

Covering Your Ass...ets

Creating a 1-Pack
z/VM “**Stand Alone Rescue**” System



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There are many ways to do any one thing.

With z/VM: there are virtually *twice* as many ways.

This is one way.

Why build a “Rescue System”?

Stuff “happens!”

- 1. Preserve your job when something goes bump in the dark of night.**
 - a. Hardware fails.
 - b. Software fails.
 - c. Humans fail, even z/VM Systems Programmers!
 - d. Humans changing “**Other Systems**” sometimes don’t understand the impact of their changes upon non-“**Other Systems**”.
 - e. Eventually, **something will go wrong** - perhaps by your own hand!
- 2. Potentially save your employer’s company.**
- 3. Reduce system outage time when something does go wrong.**
- 4. The last thing you want to see in the z/VM Messages and Codes manual when your z/VM system fails to IPL is:
“Contact your systems programmer.”**
- 5. Be a hero, after investing only a couple hours of work.**

With all of z/VM - what “parts” does a *Rescue System* need?

Get as fancy as you wish, with as much DASD as you want to allocate.

In our experience, we only needed:

- > A single 3390-3 DASD.
- > CMS, to fix other files, and
- > IODEF access to every z/VM DASD volume so that the Stand Alone Rescue System may use:

```
CP DEFINE MDISK  vdev  begin. size  volser
```

to access a CMS minidisk, and thus to fix one or more files.

Note: If the SAR system is IPLed from the same LPAR as the failed system, it will have the same DASD access. If it is IPLed from a different LPAR or CEC, ensure that the VMSAR DASD is shared across all LPARS/CECs, or clone it.

- > Let your experience (or fears) guide you.

Pre-requisites – to create a SAR system

Hardware pre-reqs:

1. **One (1) spare DASD volume.**
A single 3390-3 is plenty (3,339 cylinders should work).
2. **A small 1st level MDISK** for testing the Rescue System on 1st level, as a 2nd level guest (optional).
 - DASD is cheap: “*Eat all you want, they’ll make more!*”

Software prereqs:

1. **A z/VM system software license.** (Presumably you have this, right?)
2. **The ability to add a privclass ‘G’ userid** to the system.
3. **Privclass ‘B’** to attach a spare DASD to your userid in R/W mode.
4. **Authority to format and re-label a spare DASD.**

What makes up a - *runnable* z/VM system?

1) DISK !

- CP-formatted extents for DRCT, SPOL, PAGE, PARM, and PERM space for MDISKs.
- (TDSK handy, but not strictly required)

2) DISK !

- Copies of selected MDISKs for MAINT and precious few other userids

3) And *more* DISK! (But a wee 3390-3 will do just fine)

- Actual SPXTAPE restores to the SAR system SPOOL, of existing production SDFs (System Data Files), namely CMS and any other important friends.

Define - a new 1st Level system userid

- Choose a new 1st Level userid
 - In this presentation called “-VMSARS-”
 - Our is called: -VMOSHT- (VM Operating System Hypervisor Iool). VMOSHT is one of my first thoughts when a z/VM system won’t IPL, just before: “*what changed recently?*”
 - See 1st level userid example at the end of this handout: -VMSARS- (**hyphens** are used only to indicate that it is ***not a standard userid***)
 - This is used during and *after* the ‘build’ for testing, and making changes to the S.A.R. sysres.
 - Choose a volser for the target 1-pack Standalone Rescue System.
 - In this presentation, labeled: **VMSARS**
Matching the userid (minus the leading and trailing hyphens) and volser may reduce confusion later.

CPFMTXA – Format the new target sysres.

FORMAT, ALLOCATE, and LABEL the new target sysres.

Usually from MAINT:

- Find a free DASD volume of the desired model (3, 9, 27, etc.)
- **CP ATTACH rdev * F00**
- Run **CPFMTXA**, supplying the example F00 virtual address
- Format the whole volume “**0 END**” just to be safe.

After all, it's your **rescue** system, you don't want to run it on a failing DASD!

CPFMTXA – Allocate, and Label the new target sysres.

- **ALLOCATE the DASD spaces' for CP's use.** Using the sample USER DIRECT at the end of this handout:
 - **PERM 0 END** (Default everything to PERM)
 - **DRCT 0001.0200**
 - CKPT and WARM (don't bother, CKPT & WARM are not ALLOCated by CPFMTXA)
 - **PAGE 0511.0175**
 - **SPOL 1910.0500**
 - **PARM 2521.120**
 - **PARM 2641.120**
 - **PARM 2761.120**
 - **TDSK (none)**
- **LABEL** as: VMSARS
If you are dare, you can label it as 'VMOSHT', but be consistent throughout this whole process, i.e. changing all 'VMSARS' to 'VMOSHT'.

Select, and copy - specific MAINT disks.

1. Decide which MAINT and other userid MDISKs are required, and the target sysres. **Not much is needed, this is a minimal-function rescue system.**
 - See the target sysres “USER DIRECT” sample file at the end of this handout.
 - See “DDRSADSK EXEC” (DDR StandAlone DiSK) at end of handout for an “easier” tool to do the job.
 - **WARNING:** DDRSADSK requires some easy copy/paste updates before execution. Your MDISK locations will not be the same as these examples.
 - Execute the updated DDRSADSK exec.
 - DDRSADSK ?
Will explain usage and syntax.

Are we there yet? Can we IPL the new system now? Huh? Huh?

- » *No! CP-formatted cylinders and MAINT MDISKs do not alone make an IPLable system.*

Select, and copy - CMSPATCH userid(s)?

While the original idea of the Stand Alone Rescue system is a simple CP and CMS system to provide XEDIT capabilities (i.e., fix an erroneous update to the “SYSTEM CONFIG” file which is preventing a successful IPL), the idea could be extended to restoring your production system from backup tapes.

By including the CMSPATCH userid as a template, you can create additional batch worker machines such as CMSPAT01, CMSPAT02 through CMSPATnn.

If you define the same number of CMSPATnn userids as the number of tape drives that might be available to restore your production system, each batch worker machine can run an EXEC you create to read a tape and restore a disk.

For that to work, all programs and files used by your backup process must be available on, or from, the VMSARS system. If you choose to do this, also consider that your production backup product may be on a disk that is no longer available due to any of myriad issues. Automatically DDRing the production backup product disks to the VMSARS DASD on a regular basis may be an option.

For details on CMSPATCH, see the IBM z/VM “CMS Planning and Administration” manual.

Write the SAPL text.

The Stand-Alone Program Loader

- *Not just for a rescue system; used by production systems, too.*
- Documented in “CP Planning and Use” (AKA: the Sysprog’s Bible) as:

“a generic loader that loads standalone programs stored in CMS module form on a CMS minidisk. Using SAPL, you can use any standalone program that can be generated in the form of a CMS module.”

Examples of such programs are:

- The CP nucleus module (CPLOAD)
- Stand-Alone Program Loader Creation Utility (SALIPL)
- DASD Dump Restore Utility (DDR)
- Device Support Facilities Program (ICKDSF)

Write the SAPL text. (cont'd, 1)

You can do it manually (AKA: the hard way), or you can use the sample **MKSALIPL EXEC** at the end of this handout, and on the IBMVM-L listserver..

