ZeroMQ Component Model

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Deprecated List

Class Json::FastWriter
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Class Json::Reader
Use CharReader and CharReaderBuilder.

Member Json::Reader::getFormatedErrorMessages () const
Use getFormattedErrorMessages() instead (typo fix).

Class Json::StyledStreamWriter
Use StreamWriterBuilder.

Class Json::StyledWriter
Use StreamWriterBuilder.

Member Json::Value::removeMember (const JSONCPP_STRING &key)

Member Json::Value::removeMember (const char *key)

Member Json::Value::setComment (const char *comment, CommentPlacement placement)
Always pass len.

Member Json::ValueIteratorBase::memberName () const
This cannot be used for UTF-8 strings, since there can be embedded nulls.

Class Json::Writer
Use StreamWriter. (And really, this is an implementation detail.)

Chapter 2

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2.1 Namespace List

Here is a list of all namespaces with brief descriptions:

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Namespace Documentation

6.1 Json Namespace Reference

JSON (JavaScript Object Notation).

Classes

- struct BuiltStyledStreamWriter
- class CharReader

  Interface for reading JSON from a char array.
- class CharReaderBuilder

  Build a CharReader implementation.
- struct CommentStyle

  Scoped enums are not available until C++11.
- class Exception

  Base class for all exceptions we throw.
- class FastWriter

  Outputs a Value in JSON format without formatting (not human friendly).
- class Features

  Configuration passed to reader and writer.
- class LogicError

  Exceptions thrown by JSON_ASSERT/JSON_FAIL macros.
- class OurCharReader
- class OurFeatures
- class OurReader
- class Path

  Experimental and untested: represents a "path" to access a node.
- class PathArgument

  Experimental and untested: represents an element of the "path" to access a node.
- class Reader

  Unserialize a JSON document into a Value.
- class RuntimeError

  Exceptions which the user cannot easily avoid.
- class StaticString

  Lightweight wrapper to tag static string.

- class StreamWriter

  Usage:
- class StreamWriterBuilder

  Build a StreamWriter implementation.
- class StyledStreamWriter

  Writes a Value in JSON format in a human friendly way, to a stream rather than to a string.
- class StyledWriter

  Writes a Value in JSON format in a human friendly way.
- class Value

  Represents a JSON value.
- class ValueConstIterator

  const iterator for object and array value.
- class ValueIterator

  Iterator for object and array value.
- class ValueIteratorBase

  base class for Value iterators.
- class Writer

  Abstract class for writers.

Typedefs

- typedef char UIntToStringBuffer[uintToStringBufferSize]
- typedef std::auto_ptr< CharReader > CharReaderPtr
- typedef std::auto_ptr< StreamWriter > StreamWriterPtr
- typedef int Int
- typedef unsigned int UInt
- typedef long long int Int64
- typedef unsigned long long int UInt64
- typedef Int64 LargestInt
- typedef UInt64 LargestUInt
- typedef unsigned int ArrayIndex

Enumerations

- enum { uintToStringBufferSize = 3 * sizeof(LargestUInt) + 1 }
- enum ValueType {
  nullValue = 0, intValue, uintValue, realValue,
  stringValue, booleanValue, arrayValue, objectValue }

  Type of the value held by a Value object.
- enum CommentPlacement { commentBefore = 0, commentAfterOnSameLine, commentAfter, numberOf↩
  CommentPlacement }

Functions

- static JSONCPP_STRING codePointToUTF8 (unsigned int cp)

  Converts a unicode code-point to UTF-8.
- static bool isControlCharacter (char ch)

  Returns true if ch is a control character (in range [1,31]).
- static void uintToString (LargestUInt value, char *&current)

  Converts an unsigned integer to string.
- static void fixNumericLocale (char *begin, char *end)

  Change ',' to '.
- static bool containsNewLine (Reader::Location begin, Reader::Location end)
- static JSONCPP_STRING normalizeEOL (Reader::Location begin, Reader::Location end)
- static void getValidReaderKeys (std::set< JSONCPP_STRING > *valid_keys)
- bool parseFromStream (CharReader::Factory const &fact, JSONCPP_ISTREAM &sin, Value *root, JSON↩ CPP_STRING *errs)
- JSONCPP_ISTREAM & operator>> (JSONCPP_ISTREAM &, Value &)

  Read from 'sin' into 'root'.
- static const unsigned char ALIGNAS (8) kNull[sizeof(Value)]
- template<typename T , typename U >
  static bool InRange (double d, T min, U max)
- static char * duplicateStringValue (const char *value, size_t length)

  Duplicates the specified string value.
- static char * duplicateAndPrefixStringValue (const char *value, unsigned int length)
- static void decodePrefixedString (bool isPrefixed, char const *prefixed, unsigned *length, char const **value)
- static void releasePrefixedStringValue (char *value)

  Free the string duplicated by duplicateStringValue()/duplicateAndPrefixStringValue().
- static void releaseStringValue (char *value, unsigned)
- JSONCPP_NORETURN void throwRuntimeError (JSONCPP_STRING const &msg)

  used internally
- JSONCPP_NORETURN void throwLogicError (JSONCPP_STRING const &msg)

  used internally
- static bool IsIntegral (double d)
- static bool containsControlCharacter (const char *str)
- static bool containsControlCharacter0 (const char *str, unsigned len)
- JSONCPP_STRING valueToString (LargestInt value)
- JSONCPP_STRING valueToString (LargestUInt value)
- JSONCPP_STRING valueToString (double value, bool useSpecialFloats, unsigned int precision)
- JSONCPP_STRING valueToString (double value)
- JSONCPP_STRING valueToString (bool value)
- JSONCPP_STRING valueToQuotedString (const char *value)
- static char const * strnpbrk (char const *s, char const *accept, size_t n)
- static JSONCPP_STRING valueToQuotedStringN (const char *value, unsigned length)
- static void getValidWriterKeys (std::set< JSONCPP_STRING > *valid_keys)
- JSONCPP_STRING writeString (StreamWriter::Factory const &factory, Value const &root)

  Write into stringstream, then return string, for convenience.
- JSONCPP_OSTREAM & operator<< (JSONCPP_OSTREAM &, const Value &root)

  Output using the StyledStreamWriter.
- bool JSON_API parseFromStream (CharReader::Factory const &, JSONCPP_ISTREAM &, Value *root, std::string *errs)

  Consume entire stream and use its begin/end.
- JSONCPP_STRING JSON_API valueToString (Int value)
- JSONCPP_STRING JSON_API valueToString (UInt value)

Variables

- const unsigned char & kNullRef = kNull[0]

6.1.1 Detailed Description

JSON (JavaScript Object Notation).

6.1.2 Typedef Documentation

6.1.2.1 typedef unsigned int Json::ArrayIndex

6.1.2.2 typedef std::auto_ptr<CharReader> Json::CharReaderPtr

6.1.2.3 typedef int Json::Int

6.1.2.4 typedef long long int Json::Int64

6.1.2.5 typedef Int64 Json::LargestInt

6.1.2.6 typedef UInt64 Json::LargestUInt

6.1.2.7 typedef std::auto_ptr<StreamWriter> Json::StreamWriterPtr

6.1.2.8 typedef unsigned int Json::UInt

6.1.2.9 typedef unsigned long long int Json::UInt64

6.1.2.10 typedef char Json::UIntToStringBuffer[uintToStringBufferSize]

6.1.3 Enumeration Type Documentation

6.1.3.1 anonymous enum

Enumerator

uintToStringBufferSize Constant that specify the size of the buffer that must be passed to uintToString.

6.1.3.2 enum Json::CommentPlacement

Enumerator

commentBefore a comment placed on the line before a value

commentAfterOnSameLine a comment just after a value on the same line

commentAfter a comment on the line after a value (only make sense for

numberOfCommentPlacement root value)

6.1.3.3 enum Json::ValueType

Type of the value held by a Value object.

Enumerator

nullValue 'null' value

intValue signed integer value

uintValue unsigned integer value

realValue double value

stringValue UTF-8 string value.

booleanValue bool value

arrayValue array value (ordered list)

objectValue object value (collection of name/value pairs).

6.1.4 Function Documentation

6.1.4.1 static const unsigned char Json::ALIGNAS (8) [static]

6.1.4.2 static JSONCPP_STRING Json::codePointToUTF8 (unsigned int *cp*) [inline], [static]

Converts a unicode code-point to UTF-8.

6.1.4.3 static bool Json::containsControlCharacter (const char * *str*) [static]

6.1.4.4 static bool Json::containsControlCharacter0 (const char * *str,* unsigned *len*) [static]

6.1.4.5 static bool Json::containsNewLine (Reader::Location *begin,* Reader::Location *end*) [static]

6.1.4.6 static void Json::decodePrefixedString (bool *isPrefixed,* char const * *prefixed,* unsigned * *length,* char const ** *value*) [inline], [static]

6.1.4.7 static char* Json::duplicateAndPrefixStringValue (const char * *value,* unsigned int *length*) [inline], [static]

6.1.4.8 static char* Json::duplicateStringValue (const char * *value,* size_t *length*) [inline], [static]

Duplicates the specified string value.

Parameters

value	Pointer to the string to duplicate. Must be zero-terminated if length is "unknown".
length	Length of the value. if equals to unknown, then it will be computed using strlen(value).

Returns

Pointer on the duplicate instance of string.

6.1.4.9 static void Json::fixNumericLocale (char * *begin*, char * *end*) [inline], [static]

Change ',' to '.

' everywhere in buffer.

We had a sophisticated way, but it did not work in WinCE.

See also

https://github.com/open-source-parsers/jsoncpp/pull/9

6.1.4.10 static void Json::getValidReaderKeys (std::set< JSONCPP_STRING > * *valid_keys*) [static]

6.1.4.11 static void Json::getValidWriterKeys (std::set< JSONCPP_STRING > * *valid_keys*) [static]

6.1.4.12 template<typename T , typename U > static bool Json::InRange (double *d*, T *min*, U *max*) [inline], [static]

6.1.4.13 static bool Json::isControlCharacter (char *ch*) [inline], [static]

Returns true if ch is a control character (in range [1,31]).

6.1.4.14 static bool Json::IsIntegral (double *d*) [static]

6.1.4.15 static JSONCPP_STRING Json::normalizeEOL (Reader::Location *begin*, Reader::Location *end*) [static]

6.1.4.16 JSON_API JSONCPP_OSTREAM & Json::operator<< (JSONCPP_OSTREAM & , const Value & *root*)

Output using the StyledStreamWriter.

See also

Json::operator>>()

6.1.4.17 JSON_API JSONCPP_ISTREAM & Json::operator>> (JSONCPP_ISTREAM & , Value &)

Read from 'sin' into 'root'.

Always keep comments from the input JSON.

This can be used to read a file into a particular sub-object. For example:

```
Json::Value root;
cin >> root["dir"]["file"];
cout << root;
```

Result:

```
{
"dir": {
    "file": {
    // The input stream JSON would be nested here.
    }
}
}
```

Exceptions

std::exception	on parse error.

See also

Json::operator<<()

6.1.4.18 bool JSON_API Json::parseFromStream (CharReader::Factory const & , JSONCPP_ISTREAM & , Value * *root,* std::string * *errs*)

Consume entire stream and use its begin/end.

Someday we might have a real StreamReader, but for now this is convenient.

6.1.4.19 bool Json::parseFromStream (CharReader::Factory const & *fact,* JSONCPP_ISTREAM & *sin,* Value * *root,* JSONCPP_STRING * *errs*)

6.1.4.20 static void Json::releasePrefixedStringValue (char * *value*) [inline], [static]

Free the string duplicated by duplicateStringValue()/duplicateAndPrefixStringValue().

6.1.4.21 static void Json::releaseStringValue (char * *value,* unsigned) [inline], [static]

6.1.4.22 static char const* Json::strnpbrk (char const * *s,* char const * *accept,* size_t *n*) [static]

6.1.4.23 JSONCPP_NORETURN void Json::throwLogicError (JSONCPP_STRING const & *msg*)

used internally

6.1.4.24 JSONCPP_NORETURN void Json::throwRuntimeError (JSONCPP_STRING const & *msg*)

used internally

6.1.4.25 static void Json::uintToString (LargestUInt *value,* char *& *current*) [inline], [static]

Converts an unsigned integer to string.

Parameters

value	Unsigned interger to convert to string
current	Input/Output string buffer. Must have at least uintToStringBufferSize chars free.

6.1.4.26 JSONCPP_STRING JSON_API Json::valueToQuotedString (const char * *value*)

6.1.4.27 static JSONCPP_STRING Json::valueToQuotedStringN (const char * *value*, unsigned *length*) [static]

6.1.4.28 JSONCPP_STRING JSON_API Json::valueToString (Int *value*)

6.1.4.29 JSONCPP_STRING JSON_API Json::valueToString (UInt *value*)

6.1.4.30 JSONCPP_STRING JSON_API Json::valueToString (LargestInt *value*)

6.1.4.31 JSONCPP_STRING JSON_API Json::valueToString (LargestUInt *value*)

6.1.4.32 JSONCPP_STRING Json::valueToString (double *value*, bool *useSpecialFloats*, unsigned int *precision*)

6.1.4.33 JSONCPP_STRING JSON_API Json::valueToString (double *value*)

6.1.4.34 JSONCPP_STRING JSON_API Json::valueToString (bool *value*)

6.1.4.35 JSONCPP_STRING JSON_API Json::writeString (StreamWriter::Factory const & *factory*, Value const & *root*)

Write into stringstream, then return string, for convenience.

A StreamWriter will be created from the factory, used, and then deleted.

6.1.5 Variable Documentation

6.1.5.1 const unsigned char& Json::kNullRef = kNull[0]

6.2 std Namespace Reference

Functions

- template<>
  void swap (Json::Value &a, Json::Value &b)

  Specialize std::swap() for Json::Value.

6.2.1 Function Documentation

6.2.1.1 template<> void std::swap (Json::Value & *a*, Json::Value & *b*) [inline]

Specialize std::swap() for Json::Value.

6.3 zcm Namespace Reference

Classes

- class Actor

  Actor class.
- class Base_Operation

  Base Operation class.
- class Client

  Client class.
- class Component

  Component class.
- class Operation_Queue

  Operation_Queue class.
- class Publisher

  Publisher class.
- class Server

  Server class.
- class Server_Operation

  Server Operation class.
- class Subscriber

  Subscriber class.
- class Subscriber_Operation

  Subscriber Operation class.
- class Timer

  Timer class.
- class Timer_Operation

  Timer Operation class.

Chapter 7

Class Documentation

7.1 zcm::Actor Class Reference

Actor class.

`#include <actor.hpp>`

Public Member Functions

- void configure (std::string configuration_file)

  Configure the component_instances vector.
- void run ()

  Spawn all component instances.
- std::string get_name ()

  Get actor name.

Private Attributes

- std::string name
- std::vector< Component * > component_instances

7.1.1 Detailed Description

Actor class.

7.1.2 Member Function Documentation

7.1.2.1 void zcm::Actor::configure (std::string *configuration_file*)

Configure the component_instances vector.

Parameters

in	*configuration_file*	JSON configuration file to parse

7.1.2.2 std::string zcm::Actor::get_name ( )

Get actor name.

Returns

Name of the actor

7.1.2.3 void zcm::Actor::run ( )

Spawn all component instances.

7.1.3 Member Data Documentation

7.1.3.1 std::vector<Component*> zcm::Actor::component_instances [private]

7.1.3.2 std::string zcm::Actor::name [private]

The documentation for this class was generated from the following files:

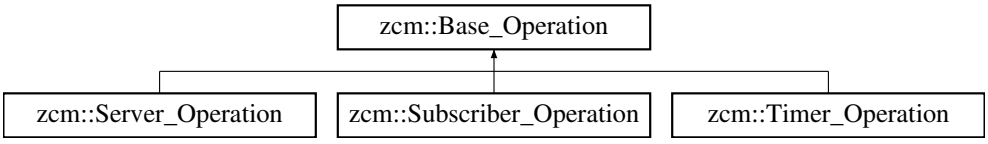
- /home/pranav/Repositories/zcm/include/actor.hpp
- /home/pranav/Repositories/zcm/src/actor.cpp

7.2 zcm::Base_Operation Class Reference

Base Operation class.

`#include <operation_types.hpp>`

Inheritance diagram for zcm::Base_Operation:



Public Member Functions

- Base_Operation (std::string name, unsigned int priority)

  Construct a base operation.
- std::string get_name ()

  Return the operation name.
- unsigned int get_priority () const

  Return the operation priority.
- virtual void execute ()

  Virtual execute function overridden by concrete types.

Private Attributes

- std::string name

  Name of the Operation.
- unsigned int priority

  Priority of the Operation.

7.2.1 Detailed Description

Base Operation class.

7.2.2 Constructor & Destructor Documentation

7.2.2.1 zcm::Base_Operation::Base_Operation (std::string *name,* unsigned int *priority*) [inline]

Construct a base operation.

Parameters

in	*name*	Name of the operation
in	*priority*	Priority of the operation

7.2.3 Member Function Documentation

7.2.3.1 virtual void zcm::Base_Operation::execute ( ) [inline], [virtual]

Virtual execute function overridden by concrete types.

Reimplemented in zcm::Server_Operation, zcm::Subscriber_Operation, and zcm::Timer_Operation.

7.2.3.2 std::string zcm::Base_Operation::get_name ( )

Return the operation name.

Returns

Name of the operation

7.2.3.3 unsigned int zcm::Base_Operation::get_priority ( ) const

Return the operation priority.

Returns

Priority of the operation

7.2.4 Member Data Documentation

7.2.4.1 std::string zcm::Base_Operation::name [private]

Name of the Operation.

7.2.4.2 unsigned int zcm::Base_Operation::priority [private]

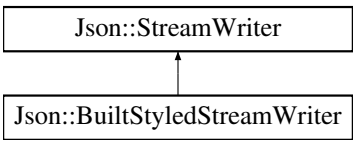
Priority of the Operation.

The documentation for this class was generated from the following files:

- /home/pranav/Repositories/zcm/include/operation_types.hpp
- /home/pranav/Repositories/zcm/src/operation_types.cpp

7.3 Json::BuiltStyledStreamWriter Struct Reference

Inheritance diagram for Json::BuiltStyledStreamWriter:



Public Member Functions

- BuiltStyledStreamWriter (JSONCPP_STRING const &indentation, CommentStyle::Enum cs, JSONCPP_STRING const &colonSymbol, JSONCPP_STRING const &nullSymbol, JSONCPP_STRING const &endingLineFeedSymbol, bool useSpecialFloats, unsigned int precision)
- int write (Value const &root, JSONCPP_OSTREAM *sout) JSONCPP_OVERRIDE

  Write Value into document as configured in sub-class.

Protected Attributes

- JSONCPP_OSTREAM * sout_

Private Types

- typedef std::vector< JSONCPP_STRING > ChildValues

Private Member Functions

- void writeValue (Value const &value)
- void writeArrayValue (Value const &value)
- bool isMultineArray (Value const &value)
- void pushValue (JSONCPP_STRING const &value)
- void writeIndent ()
- void writeWithIndent (JSONCPP_STRING const &value)
- void indent ()
- void unindent ()
- void writeCommentBeforeValue (Value const &root)
- void writeCommentAfterValueOnSameLine (Value const &root)

Static Private Member Functions

- static bool hasCommentForValue (const Value &value)

Private Attributes

- ChildValues childValues_
- JSONCPP_STRING indentString_
- unsigned int rightMargin_
- JSONCPP_STRING indentation_
- CommentStyle::Enum cs_
- JSONCPP_STRING colonSymbol_
- JSONCPP_STRING nullSymbol_
- JSONCPP_STRING endingLineFeedSymbol_
- bool addChildValues_: 1
- bool indented_: 1
- bool useSpecialFloats_: 1
- unsigned int precision_

7.3.1 Member Typedef Documentation

7.3.1.1 typedef std::vector<JSONCPP_STRING> Json::BuiltStyledStreamWriter::ChildValues [private]

7.3.2 Constructor & Destructor Documentation

7.3.2.1 Json::BuiltStyledStreamWriter::BuiltStyledStreamWriter (JSONCPP_STRING const & *indentation*, CommentStyle::Enum *cs*, JSONCPP_STRING const & *colonSymbol*, JSONCPP_STRING const & *nullSymbol*, JSONCPP_STRING const & *endingLineFeedSymbol*, bool *useSpecialFloats*, unsigned int *precision*)

7.3.3 Member Function Documentation

7.3.3.1 bool Json::BuiltStyledStreamWriter::hasCommentForValue (const Value & *value*) [static], [private]

7.3.3.2 void Json::BuiltStyledStreamWriter::indent ( ) [private]

7.3.3.3 bool Json::BuiltStyledStreamWriter::isMultineArray (Value const & *value*) [private]

7.3.3.4 void Json::BuiltStyledStreamWriter::pushValue (JSONCPP_STRING const & *value*) [private]

7.3.3.5 void Json::BuiltStyledStreamWriter::unindent ( ) [private]

7.3.3.6 int Json::BuiltStyledStreamWriter::write (Value const & *root*, JSONCPP_OSTREAM * *sout*) [virtual]

Write Value into document as configured in sub-class.

Do not take ownership of sout, but maintain a reference during function.

Precondition

sout != NULL

Returns

zero on success (For now, we always return zero, so check the stream instead.)

Exceptions

std::exception	possibly, depending on configuration

Implements Json::StreamWriter.

