

VSE/ESA Hot Topics

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Objectives



- Provide you with useful tips you can take home and use
- Get you to share your tips with the rest of US

Note: The topics covered in this presentation assume no vendor products are being used, just a standard IBM VSE system

Changing Partition Size

■ Changing a static partition

■ PSTOP the partition to VSE/POWER

```
p f5
AR 0015 1C39I  COMMAND PASSED TO VSE/POWER
AR 0015 1C39I  COMMAND PASSED TO VSE/POWER
F5 0001 1Q33I  STOPPED F5
F5-0005 1I00D  READY FOR COMMUNICATIONS.
```

■ UNBATCH the partition to VSE

```
5 unbatch
```

■ Re-allocate the partition and define the default size

```
alloc f5=0m
AR 0015 1I40I  READY
alloc f5=2m
AR 0015 1I40I  READY
size f5=1M
AR 0015 1I40I  READY
```

Changing Partition Size...

- Changing a static partition...
 - PSTART the partition to VSE/POWER
 - You *must* know in advance the spool devices and class(es) to specify

```
s f5,h5
AR 0015 1C39I  COMMAND PASSED TO VSE/POWER
F1 0001 1R86I  PLEASE SPECIFY DEVICES TO BE SPOOLED
F1-0001 1R50D   F5 READER=
1 fec
F1-0001 1R50D   F5 PRINTERS=
1 fee
F1-0001 1R50D   F5 PUNCHES=
1 fed
F5-0005
```

Changing Partition Size...

■ Changing a static partition...

■ Assign system logical units in the partition

```
5 assgn syslst,fee
F5-0005
5 assgn syspch,fed
F5-0005
5 assgn sysrdr,fec
F5-0005
```

■ Re-establish your standard assignments, etc.

```
5 // exec proc=$$jcl
F5 0005 // JOB STARTF5
          DATE 08/12/2002, CLOCK 21/30/01
F5 0005 1N90I  EOP WAS FORCED BY EOJ
F5 0005 EOJ STARTF5
          DATE 08/12/2002, CLOCK 21/30/04, DURATION 00/00/02
F5 0001 1Q34I  F5 WAITING FOR WORK
```

■ You are done!

Changing Partition Size...

- Automating the process for a static partition
 - Also known as "planning ahead"!

```
* $$ JOB JNM=ALLOCF5,DISP=H,CLASS=6
// JOB ALLOCF5      ALLOC F5 PARTITION TO 2 MB - RUNS IN F6
// EXEC DTRIATTN,PARM='P F5'
// EXEC DTRIATTN,PARM='5 UNBATCH'
// EXEC DTRIATTN,PARM='ALLOC F5=0K'
// EXEC DTRIATTN,PARM='ALLOC F5=2M'
// EXEC DTRIATTN,PARM='SIZE F5=1M'
// EXEC DTRIATTN,PARM='S F5,H5'
// EXEC DTRIATTN,PARM='1 FEC'
// EXEC DTRIATTN,PARM='1 FEE'
// EXEC DTRIATTN,PARM='1 FED'
// EXEC DTRIATTN,PARM='5 ASSGN SYSLST,FEE'
// EXEC DTRIATTN,PARM='5 ASSGN SYSPCH,FED'
// EXEC DTRIATTN,PARM='5 ASSGN SYSRDR,FEC'
// EXEC DTRIATTN,PARM='5 // EXEC PROC=$$JCL'
/&
* $$ EOJ
```

Changing Partition Size...

■ Changing a dynamic partition

■ Update Dynamic Class Table with new data

- DTR\$DYNC.Z or user-specified suffix
- Need to change Dynamic Space GETVIS value also?

■ Load updated table

```
pload dync  
pload dync,id=x
```

■ Next time a job is scheduled in dynamic class partition will be allocated with new size

- Assuming virtual storage is available for new allocation!

