008 Device 30C9 is an alias Parallel Access Volume device whose base device is 3008 Device 30C9 is an alias Parallel Access Volume device whose base device is 3009 CPU Utilization by Pipeline Specification 17 Aug 2009 18:20:27

54.536 (54.536) ms total in "NoName001" (1 invocation)

70.469 ms total.

Detailed output from Rita in UNNAMED RITA001.



UNNAMED RITA001 A1 V 89 Trunc=89 Size=22 Line=0 Col=1 Alt=0 18:23 ====> |...+...1...+...2...+...3...+...4...+...5...+...6...+...7...+... * * * Top of File * * * CPU Utilization by Pipeline Specification from: 17 Aug 2009 18:20:26 to: 17 Aug 2009 18:20:27 CPU utilization of pipeline specification "NoName001": 4.296) ms (570K) in stage 4.296 (1 of pipeline 1: CP Q DASD 5.768) ms (1K) in stage 2 of pipeline 1: split at , 5.768 (5.867 (5.867) ms (1K) in stage 3 of pipeline 1: strip 22.136) ms (4K) in stage 4 of pipeline 1: specs /QUERY PAV/ 1 w2 nw 22.136 (16.306 (16.306) ms (8K) in stage 5 of pipeline 1: cp 0.144 (0.144) ms (1K) in stage 6 of pipeline 1: locate /is an alias/ 0.010) ms (<1K) in stage 7 of pipeline 1: take 10 0.010 (0.009 (0.009) ms (2K) in stage 8 of pipeline 1: cons 54.536) ms total in "NoName001" (1 invocation) <==== 54.536 (54.536 ms attributed to stages; no virtual I/O. 0.004 ms in general overhead. 0.044 ms in scanner. 15.718 ms in dispatcher. 0.167 ms in accounting overhead. 70.469 ms total.

* * * End of File * * *

Pipe Tool: CALENDAR EXEC



- An easy way to create a 3-month calendar from a Pipe.
- Produces a calendar of three months starting with the input date or today's month and RC = 0 RC=998 input date cannot be processed. e.g. 5-digit year RC=999 if the specified month is not valid.

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Pipe Tool: CALENDAR EXEC



PIPE CALENDAR | CONSOLE would produce

February 2009						March 2009					April 2009									
S	М	Т	W	Т	F	S	S	S M	Т	W	Т	F	S	S	М	Т	W	Т	F	S
1	2	3	4	5	б	7	-	. 2	3	4	5	б	7				1	2	3	4
8	9	10	11	12	13	14	8	9	10	11	12	13	14	5	6	7	8	9	10	11
15	16	17	18	19	20	21	15	5 16	17	18	19	20	21	12	13	14	15	16	17	18
22	23	24	25	26	27	28	22	23	24	25	26	27	28	19	20	21	22	23	24	25
							29	30	31					26	27	28	29	30		

Look in the CALENDAR REXX file for the syntax/use notes

Pipe Tool: CALENDAR REXX



- There is a newer version at <u>http://www2.marist.edu/~pipeline/</u>
- We have a couple of mods too:

22 Nov 1999 ... Allow current month in MIDDLE – CurrMonMid 18 Nov 1999 ... Add WEEKS and SUNDAYLAST options Move Sunday BACK to start of week

• If you'd like our copy, let me know or E-mail me later.

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Pipe Tool: OSPDS REXX



- Decompose an OS PDS unloaded with IEBCOPY
- Input: The logical records written by IEBCOPY. If the dataset comes from tape, then it is usually in a VB format which must be unblocked before it comes here; a reader file (sendfile) is in netdata format and must be unblocked from that format.