7.3.3.7 void Json::BuiltStyledStreamWriter::writeArrayValue (Value const & *value*) [private]

7.3.3.8 void Json::BuiltStyledStreamWriter::writeCommentAfterValueOnSameLine (Value const & *root*) [private]

7.3.3.9 void Json::BuiltStyledStreamWriter::writeCommentBeforeValue (Value const & *root*) [private]

7.3.3.10 void Json::BuiltStyledStreamWriter::writeIndent ( ) [private]

7.3.3.11 void Json::BuiltStyledStreamWriter::writeValue (Value const & *value*) [private]

7.3.3.12 void Json::BuiltStyledStreamWriter::writeWithIndent (JSONCPP_STRING const & *value*) [private]

7.3.4 Member Data Documentation

7.3.4.1 bool Json::BuiltStyledStreamWriter::addChildValues_ [private]

7.3.4.2 ChildValues Json::BuiltStyledStreamWriter::childValues_ [private]

7.3.4.3 JSONCPP_STRING Json::BuiltStyledStreamWriter::colonSymbol_ [private]

7.3.4.4 CommentStyle::Enum Json::BuiltStyledStreamWriter::cs_ [private]

7.3.4.5 JSONCPP_STRING Json::BuiltStyledStreamWriter::endingLineFeedSymbol_ [private]

7.3.4.6 JSONCPP_STRING Json::BuiltStyledStreamWriter::indentation_ [private]

7.3.4.7 bool Json::BuiltStyledStreamWriter::indented_ [private]

7.3.4.8 JSONCPP_STRING Json::BuiltStyledStreamWriter::indentString_ [private]

7.3.4.9 JSONCPP_STRING Json::BuiltStyledStreamWriter::nullSymbol_ [private]

7.3.4.10 unsigned int Json::BuiltStyledStreamWriter::precision_ [private]

7.3.4.11 unsigned int Json::BuiltStyledStreamWriter::rightMargin_ [private]

7.3.4.12 JSONCPP_OSTREAM* Json::StreamWriter::sout_ [protected], [inherited]

7.3.4.13 bool Json::BuiltStyledStreamWriter::useSpecialFloats_ [private]

The documentation for this struct was generated from the following file:

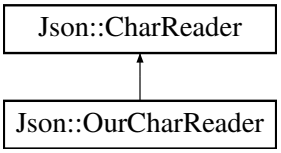
- /home/pranav/Repositories/zcm/src/json.cpp

7.4 Json::CharReader Class Reference

Interface for reading JSON from a char array.

`#include <json.hpp>`

Inheritance diagram for Json::CharReader:



Classes

- class Factory

Public Member Functions

- virtual ~CharReader ()
- virtual bool parse (char const *beginDoc, char const *endDoc, Value *root, JSONCPP_STRING *errs)=0

  Read a Value from a JSON document.

7.4.1 Detailed Description

Interface for reading JSON from a char array.

7.4.2 Constructor & Destructor Documentation

7.4.2.1 virtual Json::CharReader::~CharReader ( ) [inline], [virtual]

7.4.3 Member Function Documentation

7.4.3.1 virtual bool Json::CharReader::parse (char const * *beginDoc*, char const * *endDoc*, Value * *root*, JSONCPP_STRING * *errs*) [pure virtual]

Read a Value from a JSON document.

The document must be a UTF-8 encoded string containing the document to read.

Parameters

beginDoc	Pointer on the beginning of the UTF-8 encoded string of the document to read.
endDoc	Pointer on the end of the UTF-8 encoded string of the document to read. Must be >= beginDoc.
root	[out] Contains the root value of the document if it was successfully parsed.
errs	[out] Formatted error messages (if not NULL) a user friendly string that lists errors in the parsed document.

Returns

`true` if the document was successfully parsed, `false` if an error occurred.

Implemented in Json::OurCharReader.

The documentation for this class was generated from the following file:

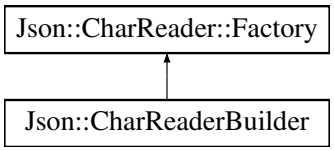
- /home/pranav/Repositories/zcm/include/json.hpp

7.5 Json::CharReaderBuilder Class Reference

Build a CharReader implementation.

```
#include <json.hpp>
```

Inheritance diagram for Json::CharReaderBuilder:



Public Member Functions

- CharReaderBuilder ()
- ~CharReaderBuilder () JSONCPP_OVERRIDE
- CharReader * newCharReader () const JSONCPP_OVERRIDE

  Allocate a CharReader via operator new().
- bool validate (Json::Value *invalid) const
- Value & operator[] (JSONCPP_STRING key)

  A simple way to update a specific setting.

Static Public Member Functions

- static void setDefaults (Json::Value *settings)

  Called by ctor, but you can use this to reset settings_.
- static void strictMode (Json::Value *settings)

  Same as old Features::strictMode().

Public Attributes

- Json::Value settings_

  Configuration of this builder.

7.5.1 Detailed Description

Build a CharReader implementation.

Usage:

```
using namespace Json;
CharReaderBuilder builder;
builder["collectComments"] = false;
Value value;
JSONCPP_STRING errs;
bool ok = parseFromStream(builder, std::cin, &value, &errs);
```

7.5.2 Constructor & Destructor Documentation

7.5.2.1 Json::CharReaderBuilder::CharReaderBuilder ( )

7.5.2.2 Json::CharReaderBuilder::~CharReaderBuilder ( )

7.5.3 Member Function Documentation

7.5.3.1 CharReader * Json::CharReaderBuilder::newCharReader ( ) const [virtual]

Allocate a CharReader via operator new().

Exceptions

std::exception	if something goes wrong (e.g. invalid settings)

Implements Json::CharReader::Factory.

7.5.3.2 Value & Json::CharReaderBuilder::operator[ ] (JSONCPP_STRING *key*)

A simple way to update a specific setting.

7.5.3.3 void Json::CharReaderBuilder::setDefaults (Json::Value * *settings*) [static]

Called by ctor, but you can use this to reset settings_.

Precondition

'settings' != NULL (but Json::null is fine)

Remarks

Defaults:

[CharReaderBuilderDefaults]

[CharReaderBuilderDefaults]

7.5.3.4 void Json::CharReaderBuilder::strictMode (Json::Value * *settings*) [static]

Same as old Features::strictMode().

Precondition

'settings' != NULL (but Json::null is fine)

Remarks

Defaults:

[CharReaderBuilderStrictMode]

[CharReaderBuilderStrictMode]

7.5.3.5 bool Json::CharReaderBuilder::validate (Json::Value * *invalid*) const

Returns

true if 'settings' are legal and consistent; otherwise, indicate bad settings via 'invalid'.

7.5.4 Member Data Documentation

7.5.4.1 Json::Value Json::CharReaderBuilder::settings_

Configuration of this builder.

These are case-sensitive. Available settings (case-sensitive):

- `"collectComments": false or true`
  - true to collect comment and allow writing them back during serialization, false to discard comments. This parameter is ignored if allowComments is false.
- `"allowComments": false or true`
  - true if comments are allowed.
- `"strictRoot": false or true`
  - true if root must be either an array or an object value
- `"allowDroppedNullPlaceholders": false or true`
  - true if dropped null placeholders are allowed. (See StreamWriterBuilder.)
- `"allowNumericKeys": false or true`
  - true if numeric object keys are allowed.
- `"allowSingleQuotes": false or true`
  - true if ' are allowed for strings (both keys and values)
- `"stackLimit": integer`
  - Exceeding stackLimit (recursive depth of `readValue()`) will cause an exception.
  - This is a security issue (seg-faults caused by deeply nested JSON), so the default is low.
- `"failIfExtra": false or true`
  - If true, `parse()` returns false when extra non-whitespace trails the JSON value in the input string.
- `"rejectDupKeys": false or true`
  - If true, `parse()` returns false when a key is duplicated within an object.
- `"allowSpecialFloats": false or true`
  - If true, special float values (NaNs and infinities) are allowed and their values are lossfree restorable.

You can examine 'settings_' yourself to see the defaults. You can also write and read them just like any JSON Value.

See also

setDefaults()

The documentation for this class was generated from the following files:

- /home/pranav/Repositories/zcm/include/json.hpp
- /home/pranav/Repositories/zcm/src/json.cpp

7.6 zcm::Client Class Reference

Client class.

`#include <client.hpp>`

Public Member Functions

- Client (std::string name)
  Construct a client object.
- Client (std::string name, std::vector< std::string > endpoints)
  Construct a client object with known endpoints.
- ~Client ()
  Close the client ZMQ socket and destroy the context.
- void connect (std::vector< std::string > new_endpoints)
  Connect the client to a new set of endpoints.
- std::string get_name ()
  Return the client name.
- std::string call (std::string message)
  Call the server.

Private Attributes

- std::string name
  Name of the publisher.
- std::vector< std::string > endpoints
  Vector of endpoints to connect to.
- zmq::context_t * context
  ZMQ Context of the client.
- zmq::socket_t * client_socket
  ZMQ Socket of the client.

7.6.1 Detailed Description

Client class.

7.6.2 Constructor & Destructor Documentation

7.6.2.1 zcm::Client::Client (std::string *name*)

Construct a client object.

Parameters

in	*name*	Client name

7.6.2.2 zcm::Client::Client (std::string *name,* std::vector< std::string > *endpoints*)

Construct a client object with known endpoints.

Parameters

in	*name*	Client name
in	*endpoints*	A vector of endpoint strings

7.6.2.3 zcm::Client::~Client ( )

Close the client ZMQ socket and destroy the context.

7.6.3 Member Function Documentation

7.6.3.1 std::string zcm::Client::call (std::string *message*)

Call the server.

Parameters

in	*message*	The message string. Serialize complex objects to strings with protobuf

7.6.3.2 void zcm::Client::connect (std::vector< std::string > *new_endpoints*)

Connect the client to a new set of endpoints.

Parameters

in	*new_endpoints*	New set of endpoints as a vector

7.6.3.3 std::string zcm::Client::get_name ( )

Return the client name.

Returns

Client name

7.6.4 Member Data Documentation

7.6.4.1 zmq::socket_t* zcm::Client::client_socket [private]

ZMQ Socket of the client.

7.6.4.2 zmq::context_t* zcm::Client::context [private]

ZMQ Context of the client.

7.6.4.3 std::vector<std::string> zcm::Client::endpoints [private]

Vector of endpoints to connect to.

7.6.4.4 std::string zcm::Client::name [private]

Name of the publisher.

The documentation for this class was generated from the following files:

- /home/pranav/Repositories/zcm/include/client.hpp
- /home/pranav/Repositories/zcm/src/client.cpp

7.7 Json::Value::CommentInfo Struct Reference

Public Member Functions

- CommentInfo ()
- ~CommentInfo ()
- void setComment (const char *text, size_t len)

Public Attributes

- char * comment_

7.7.1 Constructor & Destructor Documentation

7.7.1.1 Json::Value::CommentInfo::CommentInfo ( )

7.7.1.2 Json::Value::CommentInfo::~CommentInfo ( )

7.7.2 Member Function Documentation

7.7.2.1 void Json::Value::CommentInfo::setComment (const char * *text*, size_t *len*)

7.7.3 Member Data Documentation

7.7.3.1 char* Json::Value::CommentInfo::comment_

The documentation for this struct was generated from the following files:

- /home/pranav/Repositories/zcm/include/json.hpp
- /home/pranav/Repositories/zcm/src/json.cpp

7.8 Json::CommentStyle Struct Reference

Scoped enums are not available until C++11.

Public Types

- enum Enum { None, Most, All }
  Decide whether to write comments.

7.8.1 Detailed Description

Scoped enums are not available until C++11.

7.8.2 Member Enumeration Documentation

7.8.2.1 enum Json::CommentStyle::Enum

Decide whether to write comments.

Enumerator

None Drop all comments.

Most Recover odd behavior of previous versions (not implemented yet).

All Keep all comments.

The documentation for this struct was generated from the following file:

- /home/pranav/Repositories/zcm/src/json.cpp

7.9 zcm::Component Class Reference

Component class.

```
#include <component.hpp>
```

Public Member Functions

- Component ()
  Construct a component Prepare the component operation queue.
- ~Component ()
  Destroy the component.
- std::thread * spawn ()
  Spawn the component executor thread.

Protected Attributes

- Operation_Queue * operation_queue

  Pointer to the Component Operation Queue.
- std::thread * executor_thread

  Pointer to the Component Executor Thread.

7.9.1 Detailed Description

Component class.

7.9.2 Constructor & Destructor Documentation

7.9.2.1 zcm::Component::Component ( )

Construct a component Prepare the component operation queue.

7.9.2.2 zcm::Component::~Component ( )

Destroy the component.

7.9.3 Member Function Documentation

7.9.3.1 std::thread * zcm::Component::spawn ( )

Spawn the component executor thread.

Returns

Return a pointer to the executor thread

7.9.4 Member Data Documentation

7.9.4.1 std::thread* zcm::Component::executor_thread [protected]

Pointer to the Component Executor Thread.

7.9.4.2 Operation_Queue* zcm::Component::operation_queue [protected]

Pointer to the Component Operation Queue.

The documentation for this class was generated from the following files:

- /home/pranav/Repositories/zcm/include/component.hpp
- /home/pranav/Repositories/zcm/src/component.cpp

7.10 Json::Value::CZString Class Reference

Classes

- struct StringStorage

Public Types

- enum DuplicationPolicy { noDuplication = 0, duplicate, duplicateOnCopy }

Public Member Functions

- CZString (ArrayIndex index)
- CZString (char const *str, unsigned length, DuplicationPolicy allocate)
- CZString (CZString const &other)
- ~CZString ()
- CZString & operator= (CZString other)
- bool operator< (CZString const &other) const
- bool operator== (CZString const &other) const
- ArrayIndex index () const
- char const * data () const
- unsigned length () const
- bool isStaticString () const

Private Member Functions

- void swap (CZString &other)

Private Attributes

- char const * cstr_
- union {
  ArrayIndex index_
  StringStorage storage_
  };

7.10.1 Member Enumeration Documentation

7.10.1.1 enum Json::Value::CZString::DuplicationPolicy

Enumerator

noDuplication

duplicate

duplicateOnCopy

7.10.2 Constructor & Destructor Documentation

7.10.2.1 Json::Value::CZString::CZString (ArrayIndex *index*)

7.10.2.2 Json::Value::CZString::CZString (char const * *str,* unsigned *length,* DuplicationPolicy *allocate*)

7.10.2.3 Json::Value::CZString::CZString (CZString const & *other*)

7.10.2.4 Json::Value::CZString::~CZString ( )

7.10.3 Member Function Documentation

7.10.3.1 const char * Json::Value::CZString::data ( ) const

7.10.3.2 ArrayIndex Json::Value::CZString::index ( ) const

7.10.3.3 bool Json::Value::CZString::isStaticString ( ) const

7.10.3.4 unsigned Json::Value::CZString::length ( ) const

7.10.3.5 bool Json::Value::CZString::operator< (CZString const & *other*) const

7.10.3.6 Value::CZString & Json::Value::CZString::operator= (CZString *other*)

7.10.3.7 bool Json::Value::CZString::operator== (CZString const & *other*) const

7.10.3.8 void Json::Value::CZString::swap (CZString & *other*) [private]

7.10.4 Member Data Documentation

7.10.4.1 union { ... } [private]

7.10.4.2 char const* Json::Value::CZString::cstr_ [private]

7.10.4.3 ArrayIndex Json::Value::CZString::index_

7.10.4.4 StringStorage Json::Value::CZString::storage_

The documentation for this class was generated from the following files:

- /home/pranav/Repositories/zcm/include/json.hpp
- /home/pranav/Repositories/zcm/src/json.cpp

7.11 Json::OurReader::ErrorInfo Class Reference

Public Attributes

- Token token_
- JSONCPP_STRING message_
- Location extra_

7.11.1 Member Data Documentation

7.11.1.1 Location Json::OurReader::ErrorInfo::extra_

7.11.1.2 JSONCPP_STRING Json::OurReader::ErrorInfo::message_

7.11.1.3 Token Json::OurReader::ErrorInfo::token_

The documentation for this class was generated from the following file:

- /home/pranav/Repositories/zcm/src/json.cpp

7.12 Json::Reader::ErrorInfo Class Reference

Public Attributes

- Token token_
- JSONCPP_STRING message_
- Location extra_

7.12.1 Member Data Documentation

7.12.1.1 Location Json::Reader::ErrorInfo::extra_

7.12.1.2 JSONCPP_STRING Json::Reader::ErrorInfo::message_

7.12.1.3 Token Json::Reader::ErrorInfo::token_

The documentation for this class was generated from the following file:

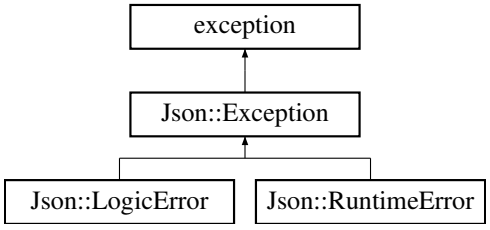
- /home/pranav/Repositories/zcm/include/json.hpp

7.13 Json::Exception Class Reference

Base class for all exceptions we throw.

`#include <json.hpp>`

Inheritance diagram for Json::Exception:



Public Member Functions

- Exception (JSONCPP_STRING const &msg)
- ~Exception () JSONCPP_OVERRIDE throw ()
- char const * what () const JSONCPP_OVERRIDE throw ()

Protected Attributes

- JSONCPP_STRING msg_

7.13.1 Detailed Description

Base class for all exceptions we throw.

We use nothing but these internally. Of course, STL can throw others.

7.13.2 Constructor & Destructor Documentation

7.13.2.1 Json::Exception::Exception (JSONCPP_STRING const & *msg*)

7.13.2.2 Json::Exception::~Exception ( ) throw)

7.13.3 Member Function Documentation

7.13.3.1 char const * Json::Exception::what ( ) const throw)

7.13.4 Member Data Documentation

7.13.4.1 JSONCPP_STRING Json::Exception::msg_ [protected]

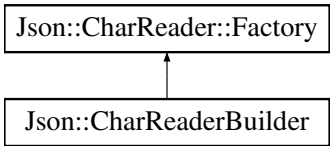
The documentation for this class was generated from the following files:

- /home/pranav/Repositories/zcm/include/json.hpp
- /home/pranav/Repositories/zcm/src/json.cpp

7.14 Json::CharReader::Factory Class Reference

`#include <json.hpp>`

Inheritance diagram for Json::CharReader::Factory:



Public Member Functions

- virtual ~Factory ()
- virtual CharReader * newCharReader () const =0

  Allocate a CharReader via operator new().

7.14.1 Constructor & Destructor Documentation

7.14.1.1 virtual Json::CharReader::Factory::~Factory ( ) [inline], [virtual]

7.14.2 Member Function Documentation

7.14.2.1 virtual CharReader* Json::CharReader::Factory::newCharReader ( ) const [pure virtual]

Allocate a CharReader via operator new().

Exceptions

std::exception	if something goes wrong (e.g. invalid settings)

Implemented in Json::CharReaderBuilder.

The documentation for this class was generated from the following file:

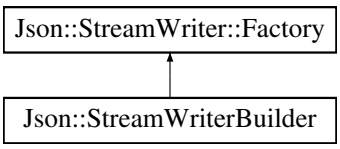
- /home/pranav/Repositories/zcm/include/json.hpp

7.15 Json::StreamWriter::Factory Class Reference

A simple abstract factory.

`#include <json.hpp>`

Inheritance diagram for Json::StreamWriter::Factory:



Public Member Functions

- virtual ~Factory ()
- virtual StreamWriter * newStreamWriter () const =0

  Allocate a CharReader via operator new().

7.15.1 Detailed Description

A simple abstract factory.

7.15.2 Constructor & Destructor Documentation

7.15.2.1 Json::StreamWriter::Factory::~Factory ( ) [virtual]

7.15.3 Member Function Documentation

7.15.3.1 virtual StreamWriter* Json::StreamWriter::Factory::newStreamWriter ( ) const [pure virtual]

Allocate a CharReader via operator new().

Exceptions

std::exception	if something goes wrong (e.g. invalid settings)

Implemented in Json::StreamWriterBuilder.

The documentation for this class was generated from the following files:

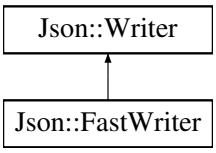
- /home/pranav/Repositories/zcm/include/json.hpp
- /home/pranav/Repositories/zcm/src/json.cpp

7.16 Json::FastWriter Class Reference

Outputs a Value in JSON format without formatting (not human friendly).

```
#include <json.hpp>
```

Inheritance diagram for Json::FastWriter:



Public Member Functions

- FastWriter ()
- ~FastWriter () JSONCPP_OVERRIDE
- void enableYAMLCompatibility ()
- void dropNullPlaceholders ()

  Drop the "null" string from the writer's output for nullValues.
- void omitEndingLineFeed ()
- JSONCPP_STRING write (const Value &root) JSONCPP_OVERRIDE

Private Member Functions

- void writeValue (const Value &value)

Private Attributes

- JSONCPP_STRING document_
- bool yamlCompatiblityEnabled_
- bool dropNullPlaceholders_
- bool omitEndingLineFeed_

7.16.1 Detailed Description

Outputs a Value in JSON format without formatting (not human friendly).

The JSON document is written in a single line. It is not intended for 'human' consumption, but may be usefull to support feature such as RPC where bandwith is limited.

See also

Reader, Value

Deprecated Use StreamWriterBuilder.

7.16.2 Constructor & Destructor Documentation

7.16.2.1 Json::FastWriter::FastWriter ( )

7.16.2.2 Json::FastWriter::~FastWriter ( ) [inline]

7.16.3 Member Function Documentation

7.16.3.1 void Json::FastWriter::dropNullPlaceholders ( )

Drop the "null" string from the writer's output for nullValues.

Strictly speaking, this is not valid JSON. But when the output is being fed to a browser's Javascript, it makes for smaller output and the browser can handle the output just fine.

7.16.3.2 void Json::FastWriter::enableYAMLCompatibility ( )

7.16.3.3 void Json::FastWriter::omitEndingLineFeed ( )

7.16.3.4 JSONCPP_STRING Json::FastWriter::write (const Value & *root*) [virtual]

Implements Json::Writer.

