



WAVV 2005
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VSE/ESA Hot Topics

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Objectives

- Provide you with useful VSE 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



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WAVV2005-3

Automating VSE shutdown

- Use DTRIATTN and MSG commands
 - Undocumented utility to send messages to other partitions
- MSG command supports jobname and DATA parameter
- Not all subsystems support MSG command with DATA parameter
 - CICS/VSE 2.3
 - TCP/IP for VSE/ESA prior to 1.5B



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Automating VSE shutdown...

DTRIATTN Shutdown Job

```
* $$ JOB JNM=SHUTDOWN,DISP=L,CLASS=0
// JOB SHUTDOWN SYSTEM SHUTDOWN
// PAUSE SYSTEM WILL BE SHUTDOWN, PRESS ENTER TO CONTINUE OR CANCEL
// EXEC DTRIATTN,PARM='MSG CICSICCF,DATA=CENT P SHUT'
// EXEC IESWAIT,PARM='05'
// EXEC DTRIATTN,PARM='MSG CICS23'
// EXEC IESWAIT,PARM='05'
// EXEC DTRIATTN,PARM='45 CENT P SHUT'
// EXEC IESWAIT,PARM='30'
// EXEC DTRIATTN,PARM='MSG TCP/IP,DATA=SHUTDOWN'
// EXEC IESWAIT,PARM='30'
// EXEC DTRIATTN,PARM='Z NET,QUICK'
// EXEC IESWAIT,PARM='30'
// EXEC DTRIATTN,PARM='PEND'
/*
* $$ EOJ
```



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Daylight Savings Time Change

- VSE provides for automatic Daylight Savings Time adjustments at IPL
 - SET ZONEDEF
 - SET ZONEBDY
- Add to IPL Proc
 - After ADD statements and before SVA
- At IPL time VSE determines date and adjusts time accordingly



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Daylight Savings Time Change...

Setting Daylight Savings Time

```

SET ZONEDEF, ZONE=WEST/05/00, CDT
SET ZONEDEF, ZONE=WEST/06/00, CST
SET ZONEBDY, DATE=04/04/2004, CLOCK=02/00/00, CDT
SET ZONEBDY, DATE=10/31/2004, CLOCK=02/00/00, CST
SET ZONEBDY, DATE=04/03/2005, CLOCK=02/00/00, CDT
SET ZONEBDY, DATE=10/30/2005, CLOCK=02/00/00, CST
SET ZONEBDY, DATE=04/02/2006, CLOCK=02/00/00, CDT
SET ZONEBDY, DATE=10/29/2006, CLOCK=02/00/00, CST
SET ZONEBDY, DATE=04/01/2007, CLOCK=02/00/00, CDT
SET ZONEBDY, DATE=10/28/2007, CLOCK=02/00/00, CST
SET ZONEBDY, DATE=04/06/2008, CLOCK=02/00/00, CDT
SET ZONEBDY, DATE=10/26/2008, CLOCK=02/00/00, CST

```



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Changing Partition Size

□ Changing a static partition

■ PSTOP and UNBATCH the partition to VSE/POWER

```

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

```



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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

```



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Changing Partition Size...

- Changing a static partition...
 - Assign system logical units in the partition

```
5 assign syslst,fee
F5-0005
5 assign syspch,fed
F5-0005
5 assign 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 IN90I EOP WAS FORCED BY EOJ
F5 0005 EOJ STARTF5
DATE 08/12/2002, CLOCK 21/30/04, DURATION 00/00/02
F5 0001 IQ34I F5 WAITING FOR WORK
```



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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,IS'
// EXEC DTRIATTN,PARM='1 FEC'
// EXEC DTRIATTN,PARM='1 FEE'
// EXEC DTRIATTN,PARM='1 FED'
// EXEC DTRIATTN,PARM='5 ASSIGN SYSYST, FEE'
// EXEC DTRIATTN,PARM='5 ASSIGN SYSPCH, FED'
// EXEC DTRIATTN,PARM='5 ASSIGN SYSRDR, FEC'
// EXEC DTRIATTN,PARM='5 // EXEC PROC=%%JCL'
/*
* %% EOJ
```



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Changing Partition Size...

