

## Chapter 18. "Svrsw60t59b" Extension for PTE Reserved-for-Software Bits 60-59, Version 0.9

If the Svrsw60t59b extension is implemented, then bits 60-59 of the page table entries (PTEs) are reserved for use by supervisor software and are ignored by the implementation.

If the Hypervisor (H) extension is also implemented, then bits 60-59 of the G-stage PTEs are reserved for use by supervisor software and are ignored by the implementation.

The Svrsw60t59b extension depends on Sv39.



*Operating systems frequently use reserved bits within PTEs to store metadata for advanced memory management features. Embedding these metadata bits directly within the PTEs allows for fast access with minimal overhead, avoiding costly lookups in auxiliary data structures. By default, Sv39 and Sv39x4 require a page fault and a guest-page fault exception, respectively, to be raised if bits 60-59 are not zero.*