7.16.3.5 void Json::FastWriter::writeValue (const Value & *value*) [private]

7.16.4 Member Data Documentation

7.16.4.1 JSONCPP_STRING Json::FastWriter::document_ [private]

7.16.4.2 bool Json::FastWriter::dropNullPlaceholders_ [private]

7.16.4.3 bool Json::FastWriter::omitEndingLineFeed_ [private]

7.16.4.4 bool Json::FastWriter::yamlCompatiblityEnabled_ [private]

The documentation for this class was generated from the following files:

- /home/pranav/Repositories/zcm/include/json.hpp
- /home/pranav/Repositories/zcm/src/json.cpp

7.17 Json::Features Class Reference

Configuration passed to reader and writer.

```
#include <json.hpp>
```

Public Member Functions

- Features ()

  Initialize the configuration like JsonConfig::allFeatures;.

Static Public Member Functions

- static Features all ()

  A configuration that allows all features and assumes all strings are UTF-8.
- static Features strictMode ()

  A configuration that is strictly compatible with the JSON specification.

Public Attributes

- bool allowComments_

  `true` *if comments are allowed. Default:* `true`*.*
- bool strictRoot_

  `true` *if root must be either an array or an object value.*
- bool allowDroppedNullPlaceholders_

  `true` *if dropped null placeholders are allowed. Default:* `false`*.*
- bool allowNumericKeys_

  `true` *if numeric object key are allowed. Default:* `false`*.*

7.17.1 Detailed Description

Configuration passed to reader and writer.

This configuration object can be used to force the Reader or Writer to behave in a standard conforming way.

7.17.2 Constructor & Destructor Documentation

7.17.2.1 Json::Features::Features ( )

Initialize the configuration like JsonConfig::allFeatures;.

7.17.3 Member Function Documentation

7.17.3.1 Features Json::Features::all ( ) [static]

A configuration that allows all features and assumes all strings are UTF-8.

- C & C++ comments are allowed
- Root object can be any JSON value
- Assumes Value strings are encoded in UTF-8

7.17.3.2 Features Json::Features::strictMode ( ) [static]

A configuration that is strictly compatible with the JSON specification.

- Comments are forbidden.
- Root object must be either an array or an object value.
- Assumes Value strings are encoded in UTF-8

7.17.4 Member Data Documentation

7.17.4.1 bool Json::Features::allowComments_

`true` if comments are allowed. Default: `true`.

7.17.4.2 bool Json::Features::allowDroppedNullPlaceholders_

`true` if dropped null placeholders are allowed. Default: `false`.

7.17.4.3 bool Json::Features::allowNumericKeys_

`true` if numeric object key are allowed. Default: `false`.

7.17.4.4 bool Json::Features::strictRoot_

`true` if root must be either an array or an object value.

Default: `false`.

The documentation for this class was generated from the following files:

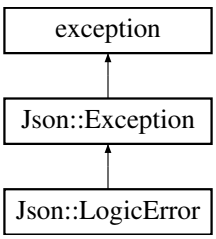
- /home/pranav/Repositories/zcm/include/json.hpp
- /home/pranav/Repositories/zcm/src/json.cpp

7.18 Json::LogicError Class Reference

Exceptions thrown by JSON_ASSERT/JSON_FAIL macros.

`#include <json.hpp>`

Inheritance diagram for Json::LogicError:



Public Member Functions

- LogicError (JSONCPP_STRING const &msg)
- char const * what () const JSONCPP_OVERRIDE throw ()

Protected Attributes

- JSONCPP_STRING msg_

7.18.1 Detailed Description

Exceptions thrown by JSON_ASSERT/JSON_FAIL macros.

These are precondition-violations (user bugs) and internal errors (our bugs).

Remarks

derived from Json::Exception

7.18.2 Constructor & Destructor Documentation

7.18.2.1 Json::LogicError::LogicError (JSONCPP_STRING const & *msg*)

7.18.3 Member Function Documentation

7.18.3.1 char const * Json::Exception::what ( ) const throw) [inherited]

7.18.4 Member Data Documentation

7.18.4.1 JSONCPP_STRING Json::Exception::msg_ [protected], [inherited]

The documentation for this class was generated from the following files:

- /home/pranav/Repositories/zcm/include/json.hpp
- /home/pranav/Repositories/zcm/src/json.cpp

7.19 zcm::Operation_Queue Class Reference

Operation_Queue class.

```
#include <operation_queue.hpp>
```

Classes

- struct PriorityOrdering

Public Member Functions

- void enqueue (Base_Operation *new_operation)
- void dequeue ()
- bool empty ()
- Base_Operation * top ()
- void process ()
- std::thread * spawn ()

Private Attributes

- std::priority_queue< Base_Operation, std::vector< Base_Operation * >, PriorityOrdering > operation_queue

  The component operation queue - STL priority_queue with fixed-priority scheduling.
- std::mutex queue_mutex

  Mutex that protects the queue during enqueue/dequeue.

7.19.1 Detailed Description

Operation_Queue class.

7.19.2 Member Function Documentation

7.19.2.1 void zcm::Operation_Queue::dequeue ( )

7.19.2.2 bool zcm::Operation_Queue::empty ( )

7.19.2.3 void zcm::Operation_Queue::enqueue (Base_Operation * *new_operation*)

7.19.2.4 void zcm::Operation_Queue::process ( )

7.19.2.5 std::thread * zcm::Operation_Queue::spawn ( )

7.19.2.6 Base_Operation * zcm::Operation_Queue::top ( )

7.19.3 Member Data Documentation

7.19.3.1 std::priority_queue<Base_Operation, std::vector<Base_Operation*>, PriorityOrdering> zcm::Operation_Queue::operation_queue [private]

The component operation queue - STL priority_queue with fixed-priority scheduling.

7.19.3.2 std::mutex zcm::Operation_Queue::queue_mutex [private]

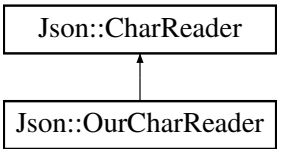
Mutex that protects the queue during enqueue/dequeue.

The documentation for this class was generated from the following files:

- /home/pranav/Repositories/zcm/include/operation_queue.hpp
- /home/pranav/Repositories/zcm/src/operation_queue.cpp

7.20 Json::OurCharReader Class Reference

Inheritance diagram for Json::OurCharReader:



Public Member Functions

- OurCharReader (bool collectComments, OurFeatures const &features)
- bool parse (char const *beginDoc, char const *endDoc, Value *root, JSONCPP_STRING *errs) JSONCP↩ P_OVERRIDE

  Read a Value from a JSON document.

Private Attributes

- bool const collectComments_
- OurReader reader_

7.20.1 Constructor & Destructor Documentation

7.20.1.1 Json::OurCharReader::OurCharReader (bool *collectComments,* OurFeatures const & *features*) [inline]

7.20.2 Member Function Documentation

7.20.2.1 bool Json::OurCharReader::parse (char const * *beginDoc,* char const * *endDoc,* Value * *root,* JSONCPP_STRING * *errs*) [inline], [virtual]

Read a Value from a JSON document.

The document must be a UTF-8 encoded string containing the document to read.

Parameters

beginDoc	Pointer on the beginning of the UTF-8 encoded string of the document to read.
endDoc	Pointer on the end of the UTF-8 encoded string of the document to read. Must be >= beginDoc.
root	[out] Contains the root value of the document if it was successfully parsed.
errs	[out] Formatted error messages (if not NULL) a user friendly string that lists errors in the parsed document.

Returns

`true` if the document was successfully parsed, `false` if an error occurred.

Implements Json::CharReader.

7.20.3 Member Data Documentation

7.20.3.1 bool const Json::OurCharReader::collectComments_ [private]

7.20.3.2 OurReader Json::OurCharReader::reader_ [private]

The documentation for this class was generated from the following file:

- /home/pranav/Repositories/zcm/src/json.cpp

7.21 Json::OurFeatures Class Reference

Static Public Member Functions

- static OurFeatures all ()

Public Attributes

- bool allowComments_
- bool strictRoot_
- bool allowDroppedNullPlaceholders_
- bool allowNumericKeys_
- bool allowSingleQuotes_
- bool failIfExtra_
- bool rejectDupKeys_
- bool allowSpecialFloats_
- int stackLimit_

7.21.1 Member Function Documentation

7.21.1.1 OurFeatures Json::OurFeatures::all ( ) [static]

7.21.2 Member Data Documentation

7.21.2.1 bool Json::OurFeatures::allowComments_

7.21.2.2 bool Json::OurFeatures::allowDroppedNullPlaceholders_

7.21.2.3 bool Json::OurFeatures::allowNumericKeys_

7.21.2.4 bool Json::OurFeatures::allowSingleQuotes_

7.21.2.5 bool Json::OurFeatures::allowSpecialFloats_

7.21.2.6 bool Json::OurFeatures::failIfExtra_

7.21.2.7 bool Json::OurFeatures::rejectDupKeys_

7.21.2.8 int Json::OurFeatures::stackLimit_

7.21.2.9 bool Json::OurFeatures::strictRoot_

The documentation for this class was generated from the following file:

- /home/pranav/Repositories/zcm/src/json.cpp

7.22 Json::OurReader Class Reference

Classes

- class ErrorInfo
- struct StructuredError
- class Token

Public Types

- typedef char Char
- typedef const Char * Location

Public Member Functions

- OurReader (OurFeatures const &features)
- bool parse (const char *beginDoc, const char *endDoc, Value &root, bool collectComments=true)
- JSONCPP_STRING getFormattedErrorMessages () const
- std::vector< StructuredError > getStructuredErrors () const
- bool pushError (const Value &value, const JSONCPP_STRING &message)
- bool pushError (const Value &value, const JSONCPP_STRING &message, const Value &extra)
- bool good () const

Private Types

- enum TokenType {
  tokenEndOfStream = 0, tokenObjectBegin, tokenObjectEnd, tokenArrayBegin,
  tokenArrayEnd, tokenString, tokenNumber, tokenTrue,
  tokenFalse, tokenNull, tokenNaN, tokenPosInf,
  tokenNegInf, tokenArraySeparator, tokenMemberSeparator, tokenComment,
  tokenError }
- typedef std::deque< ErrorInfo > Errors
- typedef std::stack< Value * > Nodes

Private Member Functions

- OurReader (OurReader const &)
- void operator= (OurReader const &)
- bool readToken (Token &token)
- void skipSpaces ()
- bool match (Location pattern, int patternLength)
- bool readComment ()
- bool readCStyleComment ()
- bool readCppStyleComment ()
- bool readString ()
- bool readStringSingleQuote ()
- bool readNumber (bool checkInf)
- bool readValue ()
- bool readObject (Token &token)
- bool readArray (Token &token)
- bool decodeNumber (Token &token)
- bool decodeNumber (Token &token, Value &decoded)
- bool decodeString (Token &token)
- bool decodeString (Token &token, JSONCPP_STRING &decoded)
- bool decodeDouble (Token &token)
- bool decodeDouble (Token &token, Value &decoded)
- bool decodeUnicodeCodePoint (Token &token, Location &current, Location end, unsigned int &unicode)
- bool decodeUnicodeEscapeSequence (Token &token, Location &current, Location end, unsigned int &unicode)
- bool addError (const JSONCPP_STRING &message, Token &token, Location extra=0)
- bool recoverFromError (TokenType skipUntilToken)
- bool addErrorAndRecover (const JSONCPP_STRING &message, Token &token, TokenType skipUntilToken)
- void skipUntilSpace ()
- Value & currentValue ()
- Char getNextChar ()
- void getLocationLineAndColumn (Location location, int &line, int &column) const
- JSONCPP_STRING getLocationLineAndColumn (Location location) const
- void addComment (Location begin, Location end, CommentPlacement placement)
- void skipCommentTokens (Token &token)

Private Attributes

- Nodes nodes_
- Errors errors_
- JSONCPP_STRING document_
- Location begin_
- Location end_
- Location current_
- Location lastValueEnd_
- Value * lastValue_
- JSONCPP_STRING commentsBefore_
- int stackDepth_
- OurFeatures const features_
- bool collectComments_

7.22.1 Member Typedef Documentation

7.22.1.1 typedef char Json::OurReader::Char

7.22.1.2 typedef std::deque<ErrorInfo> Json::OurReader::Errors [private]

7.22.1.3 typedef const Char* Json::OurReader::Location

7.22.1.4 typedef std::stack<Value*> Json::OurReader::Nodes [private]

7.22.2 Member Enumeration Documentation

7.22.2.1 enum Json::OurReader::TokenType [private]

Enumerator

tokenEndOfStream

tokenObjectBegin

tokenObjectEnd

tokenArrayBegin

tokenArrayEnd

tokenString

tokenNumber

tokenTrue

tokenFalse

tokenNull

tokenNaN

tokenPosInf

tokenNegInf

tokenArraySeparator

tokenMemberSeparator

tokenComment

tokenError

7.22.3 Constructor & Destructor Documentation

7.22.3.1 Json::OurReader::OurReader (OurFeatures const & *features*)

7.22.3.2 Json::OurReader::OurReader (OurReader const &) [private]

7.22.4 Member Function Documentation

7.22.4.1 void Json::OurReader::addComment (Location *begin,* Location *end,* CommentPlacement *placement*) [private]

7.22.4.2 bool Json::OurReader::addError (const JSONCPP_STRING & *message,* Token & *token,* Location *extra* = 0) [private]

7.22.4.3 bool Json::OurReader::addErrorAndRecover (const JSONCPP_STRING & *message,* Token & *token,* TokenType *skipUntilToken*) [private]

7.22.4.4 Value & Json::OurReader::currentValue ( ) [private]

7.22.4.5 bool Json::OurReader::decodeDouble (Token & *token*) [private]

7.22.4.6 bool Json::OurReader::decodeDouble (Token & *token,* Value & *decoded*) [private]

7.22.4.7 bool Json::OurReader::decodeNumber (Token & *token*) [private]

7.22.4.8 bool Json::OurReader::decodeNumber (Token & *token,* Value & *decoded*) [private]

7.22.4.9 bool Json::OurReader::decodeString (Token & *token*) [private]

7.22.4.10 bool Json::OurReader::decodeString (Token & *token,* JSONCPP_STRING & *decoded*) [private]

7.22.4.11 bool Json::OurReader::decodeUnicodeCodePoint (Token & *token,* Location & *current,* Location *end,* unsigned int & *unicode*) [private]

7.22.4.12 bool Json::OurReader::decodeUnicodeEscapeSequence (Token & *token,* Location & *current,* Location *end,* unsigned int & *unicode*) [private]

7.22.4.13 JSONCPP_STRING Json::OurReader::getFormattedErrorMessages ( ) const

7.22.4.14 void Json::OurReader::getLocationLineAndColumn (Location *location,* int & *line,* int & *column*) const [private]

7.22.4.15 JSONCPP_STRING Json::OurReader::getLocationLineAndColumn (Location *location*) const [private]

7.22.4.16 OurReader::Char Json::OurReader::getNextChar ( ) [private]

7.22.4.17 std::vector< OurReader::StructuredError > Json::OurReader::getStructuredErrors ( ) const

7.22.4.18 bool Json::OurReader::good ( ) const

7.22.4.19 bool Json::OurReader::match (Location *pattern,* int *patternLength*) [private]

7.22.4.20 void Json::OurReader::operator= (OurReader const &) [private]

7.22.4.21 bool Json::OurReader::parse (const char * *beginDoc,* const char * *endDoc,* Value & *root,* bool *collectComments* = true)

7.22.4.22 bool Json::OurReader::pushError (const Value & *value,* const JSONCPP_STRING & *message*)

7.22.4.23 bool Json::OurReader::pushError (const Value & *value,* const JSONCPP_STRING & *message,* const Value & *extra*)

7.22.4.24 bool Json::OurReader::readArray (Token & *token*) [private]

7.22.4.25 bool Json::OurReader::readComment ( ) [private]

7.22.4.26 bool Json::OurReader::readCppStyleComment ( ) [private]

7.22.4.27 bool Json::OurReader::readCStyleComment ( ) [private]

7.22.4.28 bool Json::OurReader::readNumber (bool *checkInf*) [private]

7.22.4.29 bool Json::OurReader::readObject (Token & *token*) [private]

7.22.4.30 bool Json::OurReader::readString ( ) [private]

7.22.4.31 bool Json::OurReader::readStringSingleQuote ( ) [private]

7.22.4.32 bool Json::OurReader::readToken (Token & *token*) [private]

7.22.4.33 bool Json::OurReader::readValue ( ) [private]

7.22.4.34 bool Json::OurReader::recoverFromError (TokenType *skipUntilToken*) [private]

7.22.4.35 void Json::OurReader::skipCommentTokens (Token & *token*) [private]

7.22.4.36 void Json::OurReader::skipSpaces ( ) [private]

7.22.4.37 void Json::OurReader::skipUntilSpace ( ) [private]

7.22.5 Member Data Documentation

7.22.5.1 Location Json::OurReader::begin_ [private]

7.22.5.2 bool Json::OurReader::collectComments_ [private]

7.22.5.3 JSONCPP_STRING Json::OurReader::commentsBefore_ [private]

7.22.5.4 Location Json::OurReader::current_ [private]

7.22.5.5 JSONCPP_STRING Json::OurReader::document_ [private]

7.22.5.6 Location Json::OurReader::end_ [private]

7.22.5.7 Errors Json::OurReader::errors_ [private]

7.22.5.8 OurFeatures const Json::OurReader::features_ [private]

7.22.5.9 Value* Json::OurReader::lastValue_ [private]

7.22.5.10 Location Json::OurReader::lastValueEnd_ [private]

7.22.5.11 Nodes Json::OurReader::nodes_ [private]

7.22.5.12 int Json::OurReader::stackDepth_ [private]

The documentation for this class was generated from the following file:

- /home/pranav/Repositories/zcm/src/json.cpp

7.23 Json::Path Class Reference

Experimental and untested: represents a "path" to access a node.

```
#include <json.hpp>
```

Public Member Functions

- Path (const JSONCPP_STRING &path, const PathArgument &a1=PathArgument(), const PathArgument &a2=PathArgument(), const PathArgument &a3=PathArgument(), const PathArgument &a4=PathArgument(), const PathArgument &a5=PathArgument())
- const Value & resolve (const Value &root) const
- Value resolve (const Value &root, const Value &defaultValue) const
- Value & make (Value &root) const

  Creates the "path" to access the specified node and returns a reference on the node.

Private Types

- typedef std::vector< const PathArgument * > InArgs
- typedef std::vector< PathArgument > Args

Private Member Functions

- void makePath (const JSONCPP_STRING &path, const InArgs &in)
- void addPathInArg (const JSONCPP_STRING &path, const InArgs &in, InArgs::const_iterator &itInArg, PathArgument::Kind kind)
- void invalidPath (const JSONCPP_STRING &path, int location)

Private Attributes

- Args args_

7.23.1 Detailed Description

Experimental and untested: represents a "path" to access a node.

Syntax:

- "." => root node
- ".[n]" => elements at index 'n' of root node (an array value)
- ".name" => member named 'name' of root node (an object value)
- ".name1.name2.name3"
- ".[0][1][2].name1[3]"
- ".%" => member name is provided as parameter
- ".[%]" => index is provied as parameter

7.23.2 Member Typedef Documentation

7.23.2.1 typedef std::vector<PathArgument> Json::Path::Args [private]

7.23.2.2 typedef std::vector<const PathArgument*> Json::Path::InArgs [private]

7.23.3 Constructor & Destructor Documentation

7.23.3.1 Json::Path::Path (const JSONCPP_STRING & *path*, const PathArgument & *a1* = PathArgument (), const PathArgument & *a2* = PathArgument (), const PathArgument & *a3* = PathArgument (), const PathArgument & *a4* = PathArgument (), const PathArgument & *a5* = PathArgument ())

7.23.4 Member Function Documentation

7.23.4.1 void Json::Path::addPathInArg (const JSONCPP_STRING & *path*, const InArgs & *in*, InArgs::const_iterator & *itInArg*, PathArgument::Kind *kind*) [private]

7.23.4.2 void Json::Path::invalidPath (const JSONCPP_STRING & *path*, int *location*) [private]

7.23.4.3 Value & Json::Path::make (Value & *root*) const

Creates the "path" to access the specified node and returns a reference on the node.

7.23.4.4 void Json::Path::makePath (const JSONCPP_STRING & *path,* const InArgs & *in*) [private]

7.23.4.5 const Value & Json::Path::resolve (const Value & *root*) const

7.23.4.6 Value Json::Path::resolve (const Value & *root,* const Value & *defaultValue*) const

7.23.5 Member Data Documentation

7.23.5.1 Args Json::Path::args_ [private]

The documentation for this class was generated from the following files:

- /home/pranav/Repositories/zcm/include/json.hpp
- /home/pranav/Repositories/zcm/src/json.cpp

7.24 Json::PathArgument Class Reference

Experimental and untested: represents an element of the "path" to access a node.

`#include <json.hpp>`

Public Member Functions

- PathArgument ()
- PathArgument (ArrayIndex index)
- PathArgument (const char *key)
- PathArgument (const JSONCPP_STRING &key)

Private Types

- enum Kind { kindNone = 0, kindIndex, kindKey }

Private Attributes

- JSONCPP_STRING key_
- ArrayIndex index_
- Kind kind_

Friends

- class Path

7.24.1 Detailed Description

Experimental and untested: represents an element of the "path" to access a node.

7.24.2 Member Enumeration Documentation

7.24.2.1 enum Json::PathArgument::Kind [private]

Enumerator

kindNone

kindIndex

kindKey

7.24.3 Constructor & Destructor Documentation

7.24.3.1 Json::PathArgument::PathArgument ( )

7.24.3.2 Json::PathArgument::PathArgument (ArrayIndex *index*)

7.24.3.3 Json::PathArgument::PathArgument (const char * *key*)

7.24.3.4 Json::PathArgument::PathArgument (const JSONCPP_STRING & *key*)

7.24.4 Friends And Related Function Documentation

7.24.4.1 friend class Path [friend]

7.24.5 Member Data Documentation

7.24.5.1 ArrayIndex Json::PathArgument::index_ [private]

7.24.5.2 JSONCPP_STRING Json::PathArgument::key_ [private]

7.24.5.3 Kind Json::PathArgument::kind_ [private]

The documentation for this class was generated from the following files:

- /home/pranav/Repositories/zcm/include/json.hpp
- /home/pranav/Repositories/zcm/src/json.cpp

7.25 zcm::Operation_Queue::PriorityOrdering Struct Reference

`#include <operation_queue.hpp>`

Public Member Functions

- bool operator() (const Base_Operation *lhs, const Base_Operation *rhs) const

7.25.1 Member Function Documentation

7.25.1.1 bool zcm::Operation_Queue::PriorityOrdering::operator() (const Base_Operation * *lhs*, const Base_Operation * *rhs*) const [inline]

The documentation for this struct was generated from the following file:

- /home/pranav/Repositories/zcm/include/operation_queue.hpp

7.26 zcm::Publisher Class Reference

Publisher class.

