
Rule WLM385: SMF Type 30 (Interval) data was not available

Finding: The service class that missed its performance goal was delayed for an UNKNOWN delay reason. CPEXpert attempted to estimate the amount of UNKNOWN delay that was related to DASD I/O. However, SMF Type 30 (Interval) data was not available for the service class.

Impact: This finding has NO IMPACT. The finding is produced for information purposes to explain that CPEXpert was unable to estimate the amount of DASD I/O using SMF Type 30 (Interval) data. This finding will not apply with OS/390 Release 3 and subsequent releases of MVS, as non-paging DASD I/O delay is reported beginning with OS/390 Release 3.

Logic flow: The following rules cause this rule to be invoked:

Rule WLM300: Service Class was delayed for UNKNOWN delay
Rule WLM301: Server Service Class was delayed for UNKNOWN delay

Discussion: As described in the above rules, the UNKNOWN category of workload delay means that the Workload Manager was unable to identify the cause of the delay. The UNKNOWN delay normally is caused by something over which the System Resources Manager has no control. The IBM documentation explains that this delay category potentially "includes I/O delay, ENQ delay, etc." No information is available about other causes of UNKNOWN delay; the UNKNOWN delay is simply a category of delay that the SRM cannot identify.

CPEXpert has detected that a service class missed its performance goal, and experienced significant I/O delays. The **TYPE30_V** guidance variable in USOURCE(GENGUIDE) was set to "Y" to indicate that SMF Type 30 Interval Recording was turned on and the **TYPE30DD** guidance variable in USOURCE(GENGUIDE) was set to "Y" to indicate that the modification to MXG or MICS had been implemented to collect detailed DASD information.

CPEXpert determined that a service class missed its performance goal, and CPEXpert attempted to analyze SMF Type 30(Interval) data related to the service class. SMF Type 30(Interval) records **were** available for the service class for some RMF intervals. However, CPEXpert could not find any interval records for the service class that had missed its performance goal, **during the interval(s) when the goal was missed**. CPEXpert produces Rule WLM385 to alert you to this situation.

The following example illustrates the output from Rule WLM385:

```
RULE WLM385: SMF TYPE 30 (INTERVAL) DATA WAS NOT AVAILABLE

TSO: SMF interval recording (for SMF Type 30 data) was turned on for
the service class, but the interval records were not available during
the following measurement intervals. Consequently, CPEXpert cannot
evaluate whether the large UNKNOWN delay for TSO (Period 1) could
have been caused by DASD I/O. However, the SMF Type 72 records did
reflect I/O activity for Service Class TSO (Period 1), as shown
below. This I/O activity COULD have caused TSO to miss its response
goal, but CPEXpert does not have sufficient information on which to base
such a conclusion.

                                SMF TYPE 72      TOTAL      AVG  EXCP
MEASUREMENT INTERVAL          TOTAL EXCP COUNT  TRANS      PER TRANS
10:45-11:00,06MAR1995                3582          199          18
```

Suggestion: This finding is produced for information purposes, to let you know that a substantial amount of the service class delay was not accounted for by CPEXpert's analysis.

Two alternatives should be considered:

- **The CPEXpert code has an error.** The code that analyzes the SMF Type 30 records and correlates the result with SMF Type 72 information is relatively complex. It is possible that an error exists in this code. If Rule WLM385 should be produced, please call Computer Management Sciences at (703) 922-7027 .
- **The SMF Type 30 (Interval) records were temporarily turned off.** Rule WLM090 will be produced if no the SMF Type 30 (Interval) records at all were found for the service class missing its goal. Rule WLM385 deals with the situation where some SMF Type 30 (Interval) records were found in the performance data base, but not for the RMF intervals in which the service class missed its goal. An operations situation may exist if interval recording was temporarily turned off.