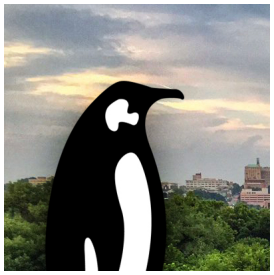

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Minidump to debug end user device crashes

Tuesday, 14 November 2023 12:00 (30 minutes)

Qualcomm devices in engineering mode provide a mechanism for generating full system RAM dumps from field / test farm for postmortem debugging even in the case of not-kernel system crashes. But, on end user devices, taking complete RAM dump at the moment of failure has substantial storage requirement as well as it is time consuming to transfer them electronically. So, instead of copying and parsing the complete RAM dump, collecting minimum required data from RAM is much more efficient and easy to transfer electronically. The minidump mechanism provides the means for selecting which snippets should be included in the RAM dump. It is built on the premise that System on Chip (SoC) or subsystems on the SoC crash due to a range of hardware and software bugs. Minidump support for Qualcomm remote processor (MODEM/ADSP) regions is already supported in upstream. Now, the effort is to upstream the kernel driver which helps to collect kernel regions as well.

The intention of this talk is to present minidump overview and how the solution could be made more generic so that it can fit into the need of other SOC vendors. Also, we are exploring if there is any way to extend existing solution to accommodate above problem.

https://lore.kernel.org/all/1687955688-20809-1-git-send-email-quic_mojha@quicinc.com/

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