`#include <publisher.hpp>`

Public Member Functions

- Publisher (std::string name)
  Construct a publisher object.
- Publisher (std::string name, std::vector< std::string > endpoints)
  Construct a publisher object with known endpoints.
- ~Publisher ()
  Close the publisher ZMQ socket and destroy the context.
- void bind (std::vector< std::string > new_endpoints)
  Bind the publisher to a new set of endpoints.
- std::string get_name ()
  Return the publisher name.
- void add_connection (std::string new_connection)
  Add a new endpoint to the publisher.
- void send (std::string message)
  Publish a new message.

Private Attributes

- std::string name
  Name of the publisher.
- zmq::context_t * context
  ZMQ Context of the publisher.
- zmq::socket_t * publisher_socket
  ZMQ Socket of the publisher.
- std::vector< std::string > endpoints
  Vector of endpoints to bind to.

7.26.1 Detailed Description

Publisher class.

7.26.2 Constructor & Destructor Documentation

7.26.2.1 zcm::Publisher::Publisher (std::string *name*)

Construct a publisher object.

Parameters

in	*name*	Publisher name

7.26.2.2 zcm::Publisher::Publisher (std::string *name,* std::vector< std::string > *endpoints*)

Construct a publisher object with known endpoints.

Parameters

in	*name*	Publisher name
in	*endpoints*	A vector of endpoint strings

7.26.2.3 zcm::Publisher::~Publisher ( )

Close the publisher ZMQ socket and destroy the context.

7.26.3 Member Function Documentation

7.26.3.1 void zcm::Publisher::add_connection (std::string *new_connection*)

Add a new endpoint to the publisher.

Parameters

in	*new_connection*	New endpoint to bind to

7.26.3.2 void zcm::Publisher::bind (std::vector< std::string > *new_endpoints*)

Bind the publisher to a new set of endpoints.

Parameters

in	*new_endpoints*	New set of endpoints as a vector

7.26.3.3 std::string zcm::Publisher::get_name ( )

Return the publisher name.

Returns

Publisher name

7.26.3.4 void zcm::Publisher::send (std::string *message*)

Publish a new message.

Parameters

in	*message*	The message string. Serialize complex objects to strings with protobuf

7.26.4 Member Data Documentation

7.26.4.1 zmq::context_t* zcm::Publisher::context [private]

ZMQ Context of the publisher.

7.26.4.2 std::vector<std::string> zcm::Publisher::endpoints [private]

Vector of endpoints to bind to.

7.26.4.3 std::string zcm::Publisher::name [private]

Name of the publisher.

7.26.4.4 zmq::socket_t* zcm::Publisher::publisher_socket [private]

ZMQ Socket of the publisher.

The documentation for this class was generated from the following files:

- /home/pranav/Repositories/zcm/include/publisher.hpp
- /home/pranav/Repositories/zcm/src/publisher.cpp

7.27 Json::Reader Class Reference

Unserialize a JSON document into a Value.

```
#include <json.hpp>
```

Classes

- class ErrorInfo
- struct StructuredError

  An error tagged with where in the JSON text it was encountered.
- class Token

Public Types

- typedef char Char
- typedef const Char * Location

Public Member Functions

- Reader ()

  Constructs a Reader allowing all features for parsing.
- Reader (const Features &features)

  Constructs a Reader allowing the specified feature set for parsing.
- bool parse (const std::string &document, Value &root, bool collectComments=true)

  Read a Value from a JSON document.
- bool parse (const char *beginDoc, const char *endDoc, Value &root, bool collectComments=true)

  Read a Value from a JSON document.
- bool parse (JSONCPP_ISTREAM &is, Value &root, bool collectComments=true)

  Parse from input stream.
- JSONCPP_STRING getFormatedErrorMessages () const

  Returns a user friendly string that list errors in the parsed document.
- JSONCPP_STRING getFormattedErrorMessages () const

  Returns a user friendly string that list errors in the parsed document.
- std::vector< StructuredError > getStructuredErrors () const

  Returns a vector of structured erros encounted while parsing.
- bool pushError (const Value &value, const JSONCPP_STRING &message)

  Add a semantic error message.
- bool pushError (const Value &value, const JSONCPP_STRING &message, const Value &extra)

  Add a semantic error message with extra context.
- bool good () const

  Return whether there are any errors.

Private Types

- enum TokenType {
  tokenEndOfStream = 0, tokenObjectBegin, tokenObjectEnd, tokenArrayBegin,
  tokenArrayEnd, tokenString, tokenNumber, tokenTrue,
  tokenFalse, tokenNull, tokenArraySeparator, tokenMemberSeparator,
  tokenComment, tokenError }
- typedef std::deque< ErrorInfo > Errors
- typedef std::stack< Value * > Nodes

Private Member Functions

- bool readToken (Token &token)
- void skipSpaces ()
- bool match (Location pattern, int patternLength)
- bool readComment ()
- bool readCStyleComment ()
- bool readCppStyleComment ()
- bool readString ()
- void readNumber ()

- bool readValue ()
- bool readObject (Token &token)
- bool readArray (Token &token)
- bool decodeNumber (Token &token)
- bool decodeNumber (Token &token, Value &decoded)
- bool decodeString (Token &token)
- bool decodeString (Token &token, JSONCPP_STRING &decoded)
- bool decodeDouble (Token &token)
- bool decodeDouble (Token &token, Value &decoded)
- bool decodeUnicodeCodePoint (Token &token, Location &current, Location end, unsigned int &unicode)
- bool decodeUnicodeEscapeSequence (Token &token, Location &current, Location end, unsigned int &unicode)
- bool addError (const JSONCPP_STRING &message, Token &token, Location extra=0)
- bool recoverFromError (TokenType skipUntilToken)
- bool addErrorAndRecover (const JSONCPP_STRING &message, Token &token, TokenType skipUntilToken)
- void skipUntilSpace ()
- Value & currentValue ()
- Char getNextChar ()
- void getLocationLineAndColumn (Location location, int &line, int &column) const
- JSONCPP_STRING getLocationLineAndColumn (Location location) const
- void addComment (Location begin, Location end, CommentPlacement placement)
- void skipCommentTokens (Token &token)

Private Attributes

- Nodes nodes_
- Errors errors_
- JSONCPP_STRING document_
- Location begin_
- Location end_
- Location current_
- Location lastValueEnd_
- Value * lastValue_
- JSONCPP_STRING commentsBefore_
- Features features_
- bool collectComments_

7.27.1 Detailed Description

Unserialize a JSON document into a Value.

Deprecated Use CharReader and CharReaderBuilder.

7.27.2 Member Typedef Documentation

7.27.2.1 typedef char Json::Reader::Char

7.27.2.2 typedef std::deque<ErrorInfo> Json::Reader::Errors [private]

7.27.2.3 typedef const Char* Json::Reader::Location

7.27.2.4 typedef std::stack<Value*> Json::Reader::Nodes [private]

7.27.3 Member Enumeration Documentation

7.27.3.1 enum Json::Reader::TokenType [private]

Enumerator

tokenEndOfStream

tokenObjectBegin

tokenObjectEnd

tokenArrayBegin

tokenArrayEnd

tokenString

tokenNumber

tokenTrue

tokenFalse

tokenNull

tokenArraySeparator

tokenMemberSeparator

tokenComment

tokenError

7.27.4 Constructor & Destructor Documentation

7.27.4.1 Json::Reader::Reader ( )

Constructs a Reader allowing all features for parsing.

7.27.4.2 Json::Reader::Reader (const Features & *features*)

Constructs a Reader allowing the specified feature set for parsing.

7.27.5 Member Function Documentation

7.27.5.1 void Json::Reader::addComment (Location *begin*, Location *end*, CommentPlacement *placement*) [private]

7.27.5.2 bool Json::Reader::addError (const JSONCPP_STRING & *message*, Token & *token*, Location *extra* = 0) [private]

7.27.5.3 bool Json::Reader::addErrorAndRecover (const JSONCPP_STRING & *message*, Token & *token*, TokenType *skipUntilToken*) [private]

7.27.5.4 Value & Json::Reader::currentValue ( ) [private]

7.27.5.5 bool Json::Reader::decodeDouble (Token & *token*) [private]

7.27.5.6 bool Json::Reader::decodeDouble (Token & *token*, Value & *decoded*) [private]

7.27.5.7 bool Json::Reader::decodeNumber (Token & *token*) [private]

7.27.5.8 bool Json::Reader::decodeNumber (Token & *token*, Value & *decoded*) [private]

7.27.5.9 bool Json::Reader::decodeString (Token & *token*) [private]

7.27.5.10 bool Json::Reader::decodeString (Token & *token*, JSONCPP_STRING & *decoded*) [private]

7.27.5.11 bool Json::Reader::decodeUnicodeCodePoint (Token & *token*, Location & *current*, Location *end*, unsigned int & *unicode*) [private]

7.27.5.12 bool Json::Reader::decodeUnicodeEscapeSequence (Token & *token*, Location & *current*, Location *end*, unsigned int & *unicode*) [private]

7.27.5.13 JSONCPP_STRING Json::Reader::getFormatedErrorMessages ( ) const

Returns a user friendly string that list errors in the parsed document.

Returns

Formatted error message with the list of errors with their location in the parsed document. An empty string is returned if no error occurred during parsing.

Deprecated Use getFormattedErrorMessages() instead (typo fix).

7.27.5.14 JSONCPP_STRING Json::Reader::getFormattedErrorMessages ( ) const

Returns a user friendly string that list errors in the parsed document.

Returns

Formatted error message with the list of errors with their location in the parsed document. An empty string is returned if no error occurred during parsing.

7.27.5.15 void Json::Reader::getLocationLineAndColumn (Location *location*, int & *line*, int & *column*) const [private]

7.27.5.16 JSONCPP_STRING Json::Reader::getLocationLineAndColumn (Location *location*) const [private]

7.27.5.17 Reader::Char Json::Reader::getNextChar ( ) [private]

7.27.5.18 std::vector< Reader::StructuredError > Json::Reader::getStructuredErrors ( ) const

Returns a vector of structured erros encounted while parsing.

Returns

A (possibly empty) vector of StructuredError objects. Currently only one error can be returned, but the caller should tolerate multiple errors. This can occur if the parser recovers from a non-fatal parse error and then encounters additional errors.

7.27.5.19 bool Json::Reader::good ( ) const

Return whether there are any errors.

Returns

`true` if there are no errors to report `false` if errors have occurred.

7.27.5.20 bool Json::Reader::match (Location *pattern*, int *patternLength*) [private]

7.27.5.21 bool Json::Reader::parse (const std::string & *document*, Value & *root*, bool *collectComments* = `true`)

Read a Value from a `JSON` document.

Parameters

document	UTF-8 encoded string containing the document to read.
root	[out] Contains the root value of the document if it was successfully parsed.
collectComments	`true` to collect comment and allow writing them back during serialization, `false` to discard comments. This parameter is ignored if Features::allowComments_ is `false`.

Returns

`true` if the document was successfully parsed, `false` if an error occurred.

7.27.5.22 bool Json::Reader::parse (const char * *beginDoc*, const char * *endDoc*, Value & *root*, bool *collectComments* = `true`)

Read a Value from a `JSON` document.

Parameters

beginDoc	Pointer on the beginning of the UTF-8 encoded string of the document to read.
endDoc	Pointer on the end of the UTF-8 encoded string of the document to read. Must be >= beginDoc.
root	[out] Contains the root value of the document if it was successfully parsed.
collectComments	`true` to collect comment and allow writing them back during serialization, `false` to discard comments. This parameter is ignored if Features::allowComments_ is `false`.

Returns

`true` if the document was successfully parsed, `false` if an error occurred.

7.27.5.23 bool Json::Reader::parse (JSONCPP_ISTREAM & *is*, Value & *root*, bool *collectComments* = `true`)

Parse from input stream.

See also

Json::operator>>(std::istream&, Json::Value&).

7.27.5.24 bool Json::Reader::pushError (const Value & *value*, const JSONCPP_STRING & *message*)

Add a semantic error message.

Parameters

value	JSON Value location associated with the error
message	The error message.

Returns

`true` if the error was successfully added, `false` if the Value offset exceeds the document size.

7.27.5.25 bool Json::Reader::pushError (const Value & *value*, const JSONCPP_STRING & *message*, const Value & *extra*)

Add a semantic error message with extra context.

Parameters

value	JSON Value location associated with the error
message	The error message.
extra	Additional JSON Value location to contextualize the error

Returns

`true` if the error was successfully added, `false` if either Value offset exceeds the document size.

7.27.5.26 bool Json::Reader::readArray (Token & *token*) [private]

7.27.5.27 bool Json::Reader::readComment ( ) [private]

7.27.5.28 bool Json::Reader::readCppStyleComment ( ) [private]

7.27.5.29 bool Json::Reader::readCStyleComment ( ) [private]

7.27.5.30 void Json::Reader::readNumber ( ) [private]

7.27.5.31 bool Json::Reader::readObject (Token & *token*) [private]

7.27.5.32 bool Json::Reader::readString ( ) [private]

7.27.5.33 bool Json::Reader::readToken (Token & *token*) [private]

7.27.5.34 bool Json::Reader::readValue ( ) [private]

7.27.5.35 bool Json::Reader::recoverFromError (TokenType *skipUntilToken*) [private]

7.27.5.36 void Json::Reader::skipCommentTokens (Token & *token*) [private]

7.27.5.37 void Json::Reader::skipSpaces ( ) [private]

7.27.5.38 void Json::Reader::skipUntilSpace ( ) [private]

7.27.6 Member Data Documentation

7.27.6.1 Location Json::Reader::begin_ [private]

7.27.6.2 bool Json::Reader::collectComments_ [private]

7.27.6.3 JSONCPP_STRING Json::Reader::commentsBefore_ [private]

7.27.6.4 Location Json::Reader::current_ [private]

7.27.6.5 JSONCPP_STRING Json::Reader::document_ [private]

7.27.6.6 Location Json::Reader::end_ [private]

7.27.6.7 Errors Json::Reader::errors_ [private]

7.27.6.8 Features Json::Reader::features_ [private]

7.27.6.9 Value* Json::Reader::lastValue_ [private]

7.27.6.10 Location Json::Reader::lastValueEnd_ [private]

7.27.6.11 Nodes Json::Reader::nodes_ [private]

The documentation for this class was generated from the following files:

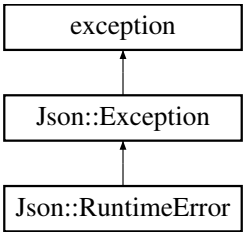
- /home/pranav/Repositories/zcm/include/json.hpp
- /home/pranav/Repositories/zcm/src/json.cpp

7.28 Json::RuntimeError Class Reference

Exceptions which the user cannot easily avoid.

`#include <json.hpp>`

Inheritance diagram for Json::RuntimeError:



Public Member Functions

- RuntimeError (JSONCPP_STRING const &msg)
- char const * what () const JSONCPP_OVERRIDE throw ()

Protected Attributes

- JSONCPP_STRING msg_

7.28.1 Detailed Description

Exceptions which the user cannot easily avoid.

E.g. out-of-memory (when we use malloc), stack-overflow, malicious input

Remarks

derived from Json::Exception

7.28.2 Constructor & Destructor Documentation

7.28.2.1 Json::RuntimeError::RuntimeError (JSONCPP_STRING const & *msg*)

7.28.3 Member Function Documentation

7.28.3.1 char const * Json::Exception::what ( ) const throw) [inherited]

7.28.4 Member Data Documentation

7.28.4.1 JSONCPP_STRING Json::Exception::msg_ [protected], [inherited]

The documentation for this class was generated from the following files:

- /home/pranav/Repositories/zcm/include/json.hpp
- /home/pranav/Repositories/zcm/src/json.cpp

7.29 zcm::Server Class Reference

Server class.

`#include <server.hpp>`

Public Member Functions

- Server (std::string name, unsigned int priority, std::function< std::string(const std::string &)> operation_function, Operation_Queue *operation_queue_ptr)

  Construct a server object.
- Server (std::string name, unsigned int priority, std::vector< std::string > endpoints, std::function< std::string(const std::string &)> operation_function, Operation_Queue *operation_queue_ptr)

  Construct a server object with known endpoints.
- ~Server ()

  Close the server socket and destroy the ZMQ context.
- void bind (std::vector< std::string > new_endpoints)

  Bind to a new set of endpoints param[in] new_endpoints A new vector of endpoints to bind to.
- std::string get_name ()

  Get the name of the server.
- unsigned int get_priority ()

  Get the priority of the server.
- void add_connection (std::string new_connection)

  Add a new connection to the server.
- void recv ()

  Thread function of the server Behavior: (1) Wait for a new request on the server ZMQ socket (2) Create a Server Operation (3) Enqueue onto operation_queue (4) Goto step (1)
- void rebind_operation_function (std::function< std::string(const std::string &)> new_operation_function)

  Rebind the server operation function.
- std::thread spawn ()

  Spawn a new thread for the server.
- void start ()

  Start the server thread.

Private Attributes

- std::string name

  Name of the server.
- unsigned int priority

  Priority of the server.
- std::vector< std::string > endpoints

  Vector of connection endpoints.
- std::function< std::string(const std::string &)> operation_function

  Operation function bound to the server - Component method that handles received requests.
- Operation_Queue * operation_queue_ptr

  Pointer to the operation_queue.
- zmq::context_t * context

  Pointer to the server ZMQ context.
- zmq::socket_t * server_socket

  Pointer to the server ZMQ socket.
- bool ready

  Boolean representing the state of the server to receive new requests.
- std::mutex func_mutex

  Mutex used when changing operation_function at runtime.

7.29.1 Detailed Description

Server class.

7.29.2 Constructor & Destructor Documentation

7.29.2.1 zcm::Server::Server (std::string *name*, unsigned int *priority*, std::function< std::string(const std::string &)> *operation_function*, Operation_Queue * *operation_queue_ptr*) [inline]

Construct a server object.

Parameters

in	*name*	Server name
in	*priority*	Priority of the server
in	*operation_function*	Operation function of the server
in	*operation_queue_ptr*	Pointer to the operation queue

7.29.2.2 zcm::Server::Server (std::string *name*, unsigned int *priority*, std::vector< std::string > *endpoints*, std::function< std::string(const std::string &)> *operation_function*, Operation_Queue * *operation_queue_ptr*)

Construct a server object with known endpoints.

Parameters

in	*name*	Server name
in	*priority*	Priority of the server
in	*endpoints*	A vector of endpoints to bind to
in	*operation_function*	Operation function of the server
in	*operation_queue_ptr*	Pointer to the operation queue

7.29.2.3 zcm::Server::~Server ( )

Close the server socket and destroy the ZMQ context.

7.29.3 Member Function Documentation

7.29.3.1 void zcm::Server::add_connection (std::string *new_connection*)

Add a new connection to the server.

Parameters

in	*new_connection*	New connection address to bind to

7.29.3.2 void zcm::Server::bind (std::vector< std::string > *new_endpoints*)

Bind to a new set of endpoints param[in] new_endpoints A new vector of endpoints to bind to.

7.29.3.3 std::string zcm::Server::get_name ( )

Get the name of the server.

7.29.3.4 unsigned int zcm::Server::get_priority ( )

Get the priority of the server.

7.29.3.5 void zcm::Server::rebind_operation_function (std::function< std::string(const std::string &)> *new_operation_function*)

Rebind the server operation function.

Parameters

in	*new_operation_function*	New server function to be handled upon recv()

7.29.3.6 void zcm::Server::recv ( )

Thread function of the server Behavior: (1) Wait for a new request on the server ZMQ socket (2) Create a Server Operation (3) Enqueue onto operation_queue (4) Goto step (1)

7.29.3.7 std::thread zcm::Server::spawn ( )

Spawn a new thread for the server.

Returns

Server thread

7.29.3.8 void zcm::Server::start ( )

Start the server thread.

7.29.4 Member Data Documentation

7.29.4.1 zmq::context_t* zcm::Server::context [private]

Pointer to the server ZMQ context.

7.29.4.2 std::vector<std::string> zcm::Server::endpoints [private]

Vector of connection endpoints.

7.29.4.3 std::mutex zcm::Server::func_mutex [private]

Mutex used when changing operation_function at runtime.

7.29.4.4 std::string zcm::Server::name [private]

Name of the server.

7.29.4.5 std::function<std::string(const std::string&)> zcm::Server::operation_function [private]

Operation function bound to the server - Component method that handles received requests.

7.29.4.6 Operation_Queue* zcm::Server::operation_queue_ptr [private]

Pointer to the operation_queue.

7.29.4.7 unsigned int zcm::Server::priority [private]

Priority of the server.

7.29.4.8 bool zcm::Server::ready [private]

Boolean representing the state of the server to receive new requests.

7.29.4.9 zmq::socket_t* zcm::Server::server_socket [private]

Pointer to the server ZMQ socket.

The documentation for this class was generated from the following files:

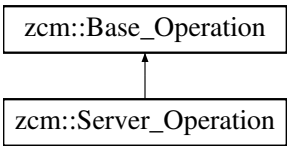
- /home/pranav/Repositories/zcm/include/server.hpp
- /home/pranav/Repositories/zcm/src/server.cpp

7.30 zcm::Server_Operation Class Reference

Server Operation class.

