

Enable intel LAM in linux

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Intel LAM (Linear Address Masking) Extension allows software to locate metadata in data pointers and dereference them without needing to mask the metadata bits. It supports:

- LAM_U48: Activate LAM for user data pointers and use of bits 62:48 as masked metadata.
- LAM_U57: Activate LAM for user data pointers and use of bits 62:57 as masked metadata.

I am presenting a proposal to enable Intel LAM in Linux:

1. Only LAM enabled Linux on LAM processors can provide LAM features.
2. Every piece of OS must be LAM enabled, starting from kernel, toolchain, libraries, ...
3. A binary is LAM enabled only if all its components are LAM enabled.
4. LAM enabled OS is backward compatible. The same LAM-enabled OS binary can run on LAM and legacy processors.
5. Provide LAM features only on LAM processors.
6. Minimum performance loss on legacy processors.

I agree to abide by the anti-harassment policy

I agree

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Session Classification: GNU Tools Track

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