

August Newsletter

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Greetings all,

I hope you all are keeping well and adjusting the shock of busy public transport, offices filling up and the pleasure of actually meeting with people in the same room.

A few updates to share

- For organisations wanting to target their security strategy more efficiently, I have contacted a few security folk. so that together we can look at the different security zones in a typical organisation, examine the type of threats relevant to each zone, and then review what tools are best for each. If you have any suggestions, please let us know;
- A dear friend and respected AIX administrator told a recent meeting that AIX was end of life next year! This came as a bit of a shock as the last AIX roadmap I saw published went to 2035. Luckily this is still the case, and please don't mistake the EoS timeline for the current AIX 7.3 TL as the end of life for AIX. AIX will be around for a long time to come;
- IBM Expert TV has moved – see [Link](#);
- There are lots of AIX patches listed below, please note that some of the links are broken and I have found that IBM has created a large number of duplicates. I am following this up and hope to have an answer soon;
- Meet the Power10 family ([Link](#)). IBM is also hosting Power10 events around A/NZ, so contact your IBM Rep; and
- IBM ESS now has IBM Live Agent Chat, so you can get quick answers to your ESS questions. This may be extended to other products shortly. See [Link](#)
- [Link](#)

Quick bites

IBM Cloud Foundation Skill Series - ICCT

A quick summary by James Belton covering training through IBM Cloud Foundation.

[Link](#)

IBM Support highlights - Preventive maintenance insights with easy-to-use portal

Included with your IBM Technology Support Services maintenance agreement, IBM Support Insights offers actionable indicators for preventive maintenance, helping to improve IT reliability and streamline asset management for IBM and other OEM systems (including Cisco, HP, Oracle, Dell, Juniper, NetApp, EMC and more). IBM Support Insights helps reduce gaps in support coverage, enabling you to simplify management of your entire IT estate across multiple vendors.

[Link](#)

X-Force Threat intelligence index 2022

Combating new threats in a time of constant change.

[Link](#)

Definitive guide to ransomware for 2022

[Link](#)

A multilayered approach to security with IBM Power

Essential infrastructure for a zero trust approach, covering Today's IT landscape; A holistic approach; A zero trust strategy; Explore IBM Power; IBM PowerSC 2.0 technology and Seamless integration.

[Link](#)

AI and automation for cybersecurity

Leading AI Adopters are uniting technology and talent to boost visibility and productivity across security operations.

[Link](#)

Analysing IBM i Performance Metrics

In every industry, business-critical processes depend on application performance.

Interruption of real-time processing, customer service delays, and missed SLAs and deadlines are all plausible outcomes with all-too-real consequences.

Uncover the most critical performance analysis and monitoring components in this guide.

[Link](#)

PowerVM Virtual I/O Server

Troubleshooting: Complete Guide To Must Gather LPM Data Collection on PowerVC, VIO, AIX, Linux and IBM I

[Link](#)

Coming soon

- **IBM Spectrum Scale Webinar – Cloud Object Storage**
Register to join the IBM Spectrum Scale Support team for a free-of-charge IBM Spectrum Scale Webinar that will discuss Cloud Object Storage in IBM Spectrum Scale ([details](#)). There is an AP session (Thursday September 8, 2022: 13:00-14:00 UTC +10)
[Register](#)

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Redbooks and Redpapers

- **IBM Power S1014, S1022s, S1022, and S1024 Technical Overview and Introduction**, Redpaper, revised: August 4, 2022
[Link](#)
- **IBM Power E1050 Technical Overview and Introduction**, draft Redpaper, revised: July 27, 2022
[Link](#)
- **IBM FlashSystem 7300 Product Guide**, draft Redbook, revised: July 29, 2022 ISBN: 0738460605
[Link](#)

- **IBM Power Systems Private Cloud with Shared Utility Capacity: Featuring Power Enterprise Pools 2.0**, draft Redbook, revised: August 4, 2022 ISBN: 0738460044
[Link](#)

IBM alerts and notices

AIX alerts:

- **AIX and the VIO Server are vulnerable to arbitrary command execution (CVE-2022-1292 and CVE-2022-2068) or an attacker may obtain sensitive information (CVE-2022-2097) due to OpenSSL**
A vulnerability in OpenSSL could allow a remote attacker to execute arbitrary commands (CVE-2022-1292 and CVE-2022-2068) or obtain sensitive information (CVE-2022-2097). OpenSSL is used by AIX as part of AIX's secure network communications.
[Link](#)
- **IJ41378: GENSYMS CAN'T HANDLE ARCHIVE WITH SAME MEMBER NAMES**
The *gensyms* command reports address which is 32-bit library region as 64-bit.
[Link](#)
- **IJ41456: ALT_DISK_MKSYMB FAIL TO INITIALIZE SOME LVS**
alt_disk_mkysyb with mkysyb having encrypted LVs, when restored on another system, it didn't initialized the LVs that didn't have /dev entries.
[Link](#)
- **IJ41435: STRFTIME_L RETURNED INCORRECT FORMATTED STRING**
strftime doesnt work as expected for %Y %Y returns incorrect format string.
[Link](#)
- **IJ41457: FIX FOR CACHEFS ERROR LOGGING.**
System crash or garbage data being logged with cachefs error logging.
[Link](#)
- **IJ41338: RESTORE MAY NOT EXTRACT FILE ARCHIVED BY FILE SYSTEM**
The restore command may not extract file or directory in archive, which is archived by file system with the backupcommand. If there are a huge number of files and directories on the filesystem archived, the below message may appear during restore.

```
# usr/sbin/restore -rqv -f /path/to/filesys.backup deleted hard link  
./path/to/dir1 to directory ./path/to/dir0
```


Or report duplication of inode number for files and directories with the below command

```
# restore -Tqv -f /path/to/filesys.backup
```


[Link](#)
- **IJ41459: DOUBLE UNLOCK IN COMMON CLIENT CREATE ROUTINE FUNCTION**
Unlocking an unlocked mutex might result in undefined & undesired behaviour.
[Link](#)

- **IJ41451: LKU: SURROGATE CRASHING DURING NFS SWAP DEVICE CREATION**
unresponsive IPv6 NFS server may lead to a crash during LKU
[Link](#)
- **IJ41430: UPDTVPKG MAY FAIL IF /USR/BIN/UNAME NOT FOUND FIRST IN PATH ENV**
Running "updtvpkg" command throws these error messages. uname: invalid option – 'W'. Try 'uname --help' for more information.
[Link](#)
- **IJ41431: RENAME PHYSICAL VOLUME CAUSING LOSS OF DISK**
Using the rendev command with a back slash in the new device name will leave the device in an unconfigured state.
[Link](#)
- **IJ41444: SYSTEM CRASH DURING LU**
LU fails with a system crash with a stack traceback similar to
Y007CA004`vnop_hold+000164 (0000000000000000 Y???)
Y007C2588`chkptWithHandle+000048 (??)
Y00A36554`IPRA.\$ld_checkpoint_populate_le_details+000534
(??,??)
...
[Link](#)
- **IJ41466: MEMORY LEAK OF CACHE STRUCTURES IN IP_OUTPUT PATH**
There is an issue with the link to this fix, Found the following APAR.
- **IJ41401: MEMORY LEAK OF CACHE STRUCTURES IN IP_OUTPUT PATH**
A customer may experience a network memory loss where any socket creation will fail.
[Link](#)
- **IJ41446: CACHED ROUTE POOL NEEDS TO INITIALIZE ENTIRE ARRAY**
There is an issue with the link to this fix, Found the following APAR.
[Link](#)
- **IJ41397: CACHED ROUTE POOL NEEDS TO INITIALIZE ENTIRE ARRAY**
A customer could experience a crash with the following profile:
larx_patch_candseh+000018 ()
drw_lock_write+00028C (??)
rtpool_get+000048 ()
rtalloc_gr_cached+000090 (??, ??, ??, ??, ??, ??)
[Link](#)
- **IJ41449: CRASH ON DEBUG KERNEL IN VM_INITPRIVSEG**
System crash in vm_initprivseg, on DEBUG kernel only.
[Link](#)
- **IJ41428: KSH93 HANG WHEN RECEIVING SIGIO**

ksh93 in interactive mode or in scripts using a trap on EXIT, will hang when receiving an SIGIO signal.

