Rule DAS223: NON-DASD DEVICES CONTRIBUTED TO RPS DELAY

Finding: CPExpert has determined that non-DASD I/O devices were attached to a channel path of the volume experiencing missed RPS reconnect delays. These non-DASD I/O devices were busy a significant percent of the time and contributed to the RPS delay.

Impact: This finding can have a HIGH IMPACT on the performance of the device experience the missed RPS reconnect delays. Since this device is used by the "loved one" workload and is the volume with the worst overall performance, this finding can have a HIGH IMPACT on the performance of the "loved one" workload. *This finding applies only to legacy systems (e.g., 3380 devices attached to 3990-2 controllers).*

Logic flow: The following rules cause this rule to be invoked

DAS200: Volume with the worst overall performance
DAS220: Missed RPS reconnect was major cause of I/O delay

Discussion: CPExpert determines whether any non-DASD I/O devices (e.g., tapes drives, etc.) share channel paths with DASD. If missed RPS reconnect delays were a major cause of I/O delay, CPExpert undertakes an analysis of the non-DASD I/O devices sharing channel paths. CPExpert examines the SMF Type 74 information to determine whether these non-DASD devices had a significant connect time to the path.

CPExpert uses a M/M/c queuing model to estimate the amount of missed RPS reconnect delay caused by the path utilization of the non-DASD devices.

Rule DAS223 is produced if the queuing model estimates that path utilization of the non-DASD devices causes more than 10% of the missed RPS reconnect delay.

Suggestion: CPExpert suggests that you eliminate or minimize the impact of the non-DASD I/O devices on the DASD performance by considering the following alternatives:

- Reschedule the workload accessing the non-DASD I/O devices to a period when the data transfer would not cause DASD problems.

- Remove the non-DASD I/O devices from the channel paths serving the DASD devices. This may mean that you must acquire additional channel paths.

    - If neither of the above options are feasible, consider placing only low-utilization (and non-critical) DASD on the paths shared with the non-DASD I/O devices.