`#include <operation_types.hpp>`

Inheritance diagram for zcm::Server_Operation:



Public Member Functions

- Server_Operation (std::string name, unsigned int priority, std::function< std::string()> operation_function, zmq::socket_t *socket_ptr, bool *recv_ready)
  Construct a server operation.
- void execute ()
  Server operation function.
- zmq::socket_t * get_socket_ptr ()
  Get the ZMQ server socket pointer.
- void set_ready ()
  Get the ZMQ server "ready" variable.
- std::string get_name ()
  Return the operation name.
- unsigned int get_priority () const
  Return the operation priority.

Private Attributes

- std::function< std::string()> operation_function
  Server Operation Function.
- zmq::socket_t * socket_ptr
  Pointer to the Server ZMQ socket.
- bool * recv_ready
  Pointer to the Server "ready" variable.

7.30.1 Detailed Description

Server Operation class.

7.30.2 Constructor & Destructor Documentation

7.30.2.1 zcm::Server_Operation::Server_Operation (std::string *name*, unsigned int *priority*, std::function< std::string()> *operation_function*, zmq::socket_t * *socket_ptr*, bool * *recv_ready*) [inline]

Construct a server operation.

Parameters

in	*name*	Name of the operation
in	*priority*	Priority of the operation
in	*operation_function*	Server function
in	*socket_ptr*	Pointer to the Server ZMQ socket
in	*recv_ready*	Pointer to the Server ready variable

7.30.3 Member Function Documentation

7.30.3.1 void zcm::Server_Operation::execute ( ) [virtual]

Server operation function.

Reimplemented from zcm::Base_Operation.

7.30.3.2 std::string zcm::Base_Operation::get_name ( ) [inherited]

Return the operation name.

Returns

Name of the operation

7.30.3.3 unsigned int zcm::Base_Operation::get_priority ( ) const [inherited]

Return the operation priority.

Returns

Priority of the operation

7.30.3.4 zmq::socket_t * zcm::Server_Operation::get_socket_ptr ( )

Get the ZMQ server socket pointer.

7.30.3.5 void zcm::Server_Operation::set_ready ( )

Get the ZMQ server "ready" variable.

7.30.4 Member Data Documentation

7.30.4.1 std::function<std::string()> zcm::Server_Operation::operation_function [private]

Server Operation Function.

7.30.4.2 bool* zcm::Server_Operation::recv_ready [private]

Pointer to the Server "ready" variable.

7.30.4.3 zmq::socket_t* zcm::Server_Operation::socket_ptr [private]

Pointer to the Server ZMQ socket.

The documentation for this class was generated from the following files:

- /home/pranav/Repositories/zcm/include/operation_types.hpp
- /home/pranav/Repositories/zcm/src/operation_types.cpp

7.31 Json::StaticString Class Reference

Lightweight wrapper to tag static string.

`#include <json.hpp>`

Public Member Functions

- StaticString (const char *czstring)
- operator const char * () const
- const char * c_str () const

Private Attributes

- const char * c_str_

7.31.1 Detailed Description

Lightweight wrapper to tag static string.

Value constructor and objectValue member assignement takes advantage of the StaticString and avoid the cost of string duplication when storing the string or the member name.

Example of usage:

```
Json::Value aValue( StaticString("some text") );
Json::Value object;
static const StaticString code("code");
object[code] = 1234;
```

7.31.2 Constructor & Destructor Documentation

7.31.2.1 Json::StaticString::StaticString (const char * *czstring*) [inline], [explicit]

7.31.3 Member Function Documentation

7.31.3.1 const char* Json::StaticString::c_str ( ) const [inline]

7.31.3.2 Json::StaticString::operator const char * ( ) const [inline]

7.31.4 Member Data Documentation

7.31.4.1 const char* Json::StaticString::c_str_ [private]

The documentation for this class was generated from the following file:

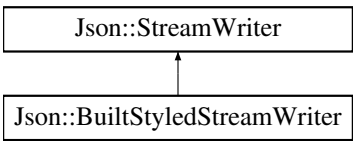
- /home/pranav/Repositories/zcm/include/json.hpp

7.32 Json::StreamWriter Class Reference

Usage:

```
#include <json.hpp>
```

Inheritance diagram for Json::StreamWriter:



Classes

- class Factory

  A simple abstract factory.

Public Member Functions

- StreamWriter ()
- virtual ~StreamWriter ()
- virtual int write (Value const &root, JSONCPP_OSTREAM *sout)=0

  Write Value into document as configured in sub-class.

Protected Attributes

- JSONCPP_OSTREAM * sout_

7.32.1 Detailed Description

Usage:

```
using namespace Json;
void writeToStdout(StreamWriter::Factory const& factory,
      Value const& value) {
  std::unique_ptr<StreamWriter> const writer(
    factory.newStreamWriter());
  writer->write(value, &std::cout);
  std::cout << std::endl;  // add lf and flush
}
```

7.32.2 Constructor & Destructor Documentation

7.32.2.1 Json::StreamWriter::StreamWriter ( )

7.32.2.2 Json::StreamWriter::~StreamWriter ( ) [virtual]

7.32.3 Member Function Documentation

7.32.3.1 virtual int Json::StreamWriter::write (Value const & *root*, JSONCPP_OSTREAM * *sout*) [pure virtual]

Write Value into document as configured in sub-class.

Do not take ownership of sout, but maintain a reference during function.

Precondition

sout != NULL

Returns

zero on success (For now, we always return zero, so check the stream instead.)

Exceptions

std::exception	possibly, depending on configuration

Implemented in Json::BuiltStyledStreamWriter.

7.32.4 Member Data Documentation

7.32.4.1 JSONCPP_OSTREAM* Json::StreamWriter::sout_ [protected]

The documentation for this class was generated from the following files:

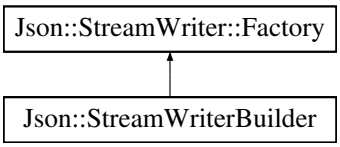
- /home/pranav/Repositories/zcm/include/json.hpp
- /home/pranav/Repositories/zcm/src/json.cpp

7.33 Json::StreamWriterBuilder Class Reference

Build a StreamWriter implementation.

`#include <json.hpp>`

Inheritance diagram for Json::StreamWriterBuilder:



Public Member Functions

- StreamWriterBuilder ()
- ~StreamWriterBuilder () JSONCPP_OVERRIDE
- StreamWriter * newStreamWriter () const JSONCPP_OVERRIDE
- bool validate (Json::Value *invalid) const
- Value & operator[] (JSONCPP_STRING key)

  A simple way to update a specific setting.

Static Public Member Functions

- static void setDefaults (Json::Value *settings)

  Called by ctor, but you can use this to reset settings_.

Public Attributes

- Json::Value settings_

  Configuration of this builder.

7.33.1 Detailed Description

Build a StreamWriter implementation.

Usage:

```
using namespace Json;
Value value = ...;
StreamWriterBuilder builder;
builder["commentStyle"] = "None";
builder["indentation"] = "   ";  // or whatever you like
std::unique_ptr<Json::StreamWriter> writer(
    builder.newStreamWriter());
writer->write(value, &std::cout);
std::cout << std::endl;  // add lf and flush
```

7.33.2 Constructor & Destructor Documentation

7.33.2.1 Json::StreamWriterBuilder::StreamWriterBuilder ( )

7.33.2.2 Json::StreamWriterBuilder::~StreamWriterBuilder ( )

7.33.3 Member Function Documentation

7.33.3.1 StreamWriter * Json::StreamWriterBuilder::newStreamWriter ( ) const [virtual]

Exceptions

std::exception	if something goes wrong (e.g. invalid settings)

Implements Json::StreamWriter::Factory.

7.33.3.2 Value & Json::StreamWriterBuilder::operator[ ] (JSONCPP_STRING *key*)

A simple way to update a specific setting.

7.33.3.3 void Json::StreamWriterBuilder::setDefaults (Json::Value * *settings*) [static]

Called by ctor, but you can use this to reset settings_.

Precondition

'settings' != NULL (but Json::null is fine)

Remarks

Defaults:

[StreamWriterBuilderDefaults]

[StreamWriterBuilderDefaults]

7.33.3.4 bool Json::StreamWriterBuilder::validate (Json::Value * *invalid*) const

Returns

true if 'settings' are legal and consistent; otherwise, indicate bad settings via 'invalid'.

7.33.4 Member Data Documentation

7.33.4.1 Json::Value Json::StreamWriterBuilder::settings_

Configuration of this builder.

Available settings (case-sensitive):

- "commentStyle": "None" or "All"
- "indentation": "<anything>"
- "enableYAMLCompatibility": false or true
  - slightly change the whitespace around colons
- "dropNullPlaceholders": false or true
  - Drop the "null" string from the writer's output for nullValues. Strictly speaking, this is not valid JSON. But when the output is being fed to a browser's Javascript, it makes for smaller output and the browser can handle the output just fine.
- "useSpecialFloats": false or true
  - If true, outputs non-finite floating point values in the following way: NaN values as "NaN", positive infinity as "Infinity", and negative infinity as "-Infinity".

You can examine 'settings_' yourself to see the defaults. You can also write and read them just like any JSON Value.

See also

setDefaults()

The documentation for this class was generated from the following files:

- /home/pranav/Repositories/zcm/include/json.hpp
- /home/pranav/Repositories/zcm/src/json.cpp

7.34 Json::Value::CZString::StringStorage Struct Reference

Public Attributes

- unsigned policy_: 2
- unsigned length_: 30

7.34.1 Member Data Documentation

7.34.1.1 unsigned Json::Value::CZString::StringStorage::length_

7.34.1.2 unsigned Json::Value::CZString::StringStorage::policy_

The documentation for this struct was generated from the following file:

- /home/pranav/Repositories/zcm/include/json.hpp

7.35 Json::Reader::StructuredError Struct Reference

An error tagged with where in the JSON text it was encountered.

`#include <json.hpp>`

Public Attributes

- ptrdiff_t offset_start
- ptrdiff_t offset_limit
- JSONCPP_STRING message

7.35.1 Detailed Description

An error tagged with where in the JSON text it was encountered.

The offsets give the [start, limit) range of bytes within the text. Note that this is bytes, not codepoints.

7.35.2 Member Data Documentation

7.35.2.1 JSONCPP_STRING Json::Reader::StructuredError::message

7.35.2.2 ptrdiff_t Json::Reader::StructuredError::offset_limit

7.35.2.3 ptrdiff_t Json::Reader::StructuredError::offset_start

The documentation for this struct was generated from the following file:

- /home/pranav/Repositories/zcm/include/json.hpp

7.36 Json::OurReader::StructuredError Struct Reference

Public Attributes

- ptrdiff_t offset_start
- ptrdiff_t offset_limit
- JSONCPP_STRING message

7.36.1 Member Data Documentation

7.36.1.1 JSONCPP_STRING Json::OurReader::StructuredError::message

7.36.1.2 ptrdiff_t Json::OurReader::StructuredError::offset_limit

7.36.1.3 ptrdiff_t Json::OurReader::StructuredError::offset_start

The documentation for this struct was generated from the following file:

- /home/pranav/Repositories/zcm/src/json.cpp

7.37 Json::StyledStreamWriter Class Reference

Writes a Value in JSON format in a human friendly way, to a stream rather than to a string.

```
#include <json.hpp>
```

Public Member Functions

- StyledStreamWriter (JSONCPP_STRING indentation="\t")
- ~StyledStreamWriter ()
- void write (JSONCPP_OSTREAM &out, const Value &root)

  Serialize a Value in JSON format.

Private Types

- typedef std::vector< JSONCPP_STRING > ChildValues

Private Member Functions

- void writeValue (const Value &value)
- void writeArrayValue (const Value &value)
- bool isMultineArray (const Value &value)
- void pushValue (const JSONCPP_STRING &value)
- void writeIndent ()
- void writeWithIndent (const JSONCPP_STRING &value)
- void indent ()
- void unindent ()
- void writeCommentBeforeValue (const Value &root)
- void writeCommentAfterValueOnSameLine (const Value &root)
- bool hasCommentForValue (const Value &value)

Static Private Member Functions

- static JSONCPP_STRING normalizeEOL (const JSONCPP_STRING &text)

Private Attributes

- ChildValues childValues_
- JSONCPP_OSTREAM * document_
- JSONCPP_STRING indentString_
- unsigned int rightMargin_
- JSONCPP_STRING indentation_
- bool addChildValues_: 1
- bool indented_: 1

7.37.1 Detailed Description

Writes a Value in JSON format in a human friendly way, to a stream rather than to a string.

The rules for line break and indent are as follow:

- Object value:
  - if empty then print {} without indent and line break
  - if not empty the print '{', line break & indent, print one value per line and then unindent and line break and print '}'.
- Array value:
  - if empty then print [] without indent and line break
  - if the array contains no object value, empty array or some other value types, and all the values fit on one lines, then print the array on a single line.
  - otherwise, it the values do not fit on one line, or the array contains object or non empty array, then print one value per line.

If the Value have comments then they are outputed according to their CommentPlacement.

Parameters

indentation	Each level will be indented by this amount extra.

See also

Reader, Value, Value::setComment()

Deprecated Use StreamWriterBuilder.

7.37.2 Member Typedef Documentation

7.37.2.1 typedef std::vector<JSONCPP_STRING> Json::StyledStreamWriter::ChildValues [private]

7.37.3 Constructor & Destructor Documentation

7.37.3.1 Json::StyledStreamWriter::StyledStreamWriter (JSONCPP_STRING *indentation* = "\t")

7.37.3.2 Json::StyledStreamWriter::~StyledStreamWriter ( ) [inline]

7.37.4 Member Function Documentation

7.37.4.1 bool Json::StyledStreamWriter::hasCommentForValue (const Value & *value*) [private]

7.37.4.2 void Json::StyledStreamWriter::indent ( ) [private]

7.37.4.3 bool Json::StyledStreamWriter::isMultineArray (const Value & *value*) [private]

7.37.4.4 static JSONCPP_STRING Json::StyledStreamWriter::normalizeEOL (const JSONCPP_STRING & *text*) [static], [private]

7.37.4.5 void Json::StyledStreamWriter::pushValue (const JSONCPP_STRING & *value*) [private]

7.37.4.6 void Json::StyledStreamWriter::unindent ( ) [private]

7.37.4.7 void Json::StyledStreamWriter::write (JSONCPP_OSTREAM & *out,* const Value & *root*)

Serialize a Value in JSON format.

Parameters

out	Stream to write to. (Can be ostringstream, e.g.)
root	Value to serialize.

Note

There is no point in deriving from Writer, since write() should not return a value.

7.37.4.8 void Json::StyledStreamWriter::writeArrayValue (const Value & *value*) [private]

7.37.4.9 void Json::StyledStreamWriter::writeCommentAfterValueOnSameLine (const Value & *root*) [private]

7.37.4.10 void Json::StyledStreamWriter::writeCommentBeforeValue (const Value & *root*) [private]

7.37.4.11 void Json::StyledStreamWriter::writeIndent ( ) [private]

7.37.4.12 void Json::StyledStreamWriter::writeValue (const Value & *value*) [private]

7.37.4.13 void Json::StyledStreamWriter::writeWithIndent (const JSONCPP_STRING & *value*) [private]

7.37.5 Member Data Documentation

7.37.5.1 bool Json::StyledStreamWriter::addChildValues_ [private]

7.37.5.2 ChildValues Json::StyledStreamWriter::childValues_ [private]

7.37.5.3 JSONCPP_OSTREAM* Json::StyledStreamWriter::document_ [private]

7.37.5.4 JSONCPP_STRING Json::StyledStreamWriter::indentation_ [private]

7.37.5.5 bool Json::StyledStreamWriter::indented_ [private]

7.37.5.6 JSONCPP_STRING Json::StyledStreamWriter::indentString_ [private]

7.37.5.7 unsigned int Json::StyledStreamWriter::rightMargin_ [private]

The documentation for this class was generated from the following files:

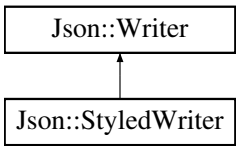
- /home/pranav/Repositories/zcm/include/json.hpp
- /home/pranav/Repositories/zcm/src/json.cpp

7.38 Json::StyledWriter Class Reference

Writes a Value in JSON format in a human friendly way.

`#include <json.hpp>`

Inheritance diagram for Json::StyledWriter:



Public Member Functions

- StyledWriter ()
- ~StyledWriter () JSONCPP_OVERRIDE
- JSONCPP_STRING write (const Value &root) JSONCPP_OVERRIDE

  Serialize a Value in JSON format.

Private Types

- typedef std::vector< JSONCPP_STRING > ChildValues

Private Member Functions

- void writeValue (const Value &value)
- void writeArrayValue (const Value &value)
- bool isMultineArray (const Value &value)
- void pushValue (const JSONCPP_STRING &value)
- void writeIndent ()
- void writeWithIndent (const JSONCPP_STRING &value)
- void indent ()
- void unindent ()
- void writeCommentBeforeValue (const Value &root)
- void writeCommentAfterValueOnSameLine (const Value &root)
- bool hasCommentForValue (const Value &value)

Static Private Member Functions

- static JSONCPP_STRING normalizeEOL (const JSONCPP_STRING &text)

Private Attributes

- ChildValues childValues_
- JSONCPP_STRING document_
- JSONCPP_STRING indentString_
- unsigned int rightMargin_
- unsigned int indentSize_
- bool addChildValues_

7.38.1 Detailed Description

Writes a Value in JSON format in a human friendly way.

The rules for line break and indent are as follow:

- Object value:
  - if empty then print {} without indent and line break
  - if not empty the print '{', line break & indent, print one value per line and then unindent and line break and print '}'.
- Array value:
  - if empty then print [] without indent and line break
  - if the array contains no object value, empty array or some other value types, and all the values fit on one lines, then print the array on a single line.
  - otherwise, it the values do not fit on one line, or the array contains object or non empty array, then print one value per line.

If the Value have comments then they are outputed according to their CommentPlacement.

See also

Reader, Value, Value::setComment()

Deprecated Use StreamWriterBuilder.

7.38.2 Member Typedef Documentation

7.38.2.1 typedef std::vector<JSONCPP_STRING> Json::StyledWriter::ChildValues [private]

7.38.3 Constructor & Destructor Documentation

7.38.3.1 Json::StyledWriter::StyledWriter ( )

7.38.3.2 Json::StyledWriter::~StyledWriter ( ) [inline]

7.38.4 Member Function Documentation

7.38.4.1 bool Json::StyledWriter::hasCommentForValue (const Value & *value*) [private]

7.38.4.2 void Json::StyledWriter::indent ( ) [private]

7.38.4.3 bool Json::StyledWriter::isMultineArray (const Value & *value*) [private]

7.38.4.4 static JSONCPP_STRING Json::StyledWriter::normalizeEOL (const JSONCPP_STRING & *text*) [static], [private]

7.38.4.5 void Json::StyledWriter::pushValue (const JSONCPP_STRING & *value*) [private]

7.38.4.6 void Json::StyledWriter::unindent ( ) [private]

7.38.4.7 JSONCPP_STRING Json::StyledWriter::write (const Value & *root*) [virtual]

Serialize a Value in JSON format.

Parameters

root	Value to serialize.

Returns

String containing the JSON document that represents the root value.

Implements Json::Writer.

7.38.4.8 void Json::StyledWriter::writeArrayValue (const Value & *value*) [private]

7.38.4.9 void Json::StyledWriter::writeCommentAfterValueOnSameLine (const Value & *root*) [private]

7.38.4.10 void Json::StyledWriter::writeCommentBeforeValue (const Value & *root*) [private]

7.38.4.11 void Json::StyledWriter::writeIndent ( ) [private]

7.38.4.12 void Json::StyledWriter::writeValue (const Value & *value*) [private]

7.38.4.13 void Json::StyledWriter::writeWithIndent (const JSONCPP_STRING & *value*) [private]

7.38.5 Member Data Documentation

7.38.5.1 bool Json::StyledWriter::addChildValues_ [private]

7.38.5.2 ChildValues Json::StyledWriter::childValues_ [private]

7.38.5.3 JSONCPP_STRING Json::StyledWriter::document_ [private]

7.38.5.4 unsigned int Json::StyledWriter::indentSize_ [private]

7.38.5.5 JSONCPP_STRING Json::StyledWriter::indentString_ [private]

7.38.5.6 unsigned int Json::StyledWriter::rightMargin_ [private]

The documentation for this class was generated from the following files:

- /home/pranav/Repositories/zcm/include/json.hpp
- /home/pranav/Repositories/zcm/src/json.cpp

7.39 zcm::Subscriber Class Reference

Subscriber class.

`#include <subscriber.hpp>`

Public Member Functions

- Subscriber (std::string name, unsigned int priority, std::string filter, std::function< void(const std::string &)> operation_function, Operation_Queue *operation_queue_ptr)

  Construct a subscriber object.
- Subscriber (std::string name, unsigned int priority, std::string filter, std::vector< std::string > endpoints, std::function< void(const std::string &)> operation_function, Operation_Queue *operation_queue_ptr)

  Construct a subscriber object with known endpoints.
- ~Subscriber ()

  Close the subscriber socket and destroy the ZMQ context.
- void connect (std::vector< std::string > new_endpoints)

  Connect to a new set of endpoints param[in] new_endpoints A new vector of endpoints to connect to.
- std::string get_name ()

  Get the name of the subscriber.
- unsigned int get_priority ()

  Get the priority of the subscriber.
- void add_connection (std::string new_connection)

  Add a new connection to the subscriber.
- void recv ()

  Thread function of the subscriber Behavior: (1) Wait for a new message on the subscriber ZMQ socket (2) Create a Susbcriber Operation (3) Enqueue onto operation_queue (4) Goto step (1)
- void rebind_operation_function (std::function< void(const std::string &)> new_operation_function)

  Rebind the subscriber operation function.
- std::thread spawn ()

  Spawn a new thread for the subscriber.
- void start ()

  Start the subscriber thread.

