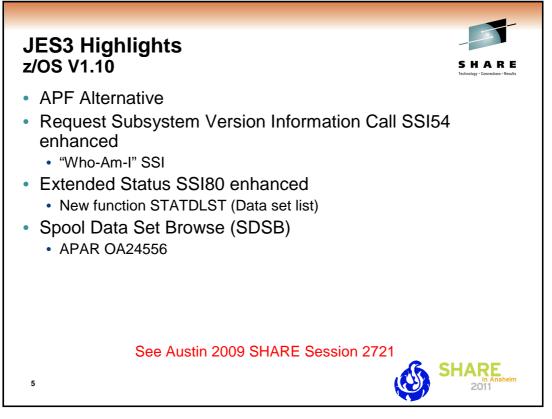


Lifecycle Extensions are a fee-based offering that provides corrective service (a fix, bypass, or restriction to a problem) for up to two years beyond the withdrawal of service date for a z/OS release.

BCP	Compat	ibility			S H A R E Technology - Centrelines - Results
		z/OS V1.10 JES3 HJS7750	z/OS V1.11 JES3 HJS7760	z/OS V1.12 JES3 HJS7770	
	z/OS V1.10				
	z/OS V1.11				
	z/OS V1.12				
			•	ecuted on the	
4				(	SHARE 2011



One of the biggest inhibitors to using the Subsystem Interface has been the fact that SSI calls require running in supervisor state, which in turn requires APF authorization. This means an application coder must go to a system programmer to install the application in an APF library. User written APF programs are a security risk. They could accidentally or maliciously compromise system integrity or step on something that is protected from a normal programs, possibly causing an outage. Even if a user program is risk free, the system programmer must still ascertain that fact when installing an initial version or later versions of that program. An application therefore cannot "code and go". Having to go through the system programmer makes it take longer to test and debug that application.

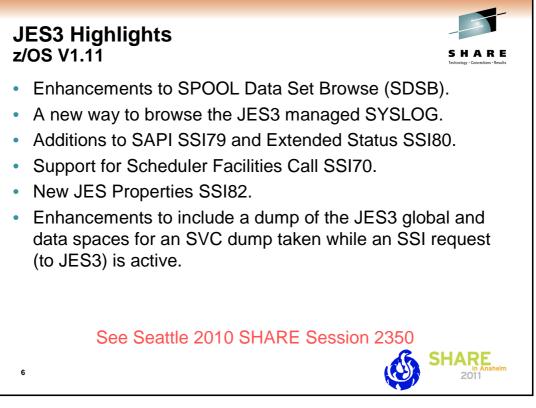
Starting in z/OS V1.10 JES3 will support SSIs 11, 75, 79, and 80 in an unauthorized environment – i.e. APF authorization no longer required. In addition, the Subsystem Interface text unit used on dynamic allocation for a SYSOUT data set, DALSSREQ, requires APF authorization. A new text unit, DALUASSR, has been provided for the unauthorized environment.

The Request Subsystem Version Information Call (SSI function code 54) – also known as the "Who-AM-I SSI" - provides a requesting program the ability to obtain version-specific information about a particular subsystem. JES3 updates were made to add the JES3 release running on the JES3 Global, the system name of the JES3 Global, and to indicate if Spool Data Set Browse is supported with the running release of JES3. Additionally, before z/OS V1.10, information strings returned by SSI 54 were built during JES3 initialization. Beginning with z/OS V1.10, the information strings are also built during CONNECT processing. This allows information to be updated when information about the global changes without the local having been restarted. The global information can change in two ways: (1) the global is IPLed and the JES3 release is changed during this IPL, and (2) a Dynamic System Interchange (DSI) is performed, which changes the name of the global and possibly the release. IATUX63, the exit that builds the installation-defined SSI 54 string, is likewise called during CONNECT processing.

A new extended status function STATDLST was added. STATDLST is used to request a data set list for a job. This request obtains verbose type information for all data sets associated with a job. It includes information on SYSIN and other internal data sets.

The need for Spool Data Set Browse (SDSB) is to avoid the single user lock that the SYSOUT Application Programming Interface (SAPI) imposes on applications. Under SAPI, when an application makes a PUT/GET call to access a data set, it causes JES3 to schedule that data set to the requesting application until the application releases the data set. As a result, no other application can access this data set during this time. In addition, SAPI is limited to either output belonging to jobs that have finished running, or output that has been spun off and closed by a job that is still running. SAPI cannot access any other output for an active job, even in completed steps.

SDSB does not have these limitations. Using the SDSB interface an application can use SVC 99 to allocate a SYSOUT data set without going through SAPI to obtain access to it. The benefits are the ability to access output for a job while it is still running and more transparency between the JES3 and JES2.



## SDSB Enhancement

Active buffers of SYSOUT data sets can now be browsed regardless of which system the data set owner resides on.

## SYSLOG Browse

The SYSLOG data sets on a system are logically concatenated into a single logical SYSLOG data set for browse requests.

Additional filtering has been added to SAPI (SSI 79) to select data sets using the job name or job ID associated with a transaction.

The SAPI job ID filter, SSS2JBIL, can now contain generic characters '?' and '\*' for use with job ID and transaction job ID filtering.

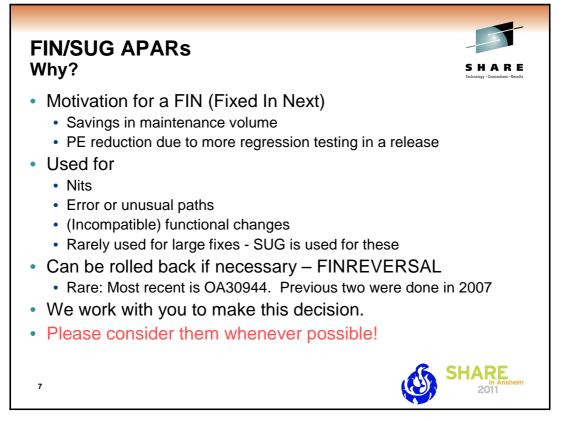
Additional filtering has been added to Extended Status (SSI 80) to obtain data for terse requests using the job name, job ID, or SYSOUT owner associated with a transaction.

The Extended Status job ID filter, STATJBIL, can now contain generic characters '?' and '\*' for use with job ID and transaction job ID filtering.

SSI 70 can be used to retrieve and modify SYSOUT data set characteristics.

SSI 82 provides a common interface for both JES2 and JES3 to return information about multiple JES managed structures. Instead of coding programs that traverse internal structures to retrieve this information, the SSI has packaged the information into a single call.

A user supplied program can call SSI 82 to obtain information about NJE (Network Job Entry) Nodes, SPOOL Volumes, Initiators, JESplex characteristics and Job Classes. The caller specifies a different sub-function value to choose which of the five kinds of information they want the SSI to return.



An APAR is closed FIN or SUG with concurrence from the submitting customer. Closing with FIN means that a fix to this APAR is expected to be delivered from IBM in a release (if any) to be available within the next 24 months. For example, if a customer has a problem in z/OS V1.10 and agrees to a FIN, it does not mean that the problem is or will be fixed in z/OS V1.11 or z/OS V1.12 which are already available.

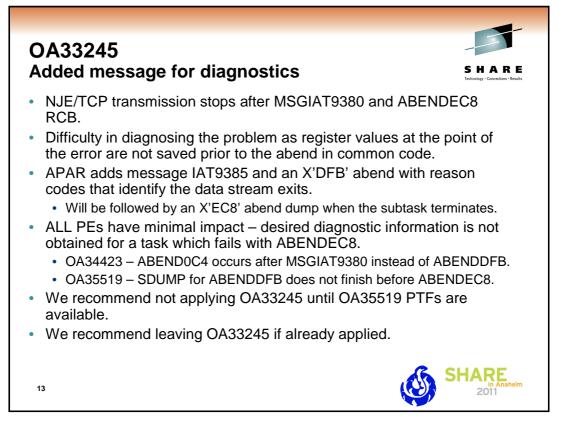
FIN/SUC	G APARs	
	SHARE Technology - Connections - Results	
Include	d in z/OS V1.10	
OA20493	ABEND0C9 in IATMFR5 while processing the 'Job queue length by JES3 function' JMF report	
OA20527	Data overlay for a large Sysout file after a re-open	
OA21435	Zero line and byte count for DUMPCORE data sets	
OA22574	After a warm start with analysis is rejected, JES3 forces analysis on the next start	
OA22886	ABEND0C4 in IATDMIT following abend recovery in non-JES3 code	
Include	d in z/OS V1.11	
OA22741	ABEND0C4 in module IATSICA following a configuration change.	
OA24930	After termination of JES3 a task fails with ABEND0C4 in module IATSICA.	
OA27454	Inquiry issued for a DSN for a job does not complete.	
OA26303	ABEND0C4 in module IATDMGR following an ABEND8FB RC25 which was preceded by ABEND8FB RC21.	
8	SHARE in Anaheim 2011	

Include	d in z/OS V1.12
OA26143	ABEND0C4 in IATUTD2.
OA28818	The text intended for MSGID MSGIAT3828 is issued with MSGID MSGIAT3728 instead
OA29654	After *S JSS, JES3 does not start all initiators as defined.
OA30005	Removal of CONSTD statement from a JES3 INISH deck has no effect.

APAR	Problem description	Updated
1107968	JES3 Maintenance Philosophy.	11/10/2006
ll11768	JES3 Toleration APARs.	7/10/2009
II11784	Recommended JES3 SAPI and Extended Status (SSI 80) maintenance.	11/4/2011
ll12051	Known causes of ATL or VTS problems in a JES3 environment.	12/20/2004
II14347	Jobs hung in GMS SELECT state when initiators are defined as JES3 managed.	12/05/2007
II14434	Recommended JES3 TCP/IP/NJE maintenance.	12/9/2010
II14572	Recommended JES3 SPOOL Browse and SYSLOG Browse maintenance.	11/4/2011
1145	572 is new!	

