ISO/IEC TS 19570:2015-07 (E)

Programming Languages - Technical Specification for C++ Extensions for Parallelism

Contents

Page

1 General 4
1.1 Scope 4
1.2 Normative references 4
1.3 Namespaces and headers 4
1.4 Terms and definitions 5
1.5 Feature-testing recommendations 5
2 Execution policies 6
2.1 In general 6
2.2 Header <experimental/execution_policy> synopsis 6
2.3 Execution policy type trait 7
2.4 Sequential execution policy 7
2.5 Parallel execution policy 7
2.6 Parallel+Vector execution policy 7
2.7 Dynamic execution policy 8
2.7.1 execution_policy construct/assign 8
2.7.2 execution_policy object access 9
2.8 Execution policy objects 9
3 Parallel exceptions 10
3.1 Exception reporting behavior 10
3.2 Header <experimental/exception_list> synopsis 10
4 Parallel algorithms 12
4.1 In general 12
4.1.1 Requirements on user-provided function objects 12
4.1.2 Effect of execution policies on algorithm execution 12
4.1.3 ExecutionPolicy algorithm overloads 14
4.2 Definitions 14
4.3 Non-Numeric Parallel Algorithms 15
4.3.1 Header <experimental/algorithm> synopsis 15
4.3.2 For each 16
4.4 Numeric Parallel Algorithms 17
4.4.1 Header <experimental/numeric> synopsis 17
4.4.2 Reduce 20
4.4.3 Exclusive scan 20
4.4.4 Inclusive scan 21
4.4.5 Transform reduce 22
4.4.6 Transform exclusive scan 22
4.4.7 Transform inclusive scan 23