The MAINT “config” disks (allocated as PARM) in this example are located at extents:

```
MDISK CF1 3390 2521 120 VMSARS  
MDISK CF2 3390 2641 120 VMSARS  
MDISK CF3 3390 2761 120 VMSARS
```

But using MKSALIPL makes it easy to write the IPL text on the VMSARS DASD (LINKED as vdev F00), pointing to **cylinder 2521** (which was formatted by CMS with label MNTCF1) as “**extent 1**”

Write the SAPL text. (cont'd, 2)

```
cp link -vmsars- f00 f00 mr
Ready; T=0.01/0.01 17:13:37
mksalipl f00
```

The following command is about to be executed:

```
SALIPL F00 (EXTENT 1 MINIVOL NOVERIFY MODULE CPLOAD ORIGIN 1000 VOLID NOVERIFY COMMENTS ?
stacked Comments:
```

Some possible "IPL PARAMETERS" section (above) entries:

CONS=ccuu	PROMPT	<--- Used most often
NOEXITS	FN=system	FT=config
PDNUM=ParmDiskNum	PDVOL=ParmDiskVolser	PDOFF=ParmDiskcylOffset

Minidisk extent 1 (e.g. MAINTs CF1) WILL NOT have its volser verified.

The virtual device at "F00" WILL NOT be verified.

Continue? Enter Yes or No

y

```
HCPSAL6803I ENTER UP TO 4 LINES OF COMMENTS
```

```
Ready; T=0.01/0.01 17:13:43
```

*Cool! Even easier! Look at all the parameters we get by default!
Can we IPL now? Huh? Huh?*

- *No! Don't make me come back there!*
Did you write a directory? How would CP know the extents of each MDISK?

Write - the new CP Directory...

... can be a bit intimidating . . . *stay awake here.*

Using the “USER DIRECT” sample at the back up this handout
as file “VMSARS DIRECT A”:

```
det f00
DASD 0F00 DETACHED
Ready; T=0.01/0.01 17:26:08
cp link -vmsars- F00 EEEE mr      ←== See sample "USER DIRECT" at end of handout.
Ready; T=0.01/0.01 17:26:14
l vmsars direct * (label
FILENAME FILETYPE FM FORMAT LRECL      RECS      BLOCKS      DATE      TIME      LABEL
VMSARS  DIRECT   A1 F    80          153           3  1/13/12 17:23:04 M2W191
Ready; T=0.01/0.01 17:26:20
* Note... be sure it is: FORMAT F, LRECL 80
directxa vmsars direct a (EDIT      ← == Just checking for errors before committing to disk.
z/VM USER DIRECTORY CREATION PROGRAM - VERSION 5 RELEASE 4.0
HCPDIR750I RESTRICTED PASSWORD FILE NOT FOUND
EOJ DIRECTORY NOT UPDATED
Ready; T=0.18/0.18 17:26:35
directxa vmsars direct a
z/VM USER DIRECTORY CREATION PROGRAM - VERSION 5 RELEASE 4.0
HCPDIR750I RESTRICTED PASSWORD FILE NOT FOUND
EOJ DIRECTORY UPDATED
HCPDIR494I User directory occupies 10 disk pages
Ready(00005); T=0.18/0.18 17:26:47
CP DET EEEE      ← == We change MAINT's 123 to EEEE as a rarely-used ,
non-IBM address so it stands out, and we catch any IBM/ISV attempts to change the directory.
```

Copying your - production System Data Files (SDFs)

Is it ready yet? Can we IPL now!!?? Puh-lease!!??

- » *Almost; it will IPL - but you'll only ask for more. Let's do it right the first time. Be patient just a little bit longer.*

From your production system (probably on MAINT):

```
vmt m scratch (retpd 0      ←== or however you get your tapes mounted)
VMTMNT005I MOUNT '0181' request accepted.
Ready; T=0.01/0.01 17:36:48
Tape 0181 attached
VMTMNT073I Volume '500001' ready on 0181 (02F0) R/W SL.
VMTBUF016I MOUNT completion code=0.
spxtape dump 181 sdf all rewind      ←== Dumping your 1st level production SDFs
SPXTAPE DUMP INITIATED ON VDEV 0181
Ready; T=0.01/0.01 17:37:58
RDR FILE 2889 SENT FROM M2WALTER CON WAS 2889 RECS 0057 CPY 001 C NOHOLD NOKEEP
SPXTAPE DUMP COMMAND COMPLETED ON VDEV 0181
TIME STARTED:      17:37:58
TIME ENDED:        17:38:05
TAPE COUNT:         001
FILES PROCESSED:    48
SPOOL PAGES:       16,657
RDR FILE 2888 SENT FROM M2WALTER CON WAS 2888 RECS 0011 CPY 001 C NOHOLD NOKEEP
< Leave the tape mounted and attached>
```

IPL - your Stand Alone Rescue System!

*Is it ready yet? Can we IPL now!!?? Huh, Huh?
I can't hold it much longer!!*

➤ Yes!!

**From your production system logon to –VMSARS-,
or from a Privclass “G” (really... Class “G”) ID with access to LINK to
–VMSARS- F00 disk:**

```
cp link -vmsars- f00 f00 mr
Ready; T=0.01/0.01 17:43:49
q v da
DASD 0190 3390 VMR54I R/O          107 CYL ON DASD 1900 SUBCHANNEL = 0004
DASD 0191 3390 VMPP09 R/W          150 CYL ON DASD 09F6 SUBCHANNEL = 000A
DASD 0192 3390 VMPP02 R/O          30 CYL ON DASD 092F SUBCHANNEL = 000B
DASD 0193 3390 VMR54I R/O          167 CYL ON DASD 1900 SUBCHANNEL = 000E
DASD 0199 3390 VMPP06 R/O          450 CYL ON DASD 0915 SUBCHANNEL = 0008
DASD 019C 3390 VMR54H R/O          20 CYL ON DASD 1901 SUBCHANNEL = 0006
DASD 019D 3390 VMR54H R/O          200 CYL ON DASD 1901 SUBCHANNEL = 0005
DASD 019E 3390 VMR54H R/O          500 CYL ON DASD 1901 SUBCHANNEL = 0007
DASD 0399 3390 VMPP02 R/O          15 CYL ON DASD 092F SUBCHANNEL = 0009
DASD 0F00 3390 VMSARS R/W          339 CYL ON DASD 0909 SUBCHANNEL = 000C      ← === Our target sysres
Ready; T=0.01/0.01 17:43:51
cp set mach xa
Ready; T=0.01/0.01 17:44:08
cp term comnode 3270
17:44:17 * MSG FROM M2WALTER: DMSCIT171T Permanent console error; re-IPL CMS
17:44:17 * MSG FROM M2WALTER: DMSDIE3550I All APPC/VM and IUCV paths have been severed.
HCPGIR450W CP entered; disabled wait PSW 000A0000 80F185FC
```

