Intel Inspector: Assuring Correctness of scientific codes

This set of tools, usable on the command line as well as via a Graphical User Interface, supports various types of correctness checking for programs built on LRZ HPC systems. The checks include, but are not limited to: correctness of pthread or OpenMP parallelization, memory leak checking, static code verification.

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Introductory Remarks

What does Intel(R) Inspector XE provide?

Intel Inspector supports the programmer in identifying and localizing problems within serial and thread-parallel code. The tool subsumes the threading correctness checking functionality of the earlier product "Thread Checker", but in addition also supports memory usage and leak detection.

Inspector XE availability on LRZ’s HPC platforms

Intel Inspector is provided on all HPC systems at LRZ.

If you encounter any difficulties with the LRZ-specific installations, please contact the LRZ Service Desk for help.

How to use Inspector XE

Before calling the tool either via the command line interface (command inspxe-cl) or the GUI (command inspxe-gui), please type the following command:

```
module load inspector_xe
```

The GUI allows you to build analysis projects, specify an executable as well as various parameters for execution and analysis modes. Please consult the documentation referenced below for a description of the many options this tool offers. Also note that the usage of this tool is rather different from that of the previously available Threading Tools.

Documentation

- The documentation for Intel Inspector is available on the systems via the environment variable $INSPECTOR_XE_DOC. This includes tutorial material.
- Manual pages for the commands can be consulted when running with the GUI.
- Intel Inspector XE for Linux (on Intel's web site)