Private Attributes

- std::string name

  Name of the subscriber.
- unsigned int priority

  Priority of the subscriber.
- std::string filter

  Reception filter enforced on all received messages.
- std::vector< std::string > endpoints

  Vector of connection endpoints.
- std::function< void(const std::string &)> operation_function

  Operation function bound to the subscriber - Component method that handles received message.
- Operation_Queue * operation_queue_ptr

  Pointer to the operation queue.
- zmq::context_t * context

  Pointer to the subscriber ZMQ context.
- zmq::socket_t * subscriber_socket

  Pointer to the subscriber ZMQ socket.
- std::mutex func_mutex

  Mutex used to change operation_function at runtime.

7.39.1 Detailed Description

Subscriber class.

7.39.2 Constructor & Destructor Documentation

7.39.2.1 zcm::Subscriber::Subscriber (std::string *name*, unsigned int *priority*, std::string *filter*, std::function< void(const std::string &)> *operation_function*, Operation_Queue * *operation_queue_ptr*) [inline]

Construct a subscriber object.

Parameters

in	*name*	Subscriber name
in	*priority*	Priority of the subscriber
in	*filter*	ZMQ filter for the subscriber
in	*operation_function*	Operation function of the subscriber
in	*operation_queue_ptr*	Pointer to the operation queue

7.39.2.2 zcm::Subscriber::Subscriber (std::string *name*, unsigned int *priority*, std::string *filter*, std::vector< std::string > *endpoints*, std::function< void(const std::string &)> *operation_function*, Operation_Queue * *operation_queue_ptr*)

Construct a subscriber object with known endpoints.

Parameters

in	*name*	Subscriber name
in	*priority*	Priority of the subscriber
in	*filter*	ZMQ filter for the subscriber
in	*endpoints*	A vector of endpoints to connect to
in	*operation_function*	Operation function of the subscriber
in	*operation_queue_ptr*	Pointer to the operation queue

7.39.2.3 zcm::Subscriber::~Subscriber ( )

Close the subscriber socket and destroy the ZMQ context.

7.39.3 Member Function Documentation

7.39.3.1 void zcm::Subscriber::add_connection (std::string *new_connection*)

Add a new connection to the subscriber.

Parameters

in	*new_connection*	New connection address to connect to

7.39.3.2 void zcm::Subscriber::connect (std::vector< std::string > *new_endpoints*)

Connect to a new set of endpoints param[in] new_endpoints A new vector of endpoints to connect to.

7.39.3.3 std::string zcm::Subscriber::get_name ( )

Get the name of the subscriber.

7.39.3.4 unsigned int zcm::Subscriber::get_priority ( )

Get the priority of the subscriber.

7.39.3.5 void zcm::Subscriber::rebind_operation_function (std::function< void(const std::string &)> *new_operation_function*)

Rebind the subscriber operation function.

Parameters

in	*new_operation_function*	New subscriber function to be handled upon recv()

7.39.3.6 void zcm::Subscriber::recv ( )

Thread function of the subscriber Behavior: (1) Wait for a new message on the subscriber ZMQ socket (2) Create a Susbcriber Operation (3) Enqueue onto operation_queue (4) Goto step (1)

7.39.3.7 std::thread zcm::Subscriber::spawn ( )

Spawn a new thread for the subscriber.

Returns

Subscriber thread

7.39.3.8 void zcm::Subscriber::start ( )

Start the subscriber thread.

7.39.4 Member Data Documentation

7.39.4.1 zmq::context_t* zcm::Subscriber::context [private]

Pointer to the subscriber ZMQ context.

7.39.4.2 std::vector<std::string> zcm::Subscriber::endpoints [private]

Vector of connection endpoints.

7.39.4.3 std::string zcm::Subscriber::filter [private]

Reception filter enforced on all received messages.

7.39.4.4 std::mutex zcm::Subscriber::func_mutex [private]

Mutex used to change operation_function at runtime.

7.39.4.5 std::string zcm::Subscriber::name [private]

Name of the subscriber.

7.39.4.6 std::function<void(const std::string&)> zcm::Subscriber::operation_function [private]

Operation function bound to the subscriber - Component method that handles received message.

7.39.4.7 Operation_Queue* zcm::Subscriber::operation_queue_ptr [private]

Pointer to the operation queue.

7.39.4.8 unsigned int zcm::Subscriber::priority [private]

Priority of the subscriber.

7.39.4.9 zmq::socket_t* zcm::Subscriber::subscriber_socket [private]

Pointer to the subscriber ZMQ socket.

The documentation for this class was generated from the following files:

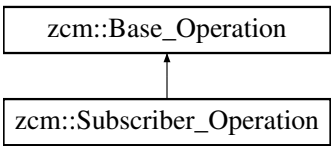
- /home/pranav/Repositories/zcm/include/subscriber.hpp
- /home/pranav/Repositories/zcm/src/subscriber.cpp

7.40 zcm::Subscriber_Operation Class Reference

Subscriber Operation class.

`#include <operation_types.hpp>`

Inheritance diagram for zcm::Subscriber_Operation:



Public Member Functions

- Subscriber_Operation (std::string name, unsigned int priority, std::function< void()> operation_function)
  Construct a subscriber operation.
- void execute ()
  Subscriber operation function.
- std::string get_name ()
  Return the operation name.
- unsigned int get_priority () const
  Return the operation priority.

Private Attributes

- std::function< void()> operation_function
  Subscriber Operation Function.

7.40.1 Detailed Description

Subscriber Operation class.

7.40.2 Constructor & Destructor Documentation

7.40.2.1 zcm::Subscriber_Operation::Subscriber_Operation (std::string *name,* unsigned int *priority,* std::function< void()> *operation_function*) [inline]

Construct a subscriber operation.

Parameters

in	*name*	Name of the operation
in	*priority*	Priority of the operation
in	*operation_function*	Subscriber function

7.40.3 Member Function Documentation

7.40.3.1 void zcm::Subscriber_Operation::execute ( ) [virtual]

Subscriber operation function.

Reimplemented from zcm::Base_Operation.

7.40.3.2 std::string zcm::Base_Operation::get_name ( ) [inherited]

Return the operation name.

Returns

Name of the operation

7.40.3.3 unsigned int zcm::Base_Operation::get_priority ( ) const [inherited]

Return the operation priority.

Returns

Priority of the operation

7.40.4 Member Data Documentation

7.40.4.1 std::function<void()> zcm::Subscriber_Operation::operation_function [private]

Subscriber Operation Function.

The documentation for this class was generated from the following files:

- /home/pranav/Repositories/zcm/include/operation_types.hpp
- /home/pranav/Repositories/zcm/src/operation_types.cpp

7.41 zcm::Timer Class Reference

Timer class.

`#include <timer.hpp>`

Public Member Functions

- Timer (std::string name, unsigned int priority, long long period, std::function< void()> operation_function, Operation_Queue *operation_queue_ptr)

  Construct a timer.
- void operation ()

  Timer thread function Behavior: (1) Wait for timer expiry (2) Create a Timer_Operation (3) Enqueue onto operation_queue (4) Goto step (1)
- std::string get_name ()

  Get the timer name.
- unsigned int get_priority ()

  Get the timer priority.
- void change_period (long long new_period)

  Change the timer period.
- void rebind_operation_function (std::function< void()> new_operation_function)

  Rebind the timer operation function.
- std::thread spawn ()

  Spawn a new thread for the timer.
- void start ()

  Start the timer thread.

Private Attributes

- std::string name

  Name of the timer.
- unsigned int priority

  Priority of the timer.
- std::chrono::duration< long long, std::ratio< 1, 1000000000 > > period

  Period of the timer.
- std::function< void()> operation_function

  Operation function bound to the timer.
- Operation_Queue * operation_queue_ptr

  Pointer to the operation queue.
- std::mutex period_mutex

  Mutex used to change the timer period at runtime.
- std::mutex func_mutex

  Mutex used to change the operation_function at runtime.

7.41.1 Detailed Description

Timer class.

7.41.2 Constructor & Destructor Documentation

7.41.2.1 zcm::Timer::Timer (std::string *name*, unsigned int *priority*, long long *period*, std::function< void()> *operation_function*, Operation_Queue * *operation_queue_ptr*)

Construct a timer.

Parameters

in	*name*	Name of the timer
in	*priority*	Priority of the timer
in	*period*	Period of the timer in nanoseconds
in	*operation_function*	Operation to which the timer is bound
in	*operation_queue_ptr*	Pointer to the operation_queue

7.41.3 Member Function Documentation

7.41.3.1 void zcm::Timer::change_period (long long *new_period*)

Change the timer period.

Parameters

in	*new_period*	New timer period in nanoseconds

7.41.3.2 std::string zcm::Timer::get_name ( )

Get the timer name.

Returns

Timer name

7.41.3.3 unsigned int zcm::Timer::get_priority ( )

Get the timer priority.

Returns

Timer priority

7.41.3.4 void zcm::Timer::operation ( )

Timer thread function Behavior: (1) Wait for timer expiry (2) Create a Timer_Operation (3) Enqueue onto operation↩ _queue (4) Goto step (1)

7.41.3.5 void zcm::Timer::rebind_operation_function (std::function< void() > *new_operation_function*)

Rebind the timer operation function.

Parameters

in	*new_operation_function*	New timer function to be handled upon expiry

7.41.3.6 std::thread zcm::Timer::spawn ( )

Spawn a new thread for the timer.

Returns

Timer thread

7.41.3.7 void zcm::Timer::start ( )

Start the timer thread.

7.41.4 Member Data Documentation

7.41.4.1 std::mutex zcm::Timer::func_mutex [private]

Mutex used to change the operation_function at runtime.

7.41.4.2 std::string zcm::Timer::name [private]

Name of the timer.

7.41.4.3 std::function<void()> zcm::Timer::operation_function [private]

Operation function bound to the timer.

7.41.4.4 Operation_Queue* zcm::Timer::operation_queue_ptr [private]

Pointer to the operation queue.

7.41.4.5 std::chrono::duration<long long, std::ratio<1, 1000000000> > zcm::Timer::period [private]

Period of the timer.

7.41.4.6 std::mutex zcm::Timer::period_mutex [private]

Mutex used to change the timer period at runtime.

7.41.4.7 unsigned int zcm::Timer::priority [private]

Priority of the timer.

The documentation for this class was generated from the following files:

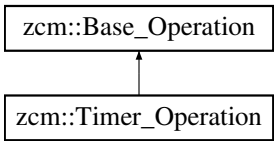
- /home/pranav/Repositories/zcm/include/timer.hpp
- /home/pranav/Repositories/zcm/src/timer.cpp

7.42 zcm::Timer_Operation Class Reference

Timer Operation class.

`#include <operation_types.hpp>`

Inheritance diagram for zcm::Timer_Operation:



Public Member Functions

- Timer_Operation (std::string name, unsigned int priority, std::function< void()> operation_function)
  Construct a timer operation.
- void execute ()
  Timer operation function.
- std::string get_name ()
  Return the operation name.
- unsigned int get_priority () const
  Return the operation priority.

Private Attributes

- std::function< void()> operation_function
  Timer operation function.

7.42.1 Detailed Description

Timer Operation class.

7.42.2 Constructor & Destructor Documentation

7.42.2.1 zcm::Timer_Operation::Timer_Operation (std::string *name*, unsigned int *priority*, std::function< void()> *operation_function*) [inline]

Construct a timer operation.

Parameters

in	*name*	Name of the operation
in	*priority*	Priority of the operation
in	*operation_function*	Timer function

7.42.3 Member Function Documentation

7.42.3.1 void zcm::Timer_Operation::execute ( ) [virtual]

Timer operation function.

Reimplemented from zcm::Base_Operation.

7.42.3.2 std::string zcm::Base_Operation::get_name ( ) [inherited]

Return the operation name.

Returns

Name of the operation

7.42.3.3 unsigned int zcm::Base_Operation::get_priority ( ) const [inherited]

Return the operation priority.

Returns

Priority of the operation

7.42.4 Member Data Documentation

7.42.4.1 std::function<void()> zcm::Timer_Operation::operation_function [private]

Timer operation function.

The documentation for this class was generated from the following files:

- /home/pranav/Repositories/zcm/include/operation_types.hpp
- /home/pranav/Repositories/zcm/src/operation_types.cpp

7.43 Json::OurReader::Token Class Reference

Public Attributes

- TokenType type_
- Location start_
- Location end_

7.43.1 Member Data Documentation

7.43.1.1 Location Json::OurReader::Token::end_

7.43.1.2 Location Json::OurReader::Token::start_

7.43.1.3 TokenType Json::OurReader::Token::type_

The documentation for this class was generated from the following file:

- /home/pranav/Repositories/zcm/src/json.cpp

7.44 Json::Reader::Token Class Reference

Public Attributes

- TokenType type_
- Location start_
- Location end_

7.44.1 Member Data Documentation

7.44.1.1 Location Json::Reader::Token::end_

7.44.1.2 Location Json::Reader::Token::start_

7.44.1.3 TokenType Json::Reader::Token::type_

The documentation for this class was generated from the following file:

- /home/pranav/Repositories/zcm/include/json.hpp

7.45 Json::Value Class Reference

Represents a JSON value.

```
#include <json.hpp>
```

Classes

- struct CommentInfo
- class CZString
- union ValueHolder

Public Types

- typedef std::vector< JSONCPP_STRING > Members
- typedef ValueIterator iterator
- typedef ValueConstIterator const_iterator
- typedef Json::UInt UInt
- typedef Json::Int Int
- typedef Json::UInt64 UInt64
- typedef Json::Int64 Int64
- typedef Json::LargestInt LargestInt
- typedef Json::LargestUInt LargestUInt
- typedef Json::ArrayIndex ArrayIndex
- typedef std::map< CZString, Value > ObjectValues

Public Member Functions

- Value (ValueType type=nullValue)

  Create a default Value of the given type.
- Value (Int value)
- Value (UInt value)
- Value (Int64 value)
- Value (UInt64 value)
- Value (double value)
- Value (const char *value)

  Copy til first 0. (NULL causes to seg-fault.)
- Value (const char *begin, const char *end)

  Copy all, incl zeroes.
- Value (const StaticString &value)

  Constructs a value from a static string.
- Value (const JSONCPP_STRING &value)

  Copy data() til size(). Embedded zeroes too.
- Value (bool value)
- Value (const Value &other)

  Deep copy.
- ~Value ()
- Value & operator= (Value other)

  Deep copy, then swap(other).
- void swap (Value &other)

  Swap everything.
- void swapPayload (Value &other)

  Swap values but leave comments and source offsets in place.
- ValueType type () const
- bool operator< (const Value &other) const

  Compare payload only, not comments etc.
- bool operator<= (const Value &other) const

- bool operator>= (const Value &other) const
- bool operator> (const Value &other) const
- bool operator== (const Value &other) const
- bool operator!= (const Value &other) const
- int compare (const Value &other) const
- const char * asCString () const

  Embedded zeroes could cause you trouble!
- JSONCPP_STRING asString () const

  Embedded zeroes are possible.
- bool getString (char const **begin, char const **end) const

  Get raw char of string-value.*
- Int asInt () const
- UInt asUInt () const
- Int64 asInt64 () const
- UInt64 asUInt64 () const
- LargestInt asLargestInt () const
- LargestUInt asLargestUInt () const
- float asFloat () const
- double asDouble () const
- bool asBool () const
- bool isNull () const
- bool isBool () const
- bool isInt () const
- bool isInt64 () const
- bool isUInt () const
- bool isUInt64 () const
- bool isIntegral () const
- bool isDouble () const
- bool isNumeric () const
- bool isString () const
- bool isArray () const
- bool isObject () const
- bool isConvertibleTo (ValueType other) const
- ArrayIndex size () const

  Number of values in array or object.
- bool empty () const

  Return true if empty array, empty object, or null; otherwise, false.
- bool operator! () const

  Return isNull()
- void clear ()

  Remove all object members and array elements.
- void resize (ArrayIndex size)

  Resize the array to size elements.
- Value & operator[ ] (ArrayIndex index)

  Access an array element (zero based index).
- Value & operator[ ] (int index)

  Access an array element (zero based index).
- const Value & operator[ ] (ArrayIndex index) const

  Access an array element (zero based index) (You may need to say 'value[0u]' to get your compiler to distinguish this from the operator[] which takes a string.)
- const Value & operator[ ] (int index) const

  Access an array element (zero based index) (You may need to say 'value[0u]' to get your compiler to distinguish this from the operator[] which takes a string.)

- Value get (ArrayIndex index, const Value &defaultValue) const

  If the array contains at least index+1 elements, returns the element value, otherwise returns defaultValue.
- bool isValidIndex (ArrayIndex index) const

  Return true if index < size().
- Value & append (const Value &value)

  Append value to array at the end.
- Value & operator[] (const char *key)

  Access an object value by name, create a null member if it does not exist.
- const Value & operator[] (const char *key) const

  Access an object value by name, returns null if there is no member with that name.
- Value & operator[] (const JSONCPP_STRING &key)

  Access an object value by name, create a null member if it does not exist.
- const Value & operator[] (const JSONCPP_STRING &key) const

  Access an object value by name, returns null if there is no member with that name.
- Value & operator[] (const StaticString &key)

  Access an object value by name, create a null member if it does not exist.
- Value get (const char *key, const Value &defaultValue) const

  Return the member named key if it exist, defaultValue otherwise.
- Value get (const char *begin, const char *end, const Value &defaultValue) const

  Return the member named key if it exist, defaultValue otherwise.
- Value get (const JSONCPP_STRING &key, const Value &defaultValue) const

  Return the member named key if it exist, defaultValue otherwise.
- Value const * find (char const *begin, char const *end) const

  Most general and efficient version of isMember()const, get()const, and operator[]const.
- Value const * demand (char const *begin, char const *end)

  Most general and efficient version of object-mutators.
- Value removeMember (const char *key)

  Remove and return the named member.
- Value removeMember (const JSONCPP_STRING &key)

  Same as removeMember(const char)*
- bool removeMember (const char *key, Value *removed)

  Same as removeMember(const char begin, const char* end, Value* removed), but 'key' is null-terminated.*
- bool removeMember (JSONCPP_STRING const &key, Value *removed)

  Remove the named map member.
- bool removeMember (const char *begin, const char *end, Value *removed)

  Same as removeMember(JSONCPP_STRING const& key, Value removed)*
- bool removeIndex (ArrayIndex i, Value *removed)

  Remove the indexed array element.
- bool isMember (const char *key) const

  Return true if the object has a member named key.
- bool isMember (const JSONCPP_STRING &key) const

  Return true if the object has a member named key.
- bool isMember (const char *begin, const char *end) const

  Same as isMember(JSONCPP_STRING const& key)const.
- Members getMemberNames () const

  Return a list of the member names.
- void setComment (const char *comment, CommentPlacement placement)
- void setComment (const char *comment, size_t len, CommentPlacement placement)

  Comments must be //... or / ... */.*
- void setComment (const JSONCPP_STRING &comment, CommentPlacement placement)

  Comments must be //... or / ... */.*

- bool hasComment (CommentPlacement placement) const
- JSONCPP_STRING getComment (CommentPlacement placement) const

  Include delimiters and embedded newlines.
- JSONCPP_STRING toStyledString () const
- const_iterator begin () const
- const_iterator end () const
- iterator begin ()
- iterator end ()
- void setOffsetStart (ptrdiff_t start)
- void setOffsetLimit (ptrdiff_t limit)
- ptrdiff_t getOffsetStart () const
- ptrdiff_t getOffsetLimit () const

Static Public Attributes

- static const Value & null = reinterpret_cast<const Value&>(kNullRef)

  We regret this reference to a global instance; prefer the simpler Value().
- static const Value & nullRef = null

  just a kludge for binary-compatibility; same as null
- static const LargestInt minLargestInt = LargestInt(~(LargestUInt(-1) / 2))

  Minimum signed integer value that can be stored in a Json::Value.
- static const LargestInt maxLargestInt = LargestInt(LargestUInt(-1) / 2)

  Maximum signed integer value that can be stored in a Json::Value.
- static const LargestUInt maxLargestUInt = LargestUInt(-1)

  Maximum unsigned integer value that can be stored in a Json::Value.
- static const Int minInt = Int(~(UInt(-1) / 2))

  Minimum signed int value that can be stored in a Json::Value.
- static const Int maxInt = Int(UInt(-1) / 2)

  Maximum signed int value that can be stored in a Json::Value.
- static const UInt maxUInt = UInt(-1)

  Maximum unsigned int value that can be stored in a Json::Value.
- static const Int64 minInt64

  Minimum signed 64 bits int value that can be stored in a Json::Value.
- static const Int64 maxInt64

  Maximum signed 64 bits int value that can be stored in a Json::Value.
- static const UInt64 maxUInt64

  Maximum unsigned 64 bits int value that can be stored in a Json::Value.

Private Member Functions

- void initBasic (ValueType type, bool allocated=false)
- Value & resolveReference (const char *key)
- Value & resolveReference (const char *key, const char *end)

Private Attributes

- union Json::Value::ValueHolder value_
- ValueType type_: 8
- unsigned int allocated_: 1
- CommentInfo * comments_
- ptrdiff_t start_
- ptrdiff_t limit_

Friends

- class ValueIteratorBase

7.45.1 Detailed Description

Represents a JSON value.

This class is a discriminated union wrapper that can represents a:

- signed integer [range: Value::minInt - Value::maxInt]
- unsigned integer (range: 0 - Value::maxUInt)
- double
- UTF-8 string
- boolean
- 'null'
- an ordered list of Value
- collection of name/value pairs (javascript object)

The type of the held value is represented by a ValueType and can be obtained using type().

Values of an objectValue or arrayValue can be accessed using operator[]() methods. Non-const methods will automatically create the a nullValue element if it does not exist. The sequence of an arrayValue will be automatically resized and initialized with nullValue. resize() can be used to enlarge or truncate an arrayValue.

The get() methods can be used to obtain default value in the case the required element does not exist.

It is possible to iterate over the list of a objectValue values using the getMemberNames() method.