VSE/POWER



- Little known Autostart SET commands
 - SET CONFIRM=power-command
 - Purpose: Prevent processing of "accidental" commands
 - Could be *very* useful for PEND
 - 1QZ3D PROCESS 'power-command'? CONFIRM WITH 'YES', ELSE 'NO'

VSE/POWER...



• Little known Autostart SET commands...

■ SET 1R33D=FLUSH|IGNORE

■ Problem: Incorrect JECL requires operator intervention

- 1R33D CORRECT FULL STATEMENT task-id
- *Full* JECL statement must be entered on console

■ FLUSH - job with incorrect JECL flushed

- Job given DISP=H|L in rdr queue

■ IGNORE - incorrect JECL ignored

- Job executes as if JECL statement not present
- Not sure this is a good option

VSE/POWER...



- Little known Autostart SET commands...
 - SET NORUN=YES
 - Purpose: Prevents active jobs from running following a system failure
 - Active jobs set to DISP=X during startup
 - Use D RDR,CDISP=X to see affected jobs
 - // PAUSE automatically issued for any static partition with job set to DISP=X and another job dispatchable
 - * \$\$ JOB NORUN=IGN ignores SET NORUN=YES
 - May be useful for VTAM, CICS, TCP/IP, and ???

VSE/POWER...



- 6 Little known Autostart SET commands...
 - SET LONGCMD=power-command
 - Problem: Short forms of VSE/POWER commands are sometimes too easy to enter by mistake
 - L RDR,ALL
 - If SET LONGCMD=PDELETE is used then L will not be accepted
 - Multiple SET LONGCMDs can be used
 - But watch out for short form commands from
 - DTRIATTN job steps
 - User SVC 30 programs
 - Vendor products

VSE/POWER...



- 6 Little known Autostart SET commands...
 - SET AUTONAME=FLUSH|HOLD
 - Purpose: Prevent jobs without valid * \$\$ JOB or // JOB from automatically running
 - Jobs automatically named AUTONAME in rdr queue
 - Without this option jobs set to DISP=D and CLASS=A
 - FLUSH - delete job from rdr queue
 - HOLD - put job in rdr queue with DISP=H
 - 1Q3HI JOB AUTONAME jobnum {FLUSHED|HELD}
DUE TO 'SET AUTONAME', TASK task,cuu

VSE/POWER...

- Manage queue entries by USER or UINF
 - Valid for PALTER, PDELETE, PDISPLAY, PHOLD, and PRELEASE commands

```
d lst,cjm55,full=yes
AR 0015 1C39I COMMAND PASSED TO VSE/POWER
F1 0001 1R46I LIST QUEUE P D C S PAGES CC FORM B
F1 0001 1R46I CJM55 00725 3 D A 1 1 TO=(JUST) FROM=(JUST)
F1 0001 D=08/10/2002 U='ABCD ' DBGP=000001 L=00000002
F1 0001 QNUM=00808
d lst,cuinf=abcd
AR 0015 1C39I COMMAND PASSED TO VSE/POWER
F1 0001 1R46I LIST QUEUE P D C S PAGES CC FORM B
F1 0001 1R46I CJM55 00725 3 D A 1 1 TO=(JUST) FROM=(JUST)
l lst,cuinf=abcd
AR 0015 1C39I COMMAND PASSED TO VSE/POWER
F1 0001 1R88I OK : 1 ENTRY PROCESSED BY L LST,CUINF=ABCD
```

Read-Only DASD Volumes

- How do you share DASD volumes today?
 - ADD cuu,dev-type,SHR with Lock File?
 - Supported, data integrity
 - Potentially lots of I/Os
 - ADD cuu,dev-type with some kind of manual controls?
 - No support or data integrity
 - Significant potential for error!

Read-Only DASD Volumes...

- How about read-only access built into VSE?

```
ADD cuu,dev-type,READ
```

- Support is in your system right now

```
ADD 254,ECKD,READ
```

```
volume 254
```

AR	0015	CUU	CODE	DEV.-TYP	VOLID	USAGE	SHARED	STATUS	CAPACITY
AR	0015	254	6E	3390-3	RWHWRK	UNUSED		READ ONLY	1113 CYL
AR	0015	1I40I		READY					

- Not documented

Read-Only DASD Volumes...

