

IA-32 Execution Layer 5.3.5338 / 5.3.98.37.22 Release Notes

Introduction

These release notes are for the IA-32 Execution Layer (IA-32 EL) version 5.3.5338 / 5.3.98.37.22.

For further information on the IA-32 Execution Layer, please refer to the following:

- The IA-32 Execution Layer Reference Guide (<http://www.intel.com/cd/ids/developer/asmo-na/eng/microprocessors/itanium/66007.htm>)
- The latest Intel® Itanium® 2 Processor Specification Update for errata updates, specification changes, specification clarifications, and documentation changes.

Main Changes in IA-32 EL 5.3.5338 / 5.3.98.37.22

This section describes the changes from version 5.3.5336/5.3.81.31.21.

Details on the following errata are documented in the Itanium 2 Processor Specification Update.

- Erratum 19 – IA-32 EL applications will not run on kernels with page sizes

greater than 16KB.

The erratum is fixed starting in version 5.3.86.34.22 of libia32x.so.

- Spec Clarification 12 – Core-dump file may contain Itanium® architecture details.

The clarification is fixed starting in version 5.3.85.34.22 of libia32x.so.

- Spec Clarification 13 – IA-32 process may hang while generating core-dump file.

The clarification is fixed starting in version 5.3.88.34.22 of libia32x.so.

Additional changes (not listed in the Itanium 2 Processor Specification Update):

- 5.3.5338: The exact description of these bugs was not cleared for publication at the time of the release, but should be published soon in the upcoming Intel Itanium 2 Processor Specification Update, under information on version 5.3.5338.
- 5.3.5337: Fixed wrong order of cache synchronization operations, which can be exposed on future IPF processors.

In most cases the impact is limited to severe slowdown, but on rare cases it might lead to unexpected results.

- 5.3.82.32.22: Allow compilation of btlb on newer gcc versions (3.4).
- 5.3.84.34.22: In libia32x.so, implemented compensation to a kernel change, such that the application loader can now find IA-32 libraries and other files in /emul. This ability is required for kernels that are compiled

without alt-root support. The support is extended at version 5.3.96.36.22 of libia32x.so.

- 5.3.87.34.22: In libia32x.so implemented ELF file loading security enhancements.
- 5.3.90.35.22: Use tkill to send signals to thread, instead of kill, when appropriate.
- 5.3.92.35.22: Fixed adjustments in IA-32 execution permissions.
- 5.3.97.36.22: In libia32x.so /proc/stat/self reading is emulated.
- 5.3.98.37.22: Fixed IOCTL SG_IO.

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