Pipe Tool: PIPDSCR EXEC

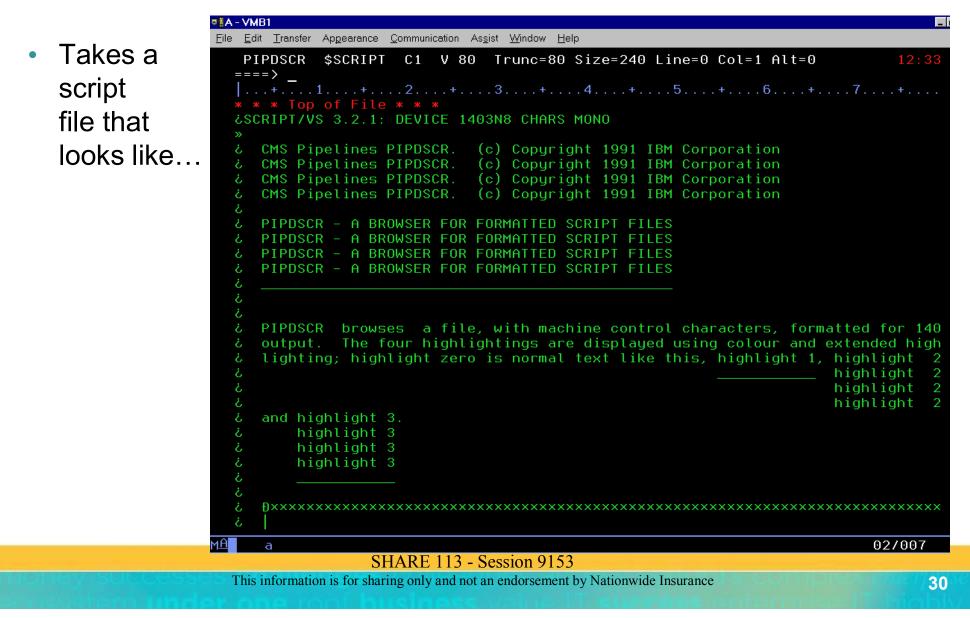


- Takes a 1403 formatted SCRIPT (DCF) and displays it with highlighting, etc, on your console.
- This is way cool...
- The only way to explain it is to show it to you:

EXEC PIPDSCR PIPDSCR \$SCRIPT

Pipe Tool: PIPDSCR EXEC





Pipe Tool: PIPDSCR EXEC



•	and makes it	·	ngearance <u>C</u> ommunication As <u>s</u> ist <u>W</u> indow <u>H</u> elp ines PIPDSCR. (c) Copyright 1991 IBM Corporation								
	look like:	<u>A BROWSER FOR FORMATTED SCRIPT FILES</u>									
		output.	browses a file, with machine control characters, formatted for 1403 The four highlightings are displayed using colour and extended high- highlight zero is normal text like this, <u>highlight 1</u> , highlight 2, <u>ight 3</u> .								
		PIPDSCR [<fname> [<ftype> [<fmode>]]] [% <dname>]</dname></fmode></ftype></fname>									
		Figure 1.	PIPDSCR Command Syntax								
		<fname></fname>	Is the file name of the file you wish to see. The default is PIPDSCR.								
		<ftype></ftype>	Is the file type of the file. The default is \$SCRIPT.								
		<fmode></fmode>	Is the mode of the file. All disks are searched by default.								
		<dname></dname>	Is the filename of a REXX external function that returns the desired character attributes used when constructing the 3270 data stream. The default is DSCRDEF.								
		M <u>A</u> a	32/080								
			SHARE 113 - Session 9153								

Other Gems... SCM XEDIT



• SCM formats comments in EXECs so that they are nice and neat. Found on MAINT's 493/193 disks.

• Example:

Other Gems... SCM XEDIT



• SCM * 71 would give:

TEMP	EXEC	A1	V 255	Trunc=255	Size=5 Lin	e=0 Col=1 Al	t=17	12:42	
====>									
	$ \ldots+\ldots1\ldots$	+	2	.+3	.+4	+5+.	6+	7	
00000	* * * Top of	File	· * * *						
00001	/* A test ex	ec						* /	
00002	Address 'COM	MAND '			/* Add	ress basics		* /	
00003	'CP Q TIME'				/* Is	it time to g	o yet??	* /	
00004	CP MSG SLOT	H Are	e you g	joing to do	some work	today?' /	* Be wise	. */	
00005	Exit				/*adio	s!		* /	
00006	* * * End of	File	* * *						

Other Gems... FMTP XEDIT



- An easy way to format your Pipelines into a more readable format (Found on MAINT's 493/193 disks)
 - "readable" is a personal preference

Example

Other Gems... FMTP XEDIT



FMTP typed in the Prefix area next to the PIPE command would produce:

TEMP EXEC A1 V 255 Trunc=255 Size=9 Line=0 Col=1 Alt=5 12:50 ====> |...+...1...+...2...+...3...+...4...+...5...+...6...+...7... 00000 * * * Top of File * * * 00001 /* A test exec */ 00002 Address 'COMMAND' 00003 00004 'PIPE(name TEMP)|', 'CP Q TIME |', 00005 00006 'CONSOLE | ', 'COUNT LINES | ', 00007 80000 'VAR HOWMANY' 00009 00010 * * * End of File * * *