II11784       Recommended SAPI and Extended Status (SSI 80) maintenance.       INFO         OA30764       Selecting an active NJE job in SDSF results in ISF111E dynamic allocation failure.       Selecting an active NJE job in SDSF results in ISF111E dynamic allocation failure.         OA31199       ABEND9C7 RC04 issued for a request from module IATGRES, FCT ENSTDRV       PE         OA31512       Extended Status (SSI 80) hang after applying OA27646       PE         OA32853       JES3 stops working : New jobs remain in CI and ended jobs remain in the purge phase.       HIPER         OA33772       JES3 does not provide class values from SDSF JDS panel for an active job.       OA33970         Extended Status SSI 80 not returning data in HJS7760 when STATJBIH contains blanks.       Contains blanks.	APAR	Problem description	
OA30764       failure.         ABEND9C7 RC04 issued for a request from module IATGRES, FCT ENSTDRV       ABEND9C7 RC04 issued for a request from module IATGRES, FCT         OA31512       Extended Status (SSI 80) hang after applying OA27646       PE         OA32853       JES3 stops working : New jobs remain in CI and ended jobs remain in the purge phase.       HIPER         OA33772       JES3 does not provide class values from SDSF JDS panel for an active job.       Extended Status SSI 80 not returning data in HJS7760 when STATJBIH contains blanks.         OA34846       ABEND0C4 in IATGRES attempting to address OSSJDSJN.       OA34913         ABEND0C4 in IATSIES after ABEND0C4 in IATGRES.       IATGRES.	ll11784		INFO
OA31199       ENSTDRV         OA31512       Extended Status (SSI 80) hang after applying OA27646       PE         OA32853       JES3 stops working : New jobs remain in CI and ended jobs remain in the purge phase.       HIPER         OA33772       JES3 does not provide class values from SDSF JDS panel for an active job.       Extended Status SSI 80 not returning data in HJS7760 when STATJBIH contains blanks.       OA34846         OA34846       ABEND0C4 in IATGRES attempting to address OSSJDSJN.       OA34913       ABEND0C4 in IATSIES after ABEND0C4 in IATGRES.	OA30764	failure.	
OA32853       JES3 stops working : New jobs remain in CI and ended jobs remain in the purge phase.       HIPER         OA33772       JES3 does not provide class values from SDSF JDS panel for an active job.       Extended Status SSI 80 not returning data in HJS7760 when STATJBIH contains blanks.         OA34846       ABEND0C4 in IATGRES attempting to address OSSJDSJN.       OA34913	OA31199	ENSTDRV	
OA32853       JES3 stops working : New jobs remain in CI and ended jobs remain in the purge phase.       HIPER         OA33772       JES3 does not provide class values from SDSF JDS panel for an active job.       HIPER         OA33970       Extended Status SSI 80 not returning data in HJS7760 when STATJBIH contains blanks.       HIPER         OA34846       ABEND0C4 in IATGRES attempting to address OSSJDSJN.       OA34913         ABEND0C4 in IATSIES after ABEND0C4 in IATGRES.       HIPER	OA31512		PE
OA33970       Extended Status SSI 80 not returning data in HJS7760 when STATJBIH contains blanks.         OA34846       ABEND0C4 in IATGRES attempting to address OSSJDSJN.         OA34913       ABEND0C4 in IATSIES after ABEND0C4 in IATGRES.	OA32853	JES3 stops working : New jobs remain in CI and ended jobs remain in the	HIPER
OA33970         contains blanks.           OA34846         ABEND0C4 in IATGRES attempting to address OSSJDSJN.           OA34913         ABEND0C4 in IATSIES after ABEND0C4 in IATGRES.	OA33772		
OA34913 ABEND0C4 in IATSIES after ABEND0C4 in IATGRES.	OA33970		
	OA34846	ABEND0C4 in IATGRES attempting to address OSSJDSJN.	
<b>PE</b> = Fixes PTF in Er	OA34913	ABEND0C4 in IATSIES after ABEND0C4 in IATGRES.	
		PE = Fixe:	s PTF in Erro

APAR	Problem description	
II14434	Recommended JES3 TCP/IP/NJE maintenance.	INFO
OA30781	NETSERV ABENDSEC8 RCB.	
OA31583	TCP FCTs not terminated after DSI with IPL after OA26487.	HIPER, PE
OA32109	The *C TCP,SOCKET= ,I command does not work.	HIPER, PE
OA33150	APAR OA31583 did not pre-req PE APAR OA26487.	PE
OA33245	Additional diagnostics required for IAT9380 ABENDEC8 RCB.	HIPER
OA33262 OA33337	Provide a means to delete orphaned JES3 NETSERV TCP jobs.	HIPER
OA33337 OA33453	0 byte count spool data sets for data transmitted via NETSERV. Mark QA30781 PE due to ++HOLD instructions.	PE
OA33455 OA33850	APAR OA33150 did not pre-reg PE APAR OA26487.	PE
OA33980	ABEND0C4 in JES3 module IATINSOC.	HIPER
OA33300	ABENDOC4 in JES3 module IATINGOC. ABENDOC4 in JES3 module IATINGOC.	PE
OA35519	ABENDDFB abends under Netserv ASIDs may not be properly taken. → Opened 2/4/2011 with target date yet TBD.	PE
	PE = Fix	es PTF in Error



#### OA33245

External symptoms: Customer encountered a transmission error, error message:

IAT9380 SEVERE ERROR OCCURRED IN SYSOUT RECEIVER, RECEIVER AREA CORRUPTED This was followed by:

IAZ0011I JES3S001 S5F01NJE Receiver issued a Terminate and Abend command

IAZ0546I JES3S001 ABEND CODE=SEC8 RC=0000000B

Impact to customer: Netserv failure

Analysis: This problem is undiagnosable with the documentation available. The registers at the point of the error recognized in IATNTTXR are not saved prior to the common code IAZNJSTK issuing its abend. This apar is being taken to add RAS for this failure

#### IAT9385 SERVER server\_name ABEND CODE=Sxxx RC=rsn

Explanation: An abend occurred in the Netserv address space during JES TCP/IP NJE processing. In the message text:

- server\_name = The TCP/IP NJE server name.
- Sxxx = The system completion code in hexadecimal format.
- rsn = The reason code:
  - . 65 The Netserv exit subtask detected data stream corruption in the inbound SYSIN record. The subtask is terminated.
  - 66 The Netserv exit subtask detected data stream corruption in the inbound SYSOUT record. The subtask is terminated.
  - 67 The Netserv exit subtask detected data stream corruption in the outbound SYSIN record. The subtask is terminated.
  - 68 The Netserv exit subtask detected data stream corruption in the outbound SYSOUT record. The subtask is terminated.

#### <u>OA34423</u>

External symptoms: Abend0c4 in JES3 module IATNTTXR following a msgIAT9380. We are attempting to access the TPRM, issuing the following OI TPRMTDFG, TPRMTDFA and abending because we don't have addressability

Users affected: All users of HJS7750, HJS7760 and HJS7770 with APAR OA33245 installed.

User impact: APAR OA33245 fixed the problem it reported but introduced a new problem, the abend0c4. Data stream corruption has already been detected, the task will abend.

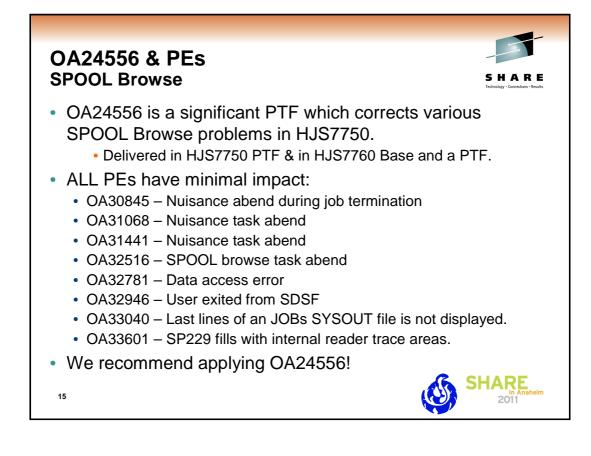
#### OA35519

External symptoms: Customer encountered ABENDDFB from the JES3 exit code in the Netserv address space, but the dump contents are an ABENDEC8 from the common code in the Netserv address space

Users affected: All users of HJS7750, HJS7760 and HJS7770 with APAR OA33245 installed.

User impact: APAR OA33245 added diagnostics for Netserv errors, but depending on SDUMP timing the subsequent dumps may still prove to be undiagnosable.

APAR	Problem description	
ll14572	Recommended JES3 SPOOL Browse and SYSLOG Browse maintenance.	INFO
OA30764	Selecting an active NJE job in SDSF results in ISF111E dynamic allocation failure.	
OA30845	ABEND1FB RC80	PE
OA31068	ABEND0C4 in IATDMEB in EBNQ000	HIPER, PE
OA31441	ABEND1FB-10 in IATDMEB reported in SDSF after applying OA24556	PE
OA31517	SDSF with JES3 - SJ results incomplete	
OA31971	SDSF LOG S command incomplete	
OA32269	SDSF loop or hang issuing SDSF LOCATE command by time with JES3	HIPER
OA32438	Unable to browse JES3 local's SYSLOG using SDSF LOG command	HIPER
OA32516	ABEND1FB in IATDMEB RC=20 / RC=C4 during SPOOL Browse	PE
OA32781	SDSF JES3: Data access error	PE
OA32946	ABEND1FB RC=20 issued by IATDMFR	PE
OA33040	SDSF browse of a SYSOUT file is missing the last lines.	PE
OA33274	ABEND0C4 in module IATDMEB near label EBT00495	PE
OA33525	ABEND0C4 in module IATDMJA while processing a SYSLOG CLST.	
OA33601	ABEND878 due to subpool 229 key 9 is filled up.	HIPER, PE



#### OA30845

External symptoms: ABEND1FB RC=80 issued from IATDMFR

Users affected: All users of HJS7750 and HJS7760 using SDSF

User Impact: This abend is of no impact to the user or system. We are in the process of terminating the address space and doing clean up, attempting to clean up storage that has already been freed.

