

Robotics Service Bus - Bug #484

Converters for Fundamental Types are not Implemented [C++]

08/08/2011 03:58 AM - J. Moringen

Status:	Resolved	Start date:	08/08/2011
Priority:	Normal	Due date:	
Assignee:	J. Moringen	% Done:	100%
Category:	C++	Estimated time:	0.00 hour
Target version:	rsb-0.15		

Description

Despite what [[Types|this]] description suggests.

Seemingly most important: double (see #606).

Progress:

Wire Schema	String Designator	Converter
No value	"void"	rsb::converter::VoidConverter
Double precision float	"double"	rsb::converter::FloatingPointConverter<double>
Single precision float	"float"	rsb::converter::FloatingPointConverter<float>
32 bit signed integer	"int32"	rsb::converter::IntegerConverter<int32_t>
64 bit signed integer	"int64"	rsb::converter::IntegerConverter<int64_t>
32 bit unsigned integer	"uint32"	rsb::converter::IntegerConverter<uint32_t>
64 bit unsigned integer	"uint64"	rsb::converter::IntegerConverter<uint64_t>
bool	"bool"	rsb::converter::BoolConverter
ASCII string	"ascii-string"	
UTF-8 string	"utf-8-string"	rsb::converter::StringConverter
Sequence of bytes	"bytes"	rsb::converter::ByteArrayConverter
Scope	"scope"	rsb::converter::ScopeConverter
Event ID	".rsb.protocol.EventId"	rsb::converter::EventIdConverter

Associated revisions

Revision b27ed22f - 01/21/2013 07:38 PM - J. Moringen

Changed bool encoding in src/rsb/converter/BoolConverter.cpp

refs #484

- src/rsb/converter/BoolConverter.cpp (header): updated copyright
(BoolConverter::serialize): store either 0 or 1
(BoolConverter::deserialize): expected either 0 or 1

- test/rsb/converter/DefaultConverterTest.cpp: cosmetic changes

Revision ebf823b0 - 03/08/2013 01:07 PM - J. Wienke

Backport: Add a converter for unit32.

refs #484

Revision 3dcfcf4a - 07/31/2013 02:57 PM - J. Wienke

Added Int64converter.

refs #484

Revision b8090c7b - 06/03/2016 11:59 AM - J. Moringen

Mention C++ float and double converters in news.rst

refs #484

- news.rst (RSB 0.14): mention new float and double converters that have been added to the C++ implementation

Revision d72d6440 - 06/03/2016 12:04 PM - J. Moringen

Added double, float converter in src/rsb/converter/FloatConverter.{h,cpp}

refs #484

The new template class FloatConverter converts floating point values by just grabbing the bit pattern from memory. To make this at least slightly safe, a runtime_error is throw in the constructor unless

```
std::numeric_limits<T>::is_iec559
```

is true.

- src/rsb/converter/FloatConverter.{h,cpp}: new files; contain implementation FloatConverter template class with specializations for float and double
- src/rsb/converter/converters.cpp (registerDefaultConverters): register FloatConverter<float> and FloatConverter<double>
- test/rsb/converter/DefaultConverterTest.cpp (header): updated copyright (FloatConverterTest): new test; roundtrip test for FloatConverter<float> (DoubleConverterTest): new test; roundtrip test for FloatConverter<double>
- src/CMakeLists.txt: added files src/rsb/converter/FloatConverter.{h,cpp}

Revision 178f08b5 - 06/03/2016 01:10 PM - J. Moringen

Floating point converters in src/rsb/converter/FloatingPointConverter.{h,cpp}

refs #484

The new template class FloatingPointConverter converts floating point values by just grabbing the bit pattern from memory. To make this at least slightly safe, a runtime_error is throw in the constructor unless

```
std::numeric_limits<T>::is_iec559
```

is true. Derived classes FloatConverter and DoubleConverter are provided for convenience.

- src/rsb/converter/FloatingPointConverter.{h,cpp}: new files; contain FloatingPointConverter template class with specializations FloatConverter and DoubleConverter for float and double respectively
- src/rsb/converter/converters.cpp (registerDefaultConverters): register FloatConverter and DoubleConverter
- test/rsb/converter/DefaultConverterTest.cpp (header): updated copyright (FloatConverterTest): new test; roundtrip test for FloatConverter (DoubleConverterTest): new test; roundtrip test for DoubleConverter
- src/CMakeLists.txt: added files src/rsb/converter/FloatingPointConverter.{h,cpp}

Revision 9aa1f5c4 - 06/03/2016 01:12 PM - J. Moringen

Backport: Floating point converters in src/rsb/converter/FloatingPointConverter.{h,cpp}

refs #484

The new template class FloatingPointConverter converts floating point values by just grabbing the bit pattern from memory. To make this at least slightly safe, a runtime_error is throw in the constructor unless

```
std::numeric_limits<T>::is_iec559
```

is true. Derived classes FloatConverter and DoubleConverter are provided for convenience.

