

Robotics Systems Types - Feature #2482

Update Protobuf to 2.6.1

12/17/2015 09:03 AM - T. Korthals

Status:	Closed	Start date:	12/17/2015
Priority:	Normal	Due date:	
Assignee:		% Done:	0%
Category:	Build System	Estimated time:	2.00 hours
Target version:	rsb-0.13		

Description

The major benefits are as follows:

General

- Added oneofs(unions) feature. Fields in the same oneof will share memory and at most one field can be set at the same time. Use the oneof keyword to define a oneof like:

```
message SampleMessage {  
    oneof test_oneof {  
        string name = 4;  
        YourMessage sub_message = 9;  
    }  
}
```
- Files, services, enums, messages, methods and enum values can be marked as deprecated now.
- Added Support for list values, including lists of messages, when parsing text-formatted protos in C++ and Java.
For example: foo: [1, 2, 3]

C++

- Enhanced customization on TestFormat printing.
- Added SwapFields() in reflection API to swap a subset of fields. Added SetAllocatedMessage() in reflection API.
- Repeated primitive extensions are now packable. The [packed=true] option only affects serializers. Therefore, it is possible to switch a repeated extension field to packed format without breaking backwards-compatibility.
- Various speed optimizations.

Java

- writeTo() method in ByteString can now write a substring to an output stream. Added endWith() method for ByteString.
- ByteString and ByteBuffer are now supported in CodedInputStream and CodedOutputStream.
- java_generate_equals_and_hash can now be used with the LITE_RUNTIME.

Python

- A new C++-backed extension module (aka "cpp api v2") that replaces the old ("cpp api v1") one. Much faster than the pure Python code. This one resolves many bugs and is recommended for general use over the pure Python when possible.
- Descriptors now have enum_types_by_name and extension_types_by_name dict attributes.
- Support for Python 3.

History

#1 - 12/17/2015 09:10 AM - J. Wienke

- Status changed from New to Closed
- Assignee deleted (Anonymous)

You are free to use 2.6 if it is installed as the library dependency. CMake just needs to be instructed to use that version. We will however not make this a requirement as long as trusty is used since RSX should be able to work with system packages.

#2 - 12/17/2015 09:18 AM - J. Moringen

Please note that not all of the new features are supported by our pipeline and tools. However, using the current feature set but the new library version should not be a problem.

#3 - 12/17/2015 10:14 AM - T. Korthals

Our intention was the usage of the "oneof" keyword to reduce the overhead for our embedded AMiRo platform.
We'll give it try and test the downward compatibility as well.

#4 - 12/17/2015 10:56 AM - J. Wienke

These new keywords will very likely not work with older versions of protobuf. You can use them in your own RST copy, but we cannot merge them back atm.

#5 - 12/17/2015 12:37 PM - T. Korthals

You are absolutely right. But I assume/hope, that the common RST library will work with both versions.

#6 - 12/17/2015 12:42 PM - J. Wienke

Shouldn't be a problem as long as protobuf is backwards compatible.