DFDL4S/DFDL4S++ Version 2.1.0 - Release Notes

1. RELEASE CHANGE LOG

1.1 New Features/Improvements

- DFDL4S-ANR-0033: Java and C++ API extended to handle time values following CCSDS Time Code Formats

- DFDL4S-ANR-0067: Improve exception handling in DFDL4S API

1.2 Software Problems

- DFDL4S-ANR-0063: DFDL4S crashes when a directory is passed as schema location

- DFDL4S-ANR-0073: Incorrect handling of occursCount when expression evaluates to 0

- DFDL4S-ANR-0074: Root element ignored in absolute path evaluation

- DFDL4S-ANR-0075: Crash when document outlives dfdllib (c++)

- DFDL4S-ANR-0079: In C++ Installation Package, CreateNewDocumentExample crashes if the output file already exists (which, e.g would happen if the test is executed twice)

2. RELEASE CONTENTS

2.1 Distribution Packages

A DFDL4S (Java library) distribution package consists of one single archive (multi-platform):
- dfdl4s-2.1.0-bin.zip (MD5: e16b36c6d0fce1956f42e130266eba2b)

A DFDL4S++ (C++ library) distribution package consists of one single archive (one per each supported platform):
- dfdl4s-2.1.0-win64.tar.gz (MD5: e3b7fc170afba5a53406136b8375c01a)
- dfdl4s-2.1.0-mac64.tar.gz (MD5: 9e8632c37c0f6e18f84611fb7a3cdb45)
- dfdl4s-2.1.0-linux64.tar.gz (MD5: 755c433f933e1098a3b1507f08f120e6)

To install DFDL4S/DFDL4S++, extract the distribution package into a selected installation directory. Please check the DFDL4S/DFDL4S++ developer manual for further information about the installation steps.

2.2 Documentation

For information related to DFDL4S library usage, please refer to the Developer Manual, in particular:
- DFDL4S (Java API): DFDL4S_Developers_Manual_S2G-DME-TEC-SUM078-1O.pdf
- DFDL4S (C++ API): DFDL4S++_Developers_Manual_S2G-DME-TEC-SUM113-1M.pdf

All library documentation can be downloaded from the following location:

https://eop-cfi.esa.int/Repo/PUBLIC/DOCUMENTATION/APPLICATIONS/DFDL4S/

2.3 Software and Hardware Requirements

DFDL4S (Java library) is available for the following computer platforms:

- Windows 10 (64-bit)
- Mac OS X Intel 10.9 or above (64-bit)
- Linux (64-bit)

DFDL4S++ (C++ library) is available for the following computer platforms:

- Windows 10 (64-bit)
  - Microsoft Visual Studio 2022 64-bit
- macOS Intel (64-bit)
  - Apple LLVM v12.0.0 (clang-1200.0.32.27) 64-bit
- Linux (64-bit)
  - GNU C++ (v11+) 64-bit

For both Java and C++ libraries, the minimum recommended requirements are:

- OpenJDK 11 or higher (Linux x64, macOS x64, or Windows x64; available at https://adoptium.net/)
- 10+ Mb of hard disk space
- 2 GB RAM

3. ADDITIONAL INFORMATION AND KNOWN PROBLEMS

3.1 Mission Support

The DFDL4S distribution package already includes example mission configuration files (JAR archive containing XML files and schemas). The latest version of the mission configuration files for all supported missions are available in the "Mission Files" section of the S2G website (http://eop-cfi.esa.int/index.php/applications/s2g-data-viewer/mission-files)
The schema files in the website are compatible with the latest versions of the S2G application and the DFDL4S library.

3.2 DFDL4S Java vs C++ API

There is a small set of features available in DFDL4S' Java API, mostly related to use of Callbacks, that are not currently implemented in C++. See the DFDL4S++ development manual for further details.

4. REPORTING PROBLEMS

For any problems or questions contact the DFDL4S helpdesk: *dfdl4s@eopp.esa.int*