- Changing a dynamic partition
 - Update Dynamic Class Table with new data
 - DTR\$DYNCL.Z or user-specified suffix
 - Need to change Dynamic GETVIS value also?
 - Load updated table

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

- Next time job is scheduled in dynamic class it will be allocated to new size
 - Assuming virtual storage is available for new allocation and IPL SYS PASIZE is large enough!




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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'




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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




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VSE/POWER...

- Little known Autostart SET commands...
 - SET NORUN=YES,DYN1=PAUSE
 - 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 with job set to DISP=X and another job dispatchable
 - Dynamic partition support added with DY46031
 - * \$\$ JOB NORUN=IGN ignores SET NORUN=YES
 - May be useful for VTAM, CICS, TCP/IP, and ???



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VSE/POWER...

■ 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



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VSE/POWER...

■ 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



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VSE/POWER...

■ Manage queue entries by USER or UINF

- Valid for PALTER, PDELETE, PDISPLAY, PHOLD, and PRELEASE commands

```

d list,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 list,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 list,cuinf=abcd
AR 0015 1C39I COMMAND PASSED TO VSE/POWER
F1 0001 1R88I OK : 1 ENTRY PROCESSED BY L LST,CUINF=ABCD
  
```




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VSE/POWER...

- Manage large spool entries
 - CPAGE and CCARD parameters
 - PDISPLAY LST,CPAGES>nnnnn
 - PDISPLAY PUN,CCARD>nnnnn
 - Displays RDR,LST,PUN or XMT entries with lines or cards greater than nnnnn
 - Equal (=) and less than (<) criteria also valid
 - Valid for PALTER, PDELETE, PHOLD, and PRELEASE commands


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VSE/POWER...

- Manage large spool entries...
 - PDISPLAY BIGGEST,LIMIT=nn(,LST)
 - Displays up to nn of the largest spool entries
 - All queues
 - LST option sends display output to LST queue
 - LST output jobname \$BIGnnnn


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VSE/POWER...

- Reallocate Queue file
 - Normally requires cold start and reformat
 - Can be reallocated during warm start
 - Controlled by STDLABEL and DTRPOWR changes
 - Change current IJQFILE DLBL to IJQFOLD
 - Change current IJQFILE EXTENT to SYS034
 - Add new DLBL and EXTENT SYS001 for IJQFILE
 - Change ASSGN for SYS001 to SYS034
 - Add ASSGN for SYS001 to volume for new EXTENT
 - Next warm start of POWER reallocates queue file
 - Operator messages to confirm reallocation


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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!



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Read-Only DASD Volumes...

- How about read-only access built into VSE?

- Support is in your system right now

```
ADD cuu,dev-type,READ
ADD 254,ECKD,READ
```

- Not documented

```
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
```



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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 REJECT SYS252=254
CCSW=0DD0CE39500E00008C CCB=CE396A SK=000080000000
SNS= 80000000 C6000C01 00000021 00001704 02008B4D 43160F04
000000E2 0001A302
```

- X'0D' is write key and data



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Undocumented Commands

- List all commands with SIR COMMAND
 - "Documented" - in official IBM SRLs
 - System Control Statements, Diagnostic Tools, etc.
 - "Undocumented"
 - Some are "semi-documented" in Hints and Tips for VSE/ESA document on IBM VSE web site
<http://www-1.ibm.com/servers/eserver/zseries/os/vse/>
 - "Undocumented additional function" in some "documented" commands

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Undocumented Commands...

Undocumented

ATIN	DOIO	ECHO	EZAAPI	IXFP
LOCATE	LOCK	MODE	NOAVR	NOASSGN
PFKEY	REIPL	RESUME	SHOW	SHUT
SIMTAPE	SIM3540	SIR	SL	STACK
SUSPEND	TAPE	TESTMON	TIME	Q...
#CP				


Additional Function

VOLUME

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STACK Command Update

- Review
 - Used to
 - Create customized console commands
 - Disable or replace existing console commands
 - "Semi-documented" in VSE/ESA Hints and Tips
 - Can make your life much easier
 - Or more difficult!


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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 ] [ | ... ] ...
  