IPL (cont'd, 1)

```
cp ipl f00
17:48:33 z/VM V5 R4.0 SERVICE LEVEL 1001 (64-BIT)
17:48:33 SYSTEM NUCLEUS CREATED ON 2010-03-25 AT 14:10:56, LOADED FROM VMSARS
17:48:33
17:48:33 HCPZC06718I Using parm disk 1 on volume VMSARS (device 0F00).
17:48:33 HCPZC06718I Parm disk resides on cylinders 2521 through 2640.
17:48:33 HCPZPQ2780I Beginning: 'SYSTEM CONFIG' from MAINT's CF1 disk... for VMSARS
17:48:33 HCPZPQ2780I > +-----+
17:48:33 HCPZPQ2780I > + H.A. Operators, please read the following carefully +
17:48:33 HCPZPQ2780I > +-----+
17:48:33 HCPZPQ2780I > If "WARM" failed during the most recent attempt to IPL
17:48:33 HCPZPQ2780I > this system, then contact VM Support for assistance.
17:48:33 HCPZPQ2780I > *REMIND* VM Support to ask about missing DASD volumes
17:48:33 HCPZPQ2780I > or other error messages.
17:48:33 HCPZPQ2780I >
17:48:33 HCPZPQ2780I > If this is the first IPL of this system since a
17:48:33 HCPZPQ2780I > SHUTDOWN -without- the "REIPL" parameter (usually for a
17:48:33 HCPZPQ2780I > POR or other hardware maintenance), then respond to the
17:48:33 HCPZPQ2780I > "Start" prompt by pressing "ENTER", or entering: WARM
17:48:33 HCPZPQ2780I > and press "ENTER" for the "Change TOD clock" prompt.
17:48:33 HCPZPQ2780I > +-----+
17:48:33 HCPZPQ2780I Completed: 'SYSTEM CONFIG' from MAINT's CF1 disk... for VMSARS.
17:48:33 Start ((Warm|Force|COLD|CLEAN) (DRain) (DIsable) (NODIRect)
17:48:33 (NOAUTolog)) or (SHUTDOWN)
17:48:46 CLEAN
---< Note the CLEAN start. You just formatted all of SPOOL during the build. >---
```

IPL (cont'd, 2)

```
17:48:46 NOW 17:48:46 CST FRIDAY 2012-01-13
17:48:46 Change TOD clock (Yes|No)
17:48:48 <Enter>
17:48:48 The directory on volume VMSARS at address 0F00 has been brought online.
17:48:48 HCPWRS2511A
17:48:48 HCPWRS2511A CLEAN start has been selected. This will cause all
17:48:48 HCPWRS2511A spool files and System Data Files (NSS, DCSS, TRF, IMG,
17:48:48 HCPWRS2511A UCR, NLS) to be deleted.
17:48:48 HCPWRS2511A
17:48:48 HCPWRS2511A No files have been deleted yet.
17:48:48 HCPWRS2511A To continue CLEAN start and delete files, enter GO.
17:48:48 HCPWRS2511A To stop CLEAN start without deleting files, enter STOP.
17:53:48 GO
17:53:52 HCPWRS9309E CP was unable to allocate a soft abend dump file.
17:53:52 HCPWRS2512I Spooling initialization is complete.
17:53:52 DASD 0F00 dump unit CP IPL pages 12376
17:53:52 HCPAAU2700I System gateway VMSARS identified.
17:53:52 z/VM Version 5 Release 4.0, Service Level 1001 (64-bit),
17:53:52 built on IBM Virtualization Technology
17:53:52 FILES: NO RDR, NO PRT, NO PUN
17:53:52 LOGON AT 17:53:52 CST FRIDAY 01/13/12
17:53:52 GRAF 0009 LOGON AS OPERATOR USERS = 1
17:53:52 HCPIOP952I 0999M system storage
17:53:52 FILES: 0000001 RDR, 0000001 PRT, NO PUN
17:53:52 HCPCRC8082I Accounting records are accumulating for userid OPERACCT.
DMSWSP327I The installation saved segment could not be loaded
z/VM V5.4.0 2010-04-11 12:01
<Enter>
DMSDCS1083E Saved segment CMSPIPES does not exist
DMSDCS1083E Saved segment CMSPIPES does not exist
DMSDCS1083E Saved segment CMSVMLIB does not exist
DMSACP112S A(191) device error
Ready; T=0.05/0.07 17:53:57
```

IPL (cont'd, 3)

**See? No SPOOL files due the *CLEAN* start; not even NSSes like CMS.
Wasn't it worth the wait? Let's fix that:**

```
17:56:01 VARY ON 181           <==== Still attached to 1st level ID as 181 from the previous SPXTAPE
17:56:01 0181 already online
17:56:01 1 device(s) specified; 0 device(s) successfully varied online
17:56:15 CP Q USERID
17:56:15 OPERATOR AT VMSARS
17:56:20 CP Q FILES
17:56:20 FILES: 0000001 RDR, 0000001 PRT,      NO PUN
17:56:23 Q R ALL
OWNERID FILE CLASS RECORDS  CPY HOLD DATE TIME      NAME      TYPE      DIST
OPERATNS 0001 D SYS 00000000 001 NONE OPEN-  SYS      CPDUMP    CPDUMP
17:56:29 Q PRT ALL
OWNERID FILE CLASS RECORDS  CPY HOLD DATE TIME      NAME      TYPE      DIST
OPERATOR 0001 T CON 00000078 001 NONE OPEN-  0009      CPDUMP    CPDUMP
93S0
17:57:10 ATT 181 *
17:57:10 TAPE 0181 ATTACHED TO OPERATOR 0181
17:57:26 SPXTAPE LOAD 181 SDF ALL REW
17:57:26 SPXTAPE LOAD INITIATED ON VDEV 0181
17:57:29 PRT FILE 0003 SENT FROM OPERATOR CON WAS 0003 RECS 0057 CPY 001 T NOHOLD NOKEEP
17:57:41 FILES: 0000001 RDR, 0000003 PRT,      NO PUN
17:57:42 LOADING 0181 : 22 FILES, PAGES      8,885
17:57:55 SPXTAPE LOAD COMMAND COMPLETED ON VDEV 0181
17:57:55 TIME STARTED: 17:57:26                      TIME ENDED: 17:57:55
17:57:55 TAPE COUNT: 001
17:57:55 FILES PROCESSED: 48
17:57:55 SPOOL PAGES: 16,657
17:57:55 PRT FILE 0002 SENT FROM OPERATOR CON WAS 0002 RECS 0011 CPY 001 T NOHOLD NOKEEP
17:58:00 CP Q F
17:58:00 FILES: 0000001 RDR, 0000003 PRT,      NO PUN
```