#### OA31068

External symptoms: Various externals can be seen for this issue (example in APAR).

Users affected: All users of HJS7750 and HJS7760

User impact: Abending task continues to run. Task is attempting to write to JESMSGLG or JESYSMSG, the control block associated with the locking isn't available, so we are going to branch from IATDMDM to IATDMEB to wait for its availability. As part of the processing a trace entry is going to be written, using the DSBTRACE field; the field is currently zero, we recognize that but then attempt to use its contents. The field is zero because we had just completed spinoff processing. No data is lost. JESMSGLG processing will revert to the JES3 global and cause a significant impact should the application affected be one that does significant message processing. If you don't use spinoff we would recommend applying OA24556.

### <u>OA31441</u>

External symptoms: ABEND1FB RC10 under SDSF using spool browse

Users affected: All users of HJS7750 and HJS7760 using SDSF

User Impact: This abend is of minimal impact to the user. The task will abend. We have a timing window where a transient PBUFF shortage can require a redrive of an I/O request using an invalid value.

#### OA32516

External Symptoms: ABEND1FB in IATDMEB RC=20 / RC-C4 during Spool Browse

Users affected: All users of HJS7750

User Impact: This abend is of minimal impact to the user. The task will abend.

#### OA32781

External symptoms: Customer attempted to half page scroll through a job's JESJCLIN data set. The JCL for the job contained in-stream SYSIN data sets. A data access error was indicated by SDSF.

Users affected: All users of HJS7750

User Impact: This error is of minimal impact to the user.

## OA32946

External symptoms: Under SDSF abend issued (details in APAR).

Users affected: All users of HJS7750, HJS7760 and HJS7770.

User Impact: This abend is of minimal impact to the user. The task will abend.

#### OA33040

External Symptoms: The last lines of an JOBs SYSOUT file is not displayed.

Users affected: All users of HJS7750, HJS7760 and HJS7770.

User Impact: This error is of minimal impact to the user. The complete SYSOUT file of a JOB is not displayed. If the JOB is copied with XDC, all lines are displayed

#### OA33601

External Symptoms: ABEND878 due to Subpool 229 key 9 is filled up with DSBTRACE.

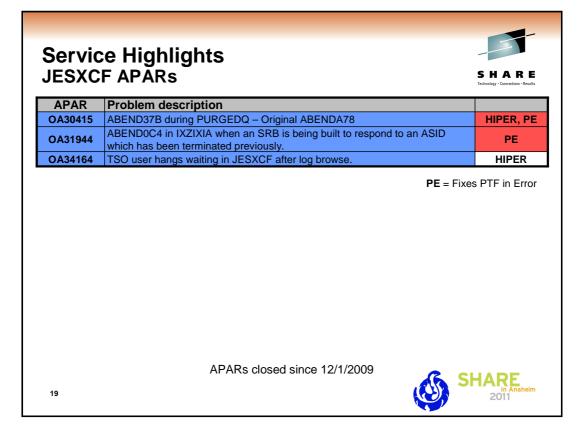
Users affected: All users of HJS7750.

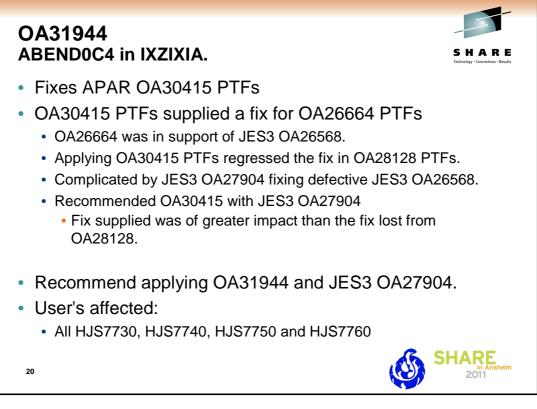
User Impact: INTRDR datasets may cause LSQA to fill with trace areas. The task ends with ABEND878.

APAR	Problem description	
OA30665	Various DM ABENDs in JES3 during initialization after IOS000I error message	
OA30685	SYSIN data not returned for JESJCLIN SDSB allocated dataset	DOC
OA30913	ABENDS052 RC=101 during JES3 DC command with OPTION=DMP	
OA30936	MSGIAT7008 SPLT ERROR DM731 received for SYSOUT file	
OA30944	ABEND0C4 IATSIAU-SIAUARR IATSICA SVTTVT	
OA31268	Excessive UCBLOOK processing during dynamic allocation.	
OA31776	JES3 monitor issues IAT6397 IAT6398 IAT6415 IAT6410 invalidly.	
OA31807	ABENDDM137 documentation in JES3 Diagnosis Reference.	DOC
OA31855	MSGARC0381A allocation request failed for XXXXX for recall.	HIPER
OA31896	IATGRSP dump followed by ABENDDM747.	
OA31962	ABEND0C4 in JES3 module IATMDSB during job termination.	
OA32190	ABENDDM672 from IATOSDO for spinoff dataset.	
OA32297	MSGIAT8121 issued for MODIFY CANCEL when OSE exists.	
OA32301	IAT4133/IAT4174 a reason-text 'SPOOL RECORD ERROR(S)' missing in message manual.	DOC
		ocumentation
		ocumentation

APAR	Problem description	
OA32426	JES3 I/O trace needs to be documented.	DOC
OA32572	Correct various problems in JES3 HJS7770.	
OA32603	ABEND0C4 in IATSICA when AWA addressability attempted.	
OA32870	Loop in JES3 module IATSIAF during SSI processing.	HIPER
OA32918	ABEND0C4 in IOSVDEVN issued by SICASTAE.	
OA32952	Correct various problems in JES3 HJS7770.	
OA33203	Missing documentation for FSI field FSIEGFID.	DOC
OA33279	Correct various problems in JES3 HJS7770.	
OA33519	JES3 Notify User (SSI 75) receives MSGICH408I when binary zeros specified as destination.	
OA33660	IATSIAI ABEND0C4, MEMALLOC is zero even after applying OA32603.	PE
OA33722	ABEND0C4 in IATSICA when AWA addressability attempted.	
OA33787	DYNALLOC failure RSN484 for non-SMS managed dataset for a job	PE
OA33916	Loop in IATGRQM.	
OA34117	ABEND9C7 RC10 during SSI80 processing in JES3.	HIPER
OA34192	ABENDS001-04 MSGIAT6712 during checkpoint processing.	HIPER
		PTF in Erro

APAR	Problem description	
OA34221	ABEND8FB RC24 during WLM processing along with message IAT2010 WLM subtask has failed.	HIPER
OA34234	Multivolume existing dataset DYNALLOC fails with RC4 reason CODE0214.	
OA34254	TSO user hung after SPOOL shortage.	
OA34409	MSGIEA602I address space create failed.	HIPER
OA34584	IAT3155 has conflicting usage.	
OA34642	Applications using IATYDAT as programming interface do not correctly display JESJCLIN after OA33040.	PE
OA34656	ABEND0C4 in IATIQNJ.	
OA34733	ABEND0C1 issued by IATDMXM, possible JES3 high CPU utilization.	HIPER
OA34746	Repetitive ABEND0C4 in IATGRPR under IOERR FCT.	HIPER
OA34953	ABEND0C4 in IATOSFP when attempting to address OSEOTSWB for DJ'd job.	
OA35160	IATGRPT sequence numbers do not allow user DSP entries after the last IBM entry.	
	PE = Fixes	PTF in Erro





# OA26664

We would not recommend applying OA26664 and JES3 APAR OA26568. See OA30415 and JES3 APAR OA27904.

# <u>OA30415</u>

External symptoms: Customer reported ABEND37B in LOGREC, slip showed original abend was ABENDA78 that was changed to ABEND37B by PURGEDQ.

The PTFs for OA30415 are marked as defective as they regress the fix provided in OA28128.

We recommend applying OA31944 as it provides a fix for a problem introduced by OA26664 and restores the fix supplied by OA28128.

# <u>OA31944</u>

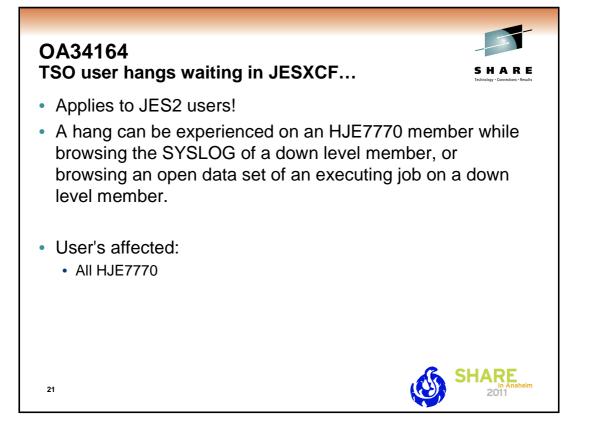
External symptoms: ABEND0C4 from module IXZIXIA in JESXCF.