VM Download Library

List of All-Time Favorites (40 total)

Rank	Count	Name	Types	Abstract	More
1	15434	B2H	<u>v-2894K</u> <u>z-576K</u>	B2H: Convert Bookmaster, GML, Script/VS and "flat" files to HTML (Internet) Release 4.7	<u>(+)</u>
2	7059	PRFCOPY	<u>v-36K</u> <u>z-25K</u>	The most complete "cut&paste" for XEDIT V4.2.f	<u>(+)</u>
3	6014	YR2000VM	<u>v-656K</u> z-215K	Technical Description of VM/ESA's Year 2000 Support (updated Sept. 1999)	<u>(+)</u>
4	5868	CPQUERY	<u>v-345K</u>	CMS GUI exec, issues CP Query commands and manages NSS V4.0.1	<u>(+)</u>
5	5466	VMWEBCD	<u>v-5245K</u> z-1091K	Redbook SG24-5347 "Web-Enabling VM resources" sample programs.	<u>(+)</u>
6	5180	CHARLOTT	<u>v-812K</u>	Charlotte - fullscreen, textual World Wide Web browser for CMS	<u>(+)</u>
7	5099	LP3820	<u>v-405K</u>	Convert AFP (LIST3820) files to personal printers	<u>(+)</u>
8	4972	H2S	<u>v-91K</u> <u>z-66K</u>	H2S - Converts HTML to Script/VS (DCF) for fine printing with AFP or PostScript	<u>(+)</u>
9	4953	GUISKEL	<u>v-1676K</u>	A framework to build REXX CMS/GUI applications much easier. V3	<u>(+)</u>
10	4935	GUIBLD95	<u>v-1208K</u>	Windows 95 GUI Builder for Writing CMS GUI Applications	<u>(+)</u>
11	4734	PRFGUI	<u>v-478K</u>	A CMSGUI interface for VMPRF Trend & Summary files Version 1.13	<u>(+)</u>
12	4612	PIPESERV	<u>v-801K</u>	A Pipeline Server. A driver for service machines. Version 1.2.4.	<u>(+)</u>
13	4580	MAILGATE	<u>v-90K</u>	Package to enable SMTP gateway functions on a pre-VM/ESA 2.3.0 system.	<u>(+)</u>
14	4445	RSK-GA	<u>v-342K</u>	RSK Extras (GA level)	<u>(+)</u>
15	4416	RSKFIX	<u>v-355K</u>	Reusable Server Kernel (RSK) fix pack	<u>(+)</u>
16	4316	FILELIST	<u>v-215K</u>	Improvements to FILELIST, RDRLIST and EXECUTE Version 2.4.7	<u>(+)</u>
17	4244	GUIONE	<u>v-1632K</u>	Make your own CMS/GUI performance monitor (includes GBOS2) V1.1	<u>(+)</u>
18	4238	COMPARE	<u>v-145K</u> z-169K	Comparing files with XEDIT, Comparing minidisks (or FILELISTs). V1.9	<u>(+)</u>
19	4195	MONVIEW	<u>v-60K</u>	Tools to look at raw VM/ESA or z/VM monitor data.	<u>(+)</u>
20	4175	LIBRCMS	<u>v-81K</u>	VSE/ESA Librarian Server for CMS users	<u>(+)</u>

