Mikihiko Nakao (KEK)
mikihiko.nakao@kek.jp

2019.8.28
Trigger/DAQ workshop at Yonsei
NSM2 version 1997

- **Stricter version control**
  - **New feature:** minimum required version = 1997
  - Anything will lower version will not start from the beginning
  - In daq_slc master branch, deployed through cvmfs
  - Nobody so far complained / questioned

- **No real bug fix yet**
  - Only small update in log file output and log file name
  - Still crashing time to time, but it is expected
Three known problems

- **nsmd2 start-up problem**
  - When multiple nodes are started simultaneously
  - Occurs mostly in COPPERs

- **timeout handling**
  - "timeout" message often seen in nsmd2 log file when nsmd2 crashes

- **corrupt data**
  - Corrupt data received by master nsmd2, remote host may have a problem, but the receiver host aborts
How to reproduce (1)

- a tmux session for >10 COPPERs + a ROPC
- start nsmd2 at once
- check nsminfo2 / log files

at a certain probability, some nsmd2 does not start up
Fix 1 — momentary deputy

- Master/deputy rapidly changes during many reassignments
- Sometimes nsmd2 receives a message from another nsmd2 which was a master/deputy but not any more
- This message is invalid, and nsmd2 was aborted when receiving it
- But this message can be simply ignored, since the reason is known

Fix 2 — select timeout

- nsmd_tcprecv is called when there is in-coming event in select
- nsmd_tcprecv calls select again before every read (sound redundant, but it is in a loop for EINTR/EAGAIN)
- return code of the second select was not correctly checked — read is called even when select times out
- EINTR should not happen since no signal is expected
- Probably EAGAIN happens (resource temporarily unavailable)
Status of NSM2 1998

- Fixes are made, and the simultaneous startup works better
- But there was still some start-up failure
- Then the KEK site power shutdown interrupted the work, and not yet resumed
Plan

- ASAP: finish nsm2-1998 debug and commit into git
- Minimum required version will be kept to be 1997
- Plan for further debug
  - Analyze the log files of 1997/1998 since log messages were improved
  - If not happening, analyze the already collected huge NSM2 log
- If problem is found and fixed, version 1999 will be made
- If nsm2 1999 works fine, update it to nsm2 2000 (version 2.000) with minimum required version = 1999