MARTe2-core - User story #369

BuilderOptimization

16.12.2019 15:58 - André Neto

Status:	Closed		**Start date:**	16.12.2019
Priority:	Normal		**Due date:**	
Assignee:	André Neto		**% Done:**	0%
Category:			**Estimated time:**	0.00 hour
Target version:			**Spent time:**	0.00 hour
Git branch (link):			**SVN commit (link/?p=rev):**	
Git merge to develop (link):				

Description

Review the optimised version of MARTe2

Requirements review

Date of the review: 10/01/2020

Person who did the review: André Neto

Version of requirements: N/A

Result of review: N/A

List of non-conformities: N/A

Comments: No new requirements were added w.r.t. to v1.0.0.

Architecture & design review

Date of the review: 10/01/2020

Person who did the review: André Neto

Version of architecture & design document: N/A

Result of review: N/A

List of non-conformities: N/A

Comments: No updates related to the architecture.

Code and documentation review

Date of the review: 10/01/2020

Person who did the review: André Neto

Version of source code: 1.1.0

Result of review: PASS

List of non-conformities:

```
Note 974: Worst case function for stack usage: 'MARTe::ConfigurationDatabase::Copy' is recursive,
loop contains call to 'MARTe::ConfigurationDatabase::Copy'. See +stack for a full report. [MISRA
```

```
C++ Rule 7-5-4]
```

List of warnings reported by Doxygen:

```
ReferenceContainer.cpp:2: warning: the name `ReferenceContainer.cpp' supplied as the second argume
nt in the \file statement matches the following input files:
L2Objects/ReferenceContainer.cpp
L3Streams/ReferenceContainer.cpp
Please use a more specific name by including a (larger) part of the path!
```

Remark
The documentation of DataSourceI has to be revisited.

Remark
The SquareRoot template methods for float32 and float64 need to be provided.

```
template<typename Type>
inline Type SquareRoot(const Type x) {

    Type tmp = x;

    if (tmp < (Type) 0) {
        REPORT_ERROR_STATIC_0(ErrorManagement::Warning, "SquareRoot<Type> of negative number");
        tmp *= -1;
    }

    return sqrt(tmp);
}
```

It is only valid for Type being float64. In case of float32, there would be an implicit casting to satisfy the sqrt method. Two implementations shall be provided to call sqrt and sqrtf, as appropriate

Remark
The following classes have non-virtual destructors. As long they are not base classes of any derived class, it is safe, but they need to be monitored (flexlint will check and signal this as error code 1509).

```
Matrix, Vector, GlobalObjectsDatabase, LoadableLibrary, MemoryArea, StaticListHolder, CharBuffer,
AnyTypeCreator, LexicalAnalyzer, Token, TokenInfo, Directory, MutexSem, ThreadInformation.
```

Unit test review

Date of the review: 10/01/2020

Person who did the review: André Neto

Version of unit tests: 1.1.0

Result of coverage tests review: PASS

Result of functional tests review: PASS

Result of review: PASS

List of non-conformities:

LCOV report (files containing functions not executed at all):
Note: execute with

```
lcov -l  Build/MARTe2.coverage.info
```

and compare with the latest master release using tkdiff.

Files containing functions with coverage < 90% or which have changed w.r.t. to last master release. Exclamation marks inform of

