

z/OS Version 1 Release 2

JES3



JES3 Enhancements z/OS 1.2



- ▲ In z/OS 1.2.0 JES3 (HJS7705) you can:
 - Define job numbers up to 999999
 - Reduce the job number range with a hot start with refresh and no IPL
 - Allows further growth
- ▲ Spin-off JESMSG LG and JESYSMSG data sets for long running jobs - (JESlog processing)
 - Perform JESMSG LG spool I/O in user's address space

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Greater than 64K Jobs



Initialization Statement Changes



- ▲ The JOBNO parameter on the OPTIONS statement
 - JOBNO=(1,999999,999999)
- ▲ The JSPAN keyword on GROUP still has a maximum of 65,534
- ▲ Limits not changed
 - 65,534 active JES managed jobs per processor
 - 65,534 active WLM managed jobs per processor
 - 32,767 jobs per DJC net
 - 9,999 BDT jobs and job numbers

Restart to Change the JOBNO Range



- ▲ Previously the JOBNO range could be expanded but not shrunk during a hot start with refresh
- ▲ In z/OS 1.2.0 this restriction is removed
 - Active jobs that are deleted must be cancelled
 - Processor that they are running on must be IPLed

Displaying Jobids



- ▲ jobid is JOBnnnnn whenever:
 - The job number <= 99,999
 - Otherwise it becomes Jnnnnnn
- ▲ Initiators now have a new jobid
 - INTnnnnn or Innnnnn
- ▲ In SMF26 records:
 - Started tasks are - STCnnnnn or Snnnnnn
 - TSO job numbers are - TSUnnnnn or Tnnnnnn
- ▲ NJEROUT DSP names:
 - RRTnnnnn or Rnnnnnn

Coexistence



- ▲ z/OS 1.2.0 can coexist with OS/390 2.8.0, 2.9.0, or 2.10.0 BUT:
 - Entire complex must be z/OS 1.2.0 before you can increase JOBNO beyond 65534
 - JES3 will not allow a local below z/OS 1.2.0 to connect if the global is defined with job numbers greater than 65534

Coexistence JOBNO Changes



- ▲ New JES3 does not allow a down level local to connect if the JOBNO parameter is defined with a range that exceeds 65,534
- ▲ Hot start with refresh allowed to change JOBNO range
 - Previously reducing the range required a warm start
 - This allows reducing the range and falling back to be done during the same IPL/hot start with refresh

IAT2640 CONNECT REJECTED FOR SC49 - JOB NUMBERS INCOMPATIBLE

Reducing the JOBNO Range



- ▲ JES3 finds a JCT with a job number outside the range
 - New message IAT3101 is issued warning the operator that the system that the job was running on must be IPLed
 - Global: JES3 abends with a DM025
 - Local: IAT3062 WTOR is issued asking for a CONTINUE or CANCEL reply.
 - If CANCEL, JES3 abends with a DM025
 - If CONTINUE, no further IAT3101/IAT3062 is issued for that system.

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JESlog Processing



JESlog Support



- ▲ New keyword on CLASS initialization statement
 - Allow/suppress updating JESMSGGLG data set
 - Allow/suppress spin-off of JESlog data sets
- ▲ New keyword on '*F J=' command
 - Allow JESMSGGLG text to be added from a console
 - Allow spin-off of JESlog data sets
- ▲ New JOB card keyword providing job JESlog (JESMSGGLG and JESYSMSG) SPIN characteristics

CLASS Statement



- ▲ JESMSG= keyword
 - LOG - indicates messages should be written to JESMSGGLG for jobs in this class
 - NOLOG - indicates messages should not be written to JESMSGGLG for jobs in this class
 - default taken from STANDARDS statement
- ▲ SPIN= keyword
 - YES - indicates JESlog data sets can be spun at any time during job execution when the appropriate JES3 command is issued
 - NO - indicates JESlog processing is to be processed normally

