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Decoupling Large Folios from Transparent Huge Pages

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Large folios were initially implemented with dependencies on Transparent Huge Pages (THP) infrastructure. As large folio adoption expands across the kernel, CONFIG_TRANSPARENT_HUGEPAGE has become an overloaded configuration option, sometimes used as a proxy for large folio support [1][2].

While this coupling was discussed during the THP cabal, the specific dependencies remain unclear. This discussion-oriented session will:

- Identify which THP features large folios actually require
- Explore potential approaches for architectural separation, and discuss implementation strategies

The goal is to enable more granular memory management configuration by decoupling large folios from THP. RFC patches shall be posted prior to the session.

[1] https://lore.kernel.org/linux-mm/731d8b44-1a45-40bc-a274-8f39a7ae0f7f@lucifer.local/

[2]https://lore.kernel.org/all/aGfNKGBz9lhuK1AF@casper.infradead.org/

Primary author: RAGHAV, Pankaj (Samsung)

Presenter: RAGHAV, Pankaj (Samsung)

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