IPL (cont'd, 4)

```
17:58:03 CP Q NSS ALL
17:58:03 OWNERID FILE TYPE CL RECS DATE TIME     FILENAME FILETYPE ORIGINID
17:58:03 *NSS    0002 NSS A 1302 12/16 15:28:03 CMS      NSS     M2WALTER
17:58:03 *NSS    0004 NSS A 0514 12/02 15:19:05 OFSSEG   DCSS    MAINT
17:58:03 *NSS    0005 NSS A 0258 12/11 15:06:23 VTAM     DCSS    VTAMADMN
17:58:03 *NSS    0006 NSS A 2050 03/15 14:31:32 PIPERLD  DCSS    MAINT
17:58:03 *NSS    0007 NSS A 0258 02/11 06:43:36 NLSGER   DCSS    BLDSEG
17:58:03 *NSS    0008 NSS A 0258 02/11 06:42:58 NLSUCENG DCSS    BLDSEG
17:58:03 *NSS    0009 NSS A 0258 02/11 06:42:22 CMSVMLIB DCSS    BLDSEG
17:58:03 *NSS    0010 NSS A 0015 07/01 10:34:05 CMSDOS   DCSS    MAINT
17:58:03 *NSS    0011 NSS A 0045 07/01 10:34:05 CMSBAM   DCSS    MAINT
17:58:03 *NSS    0012 NSS A 0001 07/01 10:34:05 DOSBAM   DCSS    MAINT
17:58:03 *NSS    0013 NSS R 0001 07/01 10:34:05 MONDCSS  DCSS    MAINT
17:58:03 *NSS    0014 NSS A 0770 07/01 10:34:05 CMSFILES DCSS    MAINT
17:58:03 *NSS    0015 NSS A 0258 07/01 10:34:05 CMSPIPES DCSS    MAINT
17:58:03 *NSS    0016 NSS A 0018 07/01 10:34:01 DOSINST  DCSS    MAINT
17:58:03 *NSS    0017 NSS A 0770 03/15 16:11:48 INSTSEG  DCSS    MAINT
17:58:03 *NSS    0020 NSS A 0258 01/06 16:09:13 HAEXECS DCSS    MAINT
17:58:03 *NSS    0021 NSS A 0258 12/12 16:29:28 ISRDCSS  DCSS    MAINT
17:58:03 *NSS    0022 NSS A 0258 02/10 23:31:17 ISPDCSS  DCSS    MAINT
17:58:03 *NSS    0024 NSS A 0001 07/01 10:46:57 PERfout  DCSS    MAINT
17:58:03 *NSS    0023 NSS A 2050 02/24 17:18:30 SCEEX   DCSS    MAINT
17:58:03 *NSS    0025 NSS A 0258 02/24 17:18:04 SCEE    DCSS    MAINT
17:58:03 *NSS    0026 NSS R 0124 03/05 11:33:26 GCS     NSS     MAINT
17:58:03 *NSS    0027 NSS A 1303 07/03 06:15:11 ZCMS   NSS     MAINT
17:58:03 *NSS    0030 NSS A 0258 02/11 06:43:18 NLSKANJI DCSS    BLDSEG
17:58:03 *NSS    0031 NSS A 0258 02/11 06:42:39 NLSAMENG DCSS    BLDSEG
17:58:03 *NSS    0032 NSS A 0258 02/11 06:42:05 HELPSEG  DCSS    BLDSEG
17:58:03 *NSS    0033 NSS A 0258 07/01 10:34:05 GUICSLIB DCSS    MAINT
17:58:03 *NSS    0034 NSS A 0258 07/01 10:34:05 SVM     DCSS    MAINT
17:58:11 I CMS
```

z/VM V5.4.0 2010-04-11 12:01

<Enter>

DMSACP112S A(191) device error

Ready; T=0.03/0.05 17:58:12

---< Ah, we didn't DDR the production OPERATOR 191 disk to the Rescue System. Of course not, it's quite full >---

Using the CMS command: FORMAT, format the OPERATOR 191 MDISK, and place thereon a "PROFILE EXEC" (there's a sample at the end of this handout).

How to IPL - the “Rescue System”

From the HMC:

- Enter the rdev (DASD real device address) as the LOAD ADDRESS
- Enter the console rdev (real device) as the LOADPARM

From a 1st level userid, perhaps from: -VMSARS-

- ***STRONGLY suggested: a userid with only privclass “G”***
to prevent accidental CP SHUTDOWN of the 1st level system!
- CP LINK –VMSARS- F00 F00 MR
- CP TERM CONMODE 3270
- CP SET MACHINE XA
- CP IPL F00

Sample “Rescue System” files

(why re-invent the wheel?)

OPERATOR's “PROFILE EXEC”

```
*****  
/* Stand Alone Rescue System: OPERATOR's PROFILE EXEC */  
*****  
  
Address COMMAND  
'CP SPOOL CONSOLE * CLASS C START NAME OPERATOR CONSOLE'  
  
/* Do not bother with CP dump space */  
'CP SET DUMP OFF'  
'CP SET DUMP OFF' /* Yes, need it twice to be effective */  
  
hi='1DE8'x          /* 3270 Hilite Char      */  
lo='1D60'x          /* 3270 Default Char    */  
  
'SYNONYM STANDARD SYNONYM Y'          /* Aon Hewitt synonyms */  
'CP LINK MAINT 19C 19C RR'            /* Aon Hewitt Tools disk*/  
'ACCESS 19C T/T * * T2'              /* Let CMS see the files*/  
'CP TERMINAL MODE VM'  
'CP SET RUN ON'  
  
'PIPE CP RECORDING EREP    OFF PURGE'  
'PIPE CP RECORDING ACCOUNT OFF PURGE'  
'PIPE CP RECORDING SYMPTOM OFF PURGE'  
  
'CP SET PF06 RETRIEVE BACKWARD'  
'CP SET PF07 RETRIEVE BACKWARD'  
'CP SET PF08 RETRIEVE FORWARD'  
'CP SET PF11 RETRIEVE FORWARD'  
'CP SET PF12 RETRIEVE BACKWARD'  
'CP SET PF23 RETRIEVE FORWARD'  
'CP SET PF24 RETRIEVE BACKWARD'
```

OPERATOR's “PROFILE EXEC” (cont'd)

```
'PIPE CP SET RDEVICE 0100-011F TYPE 3279 MODEL 4' /* Used on 2nd level test system */
'PIPE CP SET RDEVICE 0160-016F TYPE 3279 MODEL 4' /* Ditto... */
'PIPE CP SET RDEVICE 0150-015F TYPE 3279 MODEL 4'
'PIPE CP SET RDEVICE 0700-071F TYPE 3279 MODEL 4'
'PIPE CP VARY ON 100-11F'
'PIPE CP VARY ON 160-16F'
'PIPE CP VARY ON 150-15F'
'PIPE CP VARY ON 700-71F'
'PIPE CP ENABLE ALL'

'PIPE CP SET RDEVICE 000E TYPE 3211 CLASS * FORM * SEPARATOR NO'
'PIPE CP VARY ON 000E'
say hi
say 'This is a MINIMAL-function Stand-Alone z/VM recovery system!'
say 'Do not expect all production tools to be present.'
say lo
```

Exit

1st level z/VM system userid:

USER -VMSARS- xxxxxxxx 64M 16G G 64
*UI=Server, Disaster Recovery support
ACCOUNT OVERHEAD 93S0
ACIGROUP \$DR
MACH XA
IPL CMS PARM AUTOOCR
IUCV ANY
OPTION MAX 2048
CONSOLE 009 3215 C VMBSYSAD
SPOOL 00C 2540 READER *
SPOOL 00D 2540 PUNCH D
SPOOL 00E 1403 P
LINK MAINT 190 190 RR
LINK MAINT 19D 19D RR
LINK MAINT 19E 19E RR

GRP=IS

LINK VMBSYSAD 191 B191 RR * Permit view of previous night backup reports

LINK VMXSYSAD 1B0 B1B0 RR * Permit view of previous night VMX DRCT source

*

MDISK 0191 3390 2995 5 VMU357 MR
MDISK 0A00 3390 0000 0001 VMSARS R

MDISK AAAA 3390 2460 0050 VMSARS R * VMSARS's MAINT AAAA disk

*MDISK AAAA * copied TO by VMXSYSAD each night.
*MDISK AAAA * KEEP LOCATION IN SYNCH w/VMSARS

MDISK 0F00 3390 0000 END VMSARS

* Something to DIAL to when testing when IPLed from a virtual machine.

