
Rule CIC155: The number of concurrent autoinstall terminals may be too small

Finding: CPExpert has determined that the number of concurrent Autoinstall terminals may be too small.

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

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

Discussion: The Automatic Installation of Terminals (Autoinstall) is controlled by the AUTINST operand in the SIT (for CICS versions before Version 3) and the AIQMAX operand in the SIT (for CICS Version 3).

During Autoinstall processing, CICS will obtain storage to handle each Autoinstall request. This storage is obtained from the control subpool in the Dynamic Storage Area (DSA). The amount of virtual storage obtained will be between 120-250 bytes for a typical Autoinstall request.

The Autoinstall task (CATA) is the principal consumer of CICS resources in the Autoinstall process.

Unless there is a virtual storage constraint, the value specified for the maximum number of concurrent Autoinstall terminals (the AUTINST or AIQMAX operands) should be greater than the number of Autoinstall attempts.

However, if there is a virtual storage constraint or if the CICS region becomes overloaded by the number of concurrent autoinstall tasks, the AUTINST or AIQMAX operands can be used to limit the amount of resources required by the Autoinstall process.

CPExpert did not detect a virtual storage constraint in the data being analyzed. However, the "peak concurrent attempts" in the statistics was as large as the number of concurrent Autoinstall attempts specified in the SIT, and there were some rejected Autoinstall attempts.

Suggestion: CPExpert suggests that you consider increasing the number of concurrent autoinstall terminals by increasing the value of the AUTINST operand for CICS/XA; or the AIQMAX operand for CICS/ESA, CICS/TS for OS/390, or CICS/TS for z/OS.

Of course, you may have previously experienced problems caused by a large number of devices queued for autoinstall. If this should be the case, perhaps no adjustment of the number of autoinstall terminals is appropriate.

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/ESA Version 3.1.1 Performance Guide*, page 43 and pages 224-226.

CICS/ESA Version 3.2.1 Performance Guide, pages 141-143 and page 265.

CICS/ESA Version 3.3.1 Performance Guide, pages 151-154 and page 285.

CICS/ESA Version 4.1.1 Performance Guide: Section 4.3.11 and Appendix A.1.1.

CICS/TS Release 1.1 Performance Guide: Section 4.3.11 and Appendix 1.1.1.

CICS/TS Release 1.2 Performance Guide: Section 4.3.3 and Appendix 1.1.1.

CICS/TS Release 1.3 Performance Guide: Section 4.3.11 and Appendix 1.1.2.

CICS/TS for z/OS Release 2.1 Performance Guide: Chapter 16 (Automatic installation of terminals) and Appendix A (Table 16).

CICS/TS for z/OS Release 2.2 Performance Guide: Section 4.3.11 (Tuning automatic installation of terminals) and APPENDIX 1.1.30.1.