```

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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

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STACK Command Update...

- New: STACKP to preserve stack over 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
 - Doesn't seem to work correctly on 2.6.0 GA level!
- Up to 10 variables can be used
 - &0 through &9

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STACK Command Update...

Example

```

stack task|msg f2,data=cent i tas
AR 0015 1140I  READY
stack prty|* priority command has been disabled
AR 0015 1140I  READY
task
AR 0015 1140I  READY
AR 0015 MSG F2,DATA=CENT I TAS
AR 0015 1140I  READY
F2 0120
    Tas(0000023) Tra(CXPB)          Sus Tas Pri( 001 )
    Sta(S ) Use(DBCCICS) Rec(X'B8116B39A24FCA80') Hty(OPEN_ANY)
    Tas(0000025) Tra(IESO)          Sus Tas Pri( 020 )
    Sta(S ) Use(CICSUSER) Rec(X'B8116B399B259980') Hty(EKWAIT )
.
.
.
prty
AR 0015 1140I  READY
AR 0015 * PRIORITY COMMAND HAS BEEN DISABLED

```


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STACK Command Update...

Example

```

stack gv|time|getvis sva|getvis f2
AR 0015 1140I  READY
gv
AR 0015 1140I  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 1140I  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 1140I  READY

```


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STACK Command Update...

Example

```

stack gv|time|getvis f0,f1
AR 0015 1140I  READY
gv f7
AR 0015 1140I  READY
AR 0015 TIME
AR 0015 TIME IS: 15:44:29 (DST)      DATE 08/12/2002  MONDAY
AR 0015 GETVIS
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 1140I  READY

```


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STACK Command Update...

Example

```

stack dp|d t|sl 1|d q|sl 1|d a|sl 1|d status
AR 0015 1140I READY
AR 0015 1140I 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 1140I 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 CHD-250, SYS001, 945, 7
AR 0015 1140I 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=SYSTCP00,
AR 0015 1140I READY
AR 0015 D STATUS
AR 0015 1C39I COMMAND PASSED TO VSE/POWER
F1 0001 1R46I VSE/POWER 6.6.0 STATUS FOR 1PWPOWER ON 08/12/2002 TIME 15/52/55

```

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STACK Command Update...

Example

```

stack cjm1|time|cjm2
AR 0015 1140I READY
stack cjm2|pdelete lst,vtam*
AR 0015 1140I READY
cjm1
AR 0015 1140I READY
AR 0015 TIME
AR 0015 TIME IS: 16:13:16 (DST) DATE 08/12/2002 MONDAY
AR 0015 CJM2
AR 0015 1140I 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*

```

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STACK Command Update...

Example

```

stack show
AR 0015 TASK|MSG F2,DATA=CEMT I TAS
AR 0015 GV|TIME|GETVIS 40
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 1140I READY
stack clear=dp
AR 0015 1140I READY
stack clear=cjm1
AR 0015 1140I READY
stack show
AR 0015 TASK|MSG F2,DATA=CEMT I TAS
AR 0015 GV|TIME|GETVIS 40
AR 0015 CJM2|PDELETE LST,VTAM*
AR 0015 1140I READY
stack clear
AR 0015 1140I READY
stack show
AR 0015 1140I READY


```

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STACK Command Update...

- Additional information
 - Maximum of 32 entries 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

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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!
 - STACK buffer written on DOSRES Cyl 0 Head 0 Record 4
 - Record key is STACK.DATA.BUFFER

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REIPL Command

- Causes VSE to re-IPL
 - Uses same IPL/JCL procs
 - Should quiesce the system first!
- AR command

REIPL [cuu] [NOPROMPT]

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REIPL Command...

■ APAR DY45452

□ Volser or cuu


□ LOADP now accepted

■ If omitted, existing LOADP used

■ Reset with LOADP=

□ If NOPROMPT used it must be last operand

REIPL DOSRES,LOADP= . P,NOPROMPT




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Now Its Your Turn

Anybody got anything they want to contribute?



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