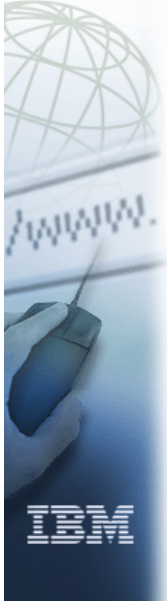


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JES3 Enhancements



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eNetwork	DFSMS/MVS	IMS	RMF
geoManager	DFSMSdfp	IMS/ESA	RS/6000
AD/Cycle	DFSMSdss	IP PrintWay	S/390
ADSTAR	DFSMSshm	IPDS	S/390 Parallel Enterprise Server
AFP	DFSMSrmm	Language Environment	SecureWay
APL2	DFSORT	Multiprise	StorWatch
APPN	Enterprise System 3090	MQSeries	Sysplex Timer
BookManger	Enterprise System 4381	MVS/ESA	System/390
BookMaster	Enterprise System 9000	Network Station	System REXX
C/370	ES/3090	NetSpool	SystemView
CallPath	ES/4381	OfficeVision/MVS	SOM
CICS	ES/9000	Open Class	SOMobjects
CICS/ESA	ESA/390	OpenEdition	SP
CICS/MVS	ESCON	OS/2	VisualAge
CICSPlex	First Failure Support Technology	OS/390	VisualGen
COBOL/370	FLowMark	Parallel Sysplex	VisualLift
DataPropagator	FFST	Print Services Facility	VTAM
DisplayWrite	GDDM	PrintWay	WebSphere
DB2	ImagePlus	ProductPac	3090
DB2 Universal Database	Intelligent Miner	PR/SM	3890/XP
DFSMS	IBM	QMFr	z/OS
	IBM System z	RACF	z/OS.e

Domino (Lotus Development Corporation)
 DFS (Transarc Corporation)
 Java (Sun Microsystems, Inc.)
 Lotus (Lotus Development Corporation)

Tivoli (Tivoli Systems Inc.)
 Tivoli Management Framework
 (Tivoli Systems Inc.)
 Tivoli Manger (Tivoli Systems Inc.)

UNIX (X/Open Company Limited)
 Windows (Microsoft Corporation)
 Windows NT (Microsoft Corporation)



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JES3 V1R12 Enhancements



- ❑ JES3 extended address volume (EAV) support
- ❑ Enable ENF 58 signaling with SAPI SSI 79
- ❑ New JES device information services SSI 83



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JES3 Data Sets for EAV Support



- ❑ Physical sequential data sets, may also reside anywhere on an EAV volumes -The data sets include:
 - SYSABEND
 - SYSUDUMP
 - PROCLIBs
- ❑ User data sets include:
 - JES3IN
 - JES3ABEND
 - JES3DRDS
 - JES3SNAP

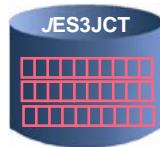


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Important JES3 Data Sets - EAV Support



- ❑ Make spool data set EAS eligible, specify the EATTR=OPT keyword on the JCL DD statement used to create the data set
 - The JES3 JCT Utility (IATUTJCT) can be used to migrate the existing JCT and checkpoint data sets to EAS eligible data sets
 - Existing facilities and procedures for managing spool data sets can be used to add an EAS eligible data set or replace an existing spool data set with an EAS-eligible data set



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JES3 EAV Support



- ❑ JES3 EAV support allows spool, checkpoint, and JCT data sets to be anywhere on an EAV
 - Spool data sets larger than 65,520 cylinders (982,800 tracks)
 - Each spool data set must be contained in a single extent
 - You cannot allocate any secondary extents
 - You cannot allocate more than 1024 spool data sets

```
//ALLOCSP3 JOB ACCNT#,MSGLEVEL=(1,1),NOTIFY=&SYSUID  
//ALLOCATE EXEC PGM=IEFBR14  
//SPOOLEAS DD DISP=(NEW,CATLG),DSN=SYS1.JES3SPL2,  
//  
DCB=(RECFM=U,BLKSIZE=4084),SPACE=(CYL,120000,,CONTIG),  
// DSNTYPE=LARGE,EATTR=OPT,UNIT=3390,VOL=SER=BH5JS4  
//
```