* Real Aon Hewitt z196 1st level system consoles are in 100-11F range)

SPECIAL 100 3270
SPECIAL 101 3270
SPECIAL 102 3270
SPECIAL 103 3270
SPECIAL 104 3270
SPECIAL 105 3270
SPECIAL 106 3270
SPECIAL 107 3270
SPECIAL 108 3270
SPECIAL 109 3270
SPECIAL 10A 3270
SPECIAL 10B 3270
SPECIAL 10C 3270
SPECIAL 10D 3270
SPECIAL 10E 3270
SPECIAL 10F 3270

SPECIAL 110 3270
SPECIAL 111 3270
SPECIAL 112 3270

SPECIAL 113 3270
SPECIAL 114 3270
SPECIAL 115 3270
SPECIAL 116 3270
SPECIAL 117 3270
SPECIAL 118 3270
SPECIAL 119 3270
SPECIAL 11A 3270
SPECIAL 11B 3270
SPECIAL 11C 3270
SPECIAL 11D 3270
SPECIAL 11E 3270
SPECIAL 11F 3270

* Real Aon Hewitt z800 1st level system consoles are in 100-11F range

SPECIAL 700 3270
SPECIAL 701 3270
SPECIAL 702 3270
SPECIAL 703 3270
SPECIAL 704 3270
SPECIAL 705 3270
SPECIAL 706 3270
SPECIAL 707 3270
SPECIAL 708 3270
SPECIAL 709 3270
SPECIAL 70A 3270
SPECIAL 70B 3270
SPECIAL 70C 3270
SPECIAL 70D 3270
SPECIAL 70E 3270
SPECIAL 70F 3270

SPECIAL 160 3270
SPECIAL 161 3270
SPECIAL 162 3270
SPECIAL 163 3270
SPECIAL 164 3270
SPECIAL 165 3270
SPECIAL 166 3270
SPECIAL 167 3270
SPECIAL 168 3270
SPECIAL 169 3270
SPECIAL 16A 3270
SPECIAL 16B 3270
SPECIAL 16C 3270
SPECIAL 16D 3270
SPECIAL 16E 3270
SPECIAL 16F 3270

•End of Filee

```
•          z/VM 5.4.0 CP Directory; VMSARS      *
•          (VM StandAlone Rescue System)      *
*****  
*  
* FOR A DESCRIPTION OF DIRECTORY STATEMENTS SEE:      *
* VM ENTERPRISE SYSTEM ARCHITECTURE      *
* PLANNING AND ADMINISTRATION MANUAL.      *
*  
*****  
*  
*  
*  
DIRECTORY EEEE 3390 VMSARS  
*  
*****  
*  
GLOBALDEFS  
    POSIXGROUP system 0  
    POSIXGROUP staff 1  
    POSIXGROUP bin 2  
    POSIXGROUP sys 3  
    POSIXGROUP adm 4  
    POSIXGROUP mail 6  
    POSIXGROUP security 7  
    POSIXGROUP nobody 4294967294  
*  
*****  
*  
PROFILE IBMDFLT  
    SPOOL 000C 2540 READER *  
    SPOOL 000D 2540 PUNCH A  
    SPOOL 000E 1403 A  
    CONSOLE 009 3215 T  
    LINK MAINT 0190 0190 RR  
    LINK MAINT 019D 019D RR  
    LINK MAINT 019E 019E RR  
*****  
*****
```

Page 1 of target Standalone rescue system sample “USER DIRECT”

←==== EEEE on this "DIRECTORY" statement is the device address to which the compiled "USER DIRECT" is written.

It can be an virtual or real address. I chose "EEEE" because IBM has not usurped that address for anything else, and it brings to mind "*EEEEKK!!*". You really do NOT want to have anything write to your compiled DRCT cylinders without your knowing about it. **IBM distributes z/VM using MAINT's 123 disk as the full-pack sysres containing the DRCT cylinders.** "Trust, but verify" was wise advise. Thus I change IBM's 123 address to EEEE to keep IBM or other ISV's from doing something (perhaps via VMSES/E) that I'm not aware of. EEEE can be changed temporarily back to 123 if something really requires it -- unlikely.

*

```

PROFILE TCPCMSU
IPL CMS
MACH XA
SPOOL 000C 2540 READER *
SPOOL 000D 2540 PUNCH A
SPOOL 000E 1403 A
CONSOLE 009 3215 T
LINK MAINT 0190 0190 RR
LINK MAINT 019D 019D RR
LINK MAINT 019E 019E RR
*****
*****
```

```

PROFILE TCPGCSU
IPL GCS PARM AUTOLOG
MACH XA
NAMESAVE GCS
SPOOL 000C 2540 READER *
SPOOL 000D 2540 PUNCH A
SPOOL 000E 1403 A
CONSOLE 0009 3215 T
LINK MAINT 0190 0190 RR
LINK MAINT 019D 019D RR
LINK MAINT 019E 019E RR
*
*****
```

```

USER $ALLOC$ NOLOG
MDISK A00 3390 0000 0001 VMSARS R
*Since this sysres is a 3390-9, ensure that DISKMAP and DIRMAP
*report overlaps if an MDISK is allocated above cylinder 3338.
MDISK FFFF 3390 3339 6678 VMSARS R
*
```

```

USER $DRCT$ NOLOG
MDISK A00 3390 0001 0200 VMSARS R
*
```

```

USER $CKPT$ NOLOG
MDISK A00 3390 0201 0009 VMSARS R
*
```