CLASS Statement



▲ SPIN= keyword

- +hh:mm - indicates the JESlog data sets to be spun every hh hours, mm minutes or hh hours and mm minutes (time interval) during job execution
 - hh has a range of 00 to 99
 - mm has a range of 00 to 59, unless hh has a value of zero - In this case, mm has a range of 10 to 59
 - Eligible for spin by command

CLASS Statement



▲ SPIN=nnn/nnnK/nnnM

- Indicates the JESlog data set will be spun off every nnn, nnnK or nnnM lines
 - nnn has a value of 500 to 999 when K and M not used
 - nnn has a value of 1 to 999 when K or M used
 - K represents thousand and M represents million
- Eligible for spin by command

JOB Card on CLASS Statement



JESlog SPIN keywords comparison

JOB statement	CLASS statement
JESLOG=SPIN	SPIN=YES
JESLOG=NOSPIN	SPIN=NO
JESLOG=(SPIN,'+hh:mm')	SPIN=+hh:mm
JESLOG=(SPIN,'hh:mm')	SPIN=hh:mm
JESLOG=(SPIN,nnn)	SPIN=nnn
JESLOG=(SPIN,nnnK)	SPIN=nnnK
JESLOG=(SPIN,nnnM)	SPIN=nnnM
JESLOG=SUPPRESS	JESMSG=NOLOG

Order of Override



- ▲ IEAVMXIT/MPF exit
 - Allows suppression on individual message basis
- ▲ IATUX29
 - Use SUPPRESS=YES on JESMSG macro to suppress on a job basis
- ▲ CLASS initialization statement
 - JESMSG=LOG | NOLOG
- ▲ STANDARDS initialization statement
 - JESMSG=NOTSO | NOSTC | NOBATCH | ALL

Request Job Id



- ▲ SSOBFUNC=SSOBRQST supports 'SPIN' processing
- ▲ SSRRVER (in IEFSSRR) must be set to SSRRCOVER (2)
- ▲ New IEFSSRR fields
 - SSRRELIG: spin eligible flag
 - SSRRTIMI: spin on time interval flag
 - SSRRTIMD: spin on time of day flag
 - SSRRLINE: spin on line count flag
 - SSRRNOSP: no spin flag
 - SSRRSVAL: spin value field

'*F C=class' Command



- ▲ JESMSG= keyword allowable parms
 - LOG | NOLOG | STD
- ▲ SPIN= keyword allowable parms
 - NO
 - YES
 - hh:mm
 - +hh:mm
 - nnn
 - nnnK
 - nnnM

'*F J=' Command



- ▲ New MSG= keyword
 - Message text must be enclosed in quotes
 - Message text can not exceed 124 characters
 - N=ALL only acceptable keyword/parameter to follow MSG=
 - Applicable to any job
- ▲ New SPIN keyword
 - Initiates spin-off of JESlog data sets for eligible jobs
 - N=ALL only acceptable keyword/parameter to follow SPIN
 - Applicable only to SPIN eligible jobs

Notes for MSG/SPIN Keyword Usage



- ▲ MSG= keyword will not be accepted if job is in PURGE
- ▲ MSG= keyword applicable to jobs which has JESMSGGLG logging suppressed
- ▲ MSG= keyword applicable to jobs running on lower level local
- ▲ MSG=keyword applicable even when RQ does not exist
- ▲ When updating the JESMSGGLG data set and the job is in Output Service, the update will occur. However, if the JESMSGGLG data set was printed prior to the issuance of this command, the message text will not appear in the printed SYSOUT.
- ▲ SPIN keyword applicable only to jobs in execution

Processing Rules



- ▲ If spin-off TOD time is set for 2:00 PM. and the job begins executing at 2:01 PM, spin-off occurs at 2:00 PM the next day
- ▲ Spin-off interval time is set to occur every 3 hours - last spin-off occurred at 3:00 PM
 - Modify command is issued at 4:00 p.m. to spin-off the JESlog data sets. The next scheduled spin-off time is now set to 7:00 p.m
- ▲ Spin-off limit value is exceeded - both JESlog data sets are spun off
- ▲ The spin-off value limit is checked when a buffer write of either JESlog data set is performed