The procstack or dbx stack will show :

```
0x090000000000401b4 pause() + 0x1f4
0x00000000100064e0c sh_done(??, ??) + 0x1ec
0x00000000100001ab8 sh_main(??, ??, ??) + 0x418
0x00000000100000494 main(??, ??) + 0x34
0x000000001000002b0 __start() + 0x70
```

[Link](#)

- **IJ41463: LPAR CRASHED @__MEMMOVE64+000088**

System crash in tcp_ndbg_change when tcp_ndebug is changed using the "no" command.

[Link](#)

- **IJ41442: THE BOOTLIST COMMAND FAILS FOR ISCSI DISKS**

The bootlist command fails with an invalid attribute error when a "pathid" attribute is specified for an ISCSI disk.

[Link](#)

- **IJ41464: THE RESTVG IS FAILING TO RESTORE PKS AUTH AS RBAC**

As the RBAC user, restvg failed to add PKS authentication method during restore of data VG.

[Link](#)

- **LI82699: SECURITY VULNERABILITIES DUE TO WEAK SSL/TLS KEY EXCHANGE ALGORITHM**

Security vulnerabilities due to Weak SSL/TLS Key Exchange algorithm

[Link](#)

- **IJ41606: LIVE UPDATE MAY ALLOW ENCRYPTED DUMPS ON UNENCRYPTED DUMP DEVS**

Live Update will succeed in the case of non-rootvg encrypted dump volumes, but unbeknownst to the customer it is using an unencrypted device

Note this fix link is broken, I am still investigating this one

[Link](#)

- **IJ41607: LPAR GOT HUNG @IPOLL_WAIT_TEST+000000**

System hang in ip6_setmoptions due to serialization. The function ip6_setmoptions might be pointing to itself in a race condition situation where it checks ia_hash->NEXT==NULL without holding IN6IFADDR_HASHCHNHEAD_WRITE_LOCK when 2 process on different CPU's working on the same index.

[Link](#)

- **IJ41554: ABEND FROM XFIDTONAME DUE TO NULL VNODE**

System can crash with following stack:

```
[000000000069C600] bad_vnode_bad_caller
[00000000006ABEAC] xfidToName@AF18_14+8C
[00000000006AA5C0] openpnp+BA0
[00000000006AAAEC] openpath+28C
[00000000006AAED8] copen+338
```

[0000000006A97C4] kopen+24

Happens when FS is being unmounted in parallel of file being accessed.

[Link](#)

- **IJ41537: CLARIFY DOCUMENTATION FOR ADDING VIOS MANAGEMENT OBJECTS IN NIM**

In the following documentation: <https://www.ibm.com/docs/en/aix/7.2?topic=environment-adding-vios-management-objects-nim>

The provided flags -a platform= and -a netboot_kernel= are not valid flags.

[Link](#)

- **IJ41519: ISSUE IN ERRINSTALL/PASS1.C - CURRENT VAR "LEN" TOO SHORT**

errpt 0315-021 Unable to open error message catalog
/usr/lib/nls/msg/ja_JP/codepoint.cat

[Link](#)

- **IJ41564: CREATE MAX_WQ_THREADS IN URH AND CACHE ASYNC.**

When lpar has above 256 cpus during the boot, when caching is active for target disks, errpt entries may be shown indicating memory allocation issues.

[Link](#)

- **IJ41565: REMOVE DEPENDENCY ON LIBBCERT.A**

Not applicable, so removed linkage with libbcert.a

[Link](#)

- **IJ41568: TIMING ISSUE - ICMP UNREACHABLE MIGHT CRASH THE SYSTEM**

System crash in icmp_input stack trying to use a invalid route entry and never un-ref it which also leads to mem leak.

[Link](#)

- **IJ41569: ZLIBNX ISSUES WITH DEFLATEPARAMS() AND INFLATESETDICT()**

zlib API function deflateParams can fail to compress buffered input with the old level and strategy.

zlib API function inflateSetDictionary does not set compression dictionary, subsequent inflate() calls may return failure.