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VM Download Library



21	4142	PICKPIPE	<u>v-33K</u>	Choose between default VM, Marist, and test runtime versions of Pipelines	<u>(+)</u>
22	4118	FCOPY	<u>v-131K</u>	* FCOPY - High speed CMS file copy routine with PACKLIB support	(+)
23	4108	SG245148	<u>v-201K</u>	Redbook "VM/ESA Network Computing with Java and NetRexx" sample programs	<u>(+)</u>
24	4107	SEARCH	<u>v-352K</u>	Search Engine for VM-Hosted Web Sites	<u>(+)</u>
25	4084	VMHP	<u>v-114K</u>	Tools we use to manage the VM home page system.	<u>(+)</u>
26	4073	LOOKALL	<u>v-65K</u>	Probably the best XEDIT-based search engine you will find.	<u>(+)</u>
27	4035	SPOOLCHN	<u>v-474K</u>	System Programmer/System Operator Extended Spool Query Commands	<u>(+)</u>
28	3959	INFOLIST	<u>v-266K</u>	The CMS File Manager. Replaces FILELIST, RDRLIST, MACLIST	(+)
29	3941	PIPEFIND	<u>v-545K</u>	VERY FAST/FUZZY PIPELINES SEARCH OF FILES.	(+)
30	3915	CHAT	<u>v-10K</u>	Network chatting tool demonstrating various CMS APIs.	<u>(+)</u>
31	3902	VM220PRF	<u>v-840K</u>	VM/ESA Version 2 Release 2.0 Performance Report	<u>(+)</u>
32	3889	TLD	<u>v-144K</u>	TCP/IP line driver for CMS distributed queues.	(+)
33	3889	XASTOR	<u>v-49K</u>	A multi-functioned, programmable, full-screen storage display	(+)
34	3887	GETBACK	<u>v-15K</u>	Recover a wrongly erased file.	<u>(+)</u>
35	3876	ECHO	<u>v-8K</u>	Empty Rexx/Sockets-based, multi-client TCP server	<u>(+)</u>
36	3855	HASHWF	<u>v-28K</u> z-17K	A General HASH function (S/370 and other systems)	<u>(+)</u>
37	3811	SG245164	<u>v-92K</u>	Redbook "Exploiting Recent CMS Function: A User's Guide to CMS Application Multitasking" sample programs.	<u>(+)</u>
38	3773	DRM	<u>v-205K</u>	An XEDIT based interface to manage the CP Directory Version 4.5.3	<u>(+)</u>
39	3701	MULTISRV	<u>v-444K</u>	Multiple protocol server for TCP/IP	<u>(+)</u>
40	3662	BOX2BMS	<u>v-3K</u>	Draw box diagrams for BookMaster documents	<u>(+)</u>

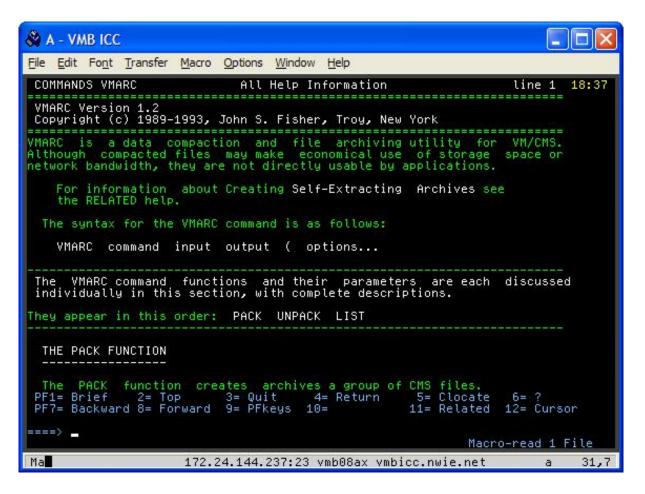
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VMARC



- VMARC is a data compaction and file archiving utility for VM/CMS. Although compacted files may make economical use of storage space or network bandwidth, they are not directly usable by applications.
- Similar in function to WinZip
- File date / time preserved in VMARC
- http://www.vm.ibm.com/download/