differences w.r.t. to the last master.:_

```
   1                                                        |Lines      |Functions|Branches         1
                                              |Lines      |Functions|Branches
   2   Filename                                             |Rate   Num|Rate  Num|Rate   Num        2
Filename                                      |Rate   Num|Rate  Num|Rate   Num
   3   ==============================================================================        3
====================================================================================
   4 ! [/home/aneto/Projects/MARTe2-dev-master/Source/Core/BareMetal/]                        4 !
[/home/aneto/Projects/MARTe2-dev/Source/Core/BareMetal/]
                                                                                              9 +
L0Types/DjbHashFunction.cpp                   | 100%    19| 100%   4|   -    0
                                                                                             13 +
L0Types/Fnv1aHashFunction.cpp                 | 100%    18| 100%   4|   -    0
                                                                                             15 +
L0Types/HashFunction.cpp                      | 100%     4|66.7%   3|   -    0
                                                                                             36 +
L1Portability/BinaryTree.h                    | 100%    66|88.5% 139|   -    0
  35   L1Portability/Environm...Linux/BasicConsole.cpp|79.9%   224|76.2%  42|   -    0       39
L1Portability/Environm...Linux/BasicConsole.cpp|79.9%   224|76.2%  42|   -    0
  51   L1Portability/FastResourceContainer.cpp      |83.5%    97|71.4%   7|   -    0       55
L1Portability/FastResourceContainer.cpp       |83.5%    97|71.4%   7|   -    0
  68 ! L1Portability/StaticList.h               | 100%    29| 100%  32|   -    0       72 !
L1Portability/StaticList.h                    | 100%    29| 100%  88|   -    0
  81 ! L2Objects/ClassMethodCallerT.h           |95.3%   215|81.0% 727|   -    0       85 !
L2Objects/ClassMethodCallerT.h                |95.3%   212|81.0% 727|   -    0
  85   L2Objects/ClassRegistryDatabase.cpp      |81.9%   127| 100%  15|   -    0       89
L2Objects/ClassRegistryDatabase.cpp           |81.9%   127| 100%  15|   -    0
  88   L2Objects/Introspection.cpp              |73.3%    15|85.7%   7|   -    0       92
L2Objects/Introspection.cpp                   |73.3%    15|85.7%   7|   -    0
  89   L2Objects/IntrospectionEntry.cpp         |87.4%   103|93.3%  15|   -    0       93
L2Objects/IntrospectionEntry.cpp              |87.4%   103|93.3%  15|   -    0
  92   L2Objects/Object.cpp                     |88.5%   253|96.8%  31|   -    0       96
L2Objects/Object.cpp                          |88.5%   253|96.8%  31|   -    0
  94 ! L2Objects/ObjectBuilderT.h               | 100%     8|68.9% 708|   -    0       98 !
L2Objects/ObjectBuilderT.h                    | 100%     8|68.7% 716|   -    0
 101 ! L2Objects/ReferenceCon...erFilterObjectName.cpp|97.1%   103| 100%  11|   -    0      105 !
L2Objects/ReferenceCon...erFilterObjectName.cpp|96.7%   121| 100%  11|   -    0
 102   L2Objects/ReferenceCon...erFilterReferences.cpp| 100%    13| 100%   5|   -    0      106
L2Objects/ReferenceCon...erFilterReferences.cpp| 100%    13| 100%   5|   -    0
 107   L2Objects/StructuredDataI.h              | 100%     6|75.0%   4|   -    0      111
L2Objects/StructuredDataI.h                   | 100%     6|75.0%   4|   -    0
 117 ! L3Streams/DoubleBufferedStream.cpp       |86.6%   119|84.0%  25|   -    0      121 !
L3Streams/DoubleBufferedStream.cpp            |88.9%   117|84.0%  25|   -    0
 118 ! L3Streams/IOBuffer.cpp                   |95.1%   920|97.7%  44|   -    0      122 !
L3Streams/IOBuffer.cpp                        |95.0%   920|97.7%  44|   -    0
 120   L3Streams/IOBufferFloatPrint.cpp         |84.3%   460| 100%  29|   -    0      124
L3Streams/IOBufferFloatPrint.cpp              |84.3%   460| 100%  29|   -    0
 121 ! L3Streams/IOBufferIntegerPrint.cpp       |85.1%   442|93.5%  93|   -    0      125 !
L3Streams/IOBufferIntegerPrint.cpp            |85.5%   442|93.5%  93|   -    0
 127   L3Streams/PrinterI.cpp                   | 100%    17|88.9%   9|   -    0      131
L3Streams/PrinterI.cpp                        | 100%    17|88.9%   9|   -    0
 129   L3Streams/SingleBufferedStream.cpp       |86.0%   186|83.3%  24|   -    0      133
L3Streams/SingleBufferedStream.cpp            |86.0%   186|83.3%  24|   -    0
 143 ! L4Configuration/ConfigurationDatabase.cpp|98.4%   249|97.1%  35|   -    0      147 !