[Link](#)

- **IJ41603: CRASH VETHLPAR2 WHILE RUNNING WORKLOAD ON IT AND V**

System crash with below stack:

```
Ý0000950C".simple_lock+00000C ()  
Ý0000950C".simple_lock+00000C ()  
ÝF10009D5B040E744"pts_close+000AE4 (??, ??, ??)  
ÝF10009D5B01C7AD0"close_wrapper@AF26_6+0001D0 (??)  
ÝF10009D5B01B7C70"csq_protect+0003B0 (??, ??, ??, ??, ??, ??)  
ÝF10009D5B01ECFB8"osr_pop_subr+0000D8 (??, ??)  
ÝF10009D5B01C1BB0"osr_close_subr+0002F0 (??)  
...
```

- [Link](#)
IJ41604: KRPC SOCKET BIND NOT RELEASING LOCK IN ERROR PATH
Possible hang or undefined behavior while using autofs.
- [Link](#)
IJ41727: UNABLE TO OPEN LOCALE JA_JP CODEPOINT CATALOG
For LANG=Ja_JP, errpt won't show the description details.
- [Link](#)
IJ41630: 0N7 SYSDUMPSTART -P HUNG ON VIOS
trigger a dump, this might cause dump hang
- [Link](#)
IJ41785: ERRLOGADAPTER DIAGNOSTICS CAUSE INTRPPC_ERR/EXINTRFLIH IN
Diagnostics for serial adapter features 5277 and 5785 can falsely detect a problem. An INTRPPC_ERR error log entry is created for SRN A24-2576 suggesting to replace FRU 46K6734.
- [Link](#)
IJ41675: CAA TIMERS MAY CAUSE ABEND DURING SHUTDOWN
A node may be halted by KERNEL_ABEND during shutdown.
- [Link](#)
IJ41775: LPAR GOT HUNG @KRLOCK_CONFER_NORESTART
LPAR got hung with some thread stacks showing
krlock_confer_norestart/krlock_timeout:
KDB(0)> f
pvthread+105800 STACK:
Y0001151C"krlock_confer_norestart+000000 ()
Y00669D14"krlock_timeout+000354 (??, ??, ??)
Y00740D84"dlock_krlock_acquire+0003A4 (??, ??, ??, ??)
Y00741D48"simple_dlock_timeout+000568 (??, ??)
...
[Link](#)
- **IJ41732: ENTDENI03**
System crash with stack tcp_output ,tcp_input ,ipintr_noqueue functions.
[Link](#)
- **IJ41733: KERNEL HANG IN THE UIPC_SLOWTIMO THREAD.**
A customer may experience a kernel hang. The function in question is called uipc_slowtimo. The link to this fix is broken, investigating..
[Link](#)
- **IJ41734: OSTD_MEM_EXPAND NEEDS TO CHECK FOR PROPER CONTEXT**
You will see a callstack similar to the following:
abend_trap+000000
IPRA.\$xmalloc_backend+000E88
xmalloc+0002F0
ostd_mem_expand+0001A0

Netintr+00030C
 netisr_thread+000020
 threadentry+000088

[Link](#)

- **IJ41778: TRYING TO BIND AN INVALID SOCKET MIGHT RESULT IN SYSTEM CRASH**

System crash with stack trace

disable_lock+00007C ()
 in6_pcbbind_dyn+001550 (??, ??, ??)
 tcp_usrreq+0006DC (??, ??, ??, ??, ??)
 sobind+000260 (??, ??)

[Link](#)

- **IJ41789: NETINET/IN_EPHEMERAL.H MISSING IN 2230A_73B**
 When building kernel api's might fail with not found. This link is broken, investigating.

[Link](#)

- **IJ41736: MKPS -K IS WORKING FOR HELPER/NFS TYPE**

Error message fails to appear when mkps -k is used on non lv.

[Link](#)

This link is broken, See: IJ41861: MKPS -K IS WORKING FOR HELPER/NFS TYPE

[Link](#)

- **IJ41790: ASO INCREASE DOMAIN CONSUMPTION THRESHOLD**

When ASO is active, workload may not get optimized for cache affinity.

[Link](#)

- **IJ41673: SRC_TRYX, SRC_RSTRT ERRLOG ENTRIES WITH ASO IN VIOS ENVIRONMENT**

ASO logs following error log entries in VIOS environment after upgrading to 3.1.3.21.

```
SRC      P SRC_TRYX      aso
SRC      I SRC_RSTRT    aso
SRC      I SRC_RSTRT    aso
```

The above error log entries can be seen after each reboot and can also be seen after starting the aso manually using following command:

```
/usr/bin/startsrc -s aso
```

[Link](#)

- **LI82718: DATABASE ENDPOINTS DO NOT DISPLAY PROPERLY**
 App Connect Professional Database Endpoints in the project do not display the properties.