Note

Value string-length fit in size_t, but keys must be $< 2^{\wedge}30$. (The reason is an implementation detail.) A #↩ CharReader will raise an exception if a bound is exceeded to avoid security holes in your app, but the Value API does *not* check bounds. That is the responsibility of the caller.

7.45.2 Member Typedef Documentation

7.45.2.1 typedef Json::ArrayIndex Json::Value::ArrayIndex

7.45.2.2 typedef ValueConstIterator Json::Value::const_iterator

7.45.2.3 typedef Json::Int Json::Value::Int

7.45.2.4 typedef Json::Int64 Json::Value::Int64

7.45.2.5 typedef ValueIterator Json::Value::iterator

7.45.2.6 typedef Json::LargestInt Json::Value::LargestInt

7.45.2.7 typedef Json::LargestUInt Json::Value::LargestUInt

7.45.2.8 typedef std::vector<JSONCPP_STRING> Json::Value::Members

7.45.2.9 typedef std::map<CZString, Value> Json::Value::ObjectValues

7.45.2.10 typedef Json::UInt Json::Value::UInt

7.45.2.11 typedef Json::UInt64 Json::Value::UInt64

7.45.3 Constructor & Destructor Documentation

7.45.3.1 Json::Value::Value (ValueType *type* = nullValue)

Create a default Value of the given type.

This is a very useful constructor. To create an empty array, pass arrayValue. To create an empty object, pass objectValue. Another Value can then be set to this one by assignment. This is useful since clear() and resize() will not alter types.

Examples:

```
Json::Value null_value; // null
Json::Value arr_value(Json::arrayValue); // []
Json::Value obj_value(Json::objectValue); // {}
```

7.45.3.2 Json::Value::Value (Int *value*)

7.45.3.3 Json::Value::Value (UInt *value*)

7.45.3.4 Json::Value::Value (Int64 *value*)

7.45.3.5 Json::Value::Value (UInt64 *value*)

7.45.3.6 Json::Value::Value (double *value*)

7.45.3.7 Json::Value::Value (const char * *value*)

Copy til first 0. (NULL causes to seg-fault.)

7.45.3.8 Json::Value::Value (const char * *begin*, const char * *end*)

Copy all, incl zeroes.

7.45.3.9 Json::Value::Value (const StaticString & *value*)

Constructs a value from a static string.

Like other value string constructor but do not duplicate the string for internal storage. The given string must remain alive after the call to this constructor.

Note

This works only for null-terminated strings. (We cannot change the size of this class, so we have nowhere to store the length, which might be computed later for various operations.)

Example of usage:

```
static StaticString foo("some text");
Json::Value aValue(foo);
```

7.45.3.10 Json::Value::Value (const JSONCPP_STRING & *value*)

Copy data() til size(). Embedded zeroes too.

7.45.3.11 Json::Value::Value (bool *value*)

7.45.3.12 Json::Value::Value (const Value & *other*)

Deep copy.

7.45.3.13 Json::Value::~Value ( )

7.45.4 Member Function Documentation

7.45.4.1 Value & Json::Value::append (const Value & *value*)

Append value to array at the end.

Equivalent to jsonvalue[jsonvalue.size()] = value;

7.45.4.2 bool Json::Value::asBool ( ) const

7.45.4.3 const char * Json::Value::asCString ( ) const

Embedded zeroes could cause you trouble!

7.45.4.4 double Json::Value::asDouble ( ) const

7.45.4.5 float Json::Value::asFloat ( ) const

7.45.4.6 Value::Int Json::Value::asInt ( ) const

7.45.4.7 Int64 Json::Value::asInt64 ( ) const

7.45.4.8 LargestInt Json::Value::asLargestInt ( ) const

7.45.4.9 LargestUInt Json::Value::asLargestUInt ( ) const

7.45.4.10 JSONCPP_STRING Json::Value::asString ( ) const

Embedded zeroes are possible.

7.45.4.11 Value::UInt Json::Value::asUInt ( ) const

7.45.4.12 UInt64 Json::Value::asUInt64 ( ) const

7.45.4.13 Value::const_iterator Json::Value::begin ( ) const

7.45.4.14 Value::iterator Json::Value::begin ( )

7.45.4.15 void Json::Value::clear ( )

Remove all object members and array elements.

Precondition

type() is arrayValue, objectValue, or nullValue

Postcondition

type() is unchanged

7.45.4.16 int Json::Value::compare (const Value & *other*) const

7.45.4.17 Value const* Json::Value::demand (char const * *begin*, char const * *end*)

Most general and efficient version of object-mutators.

Note

As stated elsewhere, behavior is undefined if (end-begin) >= 2^30

Returns

non-zero, but JSON_ASSERT if this is neither object nor nullValue.

7.45.4.18 bool Json::Value::empty ( ) const

Return true if empty array, empty object, or null; otherwise, false.

7.45.4.19 Value::const_iterator Json::Value::end ( ) const

7.45.4.20 Value::iterator Json::Value::end ( )

7.45.4.21 Value const * Json::Value::find (char const * *begin*, char const * *end*) const

Most general and efficient version of isMember()const, get()const, and operator[]const.

Note

As stated elsewhere, behavior is undefined if (end-begin) >= 2^30

7.45.4.22 Value Json::Value::get (ArrayIndex *index*, const Value & *defaultValue*) const

If the array contains at least index+1 elements, returns the element value, otherwise returns defaultValue.

7.45.4.23 Value Json::Value::get (const char * *key*, const Value & *defaultValue*) const

Return the member named key if it exist, defaultValue otherwise.

Note

deep copy

7.45.4.24 Value Json::Value::get (const char * *begin*, const char * *end*, const Value & *defaultValue*) const

Return the member named key if it exist, defaultValue otherwise.

Note

deep copy
key may contain embedded nulls.

7.45.4.25 Value Json::Value::get (const JSONCPP_STRING & *key*, const Value & *defaultValue*) const

Return the member named key if it exist, defaultValue otherwise.

Note

deep copy

Parameters

key	may contain embedded nulls.

7.45.4.26 JSONCPP_STRING Json::Value::getComment (CommentPlacement *placement*) const

Include delimiters and embedded newlines.

7.45.4.27 Value::Members Json::Value::getMemberNames ( ) const

Return a list of the member names.

If null, return an empty list.

Precondition

type() is objectValue or nullValue

Postcondition

if type() was nullValue, it remains nullValue

7.45.4.28 ptrdiff_t Json::Value::getOffsetLimit ( ) const

7.45.4.29 ptrdiff_t Json::Value::getOffsetStart ( ) const

7.45.4.30 bool Json::Value::getString (char const ** *begin*, char const ** *end*) const

Get raw char* of string-value.

Returns

false if !string. (Seg-fault if str or end are NULL.)

7.45.4.31 bool Json::Value::hasComment (CommentPlacement *placement*) const

7.45.4.32 void Json::Value::initBasic (ValueType *type*, bool *allocated* = `false`) [private]

7.45.4.33 bool Json::Value::isArray ( ) const

7.45.4.34 bool Json::Value::isBool ( ) const

7.45.4.35 bool Json::Value::isConvertibleTo (ValueType *other*) const

7.45.4.36 bool Json::Value::isDouble ( ) const

7.45.4.37 bool Json::Value::isInt ( ) const

7.45.4.38 bool Json::Value::isInt64 ( ) const

7.45.4.39 bool Json::Value::isIntegral ( ) const

7.45.4.40 bool Json::Value::isMember (const char * *key*) const

Return true if the object has a member named key.

Note

'key' must be null-terminated.

7.45.4.41 bool Json::Value::isMember (const JSONCPP_STRING & *key*) const

Return true if the object has a member named key.

Parameters

key	may contain embedded nulls.

7.45.4.42 bool Json::Value::isMember (const char * *begin*, const char * *end*) const

Same as isMember(JSONCPP_STRING const& key)const.

7.45.4.43 bool Json::Value::isNull ( ) const

7.45.4.44 bool Json::Value::isNumeric ( ) const

7.45.4.45 bool Json::Value::isObject ( ) const

7.45.4.46 bool Json::Value::isString ( ) const

7.45.4.47 bool Json::Value::isUInt ( ) const

7.45.4.48 bool Json::Value::isUInt64 ( ) const

7.45.4.49 bool Json::Value::isValidIndex (ArrayIndex *index*) const

Return true if index < size().

7.45.4.50 bool Json::Value::operator! ( ) const

Return isNull()

7.45.4.51 bool Json::Value::operator!= (const Value & *other*) const

7.45.4.52 bool Json::Value::operator< (const Value & *other*) const

Compare payload only, not comments etc.

7.45.4.53 bool Json::Value::operator<= (const Value & *other*) const

7.45.4.54 Value & Json::Value::operator= (Value *other*)

Deep copy, then swap(other).

Note

Over-write existing comments. To preserve comments, use swapPayload().

7.45.4.55 bool Json::Value::operator== (const Value & *other*) const

7.45.4.56 bool Json::Value::operator> (const Value & *other*) const

7.45.4.57 bool Json::Value::operator>= (const Value & *other*) const

7.45.4.58 Value & Json::Value::operator[] (ArrayIndex *index*)

Access an array element (zero based index).

If the array contains less than index element, then null value are inserted in the array so that its size is index+1. (You may need to say 'value[0u]' to get your compiler to distinguish this from the operator[] which takes a string.)

7.45.4.59 Value & Json::Value::operator[ ] (int *index*)

Access an array element (zero based index).

If the array contains less than index element, then null value are inserted in the array so that its size is index+1. (You may need to say 'value[0u]' to get your compiler to distinguish this from the operator[] which takes a string.)

7.45.4.60 const Value & Json::Value::operator[ ] (ArrayIndex *index*) const

Access an array element (zero based index) (You may need to say 'value[0u]' to get your compiler to distinguish this from the operator[] which takes a string.)

7.45.4.61 const Value & Json::Value::operator[ ] (int *index*) const

Access an array element (zero based index) (You may need to say 'value[0u]' to get your compiler to distinguish this from the operator[] which takes a string.)

7.45.4.62 Value & Json::Value::operator[ ] (const char * *key*)

Access an object value by name, create a null member if it does not exist.

Note

Because of our implementation, keys are limited to 2^30 -1 chars. Exceeding that will cause an exception.

7.45.4.63 const Value & Json::Value::operator[ ] (const char * *key*) const

Access an object value by name, returns null if there is no member with that name.

7.45.4.64 Value & Json::Value::operator[ ] (const JSONCPP_STRING & *key*)

Access an object value by name, create a null member if it does not exist.

Parameters

key	may contain embedded nulls.

7.45.4.65 Value const & Json::Value::operator[ ] (const JSONCPP_STRING & *key*) const

Access an object value by name, returns null if there is no member with that name.

Parameters

key	may contain embedded nulls.

7.45.4.66 Value & Json::Value::operator[ ] (const StaticString & *key*)

Access an object value by name, create a null member if it does not exist.

If the object has no entry for that name, then the member name used to store the new entry is not duplicated. Example of use:

```
Json::Value object;
static const StaticString code("code");
object[code] = 1234;
```

7.45.4.67 bool Json::Value::removeIndex (ArrayIndex *i*, Value * *removed*)

Remove the indexed array element.

O(n) expensive operations. Update 'removed' iff removed.

Returns

true iff removed (no exceptions)

7.45.4.68 Value Json::Value::removeMember (const char * *key*)

Remove and return the named member.

Do nothing if it did not exist.

Returns

the removed Value, or null.

Precondition

type() is objectValue or nullValue

Postcondition

type() is unchanged

Deprecated

7.45.4.69 Value Json::Value::removeMember (const JSONCPP_STRING & *key*)

Same as removeMember(const char*)

Parameters

key	may contain embedded nulls.

Deprecated

7.45.4.70 bool Json::Value::removeMember (const char * *key*, Value * *removed*)

Same as removeMember(const char* begin, const char* end, Value* removed), but 'key' is null-terminated.

7.45.4.71 bool Json::Value::removeMember (JSONCPP_STRING const & *key*, Value * *removed*)

Remove the named map member.

Update 'removed' iff removed.

Parameters

key	may contain embedded nulls.

Returns

true iff removed (no exceptions)

7.45.4.72 bool Json::Value::removeMember (const char * *begin*, const char * *end*, Value * *removed*)

Same as removeMember(JSONCPP_STRING const& key, Value* removed)

7.45.4.73 void Json::Value::resize (ArrayIndex *size*)

Resize the array to size elements.

New elements are initialized to null. May only be called on nullValue or arrayValue.

Precondition

type() is arrayValue or nullValue

Postcondition

type() is arrayValue

7.45.4.74 Value & Json::Value::resolveReference (const char * *key*) [private]

7.45.4.75 Value & Json::Value::resolveReference (const char * *key*, const char * *end*) [private]

7.45.4.76 void Json::Value::setComment (const char * *comment*, CommentPlacement *placement*)

Deprecated Always pass len.

7.45.4.77 void Json::Value::setComment (const char * *comment*, size_t *len*, CommentPlacement *placement*)

Comments must be //... or /* ... */.

7.45.4.78 void Json::Value::setComment (const JSONCPP_STRING & *comment*, CommentPlacement *placement*)

Comments must be //... or /* ... */.

7.45.4.79 void Json::Value::setOffsetLimit (ptrdiff_t *limit*)

7.45.4.80 void Json::Value::setOffsetStart (ptrdiff_t *start*)

7.45.4.81 ArrayIndex Json::Value::size ( ) const

Number of values in array or object.

7.45.4.82 void Json::Value::swap (Value & *other*)

Swap everything.

7.45.4.83 void Json::Value::swapPayload (Value & *other*)

Swap values but leave comments and source offsets in place.

7.45.4.84 JSONCPP_STRING Json::Value::toStyledString ( ) const

7.45.4.85 ValueType Json::Value::type ( ) const

7.45.5 Friends And Related Function Documentation

7.45.5.1 friend class ValueIteratorBase [friend]

7.45.6 Member Data Documentation

7.45.6.1 unsigned int Json::Value::allocated_ [private]

7.45.6.2 CommentInfo* Json::Value::comments_ [private]

7.45.6.3 ptrdiff_t Json::Value::limit_ [private]

7.45.6.4 const Int Json::Value::maxInt = Int(UInt(-1) / 2) [static]

Maximum signed int value that can be stored in a Json::Value.

7.45.6.5 const Int64 Json::Value::maxInt64 [static]

Maximum signed 64 bits int value that can be stored in a Json::Value.

7.45.6.6 const LargestInt Json::Value::maxLargestInt = LargestInt(LargestUInt(-1) / 2) [static]

Maximum signed integer value that can be stored in a Json::Value.

7.45.6.7 const LargestUInt Json::Value::maxLargestUInt = LargestUInt(-1) [static]

Maximum unsigned integer value that can be stored in a Json::Value.

7.45.6.8 const UInt Json::Value::maxUInt = UInt(-1) [static]

Maximum unsigned int value that can be stored in a Json::Value.

7.45.6.9 const UInt64 Json::Value::maxUInt64 [static]

Maximum unsigned 64 bits int value that can be stored in a Json::Value.

7.45.6.10 const Int Json::Value::minInt = Int(~(UInt(-1) / 2)) [static]

Minimum signed int value that can be stored in a Json::Value.

7.45.6.11 const Int64 Json::Value::minInt64 [static]

Minimum signed 64 bits int value that can be stored in a Json::Value.

7.45.6.12 const LargestInt Json::Value::minLargestInt = LargestInt(~(LargestUInt(-1) / 2)) [static]

Minimum signed integer value that can be stored in a Json::Value.

7.45.6.13 const Value & Json::Value::null = reinterpret_cast<const Value&>(kNullRef) [static]

We regret this reference to a global instance; prefer the simpler Value().

7.45.6.14 const Value & Json::Value::nullRef = null [static]

just a kludge for binary-compatibility; same as null

7.45.6.15 ptrdiff_t Json::Value::start_ [private]

7.45.6.16 ValueType Json::Value::type_ [private]

7.45.6.17 union Json::Value::ValueHolder Json::Value::value_ [private]

The documentation for this class was generated from the following files:

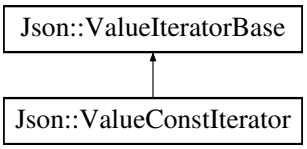
- /home/pranav/Repositories/zcm/include/json.hpp
- /home/pranav/Repositories/zcm/src/json.cpp

7.46 Json::ValueConstIterator Class Reference

const iterator for object and array value.

`#include <json.hpp>`

Inheritance diagram for Json::ValueConstIterator:



Public Types

- typedef const Value value_type
- typedef const Value & reference
- typedef const Value * pointer
- typedef ValueConstIterator SelfType
- typedef std::bidirectional_iterator_tag iterator_category
- typedef unsigned int size_t
- typedef int difference_type

Public Member Functions

- ValueConstIterator ()
- ValueConstIterator (ValueIterator const &other)
- SelfType & operator= (const ValueIteratorBase &other)
- SelfType operator++ (int)
- SelfType operator-- (int)
- SelfType & operator-- ()
- SelfType & operator++ ()
- reference operator* () const
- pointer operator-> () const
- bool operator== (const SelfType &other) const
- bool operator!= (const SelfType &other) const
- difference_type operator- (const SelfType &other) const

- Value key () const

  Return either the index or the member name of the referenced value as a Value.
- UInt index () const

  Return the index of the referenced Value, or -1 if it is not an arrayValue.
- JSONCPP_STRING name () const

  Return the member name of the referenced Value, or "" if it is not an objectValue.
- char const * memberName () const

  Return the member name of the referenced Value.
- char const * memberName (char const **end) const

  Return the member name of the referenced Value, or NULL if it is not an objectValue.

Protected Member Functions

- Value & deref () const
- void increment ()
- void decrement ()
- difference_type computeDistance (const SelfType &other) const
- bool isEqual (const SelfType &other) const
- void copy (const SelfType &other)

Private Member Functions

- ValueConstIterator (const Value::ObjectValues::iterator &current)

Friends

- class Value

7.46.1 Detailed Description

const iterator for object and array value.

7.46.2 Member Typedef Documentation

7.46.2.1 typedef int Json::ValueIteratorBase::difference_type [inherited]

7.46.2.2 typedef std::bidirectional_iterator_tag Json::ValueIteratorBase::iterator_category [inherited]

7.46.2.3 typedef const Value* Json::ValueConstIterator::pointer

7.46.2.4 typedef const Value& Json::ValueConstIterator::reference

7.46.2.5 typedef ValueConstIterator Json::ValueConstIterator::SelfType

7.46.2.6 typedef unsigned int Json::ValueIteratorBase::size_t [inherited]

7.46.2.7 typedef const Value Json::ValueConstIterator::value_type

7.46.3 Constructor & Destructor Documentation

7.46.3.1 Json::ValueConstIterator::ValueConstIterator ( )

7.46.3.2 Json::ValueConstIterator::ValueConstIterator (ValueIterator const & *other*)

7.46.3.3 Json::ValueConstIterator::ValueConstIterator (const Value::ObjectValues::iterator & *current*) [explicit], [private]

7.46.4 Member Function Documentation

7.46.4.1 ValueIteratorBase::difference_type Json::ValueIteratorBase::computeDistance (const SelfType & *other*) const [protected], [inherited]

7.46.4.2 void Json::ValueIteratorBase::copy (const SelfType & *other*) [protected], [inherited]

7.46.4.3 void Json::ValueIteratorBase::decrement ( ) [protected], [inherited]

7.46.4.4 Value & Json::ValueIteratorBase::deref ( ) const [protected], [inherited]

7.46.4.5 void Json::ValueIteratorBase::increment ( ) [protected], [inherited]

7.46.4.6 UInt Json::ValueIteratorBase::index ( ) const [inherited]

Return the index of the referenced Value, or -1 if it is not an arrayValue.

7.46.4.7 bool Json::ValueIteratorBase::isEqual (const SelfType & *other*) const [protected], [inherited]

7.46.4.8 Value Json::ValueIteratorBase::key ( ) const [inherited]

Return either the index or the member name of the referenced value as a Value.

7.46.4.9 char const * Json::ValueIteratorBase::memberName ( ) const [inherited]

Return the member name of the referenced Value.

"" if it is not an objectValue.

Deprecated This cannot be used for UTF-8 strings, since there can be embedded nulls.

7.46.4.10 char const * Json::ValueIteratorBase::memberName (char const ** *end*) const [inherited]

Return the member name of the referenced Value, or NULL if it is not an objectValue.

Note

Better version than memberName(). Allows embedded nulls.

7.46.4.11 JSONCPP_STRING Json::ValueIteratorBase::name ( ) const [inherited]

Return the member name of the referenced Value, or "" if it is not an objectValue.

Note

Avoid `c_str()` on result, as embedded zeroes are possible.

