

October Newsletter

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Greetings all,

I hope you are all keeping well and being able to join the virtual TechU this year? There have been some great sessions from Grover on AIX, Shawn and Mike on HA management and options and Faraz and Tim on PowerSC updates. While Alex and Mo have done a superb job, it is a shame that we cannot engage in person this year – but this is way better than not learning at all.

A few updates to share

- The HA/DR redpaper mentioned in last month's newsletter should be out by the end of this month.
- I have also been working with PowerSC 2.0 (fix pack 2.0.0.1 is out). Great to see improvements in Availability, fapolicyd support for Linux and EDR has been introduced (sorry Endpoint Detection and Response).
- Testing AIX 7.3 (beta programme) and checking PowerSC and PowerSC MFA operation.
- TechU!
- There have been some changes in the IBM Community – have you updated your profile and kept up with your communities?

Quick bites

Best Practices for AIX in a SAN Environment

- Part 1: Jose Luis Ortega review major best practices for AIX in a SAN environment, such as storage systems, FC connectivity and multipathing recommendations.
https://techchannel.com/IT-Strategy/06/2021/best-practices-aix-san?_hstc=47052536.70dadefc3389af353e3059638f98958d.1633658946600.1633658946600.1633658946600.1&_hssc=47052536.1.1633658946601&_hsfp=938672151
- Part 2: Jose Luis Ortega on best practices for I/O configurations from an AIX perspective.
<http://standby.ibmssystemsmag.com/SMB/07/2021/san-best-practices-i-o-configurations>

Coming soon

- **IBM Community festival**

It is about time there was a Community event! - An online gathering for IBM Community members - user groups, clients, technology experts, distinguished engineers, & everyone else - to exchange technical knowledge & information about IBM products & services? Well it is happening - The IBM Community Festival 2021 will be from 8-17th November on IBM Expert TV, see:

<https://community.ibm.com/community/user/blogs/doug-moran/2021/09/23/join-us-for-the-november-community-festival>

Central European time (CET, UTC+1) 12:00—16:00;

Eastern Time, U.S. (ET, UTC-5) 10:00—16:00;

Hong Kong Time (HKT, UTC+8) 08:00—11:00;

- **ASEAN Power (AIX, i, Linux) Meetup**

The November meeting (announced soon), will feature Chris Gibson talking about his experiences with AIX 7.3 beta.

In case you missed

- **IBM Spectrum Scale Webinar: Information Lifecycle Management (ILM)**

This webinar is part of the series hosted by IBM Spectrum Scale Support and Development teams to share expertise and knowledge of the Spectrum Scale product, as well as product updates and best practices.

For recording / presentation:

<https://ibm.box.com/s/o7gd1q0zrnn6cb09d4be2xnlq1alba5l>

Redbooks and Redpapers

- **IBM Power E1080 Technical Overview and Introduction**; Redbook, revised: September 30, 2021,

<http://www.redbooks.ibm.com/abstracts/redp5649.html?Open>

- **IBM DS8000 and Transparent Cloud Tiering (DS8000 Release 9.2)**; Redbook, Published: September 30, 2021

<http://www.redbooks.ibm.com/redpieces/abstracts/sg248381.html?Open>

- **IBM Power Systems Private Cloud with Shared Utility Capacity Featuring Power Enterprise Pools 2.0**; Redbook, Revised: September 29, 2021

<http://www.redbooks.ibm.com/abstracts/sg248478.html?Open>

- **IBM Power Systems Private Cloud with Shared Utility Capacity: Featuring Power Enterprise Pools 2.0**; Redbook, Revised: October 7, 2021

<http://www.redbooks.ibm.com/abstracts/sg248478.html?Open>

- **IBM SAN Volume Controller Best Practices and Performance Guidelines**; Redbook, Revised: October 13, 2021

<http://www.redbooks.ibm.com/abstracts/sg248502.html?Open>

- **IBM FlashSystem Best Practices and Performance Guidelines**; Redbook, Revised: October 13, 2021

<http://www.redbooks.ibm.com/abstracts/sg248503.html?Open>

- Innovate at Scale and Deploy with Confidence in a Hybrid Cloud Environment; Redpaper, Revised: October 20, 2021
<http://www.redbooks.ibm.com/abstracts/redp5621.html?Open>

IBM Alerts and notices

ESS Updates:

- **Alert: ESS may experience data loss during sudden enclosure power cycle**

Abstract:

ESS may experience data loss during sudden enclosure power cycle.

Problem:

ESS Spectrum Scale RAID software requires that all drives within its RAID array operate such that write operations acknowledged by the drive to the host are committed to the drive's persistent storage. This setting is governed by the write cache enable (WCE) parameter in the SCSI caching mode page 0x08. The correct setting for all ESS HDD drives within all enclosures should be WCE=0, meaning that volatile write caching is disabled.

If an ESS is operated with WCE values other than 0, then the system is at risk of data loss and file system corruption in the event of an unexpected enclosure power loss.

While the occurrence of a power loss may be rare, it is recommended that all customers running an ESS with HDD drives verify their systems with the procedure listed below.