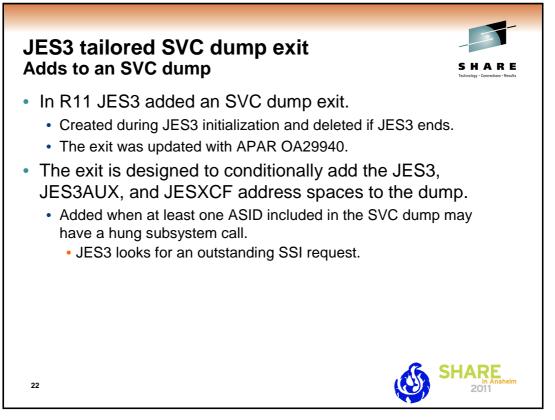
Corrects defective OA30415 PTFs which regressed the fix supplied by OA28128 PTFs.

Affects all users of HJS7730, HJS7740, HJS7750, HJS7760.

We recommend applying OA31944.

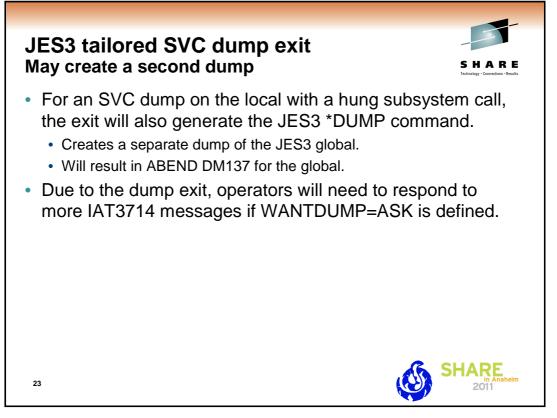
We also recommend applying JES3 APAR OA27904 which fixes defective OA26568 PTFs.





Beginning with z/OS V1.11, JES3 establishes an SVC dump exit. The SVC dump exit is created during JES3 initialization. The dump exit is new JES3 module IATABTDX which is a dynamic LPA module. The MVS service CSVDYNEX is used to establish the dump exit when JES3 is started. If JES3 is ended, then MVS service CSVDYNEX is used to delete the dump. The delete allows for the dump exit module to be updated when JES3 is started. During initialization, if the call to the MVS service fails and the dump exit cannot be established, initialization will continue and message IAT3207 is written.

Whenever an SVC dump is taken in a user address space, either because it fails, because the operator requests a dump, or because a dump is triggered by a SLIP trap, the JES3 dump exit is called. The dump exit conditionally adds the address spaces for JES3, JES3AUX, and JESXCF to the SVC dump. This occurs if the exit determines that least one ASID, included in the SVC dump, has an outstanding SSI request. Identification of the address spaces with outstanding SSI requests is based upon the same internal activity table counters used to control the setting and resetting of the IAZJSAB activity flags.



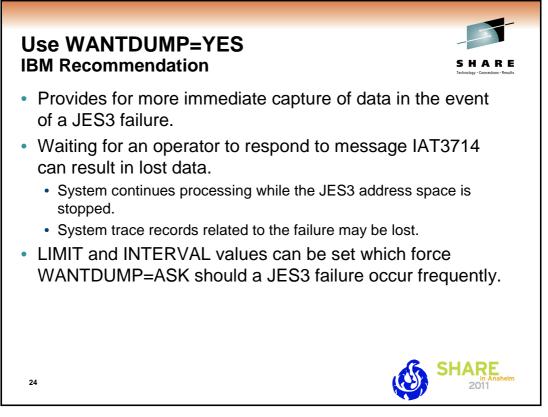
If the SVC dump originates on a JES3 local, then the JES3 \*DUMP command is also generated and a separate dump of the JES3 global is created with ABEND DM137. ABEND DM137 currently indicates that he operator issued the \*DUMP command – JES3 Diagnosis Reference. Documentation APAR OA31807 has been created to update the documentation to include that the \*DUMP command can be issued for an SVC dump.

Updated JES3 Diagnosis Reference explanation for DM137:

Either the operator issued the \*DUMP command or the command was automatically issued from the JES3 Tailored dump exit to supplement a user address space dump. In that case, the dump title will contain the following text: 'COMPON= JES3 DYN DUMP,COMPID=SC1BA,ISSUER=IATABTDX'.

Updated z/OS JES3 Messages description for IAT3833:

Either the operator issued the \*DUMP command which caused the CONCMD FCT to be terminated with abend DM137 or the command may have been entered automatically by module IATABTDX to complement a user address space dump. In that case, the dump title will contain the following text: 'COMPON=JES3 DYN DUMP,COMPID=SC1BA,ISSUER=IATABTDX'.

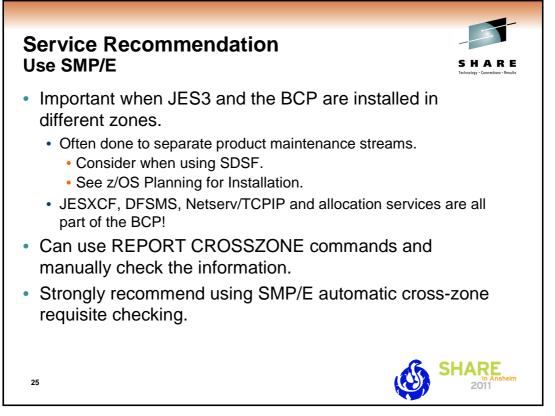


Specifies that a dump should be taken immediately when a JES3 failure occurs.

WANTDUMP is a parameter of the OPTIONS initialization statement. Default is WANTDUMP=YES,LIMIT=3,INTERVAL=10 (INTERVAL is in minutes)

Commands allow the WANTDUMP option to be changed including the LIMIT and INTERVAL specifications.

IBM suggests that you allow the WANTDUMP option on the STANDARDS initialization parameter to default to "YES" instead of setting it to "ASK". Using the default of "YES" allows the system to determine what action to take when a JES3 failure condition occurs. In today's sysplex environment setting this parameter to "ASK" can cause delays in operations because the JES3 address space essentially stops functioning until you respond to the IAT3714 message. Also, certain portions of the dump, such as the system trace, are invalid because the system continues processing until you response to message IAT3714.



The SMP/E REPORT command helps you obtain information about SYSMODs installed on your system. REPORT CROSSZONE is used to list conditional requisites that must be installed in certain zones because of SYSMODs installed in other zones. This information can help you synchronize service for related products that are in different zones like JES3 and JESXCF. You can used separate REPORT CROSSZONE commands and closely review the output -- very manual and prone to mistakes. We strongly recommend using the SMP/E automatic cross-zone requisite checking.

Creating a cross-zone set is documented in the z/OS Program Directory:

## 7.3.1 Create a Cross-Zone Set

There are different methods that can be used for cross-zone processing. A zone group can be defined and added to the install jobs or the XZGROUP operand can be used. XZGROUP(value) contains a list of ZONESETs or zones that are used to establish the zone group. Each value in the list must be a valid ZONESET or zone name. XZGROUP(value) would be added to the install jobs instead of adding the XZREQCHK operand to one or more ZONESETs.

In OS/390 Release 3, SMP/E introduced the operand, XZREQ, which provides a method for a user to more easily install cross-zone requisites. SMP/E identifies the cross-zone requisites needed in the set-to zone by reading CIFREQ data in the secondary zones of the zone group in effect for the current APPLY/ACCEPT commands. Any CIFREQ data that is for FMIDs installed or being installed in the set-to zone that are not yet in the set-to zone causes the required SYSMODs to become candidates for installation. If the FORFMID operand is also used, the FMID specified on the CIFREQ must match one of the FMIDs specified on the FORFMID operand for the SYSMOD to become a candidate.

By adding the XZREQ operand, the CIFREQ SYSMODs are installed automatically into the set-to zone. However, XZREQ does not install the CIFREQs in the other cross-dependent zones. An APPLY XZREQ needs to be performed against the other zones in order to synchronize service.

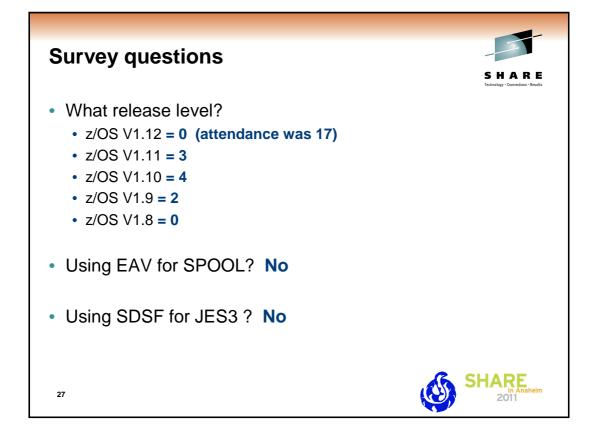
**Note:** If SYSMODs being installed into the set-to zone have requirements against the other cross-zones, that service must be APPLY'd to those zones before installation can be completed into the set-to zone.

