Rule WLM050: The number of available page slots is low

Finding: CPExpert has determined that the number of page slots available to the Auxiliary Storage Manager (ASM) has become so low that the ASM is danger of running out of slots.

Impact: This finding can have a MEDIUM impact or HIGH impact on the performance of your computer system.

Logic flow: This is a basic finding. There are no predecessor rules.

Discussion: The SRM checks for auxiliary storage shortage at two levels:

- The SRM detects when 70% of the local auxiliary storage slots are allocated. When less than 30% are available the SRM notifies the operator (using message IRA200I) that a shortage of auxiliary storage paging space exists. The SRM will reject LOGON, MOUNT, and START commands until the shortage of auxiliary storage is relieved.

- The SRM detects when 85% of the local auxiliary storage slots are allocated. When less than 15% are available the SRM notifies the operator (using message IRA201I) that a critical shortage of auxiliary storage paging space exists. The SRM will reject LOGON, MOUNT, and START commands until the shortage of auxiliary storage is relieved.

The SRM will attempt to identify address spaces with rapidly increasing auxiliary storage requirements, at both of the above levels. These address spaces will be swapped out (reason code Auxiliary Storage Shortage) until the shortage is relieved.

In order to help prevent an auxiliary storage shortage, CPExpert will produce Rule WLM050 when the available auxiliary storage is less than 50% of the total space allotted. CPExpert thus provides an "early warning" of a potential problem.

Suggestion: CPExpert suggests that additional slots be allocated to the local page data sets.

Reference: MVS Initialization and Tuning Reference, MVS/ESA SP5.1
Section 2.3.9.1.7 (Page Space Shortage discussion)

Please note that while this reference applies to MVS/ESA SP5 (Compatibility Mode), the finding is applicable to versions of MVS after SP5.

The two thresholds described above are controlled by the constants MCCASMT1 (for the low threshold) and MCCASMT2 (for the critical shortage) located in the SRM module IRARMCNS.