- Prefixes MODE SET to each CCW string to inhibit writes
 - Example: IUI dialog to add VSAM space to existing catalog on read-only 3390

```
F2 0014 0P18I C COMM REJCT SYS252=254
      CCSW=0DD0CE39500E00008C CCB=CE396A SK=000080000000
      SNS= 80000000 C6000C01 00000021 00001704 02008B4D 43160F04
          000000E2 0001A302
```

- X'0D' is write key and data

CICS Transaction Server

6 LE/VSE with CICS TS

■ Displaying current options with ROPC

```
msg cicsiccf,d=ropc
AR 0015 1I40I  READY
F2 0131 Options Report for Enclave EDCYCROP 08/10/02 3:21:05 PM
F2 0131 Language Environment for VSE/ESA V1 R4.2
F2 0131
F2 0131 LAST WHERE SET          OPTION
F2 0131 -----
F2 0131 Installation default      ABPERC(NONE)
F2 0131 Installation default      ABTERMENC(ABEND)
.
F2 0131 Installation default      TRAP(ON,MAX)
F2 0131 Installation default      UPSI(00000000)
F2 0131 *****
** LE/VSE CICS-wide run-time option report **
** has been written to system console.     **
*****
```

■ Reloading updated options with NEWC

```
msg cicsiccf,d=newc
AR 0015 1I40I  READY
F2 0120 CEE3553I CICS Options Newcopy Started
F2 0120 CEE3554I CICS Options Newcopy Complete
```

CICS Transaction Server...

What is my DSA usage?

Use transaction IEDC

```
IESADMDCST                CICS TS Storage Reporter                Time: 15:31:06
  Applid: DBDCCICS        Sysid: CIC1        Jobname: CICSICCF        CICS TS Level: 111
Storage Protection ..... INACTIVE                Reentrant Programs ..... PROTECT
                                           CICS Trace Table size..      80
Extended DSA:                (All sizes in kbyte)                LIMIT 25600
                               ECDSA    EUDSA    ESDSA    ERDSA    Totals
Current DSA Size .....      3072    1024    1024    7168    12288
Current DSA used .....      2300     64     140    6716    9220
*Peak DSA used .....      2324    128     140    6716
Peak DSA Size .....      3072    1024    1024    7168    12288
Largest free area/Free Storage. 0.99    1.00    1.00    0.94
Times short-on-storage (SOS)..    0      0      0      0      0

DSA:                          LIMIT 5120
                               CDSA    UDSA    SDSA    RDSA    Totals
Current DSA Size .....      768    256    768    512    2304
Current DSA used .....      512     8    552    468    1540
*Peak DSA used .....      528    48    572    468
Peak DSA Size .....      768    256    768    512    2304
Largest free area/Free Storage. 0.88    1.00    0.93    0.64
Times short-on-storage (SOS)...    0      0      0      0      0
PF1=HELP        2=REFRESH    3=END        4=RETURN
```

CICS Transaction Server...

- How can you ensure CICS TS shuts down?
 - Issue CEMT P SHUT I
 - Generally a very bad idea!
 - Manually try to find and terminate task(s) delaying shutdown
 - Can take a long time
 - Operator training?
 - Write program to find and fix hung tasks
 - Time, effort, testing, skills available, etc.
 - Implement sample program DFH\$SDAP
 - DFH\$SDAP.A in PRD1.BASE

CICS Transaction Server...



- How can I make CICS TS shut down?...
 - Customize DFH\$SDAP if needed
 - Change delay time - default is 10 seconds
 - What else?
 - Define transaction SDAP
 - Points to DFH\$SDAP
 - Define program DFH\$SDAP
 - Or use program autoinstall
 - Add PLTSD entry for DFH\$SDAP
 - In Phase 1 (before DFHDELIM)

CICS Transaction Server...