- src/rsb/converter/FloatingPointConverter.{h,cpp}: new files; contain FloatingPointConverter template class with specializations FloatConverter and DoubleConverter for float and double respectively
- src/rsb/converter/converters.cpp (registerDefaultConverters): register FloatConverter and DoubleConverter
- test/rsb/converter/DefaultConverterTest.cpp (header): updated copyright (FloatConverterTest): new test; roundtrip test for FloatConverter (DoubleConverterTest): new test; roundtrip test for DoubleConverter
- src/CMakeLists.txt: added files src/rsb/converter/FloatingPointConverter.{h,cpp}

(cherry picked from commit 178f08b5819ff5f7969f7ad12bdd599d67abe78d)

Revision f0667f10 - 06/16/2016 02:22 PM - J. Moringen

Added generic IntegerConverter in src/rsb/converter/IntegerConverter.{h,cpp}

refs #484

- src/rsb/converter/{Int64,UInt32,UInt64}Converter.{h,cpp}: removed; no longer needed
- src/rsb/converter/IntegerConverter.{h,cpp}: new files; interface and implementation of generic integer converter
- src/rsb/converter/converters.cpp: adjusted includes
- test/rsb/converter/DefaultConverterTest.cpp: likewise
- src/CMakeLists.txt: removed files
src/rsb/converter/{Int64,UInt32,UInt64}Converter.{h,cpp}; added files
src/rsb/converter/IntegerConverter.{h,cpp}

Revision 08cdd6b4 - 06/16/2016 03:10 PM - J. Moringen

Added generic IntegerConverter in src/rsb/converter/IntegerConverter.{h,cpp}

refs #484

- src/rsb/converter/{Int64,UInt32,UInt64}Converter.{h,cpp}: removed; no longer needed
- src/rsb/converter/IntegerConverter.{h,cpp}: new files; interface and implementation of generic integer converter
- src/rsb/converter/converters.cpp: adjusted includes
- test/rsb/converter/DefaultConverterTest.cpp: likewise
- src/CMakeLists.txt: removed files
src/rsb/converter/{Int64,UInt32,UInt64}Converter.{h,cpp}; added files
src/rsb/converter/IntegerConverter.{h,cpp}

Revision 8c26dc79 - 06/16/2016 03:51 PM - J. Moringen

Added ScopeConverter class in src/rsb/converter/ScopeConverter.{h,cpp}

fixes #484

- src/rsb/converter/ScopeConverter.{h,cpp}: new file; interface and implementation of ScopeConverter class
- src/rsb/converter/converters.cpp (registerDefaultConverters): register ScopeConverter
- test/rsb/converter/DefaultConverterTest.cpp (ScopeConverterTest): new test; for ScopeConverter class
- src/CMakeLists.txt: added files
src/rsb/converter/ScopeConverter.{h,cpp}

Revision 9e228d39 - 06/16/2016 05:30 PM - J. Moringen

Mention new C++ IntegerConverter in news.rst

refs #484

- news.rst (RSB 0.15): mention new C++ IntegerConverter

Revision 3eaefa9f - 06/16/2016 05:32 PM - J. Moringen

Mention new C++ ScopeConverter in news.rst

refs #484

- news.rst (RSB 0.15): mention new C++ ScopeConverter

History

#1 - 10/04/2011 03:33 PM - J. Moringen

- *Priority changed from Normal to High*

#2 - 10/04/2011 03:34 PM - J. Moringen

- *Description updated*

#3 - 01/21/2013 08:11 PM - J. Moringen

- *% Done changed from 0 to 50*

#4 - 12/10/2013 11:47 PM - J. Moringen

- *Target version changed from rsb-0.10 to rsb-0.11*

#5 - 11/27/2014 01:20 PM - S. Wrede

- *Priority changed from High to Normal*

#6 - 12/17/2014 10:44 AM - J. Wienke

- *Target version changed from rsb-0.11 to rsb-0.12*

#7 - 03/25/2015 11:36 AM - J. Moringen

- *Status changed from New to In Progress*

#8 - 04/27/2015 11:14 AM - J. Wienke

- *Target version changed from rsb-0.12 to rsb-0.13*

#9 - 03/02/2016 08:55 AM - J. Moringen

- *Target version changed from rsb-0.13 to rsb-0.14*

#10 - 05/13/2016 01:58 PM - J. Moringen

- *Target version changed from rsb-0.14 to rsb-0.15*

#11 - 06/03/2016 01:13 PM - J. Moringen

- *% Done changed from 50 to 80*

#12 - 06/11/2016 03:42 PM - J. Moringen

- *Description updated*

- *Assignee set to J. Moringen*

#13 - 06/11/2016 03:46 PM - J. Moringen

- Description updated

#14 - 06/11/2016 03:57 PM - J. Moringen

- Description updated

#15 - 06/16/2016 01:53 PM - J. Moringen

- Subject changed from *Converters for Fundamental Types are not Implemented* to *Converters for Fundamental Types are not Implemented [C++]*

#16 - 06/16/2016 02:23 PM - J. Moringen

- Description updated

- % Done changed from 80 to 90

#17 - 06/16/2016 04:00 PM - J. Moringen

- Status changed from *In Progress* to *Resolved*

- % Done changed from 90 to 100

Applied in changeset commit:rsb-cpp|8c26dc79997d4d0339e6dc0ece5fecfa304dfd36.

#18 - 06/16/2016 05:27 PM - J. Moringen

- Description updated