VMARC

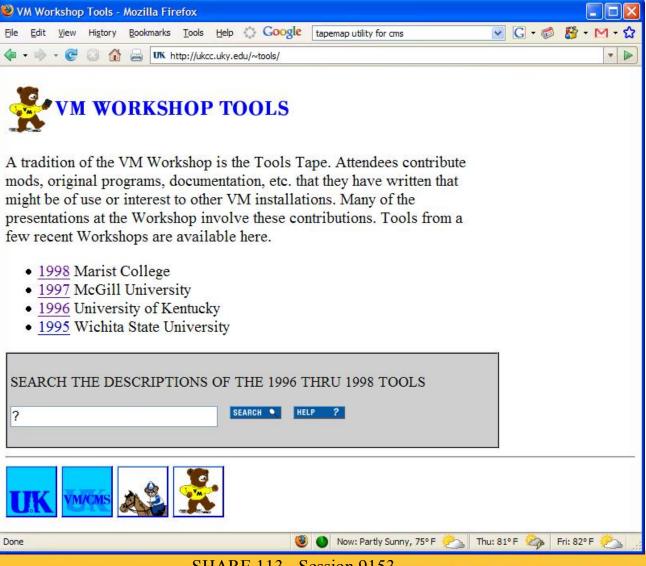




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University of Kentucky



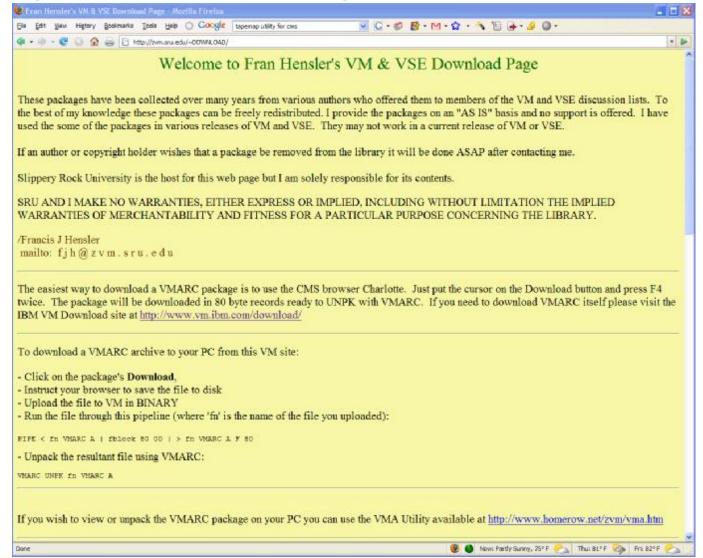


V/Soft Software

2 Mozilla Firefox									
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	^								
V/Soft V/Soft Software, Inc. Software Site Search									
Home Contact Downloads Products Links									
Downloads									
Here are some interesting and perhaps useful technical documents and software tools and applications for the z/VM and Linux under z/VM environments, free for the taking. Unless otherwise noted, the software tools and applications are the property of their respective authors. Enjoy.									
Documents:									
 "z/VM Licensing and Pricing" a short description, in plain English, of how IBM licenses and charges for Z/VM V5. A .pdf version is <u>here</u> and a MS Word version <u>here</u>. 									
Tools and applications:									
Done 🕲 🌒 Now: Partly Sunny, 75° F 🗞 Thu: 81° F 🆄	Fri: 82° F 🗞								

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😻 Fran Hensler's VM & VSE Download Page - Mozilla Firefox

REXXVSAM VMARC

REXXWAIT VMARC

Done

A1 F

A1 F

80

80

1661

415

🕘 🌑 Now: Partly Sunny, 77° F 🥕 Thu: 81° F 🌏 Fri: 82° F

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illa Firefox					ctions - Results
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TRACK

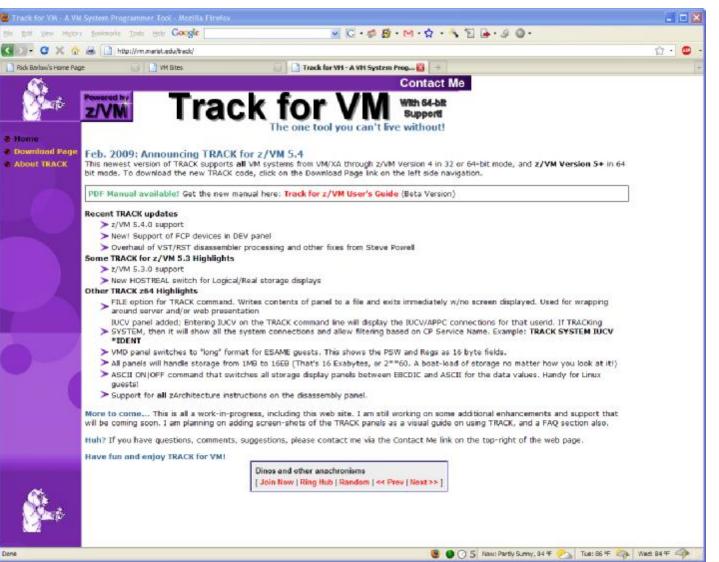


- The 'widely acclaimed' TRACK utility for monitoring and poking around in virtual machines, real storage, etc.
- Includes
 - Basic dis-assembler
 - Ability to display ASCII for Linux guests
- http://www2.marist.edu/track/
- TRACK for z/VM What's Happening in Your Virtual Machines?
 From past SHARE, Session 9123

TRACK



Technology - Connections - Results



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TRACK



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CHARLOTT



- Web Browser for VM
- CHARLOTT is a highly capable 3270-compatible web browser.
- Handles most text-heavy web pages with no problem. Web pages with a lot of graphics are not very useful.
- <u>http://www.vm.ibm.com/download/charlott.vmarc</u>