Page 2 of target Standalone rescue system sample “USER DIRECT”

```

USER $WARM$ NOLOG
MDISK A00 3390 0210 0009 VMSARS R
*
USER $TDSK$ NOLOG
*MDISK A00 3390 .... .... VMSARS R
*
USER $SPOL$ NOLOG
MDISK A00 3390 1910 0500 VMSARS R
*
USER $PAGE$ NOLOG
MDISK A00 3390 0511 0175 VMSARS R
*
*****
```

```

USER CMS1 CMS1 32M 64M G
INCLUDE IBMDFLT
AUTOLOG AUTOLOG1 OP1 MAINT
ACCOUNT OVERHEAD 93S0
MACH XA
IPL 190
LINK MAINT 0190 0190 RR
LINK MAINT 019D 019D RR
LINK MAINT 019E 019E RR
*
*****
```

```

USER MAINT MAINT 128M 1000M ABCDEFG
AUTOLOG AUTOLOG1 OP1 MAINT
ACCOUNT OVERHEAD 93S0
MACH XA
POSIXINFO UID 0 GNAME system
OPTION MAINTCCW LNKS LNKE LNKNOPAS
*OPTION DEVMINT = permit cmd: CP DEFINE MDISK
OPTION DEVMINT
IPL 190
CONSOLE 009 3215 T
SPOOL 00C 2540 READER *
SPOOL 00D 2540 PUNCH A
SPOOL 00E 1403 A

MDISK 2CC 3390 0506 005 VMSARS MR ALL ALL ALL * Has USER DIRECT file

MDISK CF1 3390 2521 120 VMSARS RR ALL ALL ALL * Config disk 1
MDISK CF2 3390 2641 120 VMSARS RR ALL ALL ALL * Config Disk 2
MDISK CF3 3390 2761 120 VMSARS RR ALL ALL ALL * Config disk 3

MDISK 190 3390 0399 107 VMSARS RR ALL ALL ALL * CMS IPL disk
MDISK 19E 3390 0999 500 VMSARS RR ALL ALL ALL * IBM (and more) tools
MDISK 19C 3390 1769 020 VMSARS RR ALL ALL ALL * Aon tools
MDISK 19D 3390 0853 146 VMSARS RR ALL ALL ALL * IBM HELP disk
MDISK 490 3390 1803 107 VMSARS RR ALL ALL ALL * CMS build disk
MDISK 191 3390 0219 175 VMSARS MR ALL ALL ALL * Maint's work disk
MDISK 193 3390 0686 167 VMSARS RR ALL ALL ALL * CMS system tools disk
MDISK 3B2 3390 1499 270 VMSARS RR ALL ALL ALL * CMS Object code
MDISK 2C2 3390 1789 005 VMSARS RR ALL ALL ALL * IBM Sample disk
MDISK 299 3390 2410 050 VMSARS RR ALL ALL ALL * Aon localmod disk

*MDISK AAAA - Also defined as -VMSARS- AAAA on VMCMS,
*MDISK AAAA - and linked R/W each night by VMBSYSAD and VMXSYSAD on VMCMS
*MDISK AAAA - to COPYFILE (not DDR) critical files from prod to VMSARS.
MDISK AAAA 3390 2460 050 VMSARS RR ALL ALL ALL

```

```

MDISK EEEE 3390 0000 3339 VMSARS RR ALL ALL ALL * Full-pack link
*
```

Page 3 of target Standalone rescue system sample “USER DIRECT”

```

USER OPERATOR OPERATOR 32M 32M ABCDEFG
INCLUDE IBMDFLT
AUTOLOG AUTOLOG1 OP1 MAINT
ACCOUNT OVERHEAD 93S0
MACH XA
OPTION MAINTCCW
IPL 190
LINK MAINT 0190 0190 RR
LINK MAINT 019D 019D RR
LINK MAINT 019E 019E RR
MDISK 191 3390 0394 005 VMSARS MR ALL ALL ALL

```

*** End of File ***

1st level “DDRSADSK EXEC”

Page 2 of 1st Level “DDRSADSK EXEC”

```

'PIPE (END ? NAME ReadDDRdisk) ' ,
  '| <' xfn xft xfm ,
  '| PICK W1 == ./' , /* Record selection */
  '| SPECS W2-* 1' , /* Drop '.' prefix */
  '| INSIDE /MDISKcopyBegin:/ /MDISKcopyEnd:/ ' ,
  '| STEM DDRdisks.'.

/* Copy/Paste from L1 MAINT      Copy/Paste from Rescue Maint Usage
-----
. MDISKcopyBegin:
. 02CC 3390 00506 00005 VMR54I 2CC 3390 0506 005 VMSARS ; USER DIR
. 0CF1 3390 02521 00120 VMR54I CF1 3390 2521 120 VMSARS ; Config d
. 0CF2 3390 02641 00120 VMR54I CF2 3390 2641 120 VMSARS ; Config d
. 0CF3 3390 02761 00120 VMR54I CF3 3390 2761 120 VMSARS ; Config d
. 0190 3390 00399 00107 VMR54I 190 3390 0399 107 VMSARS ; CMS IPL
. 019E 3390 00201 00500 VMR54H 19E 3390 0999 500 VMSARS ; IBM (and
. 019C 3390 01426 00020 VMR54H 19C 3390 1769 020 VMSARS ; Aon tool
*Note the larger Lv11 MAINT 019D and smaller Rescue 019D HELP disk.
*Aon's production 019D HELP disk has ISV product help files, too.
*DDR will prompt you if the input and output disk sizes don't match.
*          |||          ||
*          VVV          VVV
* 019D 3390 01446 00200 VMR54H 19D 3390 0853 146 VMSARS ; IBM HELP
. 0490 3390 01803 00107 VMR54I 490 3390 1803 107 VMSARS ; CMS buil
. 0191 3390 01201 00175 VMR54H 191 3390 0219 175 VMSARS ; Maint's
. 0193 3390 00686 00167 VMR54I 193 3390 0686 167 VMSARS ; CMS syst
. 03B2 3390 04450 00270 VMR54I 3B2 3390 1499 270 VMSARS ; CMS Obj
. 02C2 3390 04272 00005 VMR54I 2C2 3390 1789 005 VMSARS ; IBM Samp
. 0299 3390 01376 00050 VMR54H 299 3390 2410 050 VMSARS ; Aon loca
  MDISKcopyEnd:
*/
'PIPE CP QUERY VIRTUAL 1111'
If rc<>40 then
  Do
    say hi
    say '+++' xfn xft xfm 'relies on use of virtual address "1111".'
    say '+++' There is already a device at 1111; DETACH 1111, or' ,
        'change this EXEC.' lo
    Call Exit rc Call Exit rc
  End

```

1st level “DDRSADSK EXEC”

Page 3 of 1st level “DDRSADSK EXEC”

```
'PIPE CP QUERY VIRTUAL 2222'
If rc<>40 then
  Do
    say hi
    say '+++' xfn xft xfm 'relies on use of virtual address
"2222".'
    say '+++' There is already a device at 2222; DETACH 2222, or'
      'change this EXEC.' lo
    Call Exit rc
  End

Do ix=1 to DDRdisks.0
  parse var DDRdisks.ix L1mdisk . L1start L1size L1volser ,
          SAmdisk . SAsstart SAsize SAvolser usage
  Signal ON Error
    'CP LINK MAINT' L1mdisk 1111 'RR'
    'CP DEFINE MDISK 2222' SAsstart SAsize SAvolser
    say time() 'DDRing MAINT' L1mdisk ,
      right(L1start,5,0)'.right(L1size,5,0) L1volser
    say time() '           to:' ,
      right(SAsstart,5,0)'.right(SAsize,5,0) SAvolser
    Call DDRdisk
  Signal OFF Error
  'PIPE CP DET 1111 2222'
End ix

Call Exit 0

/*-----+
 | Sub-Routines below this point |
+-----*/
Exit:
  parse arg exitrc todo
  If todo='?' then say 'For more help, enter: xfn ?'
  If verify(exitrc, '-0123456789')>0 then Exit 999999
Exit exitrc
```

Page 4 of 1st level “DDRSADSK EXEC”

Error:

```
etxt.1='+++' "ERROR:" error rtn entered in:' xfn xft xfm', rc='rc
etxt.2='+++' from line:' sigl', which reads:'
etxt.3='+++'sourceline(sigl)
cmdline=strip(sourceline(sigl), 'B')
If symbol(value('CMDLINE'))='VAR'      /* e.g cmd='CP FAIL'; cmd */
  then cmdline=value( value('CMDLINE') )
  else cmdline=value('CMDLINE')        /* e.g.   'CP FAIL'      */
etxt.4='+++' which translates to:' cmdline
etxt.0=4
'PIPE CP DET 1111 2222'
'CONWAIT'                                /* Wait for msgs  */
'DESBUF'                                 /* Wipe leftovers */
If stack.0>0 then
  'PIPE STEM stack. | STACK'             /* Restore stack */
'PIPE STEM etxt. | CONS'
Call Exit 20
```