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JES3 SDSF Spool Display



- ❑ SDSF spool volumes (SP) panel to look at the EAS spool data set attributes
- ❑ The spool data set is allocated using the SPOOL2 DD name

```
Display Filter View Print Options Search Help
-----
SDSF SPOOL DISPLAY SC75          1% ACT    1772K FRE  1766K LINE 1-5 (5)
COMMAND INPUT ===>                SCROLL ===> HALF
NP  NAME      Status      TGPct  TGNum      TGUse  Ext  LoCyl  LoTrk
DRAINED  INACTIVE    100           0         0  00  00000000  00000000000000000000
UNAVAIL  INACTIVE    100           0         0  00  00000000  00000000000000000000
JES3PART ACTIVE       1    1815000  6524  00  00000000  00000000000000000000
SPOOL1   ACTIVE       38     15000   5706  02  00000014  0000000000000012C
SPOOL2   ACTIVE       1    1800000  818  03  0000000F  000000000000000E1
```



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Spool Space Commands



- ❑ Show the amount of available spool space using 3 similar JES3 commands
 - The commands output shows JES3 has two spool data sets in the default JES3 spool partition, JES3PART

```
*I Q S
IAT8530 1,815K GRPS, 1,809K LEFT (100%); 0 UNAVAIL, 0 DRAINED
*I Q DD=ALL
IAT8513 SPOOL1   JES3PART  15,000 GRPS,  9,294 LEFT ( 62%), STT
IAT8513 SPOOL2   JES3PART  1,800K GRPS, 1,799K LEFT (100%), STT
IAT8611 INQUIRY ON SPOOL DATA SET STATUS COMPLETE
*I Q SP=ALL
IAT8980 DRAINED  HAS NO SPOOL DATA SETS
IAT8980 UNAVAIL HAS NO SPOOL DATA SETS
IAT8509 JES3PART: 1,815K GRPS, 1,809K LEFT (100%); MIN 5%, MRG 5%,
DEF, INIT
IAT8607 INQUIRY ON SPOOL PARTITION STATUS COMPLETE
```



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Formatting a new Spool data set requires a JES3 Warm Start and an IPL



```
S JES3,PARM=NOREQ
IAT6360 CHECKPOINT DATA SET <CHKPNT2> UNAVAILABLE - CHPNT2 DD NOTDEFINED.
IAT6359 *** WARNING *** ONLY ONE JES3 CHECKPOINT DATA SET IN USE.
IAT3040 STATUS OF JES3 PROCESSORS IN JESXCF GROUP WTSCPLX4
IAT3040 SC74 ( ), SC70 ( ), SC75 +UP+
IAT3011 SPECIFY JES3 START TYPE
029 IAT3011 (C, L, H, HA, HR, HAR, W, WA, WR, WAR, OR CANCEL)
R 29,W
030 IAT3012 SELECT JES3 INISH ORIGIN (N OR M=), AND OPTIONAL EXIT PARM
(P=) OR CANCEL
R 30,M=GL
IEE600I REPLY TO 030 IS;M=GL
IAT4038 FORMATTING BYPASSED FOR PREVIOUSLY FORMATTED SPOOL DATA SET "SPOOL1 "
IAT4031 FORMATTING OF SPOOL DATA SET "SPOOL2 " IN PROGRESS
IAT6397 FCT JSS (NODEVICE) HAS BEEN DISPATCHED CONTINUOUSLY FOR:
IAT6398 00000 HOURS 00 MINUTES 30 SECONDS
IAT6415 at 0002B70A in LOADMOD=IATDMVR , EPNAME=IATDMVR , EPADDR=0002AA
68,LEN=001290
031 IAT6418 Reply 'JES3 ' to fail JES3 INITIALIZATION or 'nnn' to ask later
R 31,999
IEE600I REPLY TO 031 IS;999
IAT4032 FORMATTING OF SPOOL DATA SET "SPOOL2 " COMPLETE, NO ERRORS
IAT4030 0002 SPOOL DATA SETS IN USE
IAT4075 MAXIMUM NUMBER OF JOBS IS LIMITED TO 0021461 BY JCT DATA SET SIZE
IAT6365 CHECKPOINT WRITE FAILED DUE TO INSUFFICIENT SPACE - PTC , CHPKNT
IAT6368 CHECKPOINT SPACE PROBLEM - DATA SET <CHKPNT > HAS INSUFFICIENT SPACE.
IAT6365 CHECKPOINT WRITE FAILED DUE TO INSUFFICIENT SPACE - PTC , CHPKNT
032 IAT4142 ERROR WRITING THE PARTITION TAT CKPT RECORD, RC=12,
(CONTINUE OR CANCEL)
R 32,CONTINUE
```



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JES3 Checkpoint on EAV Volume



