Volatility in NVRAM-centric Operating Systems

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Call for Participation

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Non-volatile main-memory technologies slowly but surely make their way into modern computing platforms - ranging from small embedded devices, such as the MSP430, to highly capable data-center systems built around Intel's Optane PMem. Even though these systems' main memories do not depend on power being available for retaining data, all systems still incorporate ordinary, volatile memories whose data is lost on power loss. These volatile memories include CPU and configuration registers but also "invisible" components such as caches and the peripherals' configurations. This talk gives an overview of the NVRAM-related adoptions of operating systems (based on Neverlast) and discusses further paths toward operating systems dedicated to working primarily with non-volatile main memories.

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