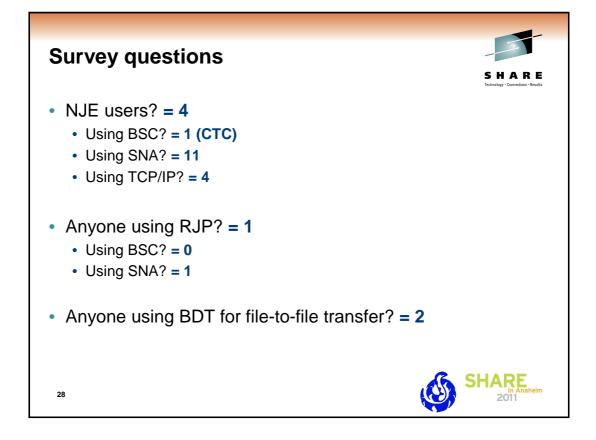
# **SHARE JES3 Requirements**

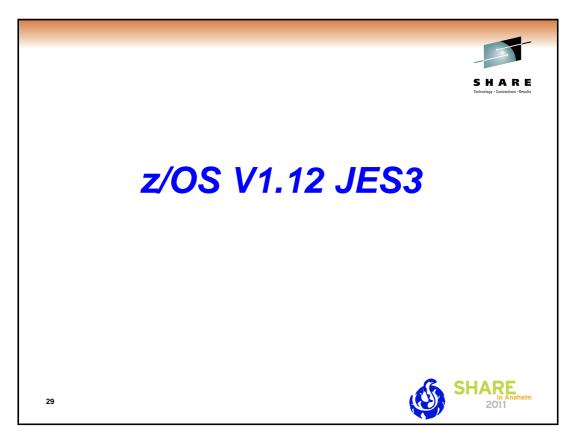
5 H A R E

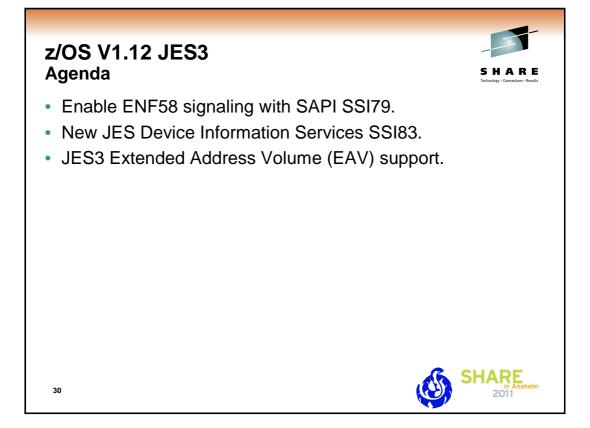
SHARE #	IBM FITS #	Title	State
SSJES3032645	MR0203033521	JES3 Dynamic Spool enhancement – Accepted for SPOOL Add function	Accepted
SSJES3032645	MR0615106131	JES3 Dynamic Spool enhancement – Created for SPOOL Remove/Delete function	Recognized
SOJES393353	MR1020084625	JES3 - Dataset Integrity for JES3's Datasets	Recognized
SSJES399351	MR041400724	Provide access to SPOOL utilization data	Recognized
SSJES397305	MR1020084630	JES3 - OUTDISP support of OUTPUT JCL statement	Recognized
SSSHARE011776	MR1020084632	Perform DFHSM 'RECALL' for Batch Jobs Before They Are Active	Recognized
SSJES3032649	MR0210035755	Provide a Way to Know Which JES3 Jobs Use a Spool Extent	Recognized
SSSHARE01633	MR1020084712	JES3 Dump Job (DJ) support for dumping jobs by spool dataset	Recognized
SBJES383304	MR1020084616	JES3 Job Scheduling With HSM.	Recognized
SBJES379323	MR1020084614	JES3 - Inquiry for Job Reserving a Device	Recognized

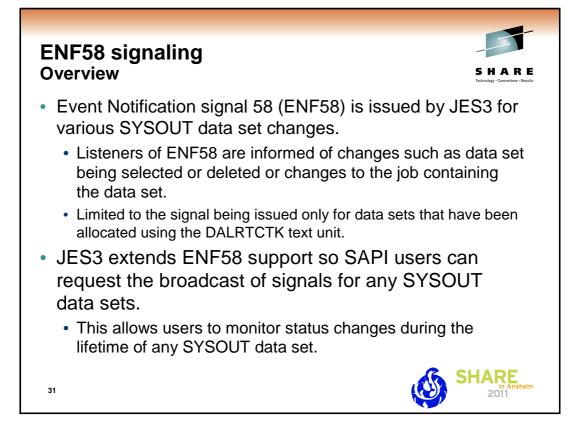


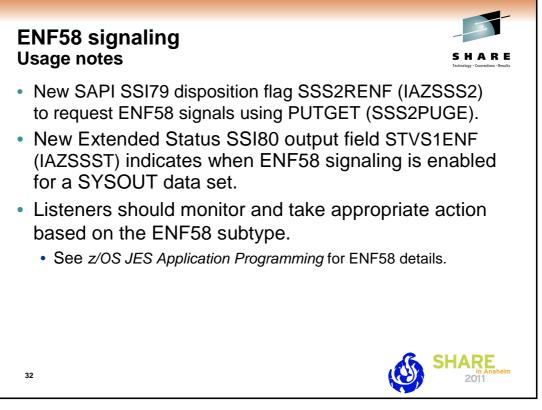






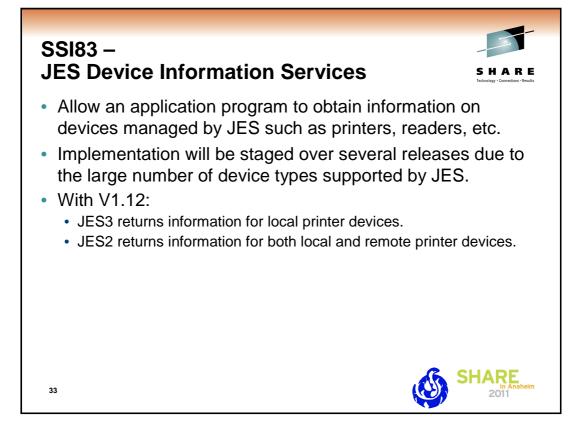


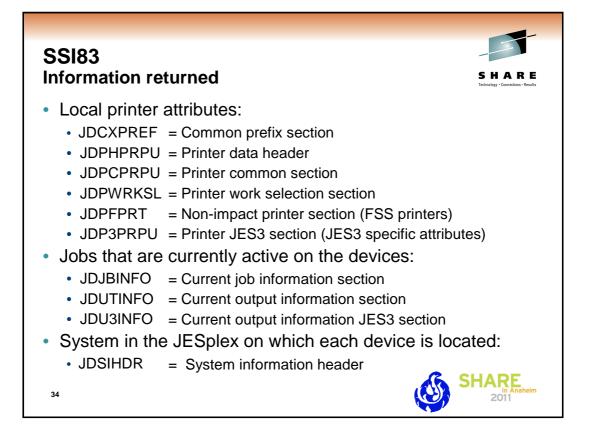


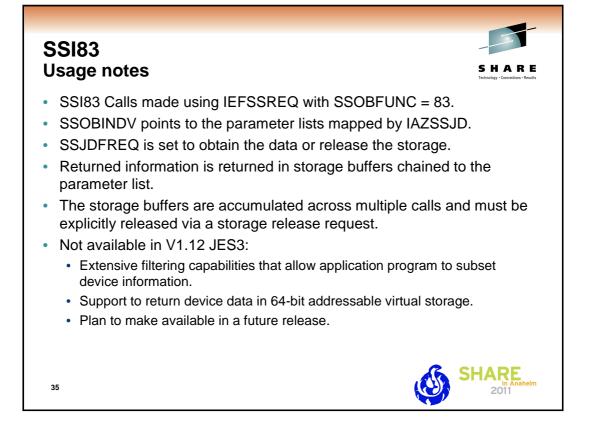


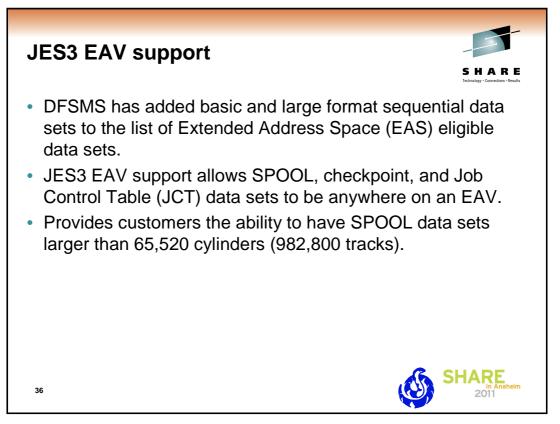
See *z/OS MVS Programming: Authorized Assembler Services Guide* for information about how to use the ENFREQ macro to listen to these events.

See z/OS JES Application Programming for additional ENF58 details.









With z/OS V1.10 and higher releases, z/OS has added support for DASD volumes having more than 65,520 cylinders. To expand the capacity of DASD storage volumes beyond 65,520 cylinders, z/OS had to extend the track address format. Hence the name **Extended Address Volume (EAV)** for a volume of more than 65,520 cylinders.

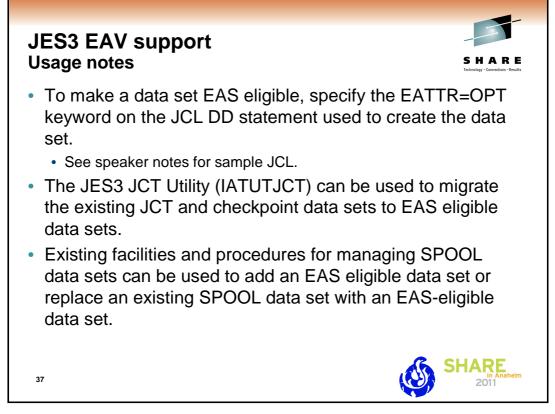
EAVs provide increased z/OS addressable disk storage. EAVs help to relieve storage constraints as well as simplify storage management by providing the ability to manage fewer, large volumes as opposed to many small volumes.

With z/OS V1.12, DFSMS added support for base and large format sequential data sets that now can be exploited for JES3 data sets.

