INTRO

Effective C++

Basic info

- The main focus is on writing an efficient and maintainable code in C++ on modern hardware.

- Some bias towards topics that are relevant for writing trading models in HFT.

- Also some useful topics, which are often overlooked by basic C++-courses.

- Basic knowledge of C++ and ability to write simple programs with it is expected.

- Instead of going through many different features, we focus on internals of a small practical subset.

- Assuming Linux/x86-64

Topics

- Memory layout and C++ object model
- Basic C++-features recap
- std-containers
- Building C++ programs and libraries
- Advanced templates and basic metaprogramming
- gdb
- Optimizations in C++
- CPU and memory
- Linux internals
- Basic multithreading in C++

Contacts

- All materials can be found on

  https://gitlab.com/spectral-tech/effective-cpp

- tg @astiunov if you have any questions

Additional materials

- Highly recommended
  - o Scott Meyers "Effective C++: 55 Specific Ways to Improve Your Programs and Designs"
  - o Scott Meyers "Effective Modern C++"
- "When a Microsecond Is an Eternity: High Performance Trading Systems in C++" https://www.youtube.com/watch?v=NH1Tta7purM
- "High Frequency Trading and Ultra Low Latency development techniques" https://www.youtube.com/watch?v=_0aU8S-hFQI
- https://en.algorithmica.org/hpc/