Syntax:

```
etxt.1='+++' "SYNTAX:" error rtn entered in:' xfn xft xfm', rc='rc
etxt.2='+++' from line:' sigl', which reads:'
etxt.3='+++'sourceline(sigl)
cmdline=strip(sourceline(sigl), 'B')
cmdline=value('CMDLINE')
etxt.4='+++' which translates to:' cmdline
etxt.0=4
'PIPE STEM etxt. | CONS'
Call Exit 20
```

NoValue:

```
etxt.1='+++' "NoValue:" error rtn entered in:' xfn xft xfm', rc='rc
etxt.2='+++' from line:' sigl', which reads:'
etxt.3='+++'sourceline(sigl)
etxt.4='+++' Variable with no value is:' condition('Description')
etxt.0=4
'PIPE STEM etxt. | CONS'
Call Exit 24
```

1st level “**DDRSADSK EXEC**”

Page 5 of 1st level "DDRSADSK EXEC"

DDRdisk:

```

'PIPE STACK | STEM stack.'          /* Preserve stack */
'DESBUF'                           /* Clear stack */

Signal ON Error
    queue 'SYSPRINT CONS'
    queue 'INPUT 1111 DASD'
    queue 'OUTPUT 2222 DASD'
    queue 'COPY ALL'
    queue 'YES'                   /* Unspec'd invol */
    queue 'YES'                   /* Unspec'd outvol */
    queue ' '                      /* We'd like to wrap things up now, thanks */
    'DDR'

Signal OFF Error
'CONWAIT'                          /* Wait for msgs */
'DESBUF'                           /* Wipe leftovers */
'PIPE STEM stack. | STACK'        /* Restore stack */

Return

```

Explain:

```
'PIPE (NAME Explain)' ,
  '| <' xfn xft xfm ,
  '| INSIDE /ExplainBegin:/ /ExplainEnd:/',
  '| PREFACE STRLITERAL '/xfn xft xfm 'help.../' 
  '| CONSOLE'
Call Exit 0
/*
ExplainBegin:
```

DDRSADSK must be executed from a userid with authority to issue 'CP DEFINE MDISK' (requires "OPTION DEVMAIN" in their directory entry), and access rights to LINK r/o to MAINT MDISKs listing inside this the command itself.

DDRSADSK is used to copy specific MAINT MDISKs to specific cylinder addresses on another DASD. That other DASD is the target StandAlone z/VM "Rescue System".

>>>>>>>>>>>>-<<<<<<<<<<<<
>> !!! IMPORTANT NOTICE !!! <<
>>>>>>>>>>>-<<<<<<<<<<<

Page 6 of 1st level “DDRSADSK EXEC”

The specific MDISKs, begin/end cylinder addresses, and volsers are included inside comments in this very exec - be very, VERY certain that they match WHAT EXISTS before executing this command!
(Even though all you can do is trash the R/W target Rescue System).

Syntax:

>>-DDRSADSK-----><

ExplainEnd;

* /

“SYSTEM CONFIG” file on MAINT’s CF1 disk.

```
/*; System: VMSARS
/*; z/VM 5.4.0
/*; Pointed to by: SALIPL MODULE on sysres volume
/*; A.H. name: SYSTEM CONFIG
/*; -----
   Say "Beginning: 'SYSTEM CONFIG' from MAINT's CF1 disk... for VMSARS"
/* TOLERATE_CONFIG_ERRORS NO|YES */
   TOLERATE_CONFIG_ERRORS YES /* It's a D.R. system: git 'er up! */
/*!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!*/
/* After each change to the SYSTEM CONFIG file, be sure to run:
/*
/*
   +-CONFIG---+ +------+
/* >>>CPSYNTAX--filename--+-+-----+-----> /*
/*           +-filetype+ +-filemode+
/*
/*
   /* >-+-----+-----+----->< */
/*   | (1)          |
/*   +-(-+--+ Options |--++-+-
/*           +-)-+
/*
/* Options:
/* -+-----+-----+-----+-----+ | */
/*   +-CPUId--model--serial-+ +-SYStem--name-+
/*   */
/*!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!*/
/****** Initial Parmdisk Access */
/****** CP_Access MAINT CF1 A
/****** CP_Access MAINT CF2 B
/****** CP_Access MAINT CF3 C
/****** Checkpoint and Warmstart Information
/****** System_Residence,
   Checkpoint  Vold VMSARS From CYL 0201 For 9 ,
   Warmstart  Vold VMSARS From CYL 0210 For 9
/****** Timezone Definitions
/****** Timezone_Definition CST West 06.00.00
/****** Timezone_Definition CDT West 05.00.00
/* TimeZone_Boundary on 2012-04-01 at 02:00:00 to CDT
/* TimeZone_Boundary on 2012-10-28 at 02:00:00 to CST
... Many more, see: TZDATES EXEC on the IBMVM-L discussion list...
/* TimeZone_Boundary on 2039-10-30 at 02:00:00 to CST
```

“SYSTEM CONFIG” page 2

```
TimeZone_Boundary on 2039-04-03 at 02:00:00 to CDT
TimeZone_Boundary on 2039-10-30 at 02:00:00 to CST
TimeZone_Boundary on 2040-04-01 at 02:00:00 to CDT
TimeZone_Boundary on 2040-10-28 at 02:00:00 to CST
/* Old 31-bit TOD clock wrapped in August of 2042!
/* As of 20040927, dates beginning in 2042 cause error msg:
/* HCPZPM6706E Invalid date - 2042-mm-dd
/*
* TimeZone_Boundary on 2041-04-07 at 02:00:00 to CDT
* TimeZone_Boundary on 2041-10-27 at 02:00:00 to CST
*/
/*
***** CP_Owned Volume Statements
/*
/* >+CP_Owned+-+Slot ##++RESERVED+-----+--> */
/*           +     +     +     */
/*           +     + +Shared+ +     */
/*           +volser---+Own---+     */
/*           +Dump---+     */
CP_Owned Slot 1 VMSARS
/* Your production & test system DASD should _NEVER_ be listed here!*/
CP_Owned Slot 2 RESERVED
CP_Owned Slot 3 RESERVED
CP_Owned Slot 4 RESERVED
CP_Owned Slot 5 RESERVED
CP_Owned Slot 6 RESERVED
CP_Owned Slot 7 RESERVED
CP_Owned Slot 8 RESERVED
CP_Owned Slot 9 RESERVED
CP_Owned Slot 10 RESERVED
/*
***** System_Identifier Information
/*
System_Identifier_Default VMSARS
```