- How can I make CICS TS shut down?...
 - General logic flow of DFH\$SDAP
 - Phase 0 (called from PLTSD)
 - Check that system shutdown in progress
 - START transaction SDAP with 10 second delay
 - Phase 1
 - PURGE all tasks except shutdown and itself
 - START transaction SDAP with 10 second delay
 - Phase 2
 - FORCEPURGE all tasks except shutdown and itself
 - START transaction SDAP with 10 second delay

CICS Transaction Server...



- How can I make CICS TS shut down?...
 - General logic flow of DFH\$SDAP...
 - Phase 3
 - FORCECLOSE VTAM
 - START transaction SDAP with 10 second delay
 - Phase 4
 - PERFORM SHUTDOWN IMMEDIATE
 - End task
 - Lots of messages to keep operator informed of progress

STACK Command Update



6 Review

■ STACK command used to

- Create customized console commands
- Disable or replace existing console commands

■ Undocumented

- "Semi-documented" in VSE/ESA Hints and Tips on VSE website
 - Description not quite correct in July 2002 issue!

■ Can make your life much easier

- Or maybe more difficult!

STACK Command Update...

Command Syntax

STACK

STACK CLEAR

→ STACKP CLEAR

STACK CLEAR=name

→ STACKP CLEAR=name

STACK SHOW

STACK SHOW=name

STACK name | command [| command] [| ...] ...

→ STACKP name | command [| command] [| ...] ...

STACK Command Update...



6 Variables

- Up to 10 variables can be used
 - &0 through &9
- Provides data substitution at command execution

STACK Command Update...

- Changes over time
 - Originally STACK with no parameters deleted entire stack
 - With APAR DY45629 acts like STACK SHOW
 - Originally stack buffer was lost at IPL
 - With APAR DY45629 stack preserved across IPLs
 - On CKD/ECKD only
 - New SLEEP command - SL nnn
 - Provides delay between execution of commands
 - APAR DY45452

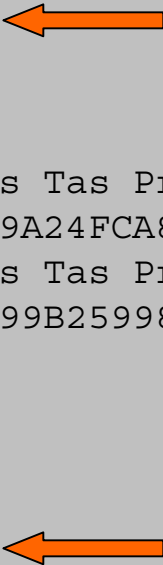
STACK Command Update...

- New: STACKP to preserve stack across IPL
 - Introduced with APAR DY45700
 - Documented in Hints and Tips (July 2002) as PSTACK
 - Shown as STACKP by SIR COMMAND
 - Commands entered with STACK now *not* saved across IPL
 - Be careful: a STACKP command will *always* rewrite the *entire* current STACK buffer from memory
 - May change in the future

STACK Command Update...

Example

```
stack task|msg f2,data=cemt i tas
AR 0015 1I40I  READY
stack prty|* priority command has been disabled
AR 0015 1I40I  READY
task
AR 0015 1I40I  READY
AR 0015 MSG F2,DATA=CEMT I TAS
AR 0015 1I40I  READY
F2 0120
      Tas(0000023) Tra(CXPB)          Sus Tas Pri( 001 )
      Sta(S ) Use(DBDCCICS) Rec(X'B8116B39A24FCA80') Hty(OPEN_ANY)
      Tas(0000025) Tra(IESO)          Sus Tas Pri( 020 )
      Sta(S ) Use(CICSUSER) Rec(X'B8116B399B259980') Hty(EKCWAIT )
.
.
.
prty
AR 0015 1I40I  READY
AR 0015 * PRIORITY COMMAND HAS BEEN DISABLED
```



STACK Command Update...