- ❑ After allocating the EAS-eligible checkpoint data set
 - Update the JES3 procedure to allocate the new checkpoint using DD name CHPKNT2
 - Then, restart JES3 and the messages issued during JES3 initialization with the new checkpoint

```
IAT6363 JES3 CHECKPOINT I/O ERROR -
CHKPNT2,BH5JS4,DD65,CMAP,41,06,0D40,0000,001D4CF
IAT6361 CHECKPOINT DATA SET <CHKPNT2> IS INVALID OR NEW, TRACK
MAP INITIALIZED
IAT3040 STATUS OF JES3 PROCESSORS IN JESXCF GROUP WTSCPLX4
IAT3040 SC74 ( ), SC70 ( ), SC75 + +
IAT3011 SPECIFY JES3 START TYPE
040 IAT3011 (C, L, H, HA, HR, HAR, W, WA, WR, WAR, OR CANCEL)
R 40,H
IEE600I REPLY TO 040 IS;H
```



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JES3 Checkpoint on EAV Volume



- ❑ JES3 initialization issued messages IAT6365 and IAT6368, indicating the checkpoint data set is too small for the new, very large, spool data set
 - You can allow JES3 to complete initialization, but then return it to allocate a larger checkpoint data set

```
//ALLOCCK3 JOB ACCNT#,MSGLEVEL=(1,1),NOTIFY=&SYSUID
//ALLOCATE EXEC PGM=IEFBR14
//CKPTEAS DD DISP=(NEW,CATLG),DSN=SYS1.JES3CKP2,
// DCB=(DSORG=PS,RECFM=U,BLKSIZE=32760,LRECL=32760),
//
//SPACE=(CYL,15,,CONTIG),EATTR=OPT,UNIT=3390,VOL=SER=BH5JS4
//
```



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JES3 JCT on an EAV



- ❑ To allow a JCT data set to be copied without a cold start
 - JES3 provides a program called the JCT utility, called IATUTJCT
 - IATUTJCT is updated in z/OS V1R12 to allow migrating from existing JCT and checkpoint data sets to EAS eligible data sets



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JES3 EAV Support



- ❑ EAV support has extended cylinder values to 28-bits
- ❑ BADTRACK initialization statement
 - Updated to allow one- to seven-digit hexadecimal values for the cylinder specification
 - *MODIFY,Q command updated
- ❑ Messages updated:
 - IAT4034, IAT4035, IAT6363, IAT8539, IAT1140, IAT1141, IAT1145, IAT1146



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JES3 Data Sets on EAV Volumes



- ❑ Other JES3 data sets, which are physical sequential data sets, may also reside anywhere on an EAV volumes
 - SYSABEND
 - SYSUDUMP
 - PROCLIBs
- ❑ User data sets include:
 - JES3IN
 - JES3ABEND
 - JES3DRDS
 - JES3SNAP



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ENF 58 Signaling



- ❑ ENF 58 is issued by JES3 for various SYSOUT data set changes
 - Listeners of ENF58 are informed of changes such as:
 - Data set being selected or deleted or changes to the job containing the data set
 - Limited to signal being issued only for data sets that have been allocated using the DALRTCTK text unit
 - JES3 extends ENF 58 support - SAPI users can request broadcast of signals for SYSOUT data sets
 - This allows users to monitor status changes during the lifetime of SYSOUT any data set.



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ENF 58 Signaling



- ❑ New SAPI SSI79 disposition flag SSS2RENF (IAZSSS2) to request ENF58 signals using PUTGET (SSS2PUGE)
 - New Extended Status SSI80 output field STVS1ENF (IAZSSST) indicates when ENF58 signaling is enabled for a SYSOUT data set
 - Listeners should monitor and take appropriate action based on the ENF58 subtype.



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SSI 83 Enhancements



- ❑ **JES3 device Information services**
 - Allow an application program to obtain information on devices managed by JES such as printers, readers,
 - Implementation will be staged over several releases due to the large number of device types supported
- ❑ **With V1R12:**
 - JES3 returns information for local printer devices.
 - JES2 returns information for both local and remote printer devices.



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SSI 83 Information Returned



- ❑ **Local printer attributes:**
 - Common prefix section
 - Printer data header
 - Printer common section
 - Printer work selection section
 - Non-impact printer section (FSS printers)
 - Printer JES3 section (JES3 specific attributes)
- ❑ **Jobs that are currently active on the devices:**
 - Current job information section
 - Current output information section
 - Current output information JES3 section



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JES3 EAV Migration Considerations



- ❑ **Spool extents, checkpoint, or JCT data set on EAV volumes can not be opened on earlier-level systems**
 - JES3 global and all locals must be at z/OS V1R12 with z/OS V1R12 JES3
 - For earlier-levels of z/OS and JES3, JES3 initialization fails with system completion code 313 accompanied by system message IEC144I and return code 0C
 - For z/OS V1R12, earlier-level JES3 initialization fails with system completion code 113 accompanied by system message IEC142I and return code 44
 - Both messages identify the data set that could not be opened



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