"SYSTEM CONFIG" page 3

```
*****
/* System Userids */
*****  
  
System_Userids , /* Keep most out of the way */  
    ACCOUNT1 OPERACT NOAUTOLOG ,  
    DUMP OPERATNS ,  
    EREP1 OPEREREP NOAUTOLOG ,  
    OPERATOR OPERATOR NODISCONNECT ,  
    STARTUp AUTOLOG1 NOAUTOLOG ,  
    SYMPTOM1 OPERSYMP NOAUTOLOG  
  
*****  
/* User Defaults */  
*****  
  
User_Defaults ,  
    CPLANG AMENG  
  
*****  
/* Features Statement */  
*****  
  
Features ,  
    Disable , /* Disable the following features */  
    Auto_Warm_IPL , /* Prompt at IPL always */  
    Clear_TDisk , /* Don't clear TDisks at IPL time */  
    Set_Privclass /* Disallow SET PRIVCLASS command */  
  
Features ,  
    Retrieve , /* Retrieve options */  
    Default 43 , /* Default.... default is 20 */  
    Maximum 255 , /* Maximum.... default is 255 */  
    MaxUsers NOLimit , /* No limit on number of users */  
    Passwords_on_Cmds , /* What commands allow passwords? */  
    Autolog yes , /* ... AUTOLOG does */  
    Link yes , /* ... LINK does */  
    Logon yes , /* ... and LOGON does, too */  
    Vdisk Syslim INFINITE , /* Maximum vdisk allowed per sys */  
    Userlim INFINITE /* Maximum vdisk allowed per sys */
```

"SYSTEM CONFIG" page 4

```
*****
/* Status of Devices */  
*****  
  
Devices ,  
    Online_at_IPL 0000-FFFF ,  
    Sensed 0000-FFFF  
  
*****  
/* HOT IO limits */  
*****  
  
HOT_IO_Rate ALL Default /* Default rates */  
  
*****  
/* Console Definitions */  
*****  
  
Operator_Consoles , /* Include production, test, D.R., etc. rdevs */  
    0009 0100 0101 0102 0103 0104 0105 ,  
    0160 0161 0162 0163 0164 0165 ,  
    0150 0151 0152 0153 0154 0155 ,  
    0700 0701 0702 0710 0711 0712 ,  
    System_3270 System_Console  
  
/* Emergency_Message_Consoles <---- defaults to Operator_Consoles */  
  
*****  
/* Special characters for system set here */  
*****  
  
Character_Defaults ,  
    Char_Delete OFF , /* System default was @ */  
    Escape "" , /* System default ... " */  
    Line_Delete OFF , /* Default was cent sign */  
    Line_End '#' , /* System default ... # */  
    Tab OFF /* System default was ] */
```

"SYSTEM CONFIG" page 5

```
*****
/* Command Overrides */
*****
/* Just an example, copied in part from one of our systems)

/* CP SEND has local mod checking privclass 'S' */
/* Systems Programmers class = 'P' */

MODIFY CMD CPRELEASE IBMclass A PRIVclass AP
MODIFY CMD CPACCESS IBMclass A PRIVclass AP
MODIFY CMD CPHX IBMclass A PRIVclass AP
MODIFY CMD CPLISTFILE IBMclass A PRIVclass AP
MODIFY CMD CPXLoad IBMclass A PRIVclass AP
MODIFY CMD CPXUnload IBMclass A PRIVclass AP
MODIFY CMD DEFINE IBMclass A PRIVclass AP
MODIFY CMD DISABLE IBMclass A PRIVclass ABG
MODIFY CMD AUTOLOG IBMclass A PRIVclass ABG
MODIFY CMD FORCE IBMclass A PRIVclass AP
MODIFY CMD INDICATE IBMclass E PRIVclass EG
MODIFY CMD LOCK IBMclass ABC
MODIFY CMD MSGNOH IBMclass ACBM
MODIFY CMD QUERY SUBCmd * IBMclass A PRIVclass ABCP
MODIFY CMD QUERY SUBCmd * IBMclass B PRIVclass BP
MODIFY CMD QUERY SUBCmd * IBMclass D PRIVclass DP
MODIFY CMD QUERY SUBCmd TDISK IBMclass B PRIVclass BPG
MODIFY CMD QUERY SUBCmd VDISK IBMclass B PRIVclass BPG
MODIFY CMD QUERY SUBCmd SYSTEM IBMclass B PRIVclass BG
MODIFY CMD QUERY SUBCmd ALLOC IBMclass D PRIVclass DG
MODIFY CMD QUERY SUBCmd NSS IBMclass E PRIVclass EG
MODIFY CMD QUERY SUBCmd PRODUCT IBMclass E PRIVclass EG
MODIFY CMD UNLOCK IBMclass ABC
MODIFY CMD WARNING IBMclass A PRIVclass ABCW
/* SET SECUSER targetid OFF|RESET|userid|* (add class 'U') */
MODIFY CMD DISPLAY IBMclass C PRIVclass CP
MODIFY CMD DISPLAY IBMclass E PRIVclass EP
MODIFY CMD QUERY Virtual SUBCmd * IBMclass B PRIVclass BP
MODIFY DIAGnose 04 IBMclass CEP
```

"SYSTEM CONFIG" page 6

```
/* pfx='00:00:00 HCPZPQ2780I' */
/* say pfx '....+....1....+....2....+....3....+....4....+....5....+
*/
/* '....+....1....+....2....+....3....+....4....+....5....+' */
say '> +-----+'
say '> + A.H. Operators, please read the following carefully +'
say '> +-----+'
say '> If "WARM" failed during the most recent attempt to IPL'
say '> this system, then contact z/VM Support for assistance.'
say '> *REMIND* z/VM Support to ask about missing DASD volumes'
say '> or other error messages at IPL.'
say '> '
say '> If this is the first IPL of this system since a'
say '> SHUTDOWN -without- the "REIPL" parameter (usually for a'
say '> POR or other hardware maintenance), then respond to the'
say '> "Start" prompt by pressing <ENTER>, or entering: WARM'
say '> and press <ENTER> for the "Change TOD clock" prompt.'
say '> +-----+'
/* say '> hh:mm:ss Start ((Warm|Force|COLD|CLEAN) (DRain) (Disable)')
* say '> hh:mm:ss'
* say '> hh:mm:ss NOW hh:mm:ss CDT weekday yyyy-mm-dd'
* say '> hh:mm:ss Change TOD clock (Yes|No)'
*/
/*****
* Logo_Config
*/
Logo_Config LOGO CONFIG
/*****
* PRODUCT ENABLE/DISABLE INFORMATION
*/
PRODUCT PROID 5684096K STATE DISABLED DESCRIPTION
'00/00/00.00:00:00.$BASEDDR RSCS Networking Version 3 Release 2 Modification 0'

PRODUCT PROID 5VMDIR10 STATE DISABLED DESCRIPTION
'00/00/00.00:00:00.$BASEDDR DIRECTORY MAINTENANCE FL 510'

PRODUCT PROID 5767002P STATE DISABLED DESCRIPTION
'00/00/00.00:00:00.$BASEDDR RACF for VM/ESA V2'

PRODUCT PROID 5VMPTK20 STATE DISABLED DESCRIPTION
'00/00/00.00:00:00.$BASEDDR PERFORMANCE TOOLKIT FOR VM'
```

Say "Completed: 'SYSTEM CONFIG' from MAINT's CF1 disk... for VMSARS."

Questions?

Later? Contact:

Mike.Walter@aon.com

Just e-mail to request a VMARC copy of the files listed at the end of this handout.

Presentation updated 2012-08-09 to

1) add slide:

Select, and copy -
CMSBATCH userid(s)?

2) Suggest in “SYSTEM CONFIG” example to **NEVER** include production or test DASD as part of the CP_Owned list.