Example

```
stack gv|time|getvis sva|getvis f2
AR 0015 1I40I  READY
gv
AR 0015 1I40I  READY
AR 0015  TIME           ←
AR 0015  TIME IS: 15:35:54 (DST)          DATE 08/12/2002  MONDAY
AR 0015  GETVIS SVA      ←
AR 0015  GETVIS USAGE    SVA-24          SVA-ANY          SVA-24          SVA-ANY
AR 0015  AREA SIZE:     1,824K          8,976K
AR 0015  USED AREA:     1,180K          3,012K MAX. EVER USED: 1,204K          3,040K
AR 0015  FREE AREA:     644K           5,964K LARGEST FREE: 644K           5,320K
AR 0015 1I40I  READY
AR 0015  GETVIS F2      ←
AR 0015  GETVIS USAGE    F2-24          F2-ANY          F2-24          F2-ANY
AR 0015  AREA SIZE:     11,260K         51,196K
AR 0015  USED AREA:     8,712K          37,140K MAX. EVER USED: 11,260K         39,868K
AR 0015  FREE AREA:     2,548K          14,056K LARGEST FREE: 2,528K          13,964K
AR 0015 1I40I  READY
```

STACK Command Update...

Example

```
stack gv|time|getvis &0,&1
AR 0015 1I40I  READY
gv f7
AR 0015 1I40I  READY
AR 0015  TIME
AR 0015  TIME IS: 15:44:29 (DST)          DATE 08/12/2002  MONDAY
AR 0015  GETVIS F7
AR 0015  GETVIS USAGE      F7-24          F7-ANY          F7-24          F7-ANY
AR 0015  AREA SIZE:      10,640K        12,688K
AR 0015  USED AREA:      3,348K        5,396K MAX. EVER USED:  10,640K        12,688K
AR 0015  FREE AREA:      7,292K        7,292K LARGEST FREE:   7,104K        7,104K
AR 0015 1I40I  READY
```

STACK Command Update...

Example

```
stack dp|d t|sl 1|d q|sl 1|d a|sl 1|d status
AR 0015 1I40I  READY
dp
AR 0015 1I40I  READY
AR 0015 D T
AR 0015 1C39I  COMMAND PASSED TO VSE/POWER
AR 0015 SL 1
F1 0001 1R46I  TIME IS 15:52:52, DATE IS 08/12/2002
F1 0001 1R46I  019 PAGES FIXED, 029 CURRENT TASKS
AR 0015 1I40I  READY
AR 0015 D Q
AR 0015 1C39I  COMMAND PASSED TO VSE/POWER
AR 0015 SL 1
F1 0001 1R49I  QUEUE FILE 014% FULL - 740 FREE QUEUE RECORDS
F1 0001 1R49I  QUEUE FILE EXTENT ON CKD-250, SYS001, 945, 7
.
AR 0015 1I40I  READY
AR 0015 D A
AR 0015 1C39I  COMMAND PASSED TO VSE/POWER
AR 0015 SL 1
F1 0001 1R48I  SAS,00007, SAS=SYSTCP00,
F1 0001 1R48I  SAS,00008, SAS=SYSTCQ00,
.
AR 0015 1I40I  READY
AR 0015 D STATUS
AR 0015 1C39I  COMMAND PASSED TO VSE/POWER
F1 0001 1R46I  VSE/POWER 6.6.0 STATUS FOR IPWPOWER ON 08/12/2002 TIME 15/52/55
.
```

STACK Command Update...

Example

```
stack cjm1|time|cjm2
AR 0015 1I40I  READY
stack cjm2|pdelete lst,vtam*
AR 0015 1I40I  READY
cjm1
AR 0015 1I40I  READY
AR 0015 TIME           ←
AR 0015 TIME IS: 16:13:16 (DST)      DATE 08/12/2002  MONDAY
AR 0015 CJM2           ←
AR 0015 1I40I  READY
AR 0015 PDELETE LST,VTAM* ←
AR 0015 1C39I  COMMAND PASSED TO VSE/POWER
F1 0001 1R88I  OK : 1 ENTRY PROCESSED BY PDELETE LST,VTAM*
```


STACK Command Update...