An added benefit is that large sequential data sets, DSNTYPE=LARGE, when EAS eligible on an EAV, are no longer limited to the volume size of 65,520 cylinders. This allows JES3 customers to have much larger SPOOL data sets.

• Each SPOOL data set must be contained in a single extent. (A single extent is one adjoining group of tracks or cylinders.)

- You cannot allocate any secondary extents.
- You cannot allocate more than 1024 spool data sets.



EATTR is used to control whether a data set can have extended attribute DSCBs and thus control whether it can be allocated in EAS.

• EATTR of NO indicates that the data set can not have extended attributes or reside in EAS. This is the default for non-VSAM data sets such as basic and large format sequential data sets.

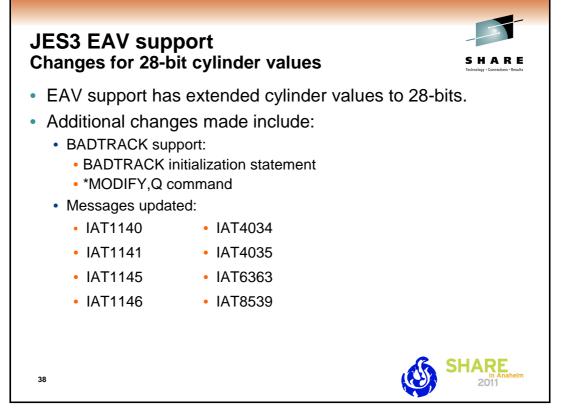
• EATTR of OPT indicates that the data set can have extended attributes and can optionally reside in EAS.

In order to allow a JCT data set to be copied without a cold start, JES3 provides a program called the JCT utility, or IATUTJCT. This utility can be used to migrate existing JCT and checkpoint data sets to EAS eligible data sets.

Managing the JES3 SPOOL space does not change with the support added to exploit EAVs. See chapter 6 of the *z/OS JES3 Initialization and Tuning Guide* for details on adding and replacing SPOOL data sets.

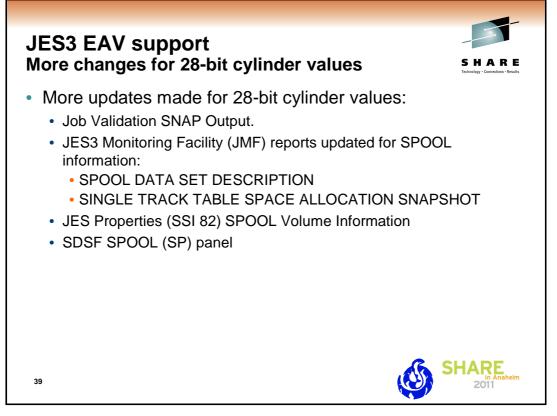
Example JCL to allocate then format a JES3 spool extent in EAS on an EAV:

//ALLOC	EXEC	PGM=IEFBR14	
//SPXTN	r dd	DSN=SYS1.JESPACE,DISP=(NEW,KEEP,KEEP),	
//		UNIT=3390,VOL=SER=J3SPL1,	
//		DCB=(RECFM=U,BLKSIZE=2048),	
//		SPACE=(CYL,80000),EATTR=OPT,	
//		DSNTYPE=LARGE	
//SPLFRN	AT EXEC	PGM=IEBDG	
//SPXTN1	r dd	DSN=SYS1.JESPACE,DISP=SHR,	
//		UNIT=3390,VOL=SER=J3SPL1,	
//		DCB=(RECFM=U,BLKSIZE=2048,BUFNO=255),	
//		DSNTYPE=LARGE	
//SYSPRI	INT DD	SYSOUT=*	
//SYSIN	DD	*	
DSD	OUTPUT=(SPXTNT)		
FD	NAME=SPOOL,FILL=X'FF',LENGTH=4084		
CREATE	NAME=(SPOOL),QUANTITY=2147483647		
END			



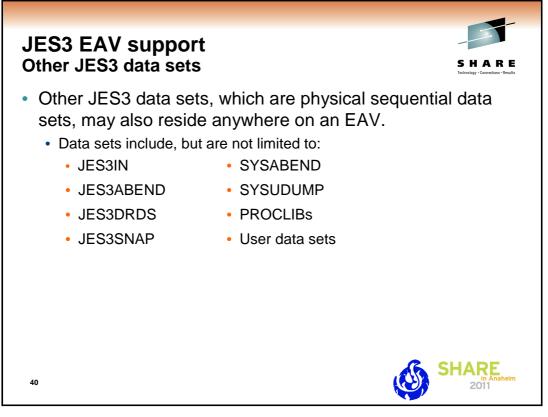
The BADTRACK initialization statement is used to identify defective tracks on a spool volume. The \*MODIFY,Q command can be used to add a BADTRACK element for a defective track in a spool data set. Both the initialization statement and command have been updated to allow one- to seven-digit hexadecimal values for the cylinder specification.

Messages which include a cylinder value have been updated to output seven-digit hexadecimal values.

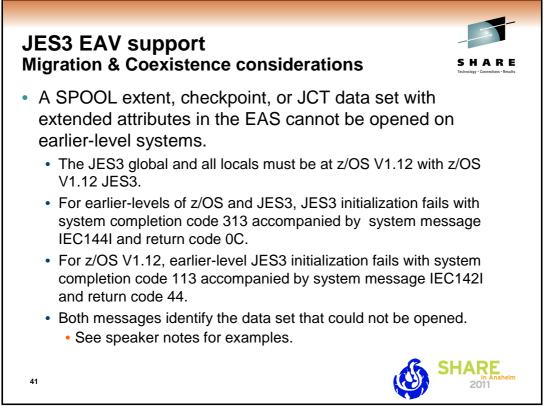


Additional externals which include or return cylinder values have been updated for 28-bit values including:

- The Spool Record Validation (SRV) entries for the Job Validation SNAP Output.
- JES3 Monitoring Facility (JMF) reports for SPOOL Information
- JES Properties subsystem interface (SSI 82) for SPOOL Volume Information.
- SDSF SPOOL (SP) panel.



Other JES3 data sets are accessed using standard DFSMS access methods – versus EXCP for SPOOL, checkpoint, and JCT data sets. Based upon DFSMS support for the data set type, these data sets may also reside anywhere on an EAV.



Care must be taken when specifying EATTR=OPT for data sets that are not EAS-eligible in z/OS VR10 or z/OS V1.11 – basic and large format sequential data sets. These will not be allowed to be opened from z/OS V1.10 or z/OS V1.11 if they were allocated in z/OS V1.12 with extended attributes.

• Example message:

# IEC144I 313-0C, IFG0194D, JES3, JES3, CHKPNT, 0340, DJEAV, SYS1. CMSCKPT1

**IEC144I - Explanation:** The error occurred during processing of an OPEN macro instruction for a data set on a direct access device.

0C = During an attempt to open a data set, open encountered an extended attribute DSCB (format-8) for a data set that is not eligible to have extents above 65,520 cylinders. This is invalid for this type of data set.

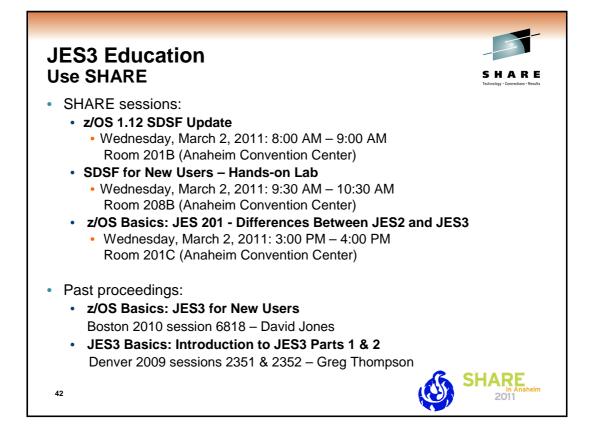
Care must be taken when specifying EATTR=OPT for JES3 data sets that cannot be opened with z/OS V1.10 and z/OS V1.11 JES3 (even if z/OS V1.12 is IPLed). These JES3 releases cannot open data sets if they were allocated in z/OS V1.12 with extended attributes.

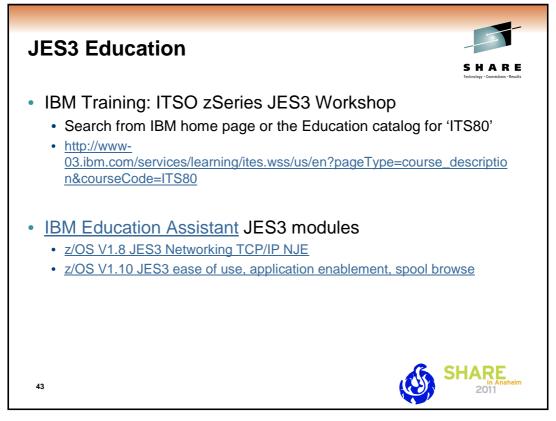
• Example message:

# IEC142I 113-44, IFG0194D, JES3, JES3, SPOOL1, 0340, DJEAV, SYS1. CMSPOOL1

**IEC142I - Explanation:** The error occurred during processing of an OPEN macro instruction or an OPEN macro instruction with a TYPE=J operand.

**44** = An attempt was made to open an EAS eligible data set on a volume with more than 65,520 cylinders but the DCBE flag, DCBEEADSCBOK, indicating that the caller understands extended attribute (Format 8/9) DSCBs was not set.





http://www-03.ibm.com/services/learning/ites.wss/us/en?pageType=course\_description&courseCode=ITS80

# **ITS80** description:

This course covers the design, installation, and management of a JES3 system, both externally and internally. All features and functions of JES3 will be discussed. Coverage includes the functions and features of all releases currently available, including the current release z/OS JES3 V1.9.

