
Rule CIC211The number of Transient Data strings may be too low

Finding: CPExpert believes that the number of strings specified for Transient Data destinations may be too low.

Impact: This finding should normally have a LOW IMPACT or MEDIUM IMPACT on the performance of the CICS region.

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

Discussion: Transient data is used for a variety of purposes within CICS (e.g., servicing request from CICS, servicing requests from user tasks, passing requests to the operating system, initiating tasks based on queue trigger level specifications, etc.). Transient data destinations are defined by the DFHDCT macros. Transient data may be directed to extrapartition destinations or to intrapartition destinations.

- Extrapartition destinations are used to specify data that is outside the CICS region, but which are allocated to CICS. Extrapartition destinations are used for two purposes:
 - Sending data outside the CICS region. For example, data created by a transaction may be sent to an extrapartition destination to be processed a batch job.
 - Retrieving data from outside the CICS region. For example, input to a transaction may be received from a terminal, using an extrapartition destination.
- Intrapartition destinations are used for data that is to be stored temporarily. An intrapartition destination may be a terminal, a file, or another system. All intrapartition destinations are retained in a single VSAM data set. Consequently, intrapartition destinations require allocation of VSAM buffers and strings. The performance of intrapartition destinations is affected by the number of buffers and the number of strings.

VSAM requires a string for each concurrent file operation to intrapartition destinations. The number of strings is explicitly specified using the TD operand in the System Initialization Table (SIT). The default is three strings for the intrapartition destinations (recall that all intrapartition destinations reside in a single VSAM file).

An intrapartition request is queued if the number of concurrent requests exceeds the number of available strings. The CICS statistics report the number of intrapartition requests that must wait for VSAM strings.

CPEXpert produces Rule CIC211 if the CICS statistics revealed that intrapartition requests must wait for VSAM strings, and if CICS did not exhibit a short-on-storage condition. CPEXpert provides information regarding the number of strings allocated for intrapartition destinations.

Suggestion: This performance constraint can be easily relieved by increasing the number of strings specified in the SIT. CPEXpert suggests that you increase the number of strings assigned to intrapartition transient data.

Reference: *CICS/MVS Version 2.1.2 Performance Guide*: pages 198-202, page 345, and pages 403-405.

CICS/ESA Version 3.1.1 Performance Guide: pages 138-143 and pages 263-268.

CICS/ESA Version 3.2.1 Performance Guide: pages 235-241 and pages 349-353.

CICS/ESA Version 3.3.1 Performance Guide: pages 254-255 and pages 367-371.

CICS/ESA Version 4.1.1 Performance Guide: Section 4.10.2 and Appendix A.1.32.

CICS/TS Release 1.1 Performance Guide: Section 4.10.3 and Appendix 1.1.29.

CICS/TS Release 1.2 Performance Guide: Section 4.10.3 and Appendix 1.1.30.

CICS/TS Release 1.3 Performance Guide: Section 4.14.3 and Appendix 1.1.33.

CICS/TS for z/OS Release 2.1 Performance Guide: Chapter 26 (CICS Transient Data) and Appendix A (Table 139).

CICS/TS for z/OS Release 2.2 Performance Guide: Section 4.13.3 (Optimizing the performance of the CICS transient data (TD) facility) and Appendix 1.1.33. |