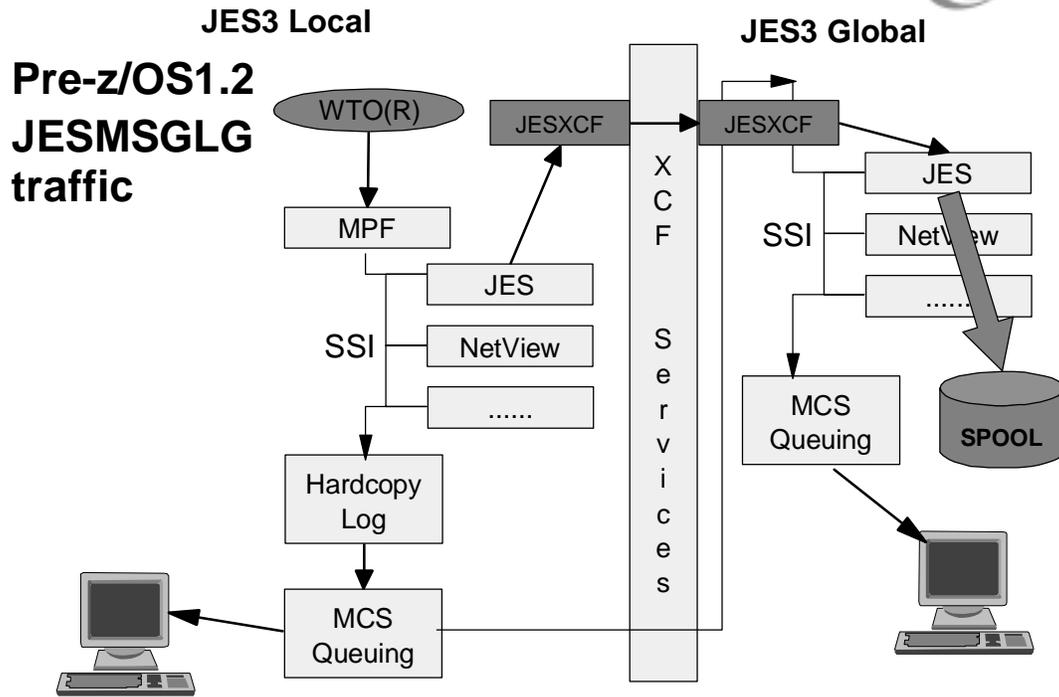
Overrides for JESMSG LG Processing



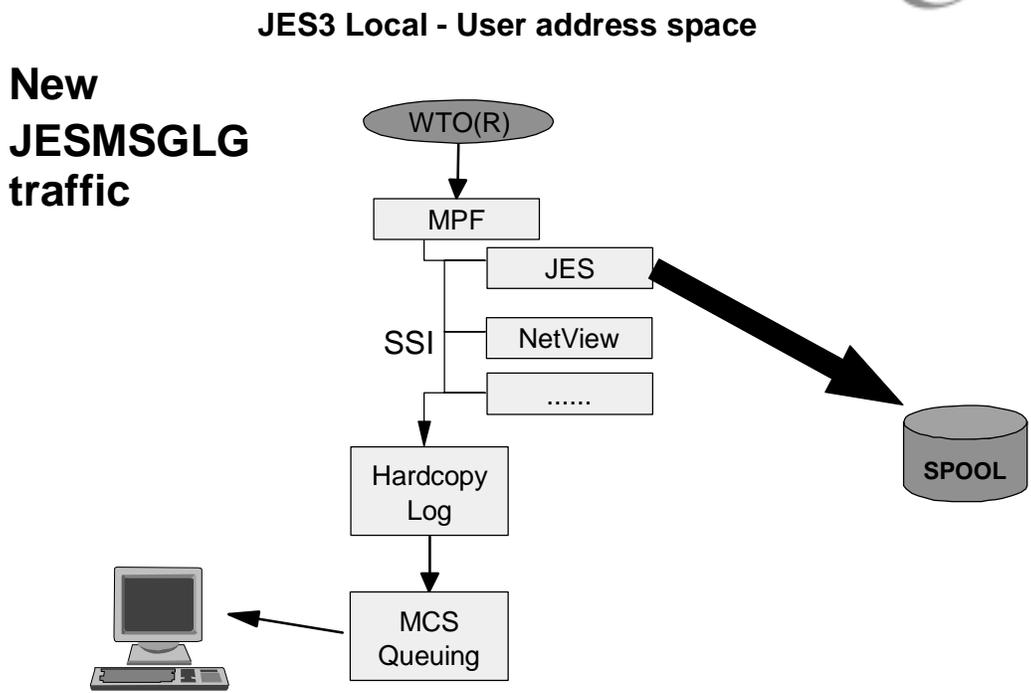
Does SPIN occur?	CLASS init stmt	CLASS init stmt	STANDARDS int stmt
	JESMSG	SPIN	JESMSG
NO (1)	default (use STD)	default (NO)	default (NOTSO)
NO (2)	NOLOG	default	N/A
Not accepted (NO defaulted to) (2)	NOLOG	500	N/A
NO	LOG	default	N/A
YES	LOG	500	N/A
YES (1)	default (use STD)	500	default (NOTSO)
YES (2)	default (use STD)	500	NOSTC,NOTSO,NOBACTH
NO (1)	default (use STD)	NO	default (NOTSO)