Volume 5

Volume 6

Volume 7

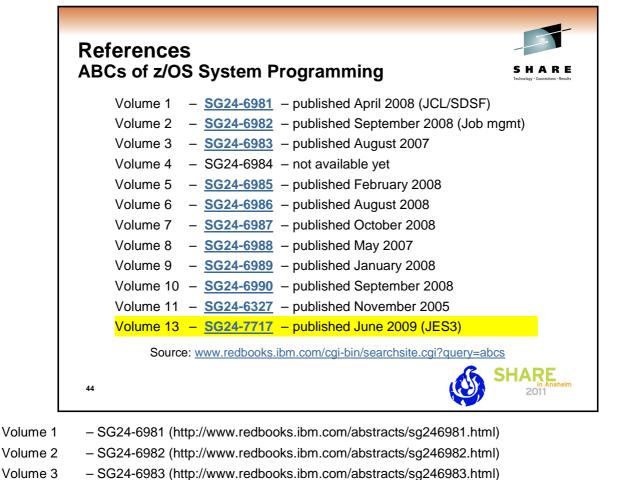
Volume 8

Volume 9

Volume 10

Volume 11

Volume 13



– SG24-6985 (http://www.redbooks.ibm.com/abstracts/sg246985.html)

- SG24-6986 (http://www.redbooks.ibm.com/abstracts/sg246986.html)

- SG24-6987 (http://www.redbooks.ibm.com/abstracts/sg246987.html)

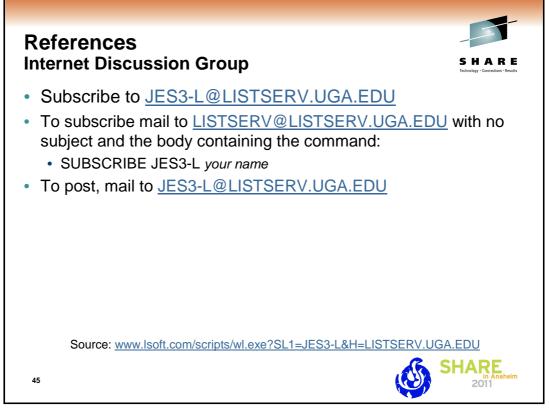
- SG24-6988 (http://www.redbooks.ibm.com/abstracts/sg246988.html)

- SG24-6989 (http://www.redbooks.ibm.com/abstracts/sg246989.html)

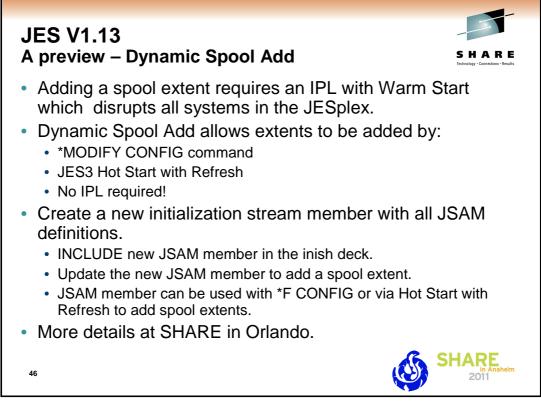
– SG24-6990 (http://www.redbooks.ibm.com/abstracts/sg246990.html)

- SG24-6327 (http://www.redbooks.ibm.com/abstracts/sg246327.html)

- SG24-7717 (http://www.redbooks.ibm.com/abstracts/sg247717.html)

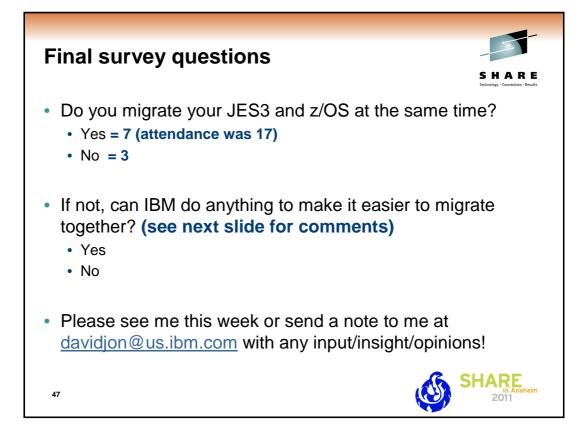


http://www.lsoft.com/scripts/wl.exe?SL1=JES3-L&H=LISTSERV.UGA.EDU



Recommended Implementation:

- Customer sets up a new member with all JSAM definitions
  - Starting with DYNALLOC statements
  - Ending with ENDJSAM
- Customer sets up a new inish deck with an INCLUDE statement pulling in the JSAM member
- Customer performs a Hot Start with Refresh with the new inish deck and JSAM member
- Or issue the \*MODIFY CONFIG,ADD= with the new JSAM member
  - New spool extents are made usable only after all locals connect (or are flushed).



SHARE

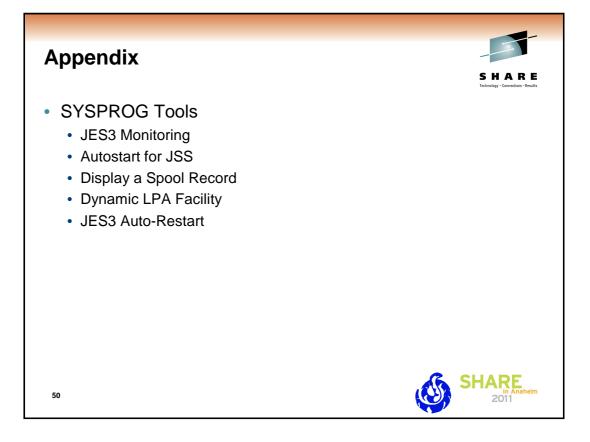
2011

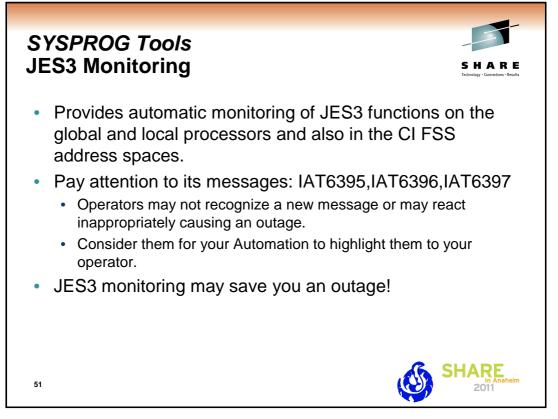


- A customer that migrates them separately indicated this was because the MVS migration and the JES3 migration are done by separate teams and not coordinated.
- Another indicated that the time it takes to assure that JES3 mods and customizations work from release to release prevent them from migrating at the same time – i.e. it takes longer to prepare for the JES3 migration. They also do not always move to each new release and sometimes skip a release.
- Finally one indicated that they migrate both at the same time to avoid two outages due to two IPLs. However, they recently discovered that JES3 could be migrated without an IPL – using Hot Start with Refresh – although this is not clearly documented anywhere. The implication was that they could migrate separately if they were assured that another IPL was not required to migrate JES3.

48







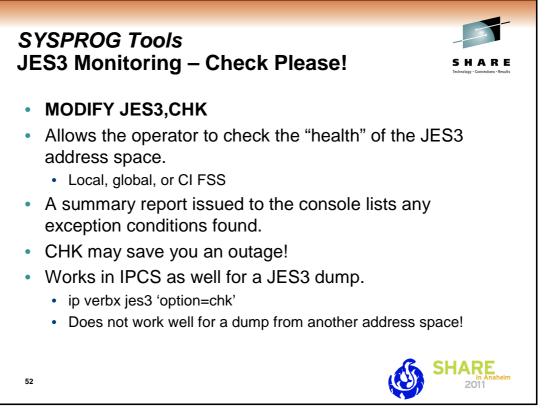
JES3 provides automatic monitoring of JES3 functions on the global and local processors and also in the CI FSS address spaces. Two types of monitors are used:

### JES3 loop and wait monitor

The JES3 loop and wait monitor ensures the two main JES3 tasks, the Nuc and the Aux task, are not suspended or in an infinite loop. When that happens, no other JES3 function (called FCTs) can be dispatched besides the currently active one. JES3 periodically examines the status of those two functions and informs the operator, through WTOR IAT6410, about the condition. MODIFY JES3 commands can be used to change the Monitoring interval and threshold for the loop and wait monitor.

# **JES3** monitor DSP

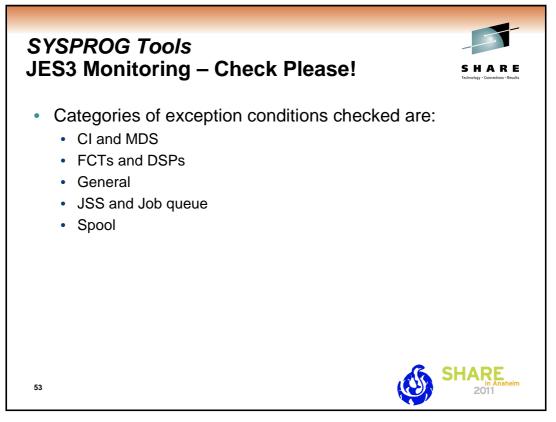
The monitor DSP runs as an FCT under the JES3 Nuc task. It monitors unavailable JES3 resource. A JES3 resource is anything that can use an FCT or a job that can become unavailable. The monitor DSP also monitors resources that a job is waiting for (data set allocation requests and tape mounts).