Example

```
stack show
AR 0015 TASK|MSG F2,DATA=CEMT I TAS
AR 0015 GV|TIME|GETVIS &0
AR 0015 DP|D T|SL 1|D Q|SL 1|D A|SL 1|D STATUS
AR 0015 CJM1|TIME|CJM2
AR 0015 CJM2|PDELETE LST,VTAM*
AR 0015 1I40I  READY
stack clear=dp
AR 0015 1I40I  READY
stack clear=cjml
AR 0015 1I40I  READY
stack show
AR 0015 TASK|MSG F2,DATA=CEMT I TAS
AR 0015 GV|TIME|GETVIS &0
AR 0015 CJM2|PDELETE LST,VTAM*
AR 0015 1I40I  READY
stack clear
AR 0015 1I40I  READY
stack show
AR 0015 1I40I  READY
```

STACK Command Update...



- Additional information
 - Maximum of 32 commands in buffer
 - Maximum command length 126 characters
 - Can put in BG ASI procedure to automate
 - But STACK command itself not accepted during ASI
 - DTRIATTN
 - PARM limited to 72 bytes
 - SVC 30 program
 - Sample in Hints and Tips document

STACK Command Update...

- Additional information...
 - STACK STACK|* to disable the STACK command
 - Keep the operators from changing your stuff?
 - Better be the last STACK command you enter!
 - Better not disable both STACK and STACKP
 - STACK buffer written on DOSRES Cyl 0 Head 0 Record 4
 - Record key is STACK.DATA.BUFFER

STACK Command Update...

- Some possible starting points
 - VTAM commands
 - Vary resource inactive and active
 - STACKP VI|TIME|V NET,INACT,ID=&0,&1
 - Console: VI D31F0001
 - Console: VI D31F0001,F
 - STACKP VA|TIME|V NET,ACT,ID=&0
 - Console: VA D31F0001
 - Display status of a resource
 - STACKP VD|TIME|D NET,ID=&0
 - Console: VD D31F0001

STACK Command Update...

- Some possible starting points...
 - AR commands
 - Change partition priorities
 - STACKP PD|TIME|PRTY BG=FA=F9=X,F2,F3,F1
 - Console: PD
 - STACKP PN|TIME|PRTY BG,X=H=K,F6,.....F2,F3,F1
 - Console: PN
 - STACKP PB|TIME|PRTY &0,BELOW,&1
 - Console: PB BG,F6
 - STACKP PE|TIME|PRTY &0,EQUAL,&1
 - Console: PE BG,F6

STACK Command Update...



• Some possible starting points...

■ AR commands...

■ Check GETVIS usage

- STACKP GVS|TIME|GETVIS SVA
 - Console: GVS
- STACKP GVP|TIME|GETVIS &0
 - Console: GVP F7
- STACKP GVF|GVS|GVP
 - Console: GVF F3

STACK Command Update...

- Some possible starting points...

- AR commands...

- Check data space usage

- STACKP QD|TIME|QUERY DSPACE,ALL

- Console: QD

- Initialize a tape using the MTC command

- STACKP IT|MTC REW,&0|MTC WTM,&0|MTC REW,&0

- Console: IT 580

STACK Command Update...

- Some possible starting points...
 - CICS commands
 - Shut down a CICS partition
 - STACKP CSDN|TIME|MSG &0,D=CEMT P SHUT
 - Console: CSDN F2
 - Console: CSDN CICSICCF
 - Inquire on CICS tasks
 - STACKP CITA|TIME|MSG &0,D=CEMT I TAS
 - Console: CITA CICSICCF
 - Inquire on CICS terminal
 - STACKP CITE|TIME|MSG &0,D=CEMT I TER(&1)
 - Console: CITE CICSICCF,L301

STACK Command Update...

Some possible starting points...

Miscellaneous

Run DITTO in the BG partition

- STACKP DITBG|R RDR,PAUSEBG|0 // EXEC DITTO
 - Console: DITBG

Connect/Disconnect the ICCF Library (DTSFILE)

- STACKP ICFD|TIME|/DISC DTSFILE
 - Console: ICFD
- STACKP ICFC|TIME|/CONN DTSFILE
 - Console: ICFC

Now Its Your Turn



**Anybody got anything
they want to contribute?**