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**Rule CIC108:** Maximum Task (MXT) specification may be too small

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**Finding:** CPExpert has detected that the value specified for the MXT operand in the System Initialization Table (SIT) may be too small.

**Impact:** This finding has a NO IMPACT on the performance of the CICS region, but it is an “early warning” that a problem might occur.

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

**Discussion:** The MXT operand in the System Initialization Table (SIT) limits the total number of concurrent tasks in the CICS region. Please refer to Rule CIC101 for additional information about the MXT operand.

Specifying a “correct” value for the MXT keyword is a balance between (1) specifying a value that is too high and (2) specifying a value that is too low.

If the MXT value is too high, storage is wasted and (with Goal Mode) unnecessary overhead is generated. The logic associated with Rule CIC104 deals with situation in which the MXT value is too high.

If the MXT value is too low, CICS will fail to attach tasks when the number of tasks reaches the MXT value. Rule CIC101 provides an indication of the number of times that the number of active tasks reached the MXT value.

This indication that MXT was reached is acceptable for many CICS regions. However, reaching MXT might be unacceptable for some critical CICS regions. Installation personnel need to be aware of the possibility of a too-low MXT value for critical CICS regions. The logic associated with Rule CIC108 can be used to provide an alert that MXT value might be too low.

CPExpert computes the percent of active tasks as a function of the value of the MXT keyword. When the percent of active tasks is greater than the **PCTMXTHI** guidance variable, CPExpert concludes that the MXT value may be too low. Rule CIC108 is produced to report this conclusion.

The default value for the PCTMXTHI guidance variable is 100%, which effectively “turns off” the logic in Rule CIC108 (the percent cannot be higher than 100%). You can specify an appropriate percentage if you have critical CICS regions and wish to be alerted that the number of active tasks may be in danger of reaching the MXT specification. CPExpert will produce Rule CIC108 when the number of active tasks reaches the

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specified percent of MXT.

**Suggestion:** CPExpert suggests that you review the information provided by Rule CIC108 and determine whether the number of active tasks is likely to reach the MXT value specified in the SIT.

The value for the MXT operand normally should be sufficiently high that tasks are not restricted by MXT. This particularly is true for important CICS regions, unless you have deliberately specified a lower MXT value for storage constraint considerations.

**Reference:** CICS/OS/VS Version 1.7 - Not applicable.

CICS/MVS Version 2.1.2 - Not applicable.

*CICS/ESA Version 3.1.1 Performance Guide:* page 53, page 295, and page 307.

*CICS/ESA Version 3.2.1 Performance Guide:* page 191, page 203, and page 271.

*CICS/ESA Version 3.3.1 Performance Guide:* page 201, page 221, and page 291.

*CICS/ESA Version 4.1.1 Performance Guide:* Section 4.7.3, Appendix A.1.4, and Appendix C.7

*CICS/TS Release 1.1 Performance Guide:* Section 4.7.3, Appendix 1.1.28, and Appendix 4.8.

*CICS/TS Release 1.2 Performance Guide:* Section 4.7.4, Appendix 1.1.4, and Appendix 1.1.29.

*CICS/TS Release 1.3 Performance Guide:* Section 4.11.3, Appendix 1.1.5, and Appendix 1.1.32.

*CICS/TS for z/OS Release 2.1 Performance Guide:* Chapter 23 (MXT) and Appendix A (Table 131).

*CICS/TS for z/OS Release 2.2 Performance Guide:* Section 4.10.3 Setting the maximum task specification (MXT)