L4Configuration/ConfigurationDatabase.cpp     |98.2%   223|97.1%  35|   -    0
     !                                                                                  148 !
L4Configuration/ConfigurationDatabaseNode.cpp |98.7%   153|95.2%  21|   -    0
 158 ! L4Configuration/TypeConversion.cpp       |96.4%   610|95.2%  21|   -    0      163 !
L4Configuration/TypeConversion.cpp            |95.8%   615|95.2%  21|   -    0
 197 ! L5GAMs/RealTimeApplica...nfigurationBuilder.cpp|97.1% 2638| 100%  55|   -    0      202 !
L5GAMs/RealTimeApplica...nfigurationBuilder.cpp|96.6% 2260|90.0%  50|   -    0
 198 ! L5GAMs/RealTimeApplica...ConfigurationBuilder.h| 100%     1| 100%   1|   -    0      203 !
L5GAMs/RealTimeApplica...ConfigurationBuilder.h| 100%     1|50.0%   2|   -    0
 203 ! L6App/Environment/Linux/Bootstrap.cpp    |97.3%    75| 100%   6|   -    0      208 !
L6App/Environment/Linux/Bootstrap.cpp         |94.4%    90| 100%   6|   -    0
```

```
  205 ! L6App/RealTimeLoader.cpp                    |96.9%    64|66.7%  12|    -    0    210 !
L6App/RealTimeLoader.cpp                    |95.3%    64|66.7%  12|    -    0
  208   BasicFile.cpp                               |88.9%   280|93.9%  33|    -    0    213
BasicFile.cpp                               |88.9%   280|93.9%  33|    -    0
  211   BasicTCPSocket.cpp                          |88.7%   238| 100%  25|    -    0    216
BasicTCPSocket.cpp                          |88.7%   238| 100%  25|    -    0
  212   BasicUDPSocket.cpp                          |88.1%   118|95.7%  23|    -    0    217
BasicUDPSocket.cpp                          |88.1%   118|95.7%  23|    -    0
  213 ! Directory.cpp                               |88.8%    80| 100%  15|    -    0    218 !
Directory.cpp                               |87.5%    80| 100%  15|    -    0
  214   DirectoryScanner.cpp                        |89.1%    92|90.0%  10|    -    0    219
DirectoryScanner.cpp                        |89.1%    92|90.0%  10|    -    0
  220   File.cpp                                    |85.7%     7|57.1%   7|    -    0    225
File.cpp                                    |85.7%     7|57.1%   7|    -    0
  231 ! HttpProtocol.cpp                            |98.4%   547|96.3%  27|    -    0    236 !
HttpProtocol.cpp                            |98.4%   550|96.3%  27|    -    0
  241   EventSem.cpp                                |87.2%   141| 100%  15|    -    0    246
EventSem.cpp                                |87.2%   141| 100%  15|    -    0
  242   MutexSem.cpp                                |86.8%   121| 100%  13|    -    0    247
MutexSem.cpp                                |86.8%   121| 100%  13|    -    0
  249   ExceptionHandler.h                          | 0.0%     2| 0.0%   2|    -    0    254
ExceptionHandler.h                          | 0.0%     2| 0.0%   2|    -    0
  270 ! LoggerService.cpp                           |96.1%    76| 100%  14|    -    0    275 !
LoggerService.cpp                           |97.4%    76| 100%  14|    -    0
  278 ! StateMachine.cpp                            |95.3%   192| 100%  16|    -    0    283 !
StateMachine.cpp                            |95.9%   195| 100%  16|    -    0
  283   GAMScheduler.cpp                            |87.0%   138| 100%  15|    -    0    288
GAMScheduler.cpp                            |87.0%   138| 100%  15|    -    0
  286   ==================================================================================    291
==================================================================================
  287 !                                    Total:|96.0% 24072|87.7%  8k|    -    0    292 !
                                           Total:|96.0% 23967|87.7%  8k|    -    0
```

GTest report

```
[----------] Global test environment tear-down
[==========] 4318 tests from 178 test cases ran. (292339 ms total)
[  PASSED  ] 4318 tests.
```

Integration test review

Date of the review: 10/01/2020

Person who did the review: André Neto

Version of integration tests: 1.1.0

Result of review: N/A

List of non-conformities: N/A

Comments: Not performed.

Acceptance test review

Date of the review: 10/01/2020

Person who did the review: André Neto

Version of acceptance tests: 1.1.0

Result of review: N/A

List of non-conformities: N/A

Comments: Not performed.

History

#1 - 10.01.2020 17:50 - André Neto

- Description updated

#2 - 10.01.2020 17:55 - André Neto

- Status changed from Code: Rev to Blocked   5/5

#3 - 23.01.2020 18:16 - André Neto

- Status changed from Blocked to Closed

History

#1 - 10.01.2020 17:50 - André Neto

- Description updated

#2 - 11.04.2025