- ▲ (1) JESMSG LG suppressed only for TSO submitted jobs
- ▲ (2) JESMSG LG suppressed for all jobs

JESMSG LG Processing



New JESMSG LG Processing



Start and End Messages



- ▲ Message IAT6853 towards top of *each* JESlog data set
 - Provides date and time of message
 - Format: THE CURRENT DATE IS day of week, DD MMM YYYY
- ▲ Message IAT6819 at bottom of *each* JESlog data set
 - Provides reason for spin-off
 - Applicable only to those jobs that are spin eligible
 - Format: {JESMSG LG}{JESYSMSG} DATASET SPINOFF DUE TO {OPERATOR COMMAND}| {TIME OF DAY LIMIT REACHED}|{TIME INTERVAL REACHED}|{LINE LIMIT REACHED}|{END OF JOB}

Coexistence



- ▲ 'JESMSG Offload' / 'JESlog Long Running Job' functional only if JES3 Global is at z/OS 1.2 level
- ▲ With Global at z/OS 1.2, local must be at z/OS 1.2 level for 'JESMSG Offload' to function on that processor
- ▲ With Global at z/OS 1.2, local must be at z/OS 1.2 level for 'JESlog Long Running Job' to be selected to execute on that processor

Coexistence Fallback



- ▲ If z/OS 1.2 Global IPL'd to lower level release, jobs with 'JESlog Long Running Job' eligibility are canceled
- ▲ SPE APAR OW47435 required on the JES3 Global if it is not at Z/OS 1.2

Large Volume Support



- ▲ Allows a spool, checkpoint, or JCT data set to reside
 - On a DASD volume with greater than 32,767 cyls
 - Data set size is still limited by DFP, but the data set can now reside anywhere on the volume
- ▲ Base function in HJS7705
 - Rolled back to HJS7703 in APAR OW49477

Migration APAR OW47435



- ▲ Lets OS/390 JES3 2.8.0, 2.9.0, or 2.10.0 coexist with z/OS 1.2.0
 - Strictly, for fallback only - but treated as mandatory to prevent fallback problems
- ▲ Recognizes a DJ job dumped that has a job number greater than 65,534 and assigns a new number
- ▲ Enforces the fallback restriction
- ▲ Lets a fallback reduce the range and hot start with refresh at the same time
- ▲ Deletes active jobs that used JESLOG=SPIN

BDT APAR OW47953



- ▲ Changes all BDT messages from displaying five digit JES3 job numbers to eight character Jobids
- ▲ Can be installed at any OS/390 or z/OS JES3 level - you don't need z/OS 1.2.0 JES3
- ▲ Should be installed before increasing JOBNO beyond 99,999