
Rule DAS260: MAJOR CAUSE OF I/O DELAY TO CRITICAL APPLICATION WAS MISSED CACHE READ HITS

Finding: CPEXpert determined that missed cache read hits was the major cause of delay in DASD response to critical applications for the device.

Impact: This finding may have a MEDIUM IMPACT or HIGH IMPACT on the performance of the critical application, on the device, and on the performance of other volumes attached to the cache controller.

Logic flow: The following rules cause this rule to be invoked:
DAS200: Volume with the worst overall performance

Discussion: Cache controllers offer the potential of **significant** reduction in I/O response times. Cache controllers operate by maintaining some amount of data from the volumes being cached in high-speed memory. Please refer to Rule DAS160 for a discussion regarding the performance of cache controllers.

Suggestion: There are several alternatives you should consider:

- There may be other volumes on the cache controller with data access patterns which cause the cache to be full with their data. These volumes may prevent the cache from adequately responding to the I/O requirements of the volume identified by this rule. You may wish to identify these volumes and move them to a non-cached controller.
- Alternatively, applications accessing the volume may be generating seeks which require movement of the arm over a large number of cylinders. If this is the case, then the actions under Rule DAS110 should be reviewed.
- Alternatively, you may wish to consider acquiring another cached controller if all volumes currently being cached are critical and the I/O requests to the identified volume are **not** being delayed because of long seeks.