[Link](#)

- **IJ41903: ZLIBNX COMPRESSION FAILURES WITH DEFLATECOPY AND Z_FULL_FLUSH**

Applications linking with zlibNX may fail compression when using the deflateCopy function or the Z_FULL_FLUSH option.

[Link](#)

- **IJ41904: SYSTEM CRASH WHEN CALLING NETINFO () SYSTEM CALL**

System crash with stack trace

```
netinfo_ifnet+0001F4 (000000000000000E, 0000000000000000,  
netinfo+0000B8 (??, ??, ??, ??, ??, ??)  
netinfo+00018C (??, ??, ??, ??)
```

[Link](#)

- **IJ41883: SYSTEM CRASH WHEN USING IPV6**

System crash with stack

```
.disable_lock+000070 ()  07E7EF7C`in_pcbbind+00095C (??, ??)  
 07E7EF7C`in_pcbbind+00095C (??, ??)  
 07EFCDBC`in6_pcbbind_dyn+0016DC (??, ??, ??)  
 07F17E7C`tcp_usrreq
```

[Link](#)

- **IJ41889: MISMATCH IN SSP CLUSTER INFO BETWEEN SSP PCM PREFERE**

cluster id is missing in SSP data collection in srcloop

[Link](#)

- **IJ41802: NIM SYNC DOES NOT WORK WITH 10+ INTSALL INTERFACES**
If the alternate master definition has 10 or more install interfaces, the sync will fail to recover the primary interface and will recover the last interface instead.

[Link](#)

- **IJ41880: CREATE MAX_WQ_THREADS IN URH AND CACHE ASYNC.**
When lpar has above 256 cpus during the boot, when caching is active for target disks, errpt entries may be shown indicating memory allocation issues.

[Link](#)

- **IJ41928: ACTIVEN VALIDATE_THREAD_RUNQ WHEN ACTIVE SYSTEM OPTIMIZER**

The home run queue of permanently borrowed threads is not updated when the thread is detached from its advisory resource set (RSET) by the Active System Optimizer (ASO).

[Link](#)

- **IJ41895: LIVE UPDATE FAILS WITH ENCRYPTED LVS ON ROOTVG**
1430-284 Failed to copy the current rootvg to an alternate disk (alt_disk_copy command). 1430-026 An error occurred while creating rootvg for surrogate. 1430-045 The live update operation failed.

[Link](#)

- **IJ41930: LOCALTIME RESULT IS RESET TO 0 AFTER LLVUPDATE**
Programs that use the result of localtime() may have garbage in that results after llvupdate is run.

[Link](#)

- **IJ41942: SYSTEM CRASH OBSERVED MICROCODE WITH EEH**

Bus errors during adapter microcode update can cause system into error state or may leads to system crash.

[Link](#)

- **IJ41274: ADD FLEXCTL SUPPORT TO VFC CLIENT ADAPTER DRIVER (VFC_KPROC)**

Kernel thread latency may be high in certain scenarios thereby impacting IO performance in VFC client driver (vfc_kproc)

[Link](#)

- **IJ41961: IN RARE INSTANCE JFS2 AIO_RETURN CAN RETURN STALE VALUE**

In rare instances aio_return can return a stale value causing application to error out. This is a very rare race condition that is not seen very often.

[Link](#)

- **IJ41962: AIO ON SINGLE-CPU LPAR MAY HANG**

Doing multiple simultaneous AIO requests on a machine with one logical CPU may result in a deadlock with a thread in get_free_server() and another in do_requests().

[Link](#)

- **IJ41900: STATUS OF SERVICE AND SUPPORT PROXY NOT CHANGING ON UI**

Proxy status incorrectly displayed in UI

[Link](#)

- **IJ41966: PEN TEST FAILURE**

System crash.

[Link](#)

- **IJ41848: NIMADM WITH NFSV4 MAY FAIL IF RPC.MOUNTD IS DISABLED.**

If rpc.mountd is disabled NIMADM may fail with:

```
+-----+
Executing nimadm phase 3.
+-----+
NFS mounting client's alt_inst filesystems on the NIM master:
showmount: 1831-263 RPC: 1832-008 Timed out 0505-157 nimadm: Error
nfs mounting alt_inst filesystems.
Cleaning up alt_disk_migration on the NIM master.
```

[Link](#)

Have a safe and productive September, chat soon.
Red, Belisama