
Rule DAS380: Applications potentially causing shared DASD conflicts

Finding: CPEXpert lists the applications which might cause shared DASD conflicts.

Impact: This finding is used to assess whether sharing DASD between systems or MVS images caused performance problems, and to identify specific applications which might cause conflicts.

Logic flow: The following rules cause this rule to be invoked:
DAS100: Volume with the worst overall performance
DAS300: Shared DASD caused performance problems

This finding is produced only if the CPEXpert modification to MXG or MICS is installed, so that SMF Type 30(DD) information is available.

Discussion: If CPEXpert determines that there may be DASD conflicts caused by sharing DASD between systems of MVS images, and if the CPEXpert modification to MXG or MICS is installed to collect application/device data, CPEXpert performs further analysis.

CPEXpert analyzes the SMF Type 74 information to acquire the device numbers associated with each VOLSER on every system. This processing is required because, while all systems would refer to a particular device by the VOLSER of the device, each system could reference the device using a different device number.

CPEXpert creates the DASD30DD data set from the Type 30 records, using the modification to MXG or MICS. VOLSER information is not retained in the SMF Type 30 records; device numbers are retained in the SMF Type 30 records. Consequently, CPEXpert must associate the unique device number used by each system, to the VOLSER of the device.

CPEXpert then analyzes the DASD30DD data set created by the modification to MXG or MICS. CPEXpert selects all job steps executing on **other** systems which referenced the device number of the device with the worst performance. For example, if CPEXpert is analyzing System A, CPEXpert would select all job steps executing on System B, System C, etc. if those job steps referenced the device with the worst performance.

CPEXpert includes only references for time intervals when earlier analysis had concluded that shared DASD conflicts might cause a performance problem.

CPEXpert produces a list of applications (listed by SMF Type 30 interval start and end times), ranked descendingly by I/O operations to the device with the worst performance.

Suggestion: Rule DAS380 is provided so you can identify the applications potentially causing shared DASD conflicts. You may wish to take the following actions:

- Reschedule the applications which cause shared DASD conflicts to a different processing time. The shared DASD conflicts may be eliminated or reduced if the applications can be rescheduled.
- Review the data sets on the volume to determine whether the data sets can be moved to other shared volumes (or to non-shared volumes). The shared DASD conflicts may be reduced or eliminated if the **data sets** are not required by systems sharing the volumes.
- Modify the applications causing shared DASD conflicts to reduce or eliminate their use of the data on the shared volume.