BullSequana Support
Technical Support Bulletin

Product	SUBJECT		Dossier	Number	Rev
BullSequana Server	SDDC+1 issue with Page Retirement feature		400	19-02	1
Issue Date	**Writer**	**Approved by**	**Domain**	**Exp. Date**	
June 07, 2019	M. MARTIN	P. ARBENZ	Hardware BIOS	Undef.	

Description:

Atos regularly improves the BIOS firmware of the BullSequana servers with advanced RAS features. The "Page Retirement Feature" was implemented in TS7 & TS20 to manage memory pages when corrected errors occur.

The Page Retirement technique allows memory pages suffering from correctable errors and relocatable clean pages suffering from uncorrectable errors to be removed from use in the virtual memory system without interrupting user applications. It is a collaborative activity between Operating System and BIOS.

Issue:

The analysis of the BIOS Page Retirement mechanism, used with ESXi Operating Systems, reveals a wrong behavior and started to TAG the DIMM after only 20x corrected errors.

When the DIMM Device Tagging is started and managed by the SDDC+1 algorithm, there is a risk of conflict of access with the HOB (Hand-Off Block) during runtime and a potential risk of Operating System hang.

Workaround:

Atos Support recommends disabling the "Page Retirement" and "SDDC+1" features on S200/S400/S800 running in TS07.02 and TS20.2 with the following CLI commands:

./bsmBiosSettings.sh -H <IP> -u <user> -p <pwd> -a set -n 'MEM.SddcPlusOneEn 0'

./bsmBiosSettings.sh -H <IP> -u <user> -p <pwd> -a set -n 'MEM.PageRetireEn 0'

Action Plan:

The BIOS of the TS21, that will be available on July 19, will fix this issue.

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