See:

https://www.ibm.com/support/pages/node/6485915?myns=s033&mynp=OCSTHMCM&mync=E&cm_sp=s033--OCSTHMCM--E

- **Alert: possible undetected data corruption when an application writes to pre-allocated file blocks using direct I/O mode**

Abstract

IBM has identified a problem with the IBM Spectrum Scale 5.1.1 code level (5.1.1.0 to 5.1.1.3; ESS 6.1.1.0 to 6.1.1.2), which can result in undetected data corruption when an application uses the direct I/O mode to write to a pre-allocated file block.

Users Affected:

Users may be affected if all conditions below are true :

1. The file is replicated (the number of data replicas of the file is greater than 1)
2. Application writes to the file that uses direct I/O mode.
3. The direct I/O write size is large enough to cover at least three blocks, of which the beginning and ending blocks are normal blocks (not holes or pre-allocated blocks).

See:

https://www.ibm.com/support/pages/node/6495047?myns=s033&mynp=OCSTXKQY&mynp=OCSTHMCM&mync=E&cm_sp=s033--OCSTXKQY-OCSTHMCM--E

- **Technote: IBM Elastic Storage System 3000 may see reboot while running heavy I/O workload**

In an IBM ESS 3000 system, the pemsmod module may hit a hard lockup which may lead to a kernel crash resulting in a system reboot.

The vmcore-dmesg.txt will have this message:

Kernel panic - not syncing: Hard LOCKUP

CPU: 27 PID: 14563 Comm: pemsRollUpQueue Kdump: loaded Tainted: G

Environment

All prior versions of ESS 3000 before V6.1.1.2.

Resolving The Problem

Users running IBM ESS 3000 V6.0.0.0 through V6.1.1.1, should apply IBM ESS 3000 V6.1.1.2 or later, available from Fix Central at:

[https://www.ibm.com/support/fixcentral/swg/selectFixes?parent=Software%20defined%20storage&product=ibm/StorageSoftware/IBM+Elastic+Storage+Server+\(ESS\)&release=6.1.0&platform=All&function=all](https://www.ibm.com/support/fixcentral/swg/selectFixes?parent=Software%20defined%20storage&product=ibm/StorageSoftware/IBM+Elastic+Storage+Server+(ESS)&release=6.1.0&platform=All&function=all)

See:

[https://www.ibm.com/support/pages/node/6493365?](https://www.ibm.com/support/pages/node/6493365?myns=s033&mynp=OCSTHMCM&mync=E&cm_sp=s033- -OCSTHMCM- -E)

[myns=s033&mynp=OCSTHMCM&mync=E&cm_sp=s033- -OCSTHMCM- -E](https://www.ibm.com/support/pages/node/6493365?myns=s033&mynp=OCSTHMCM&mync=E&cm_sp=s033- -OCSTHMCM- -E)

Spectrum Scale Updates:

- **Version Recommendation Preventive Service Planning Preventive Service Planning**

This generalized recommendation is made available to assist clients in implementing a code update strategy. It is a full field perspective, and as such, a customized recommendation that takes into account specifics such as business upgrade windows, length of time since last update, decommission plans. might require assistance from local support teams. In general, recommendations assume planning updates annually.

IBM Spectrum Scale	Minimum Recommended Level	Latest Level
IBM Spectrum Scale	5.0.x stream: 5.0.5.6 [Mar 2021] 5.1.x stream: 5.1.0.3 [Mar 2021]	5.0.x stream: 5.0.5.102 [Sept 2021] 5.1.x stream: 5.1.2.0 (Oct 2021)
IBM Spectrum Scale for ESS	5.0.x stream: ESS 5.3.7.1 [May 2021] 5.1.x stream: ESS 6.1.0.13 [May 2021]	5.0.x stream: ESS 5.3.7.2 [Jul 2021] 5.1.x stream: ESS 6.1.1.2 [Sep 2021]
IBM Elastic Storage System 3000 and 5000	5.0.x stream: ESS 6.0.2.1 [May 2021] 5.1.x stream: ESS 6.1.0.1 [May 2021]	5.0.x stream: ESS 6.0.2.2 [Jul 2021] 5.1.x stream: ESS 6.1.1.2 [Sep 2021]

IBM Elastic Storage System 3200 5.1.x stream: ESS 6.1.1.0 [May 2021] 5.1.x stream: ESS 6.1.1.2 [Sep 2021]

Notes:

1. The EOS date for the 4.2.x release is Sept, 2020 as documented on the Software lifecycle page. The final 4.2.3 PTF was 4.2.3.24. Upgrading to V5 is detailed in IBM Documentation along with a pictorial overview of the upgrade process flow by using the installation toolkit.
2. Clients upgrading to IBM Spectrum Scale version 5.0.5.2 and 5.0.5.3 should read the Flash before upgrading as the previously Active AFM DR

Relationships might get pushed to unmounted state - halting data replication from Production site to DR Site.

3. If upgrading from ESS 5.3.x.x, the minimum required version is ESS 6.1.1.2. This helps avoid issues during the upgrade. For more information, see IBM Elastic Storage Server Alert : Modifications to the ESS support matrix.

See:

https://www.ibm.com/support/pages/node/707017?myns=s033&mynp=OCSTXKQY&mynp=OCSTHMCM&mync=E&cm_sp=s033--OCSTXKQY-OCSTHMCM--E

Keep safe and catch you in November, at our Meetup, if not before.
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