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Memory optimizations for 16kb kernel

Content:

Android already supports 16kb page sizes and the number of devices supporting 16kb page sizes will increase in the future. A key challenge with 16kb page sizes is their potential to increase the memory footprint. In this presentation, we will explore several memory optimization strategies that partners should consider to help mitigate this issue, focusing on areas such as:

- 1. CMA allocations
- 2. Memory reservations (carve-outs)
- 3. DMA-BUF allocations
- 4. Buffer allocation in drivers
- 5. IOMMU configurations
- 6. Page Table Memory

This work aims to provide detailed solutions/techniques for improving memory efficiency as more devices adopt 16kb page sizes.

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