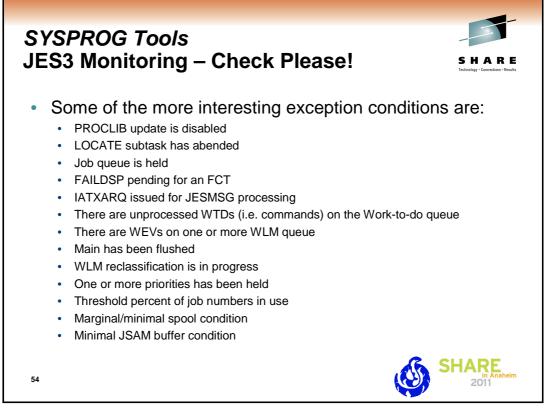
A complement to both monitors is an exception analysis function. This function is invoked by an operator MVS command while JES3 is running or offline during dump analysis. The function provides a summary report of unusual conditions as defined by JES3. Analysis can be requested for the local, global, or CI FSS address spaces. This function will be enhanced and fine-tuned over time as more and more checks are implemented.

The command runs asynchronously to the JES3 address space code. Therefore, it is possible that JES3 is changing the data while the command is executing. This can lead to an occasional program check or a loop while the command is executing. When a loop is detected, message "IAT6417 Command 'CHK' exceeded 1 minute. Reply 'CANCEL' to stop" is issued and a response is required. In either case, enter the command again.

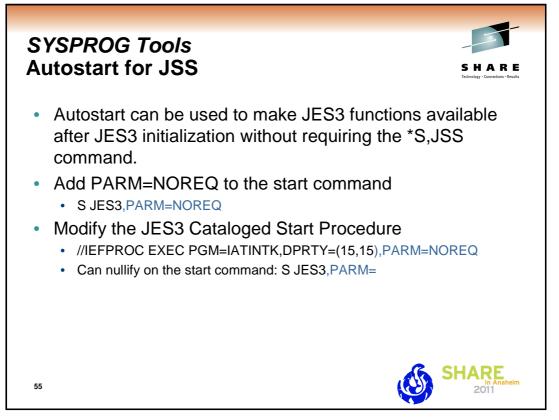
The same function can be invoked in IPCS and Dump Core (DC). For z/OS JES V1.8 and earlier, make sure you have OA15913 applied.



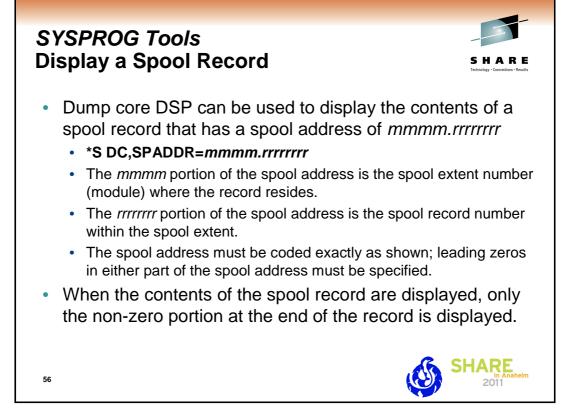
There are various types of exception analysis, each of which is called in turn by IATABEA. Each one is contained in its own module. Over time more checks may be added based on your and our experience.



There are too many exception conditions to list. The ones listed here are probably among the more interesting or likely to be seen by you, the customer.



PARM=NOREQ specifies that JES3 global will start JES automatically if you want JES3 functions to be available after JES3 initialization without requiring the **\*S,JSS** command. Place this in the JES3 start procedure. This avoids having operators forget to do the **\*S** JSS command when restarting JES3. To nullify the parameter you can specify S JES3,PARM= on the start command.



The dump core DSP is used to display and modify data in main storage, to intercept program flow during execution, and to format control blocks for debugging. This facility can be used only on the global processor.

# SPADDR=mmmm.rrrrrrr

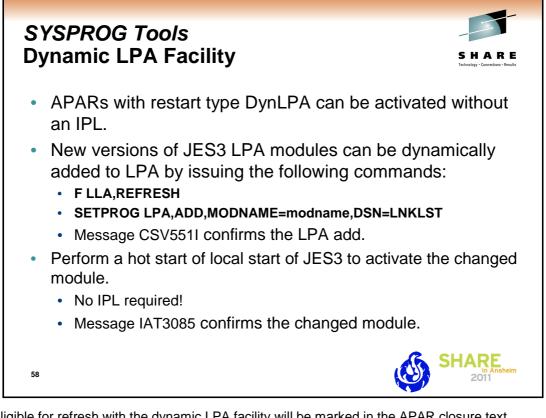
Displays the contents of the spool record that has a spool address of *mmmm.rrrrrrr*. The *mmmm* portion of the spool address is the spool extent number (module) where the record resides. The *rrrrrrr* portion of the spool address is the spool record number within the spool extent. The spool address must be coded exactly as shown; leading zeros in either part of the spool address must be specified.

When the contents of the spool record are displayed, only the non-zero portion at the end of the record is displayed. For example, if a particular spool record contains only zeros after the first 100 bytes of the records, only the first 100 bytes of the record will be displayed.

In order to use SPADDR, you must specify KEY=SYSTEM when calling dump core: \*CALL DC,OUT=CON,KEY=SYSTEM

See the *z*/OS JES3 Commands document for more details on using dump core.

SYSPROG Tools Display a Spool Record Examples						
		Xampio	Technology - Connections - Results			
*CALL, DC, OUT=CON, KEY=		1NT 01				
IAT6306 JOB09992 IS DC, CALLED BY CN 01 IAT7921 ISSUE START/CANCEL/RESTART DC REQUEST						
*S,DC,SPADDR=0003.000	0384					
SPOOL RECORD: 0003.000						
0000000-00030000 0384						
00000010-00000000 0000						
00000020-E37EC3D6 D540	D2C5 E87EE2E8	E2E3C5D4	*T=CON KEY=SYSTEM*			
*S,DC,SPADDR=0002.000	)12A8					
SPOOL RECORD: 0002.000	)012A8					
00000000-00020000 12A8	30001 D6E2C540	00000000	*yOSE*			
00000010-00000000 0000	00000 5CA2A3A3	00600060	**stt*			
00000020-00000000 0000						
00000030-00000000 0000						
00000040-00000000 0000						
00000050-00000000 0000	00000 000000000000000000000000000000000	00000000				
00000060-FFFFFFFF			* *			
			SHARE			
57			2011			



APARs eligible for refresh with the dynamic LPA facility will be marked in the APAR closure text.

- Type/IPL (Local,DynLPA)
- Type/IPL (Global, DynLPA)
   Type / IPL (Dalling DynLPA)
- Type/IPL (Rolling,DynLPA)

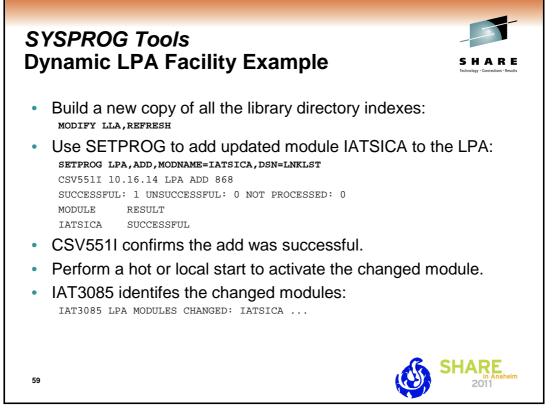
See Info APAR II07968 - JES3 Maintenance Philosophy

The SETPROG command can be issued while JES3 is active. The change does not take effect until JES3 is restarted. This allows you to back out the change if necessary.

If the fix must be installed on more than one system, a SETPROG command must be issued for each system. Multiple modules can be added at one time using MODNAME=(*modname*,...,*modname*)

When the required modules have been added to LPA, perform a hot start or local start of JES3 (without an IPL of the system) to activate the change. During initialization, JES3 picks up the new versions of the modules and issues message IAT3085. On the JES3 global processor, the message appears in JES3OUT only. On the JES3 local processors, the message appears on the console.

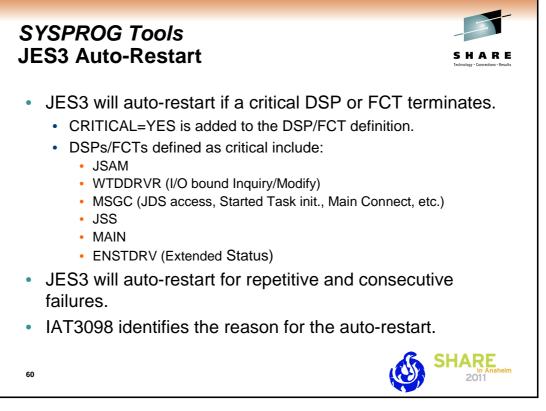
Monitor CSA usage. Dynamic add of modules to the LPA reduce the CSA space available as older versions of the module are not removed.



The APAR ++hold data will contain instructions. An example is:

New versions of JES3 LPA modules can be dynamically added to LPA by issuing the following commands:

F LLA,REFRESH followed by: SETPROG LPA,ADD,MODNAME=IATSICA,DSN=LNKLST



Auto-restart logic previously existed for a configuration change. Auto-restart means detaching the IATNUC task and reattaching it. It's like doing a DSI without changing the global.

The parameter CRITICAL=YES is added to the DSP or FCT definition in the DSP directory.

Refer to the z/OS JES3 Customization document:

- IATYDSD (Generate a DSP Dictionary Entry)
- IATYFCD (Generate Function Control Table)

IAT3098 text identifies if JES3 is restarting due to a CONFIGURATION CHANGE, a CRITICAL FCT ABEND, or REPETITIVE FAILURES.