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CHARLOTT

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GOPHER



- Gopher is a protocol system, which in advance of the World Wide Web, allowed server based text files to be hierarchically organized and easily viewed by end users who accessed the server using Gopher applications on remote computers. From The Internet Gopher <u>http://www.codeghost.com/gopher_history.html</u>
- http://www.casita.net/~rmt/software/gopher24.vmarc

IPGATE



- An application that allows the sharing APPC resources across VM systems without the need of SNA. IPGATE communicates through TCP/IP and sets up a separate session for each conversation. One conversation is needed per user and APPC resource pair. IPGATE has been tested extensively with Shared File Pools (SFS) and the IBM Performance ToolKit (a.k.a. FCON/ESA).
- Written in REXX and uses MTREXX
- Allow distributed IUCV across TCP/IP when ISLINK and SNA are not an option
- http://www.vsoft-software.com/downloads.html

VMFTP



- VMFTP is a macro processor for the VM TCP/IP File Transfer Protocol (FTP) command. It allows a REXX program to issue FTP subcommands and process the responses to them.
- From Romney White in a pre-IBM endeavor
- http://zvm.sru.edu/~download/vmftpupd.vmarc

VMFTP - Example

/* Sample VMFTP Macro named TEST*/
'open some.where'
If RC <> 220 Then Signal Oops

i = OUTPUT.0
Parse Var OUTPUT.i user rest
If user <> 'USER' Then Signal Oops

'barlowr' If RC <> 331 Then Signal Oops

`my_pw'
If RC <> 220 & RC \= 230 Then Signal Oops

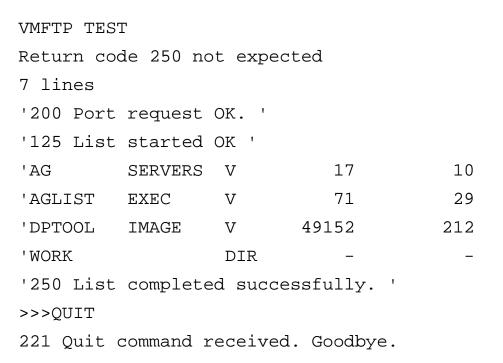
'dir' If RC <> 226 Then Signal Oops

```
'quit'
If RC <> 221 Then Signal Oops
Exit 0
Oops:
Say 'Return code' RC 'not expected'
Say OUTPUT.0 'lines'
Do i = 1 To OUTPUT.0
    Say "'"Output.i"'"
End
Exit RC
```

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VMFTP - Example



1	2008-08-08	18:45:45 -'
1	2008-08-08	18:26:34 -'
1264	2007-10-23	13:51:12 -'
-	2005-06-10	09:04:13 -'





TAPEMAP



- TapeMap describes the contents of a tape.
- Scans a tape from beginning to end and attempts to determine how many files and the layout
- Source files and install notes in VMARC; Build TAPEMAP MODULE
- http://ukcc.uky.edu/~tools/1998/tapemap.vmarc

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TAPEMAP

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WEBSHARE



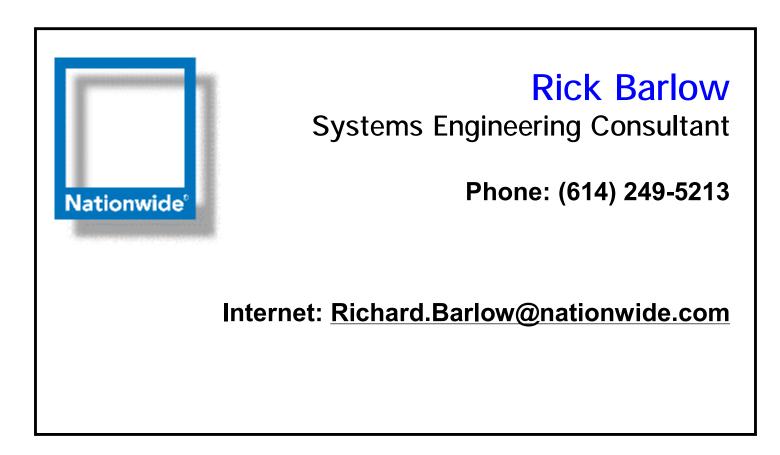
- Rick Troth's HTTPD server for z/VM (CMS)
- Written entirely in REXX and CMS Pipelines
- Allows both text and binary files to be served out to web browsers very easily from CMS
- http://www.vsoft-software.com/downloads.html



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Contact Information





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