
Rule CIC184: The size of the Temporary Storage data set may be too small

Finding: CPExpert has determined that the size of the Temporary Storage data set may be too small.

Impact: This finding should normally have a MEDIUM IMPACT or HIGH IMPACT on the performance of the CICS region, particularly with respect to individual tasks.

Logic flow: This is a basic finding, based upon an analysis of the daily CICS statistics.

Discussion: If auxiliary temporary storage is not available when a task requests allocation, the task is either suspended because of a NOSPACE condition, or may have been forced to ABEND.

It is unlikely that a significant number of task ABENDs occur because of inadequate temporary storage. The program developers or production monitors probably would take immediate steps to prevent this situation. However, a task suspend because of inadequate temporary storage may not be so visible.

The number of times auxiliary temporary storage is exhausted is reported in the CICS statistics. CPExpert produces Rule CIC184 if this value is greater than zero when analyzing the daily statistics.

Suggestion: CPExpert suggests that you consider the following alternatives:

- If this is a production CICS region, immediately take steps to resolve the problem.
- If this is a test CICS region, determine whether the problem can be resolved by better testing procedures.
- Increase the amount of auxiliary storage allocated for temporary storage. The auxiliary storage allocated for temporary storage is based upon the data set referenced by the DFHTEMP DD name in the CICS Job Control Language.
- Examine the transactions experiencing suspends or ABENDs because of inadequate temporary storage for their requirements. These transactions may need to be modified to reduce their requirement. In any event, if the transactions are suspended, they

retain their resources and thus may damage the overall performance of other transactions being processed by CICS. If the transactions ABEND, they have unnecessarily used resources up to the ABEND point. In either situation, overall CICS performance is harmed.

NOTE: The significance of this finding depends upon whether the finding is based upon analyzing daily information or based upon analyzing historical information.

- If this finding is based upon an analysis of daily information, the finding may be applicable only to the performance of CICS for this day. Unless you feel that the analysis is generally applicable (or unless the workload processed on this day is particularly critical), please wait until CPExpert performs an analysis of historical information before taking action.
- If this finding is based upon an analysis of historical data covering a prolonged period, the finding is more definite than a tentative finding based upon analysis of only a single day's data.

Reference: *CICS/OS/VS Version 1.7 Performance Guide*: page 79 and pages 264-268.

CICS/MVS Version 2.1.2 Performance Guide: pages 193-197 and page 408.

CICS/ESA Version 3.1.1 Performance Guide: page 125 and pages 259-263.

CICS/ESA Version 3.2.1 Performance Guide: pages 231-235 and page 339.

CICS/ESA Version 3.3.1 Performance Guide: pages 249-253 and page 357.

CICS/ESA Version 4.1.1 Performance Guide: Section 4.10.1 and Appendix A.1.26.

CICS/TS Release 1.1 Performance Guide: Section 4.10.1 and Appendix 1.1.25.

CICS/TS Release 1.2 Performance Guide: Section 4.10.1 and Appendix 1.1.26.

CICS/TS Release 1.3 Performance Guide: Section 4.14 and Appendix 1.1.29.

CICS/TS for z/OS Release 2.1 *Performance Guide*: Chapter 26 (CICS temporary storage) and Appendix A (Table 124).

CICS/TS for z/OS Release 2.1 *Performance Guide*: Section 4.13.1 Tuning the use of CICS temporary storage and Appendix 1.1.29. |