7.46.4.12 bool Json::ValueIteratorBase::operator!= (const SelfType & *other*) const [inline], [inherited]

7.46.4.13 reference Json::ValueConstIterator::operator* ( ) const [inline]

7.46.4.14 SelfType Json::ValueConstIterator::operator++ (int) [inline]

7.46.4.15 SelfType& Json::ValueConstIterator::operator++ ( ) [inline]

7.46.4.16 difference_type Json::ValueIteratorBase::operator- (const SelfType & *other*) const [inline], [inherited]

7.46.4.17 SelfType Json::ValueConstIterator::operator-- (int) [inline]

7.46.4.18 SelfType& Json::ValueConstIterator::operator-- ( ) [inline]

7.46.4.19 pointer Json::ValueConstIterator::operator-> ( ) const [inline]

7.46.4.20 ValueConstIterator & Json::ValueConstIterator::operator= (const ValueIteratorBase & *other*)

7.46.4.21 bool Json::ValueIteratorBase::operator== (const SelfType & *other*) const [inline], [inherited]

7.46.5 Friends And Related Function Documentation

7.46.5.1 friend class Value [friend]

The documentation for this class was generated from the following files:

- /home/pranav/Repositories/zcm/include/json.hpp
- /home/pranav/Repositories/zcm/src/json.cpp

7.47 Json::Value::ValueHolder Union Reference

Public Attributes

- LargestInt int_
- LargestUInt uint_
- double real_
- bool bool_
- char * string_
- ObjectValues * map_

7.47.1 Member Data Documentation

7.47.1.1 bool Json::Value::ValueHolder::bool_

7.47.1.2 LargestInt Json::Value::ValueHolder::int_

7.47.1.3 ObjectValues* Json::Value::ValueHolder::map_

7.47.1.4 double Json::Value::ValueHolder::real_

7.47.1.5 char* Json::Value::ValueHolder::string_

7.47.1.6 LargestUInt Json::Value::ValueHolder::uint_

The documentation for this union was generated from the following file:

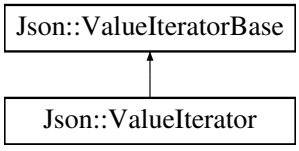
- /home/pranav/Repositories/zcm/include/json.hpp

7.48 Json::ValueIterator Class Reference

Iterator for object and array value.

```
#include <json.hpp>
```

Inheritance diagram for Json::ValueIterator:



Public Types

- typedef Value value_type
- typedef unsigned int size_t
- typedef int difference_type
- typedef Value & reference
- typedef Value * pointer
- typedef ValueIterator SelfType
- typedef std::bidirectional_iterator_tag iterator_category

Public Member Functions

- ValueIterator ()
- ValueIterator (const ValueConstIterator &other)
- ValueIterator (const ValueIterator &other)
- SelfType & operator= (const SelfType &other)
- SelfType operator++ (int)
- SelfType operator-- (int)
- SelfType & operator-- ()
- SelfType & operator++ ()
- reference operator* () const
- pointer operator-> () const
- bool operator== (const SelfType &other) const
- bool operator!= (const SelfType &other) const
- difference_type operator- (const SelfType &other) const
- Value key () const

  Return either the index or the member name of the referenced value as a Value.
- UInt index () const

  Return the index of the referenced Value, or -1 if it is not an arrayValue.
- JSONCPP_STRING name () const

  Return the member name of the referenced Value, or "" if it is not an objectValue.
- char const * memberName () const

  Return the member name of the referenced Value.
- char const * memberName (char const **end) const

  Return the member name of the referenced Value, or NULL if it is not an objectValue.

Protected Member Functions

- Value & deref () const
- void increment ()
- void decrement ()
- difference_type computeDistance (const SelfType &other) const
- bool isEqual (const SelfType &other) const
- void copy (const SelfType &other)

Private Member Functions

- ValueIterator (const Value::ObjectValues::iterator &current)

Friends

- class Value

7.48.1 Detailed Description

Iterator for object and array value.

7.48.2 Member Typedef Documentation

7.48.2.1 typedef int Json::ValueIterator::difference_type

7.48.2.2 typedef std::bidirectional_iterator_tag Json::ValueIteratorBase::iterator_category [inherited]

7.48.2.3 typedef Value* Json::ValueIterator::pointer

7.48.2.4 typedef Value& Json::ValueIterator::reference

7.48.2.5 typedef ValueIterator Json::ValueIterator::SelfType

7.48.2.6 typedef unsigned int Json::ValueIterator::size_t

7.48.2.7 typedef Value Json::ValueIterator::value_type

7.48.3 Constructor & Destructor Documentation

7.48.3.1 Json::ValueIterator::ValueIterator ( )

7.48.3.2 Json::ValueIterator::ValueIterator (const ValueConstIterator & *other*) [explicit]

7.48.3.3 Json::ValueIterator::ValueIterator (const ValueIterator & *other*)

7.48.3.4 Json::ValueIterator::ValueIterator (const Value::ObjectValues::iterator & *current*) [explicit], [private]

7.48.4 Member Function Documentation

7.48.4.1 ValueIteratorBase::difference_type Json::ValueIteratorBase::computeDistance (const SelfType & *other*) const [protected], [inherited]

7.48.4.2 void Json::ValueIteratorBase::copy (const SelfType & *other*) [protected], [inherited]

7.48.4.3 void Json::ValueIteratorBase::decrement ( ) [protected], [inherited]

7.48.4.4 Value & Json::ValueIteratorBase::deref ( ) const [protected], [inherited]

7.48.4.5 void Json::ValueIteratorBase::increment ( ) [protected], [inherited]

7.48.4.6 UInt Json::ValueIteratorBase::index ( ) const [inherited]

Return the index of the referenced Value, or -1 if it is not an arrayValue.

7.48.4.7 bool Json::ValueIteratorBase::isEqual (const SelfType & *other*) const [protected], [inherited]

7.48.4.8 Value Json::ValueIteratorBase::key ( ) const [inherited]

Return either the index or the member name of the referenced value as a Value.

7.48.4.9 char const * Json::ValueIteratorBase::memberName ( ) const [inherited]

Return the member name of the referenced Value.

"" if it is not an objectValue.

Deprecated This cannot be used for UTF-8 strings, since there can be embedded nulls.

7.48.4.10 char const * Json::ValueIteratorBase::memberName (char const ** *end*) const [inherited]

Return the member name of the referenced Value, or NULL if it is not an objectValue.

Note

Better version than memberName(). Allows embedded nulls.

7.48.4.11 JSONCPP_STRING Json::ValueIteratorBase::name ( ) const [inherited]

Return the member name of the referenced Value, or "" if it is not an objectValue.

Note

Avoid `c_str()` on result, as embedded zeroes are possible.

7.48.4.12 bool Json::ValueIteratorBase::operator!= (const SelfType & *other*) const [inline], [inherited]

7.48.4.13 reference Json::ValueIterator::operator* ( ) const [inline]

7.48.4.14 SelfType Json::ValueIterator::operator++ (int) [inline]

7.48.4.15 SelfType& Json::ValueIterator::operator++ ( ) [inline]

7.48.4.16 difference_type Json::ValueIteratorBase::operator- (const SelfType & *other*) const [inline], [inherited]

7.48.4.17 SelfType Json::ValueIterator::operator-- (int) [inline]

7.48.4.18 SelfType& Json::ValueIterator::operator-- ( ) [inline]

7.48.4.19 pointer Json::ValueIterator::operator-> ( ) const [inline]

7.48.4.20 ValueIterator & Json::ValueIterator::operator= (const SelfType & *other*)

7.48.4.21 bool Json::ValueIteratorBase::operator== (const SelfType & *other*) const [inline], [inherited]

7.48.5 Friends And Related Function Documentation

7.48.5.1 friend class Value [friend]

The documentation for this class was generated from the following files:

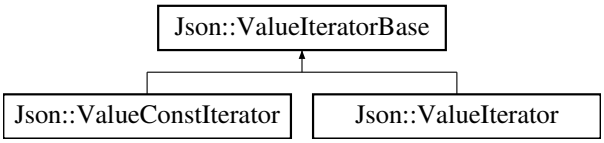
- /home/pranav/Repositories/zcm/include/json.hpp
- /home/pranav/Repositories/zcm/src/json.cpp

7.49 Json::ValueIteratorBase Class Reference

base class for Value iterators.

`#include <json.hpp>`

Inheritance diagram for Json::ValueIteratorBase:



Public Types

- typedef std::bidirectional_iterator_tag iterator_category
- typedef unsigned int size_t
- typedef int difference_type
- typedef ValueIteratorBase SelfType

Public Member Functions

- bool operator== (const SelfType &other) const
- bool operator!= (const SelfType &other) const
- difference_type operator- (const SelfType &other) const
- Value key () const

  Return either the index or the member name of the referenced value as a Value.
- UInt index () const

  Return the index of the referenced Value, or -1 if it is not an arrayValue.
- JSONCPP_STRING name () const

  Return the member name of the referenced Value, or "" if it is not an objectValue.
- char const * memberName () const

  Return the member name of the referenced Value.
- char const * memberName (char const **end) const

  Return the member name of the referenced Value, or NULL if it is not an objectValue.
- ValueIteratorBase ()
- ValueIteratorBase (const Value::ObjectValues::iterator &current)

Protected Member Functions

- Value & deref () const
- void increment ()
- void decrement ()
- difference_type computeDistance (const SelfType &other) const
- bool isEqual (const SelfType &other) const
- void copy (const SelfType &other)

Private Attributes

- Value::ObjectValues::iterator current_
- bool isNull_

7.49.1 Detailed Description

base class for Value iterators.

7.49.2 Member Typedef Documentation

7.49.2.1 typedef int Json::ValueIteratorBase::difference_type

7.49.2.2 typedef std::bidirectional_iterator_tag Json::ValueIteratorBase::iterator_category

7.49.2.3 typedef ValueIteratorBase Json::ValueIteratorBase::SelfType

7.49.2.4 typedef unsigned int Json::ValueIteratorBase::size_t

7.49.3 Constructor & Destructor Documentation

7.49.3.1 Json::ValueIteratorBase::ValueIteratorBase ( )

7.49.3.2 Json::ValueIteratorBase::ValueIteratorBase (const Value::ObjectValues::iterator & *current*) [explicit]

7.49.4 Member Function Documentation

7.49.4.1 ValueIteratorBase::difference_type Json::ValueIteratorBase::computeDistance (const SelfType & *other*) const [protected]

7.49.4.2 void Json::ValueIteratorBase::copy (const SelfType & *other*) [protected]

7.49.4.3 void Json::ValueIteratorBase::decrement ( ) [protected]

7.49.4.4 Value & Json::ValueIteratorBase::deref ( ) const [protected]

7.49.4.5 void Json::ValueIteratorBase::increment ( ) [protected]

7.49.4.6 UInt Json::ValueIteratorBase::index ( ) const

Return the index of the referenced Value, or -1 if it is not an arrayValue.

7.49.4.7 bool Json::ValueIteratorBase::isEqual (const SelfType & *other*) const [protected]

7.49.4.8 Value Json::ValueIteratorBase::key ( ) const

Return either the index or the member name of the referenced value as a Value.

7.49.4.9 char const * Json::ValueIteratorBase::memberName ( ) const

Return the member name of the referenced Value.

"" if it is not an objectValue.

Deprecated This cannot be used for UTF-8 strings, since there can be embedded nulls.

7.49.4.10 char const * Json::ValueIteratorBase::memberName (char const ** *end*) const

Return the member name of the referenced Value, or NULL if it is not an objectValue.

Note

Better version than memberName(). Allows embedded nulls.

7.49.4.11 JSONCPP_STRING Json::ValueIteratorBase::name ( ) const

Return the member name of the referenced Value, or "" if it is not an objectValue.

Note

Avoid `c_str()` on result, as embedded zeroes are possible.

7.49.4.12 bool Json::ValueIteratorBase::operator!= (const SelfType & *other*) const [inline]

7.49.4.13 difference_type Json::ValueIteratorBase::operator- (const SelfType & *other*) const [inline]

7.49.4.14 bool Json::ValueIteratorBase::operator== (const SelfType & *other*) const [inline]

7.49.5 Member Data Documentation

7.49.5.1 Value::ObjectValues::iterator Json::ValueIteratorBase::current_ [private]

7.49.5.2 bool Json::ValueIteratorBase::isNull_ [private]

The documentation for this class was generated from the following files:

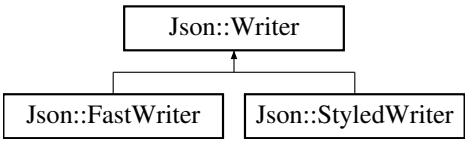
- /home/pranav/Repositories/zcm/include/json.hpp
- /home/pranav/Repositories/zcm/src/json.cpp

7.50 Json::Writer Class Reference

Abstract class for writers.

`#include <json.hpp>`

Inheritance diagram for Json::Writer:



Public Member Functions

- virtual ~Writer ()
- virtual JSONCPP_STRING write (const Value &root)=0

7.50.1 Detailed Description

Abstract class for writers.

Deprecated Use StreamWriter. (And really, this is an implementation detail.)

7.50.2 Constructor & Destructor Documentation

7.50.2.1 Json::Writer::~Writer ( ) [virtual]

7.50.3 Member Function Documentation

7.50.3.1 virtual JSONCPP_STRING Json::Writer::write (const Value & *root*) [pure virtual]

Implemented in Json::StyledWriter, and Json::FastWriter.

The documentation for this class was generated from the following files:

- /home/pranav/Repositories/zcm/include/json.hpp
- /home/pranav/Repositories/zcm/src/json.cpp

Chapter 8

File Documentation

8.1 /home/pranav/Repositories/zcm/include/actor.hpp File Reference

This file declares the Actor class.

```
#include "json.hpp"
#include "component.hpp"
#include <dlfcn.h>
#include <fstream>
```

Classes

- class zcm::Actor

  Actor class.

Namespaces

- zcm

8.1.1 Detailed Description

This file declares the Actor class.

Author

Pranav Srinivas Kumar

Date

2016.04.24

8.2 /home/pranav/Repositories/zcm/include/client.hpp File Reference

This file declares the Client class.

```
#include <iostream>
#include <zmq.hpp>
```

Classes

- class zcm::Client

  Client class.

Namespaces

- zcm

8.2.1 Detailed Description

This file declares the Client class.

Author

Pranav Srinivas Kumar

Date

2016.04.24

8.3 /home/pranav/Repositories/zcm/include/component.hpp File Reference

This file declares the Component class.

```
#include "timer.hpp"
#include "publisher.hpp"
#include "subscriber.hpp"
#include "client.hpp"
#include "server.hpp"
```

Classes

- class zcm::Component

  Component class.

Namespaces

- zcm

8.3.1 Detailed Description

This file declares the Component class.

Author

Pranav Srinivas Kumar

Date

2016.04.24

8.4 /home/pranav/Repositories/zcm/include/json.hpp File Reference

```
#include <stddef.h>
#include <string>
#include <vector>
#include <exception>
#include <map>
#include <deque>
#include <iosfwd>
#include <stack>
#include <istream>
#include <ostream>
#include <stdlib.h>
#include <sstream>
```

Classes

- class Json::Features

  Configuration passed to reader and writer.
- class Json::Exception

  Base class for all exceptions we throw.
- class Json::RuntimeError

  Exceptions which the user cannot easily avoid.
- class Json::LogicError

  Exceptions thrown by JSON_ASSERT/JSON_FAIL macros.
- class Json::StaticString

  Lightweight wrapper to tag static string.
- class Json::Value

  Represents a `JSON` *value.*
- class Json::Value::CZString
- struct Json::Value::CZString::StringStorage
- struct Json::Value::CommentInfo
- union Json::Value::ValueHolder

- class Json::PathArgument

  Experimental and untested: represents an element of the "path" to access a node.
- class Json::Path

  Experimental and untested: represents a "path" to access a node.
- class Json::ValueIteratorBase

  base class for Value iterators.
- class Json::ValueConstIterator

  const iterator for object and array value.
- class Json::ValueIterator

  Iterator for object and array value.
- class Json::Reader

  Unserialize a JSON document into a Value.
- struct Json::Reader::StructuredError

  An error tagged with where in the JSON text it was encountered.
- class Json::Reader::Token
- class Json::Reader::ErrorInfo
- class Json::CharReader

  Interface for reading JSON from a char array.
- class Json::CharReader::Factory
- class Json::CharReaderBuilder

  Build a CharReader implementation.
- class Json::StreamWriter

  Usage:
- class Json::StreamWriter::Factory

  A simple abstract factory.
- class Json::StreamWriterBuilder

  Build a StreamWriter implementation.
- class Json::Writer

  Abstract class for writers.
- class Json::FastWriter

  Outputs a Value in JSON format without formatting (not human friendly).
- class Json::StyledWriter

  Writes a Value in JSON format in a human friendly way.
- class Json::StyledStreamWriter

  Writes a Value in JSON format in a human friendly way, to a stream rather than to a string.

Namespaces

- Json

  JSON (JavaScript Object Notation).
- std

Macros

- #define JSON_IS_AMALGAMATION

  Json-cpp amalgated header (http://jsoncpp.sourceforge.net/).
- #define JSON_VERSION_H_INCLUDED
- #define JSONCPP_VERSION_STRING "1.7.2"
- #define JSONCPP_VERSION_MAJOR 1
- #define JSONCPP_VERSION_MINOR 7
- #define JSONCPP_VERSION_PATCH 2
- #define JSONCPP_VERSION_QUALIFIER
- #define JSONCPP_VERSION_HEXA ((JSONCPP_VERSION_MAJOR << 24) | (JSONCPP_VERSION_↩ MINOR << 16) | (JSONCPP_VERSION_PATCH << 8))
- #define JSONCPP_USING_SECURE_MEMORY 0
- #define JSON_CONFIG_H_INCLUDED
- #define JSON_USE_EXCEPTION 1

  If defined, indicates that json library is embedded in CppTL library.
- #define JSON_API

  If defined, indicates that the source file is amalgated to prevent private header inclusion.
- #define JSONCPP_OVERRIDE override
- #define JSON_HAS_RVALUE_REFERENCES 0
- #define JSONCPP_DEPRECATED(message)
- #define JSON_HAS_INT64
- #define JSONCPP_STRING std::string
- #define JSONCPP_OSTRINGSTREAM std::ostringstream
- #define JSONCPP_OSTREAM std::ostream
- #define JSONCPP_ISTRINGSTREAM std::istringstream
- #define JSONCPP_ISTREAM std::istream
- #define JSON_FORWARDS_H_INCLUDED
- #define CPPTL_JSON_FEATURES_H_INCLUDED
- #define CPPTL_JSON_H_INCLUDED
- #define JSONCPP_NORETURN
- #define CPPTL_JSON_READER_H_INCLUDED
- #define JSON_WRITER_H_INCLUDED
- #define CPPTL_JSON_ASSERTIONS_H_INCLUDED
- #define JSON_ASSERT(condition) {if (!(condition)) {Json::throwLogicError("assert json failed");}}

  It should not be possible for a maliciously designed file to cause an abort() or seg-fault, so these macros are used only for pre-condition violations and internal logic errors.
- #define JSON_FAIL_MESSAGE(message)
- #define JSON_ASSERT_MESSAGE(condition, message)

Typedefs

- typedef int Json::Int
- typedef unsigned int Json::UInt
- typedef long long int Json::Int64
- typedef unsigned long long int Json::UInt64
- typedef Int64 Json::LargestInt
- typedef UInt64 Json::LargestUInt
- typedef unsigned int Json::ArrayIndex

Enumerations

- enum Json::ValueType {
  Json::nullValue = 0, Json::intValue, Json::uintValue, Json::realValue,
  Json::stringValue, Json::booleanValue, Json::arrayValue, Json::objectValue }

  Type of the value held by a Value object.
- enum Json::CommentPlacement { Json::commentBefore = 0, Json::commentAfterOnSameLine, Json::commentAfter, Json::numberOfCommentPlacement }

Functions

- JSONCPP_NORETURN void Json::throwRuntimeError (JSONCPP_STRING const &msg)

  used internally
- JSONCPP_NORETURN void Json::throwLogicError (JSONCPP_STRING const &msg)

  used internally
- template<>
  void std::swap (Json::Value &a, Json::Value &b)

  Specialize std::swap() for Json::Value.
- bool JSON_API Json::parseFromStream (CharReader::Factory const &, JSONCPP_ISTREAM &, Value *root, std::string *errs)

  Consume entire stream and use its begin/end.
- JSONCPP_ISTREAM & Json::operator>> (JSONCPP_ISTREAM &, Value &)

  Read from 'sin' into 'root'.
- JSONCPP_STRING Json::writeString (StreamWriter::Factory const &factory, Value const &root)

  Write into stringstream, then return string, for convenience.
- JSONCPP_STRING JSON_API Json::valueToString (Int value)
- JSONCPP_STRING JSON_API Json::valueToString (UInt value)
- JSONCPP_STRING Json::valueToString (LargestInt value)
- JSONCPP_STRING Json::valueToString (LargestUInt value)
- JSONCPP_STRING Json::valueToString (double value)
- JSONCPP_STRING Json::valueToString (bool value)
- JSONCPP_STRING Json::valueToQuotedString (const char *value)
- JSONCPP_OSTREAM & Json::operator<< (JSONCPP_OSTREAM &, const Value &root)

  Output using the StyledStreamWriter.

8.4.1 Macro Definition Documentation

8.4.1.1 #define CPPTL_JSON_ASSERTIONS_H_INCLUDED

8.4.1.2 #define CPPTL_JSON_FEATURES_H_INCLUDED

8.4.1.3 #define CPPTL_JSON_H_INCLUDED

8.4.1.4 #define CPPTL_JSON_READER_H_INCLUDED

8.4.1.5 #define JSON_API

If defined, indicates that the source file is amalgated to prevent private header inclusion.

Remarks: it is automatically defined in the generated amalgated header.

8.4.1.6 #define JSON_ASSERT(*condition*) {if (!(condition)) {Json::throwLogicError("assert json failed");}}

It should not be possible for a maliciously designed file to cause an abort() or seg-fault, so these macros are used only for pre-condition violations and internal logic errors.

8.4.1.7 #define JSON_ASSERT_MESSAGE(*condition, message*)

Value:

```
if (!(condition)) {                                                    \
    JSON_FAIL_MESSAGE(message);                                          \
  }
```

8.4.1.8 #define JSON_CONFIG_H_INCLUDED

8.4.1.9 #define JSON_FAIL_MESSAGE(*message*)

Value:

```
{                                                                      \
    JSONCPP_OSTRINGSTREAM oss; oss << message;
      \
    Json::throwLogicError(oss.str());                                    \
    abort();                                                             \
  }
```

8.4.1.10 #define JSON_FORWARDS_H_INCLUDED

8.4.1.11 #define JSON_HAS_INT64

8.4.1.12 #define JSON_HAS_RVALUE_REFERENCES 0

8.4.1.13 #define JSON_IS_AMALGAMATION

Json-cpp amalgated header (http://jsoncpp.sourceforge.net/).

It is intended to be used with #include "json/json.h" If defined, indicates that the source file is amalgated to prevent private header inclusion.

8.4.1.14 #define JSON_USE_EXCEPTION 1

If defined, indicates that json library is embedded in CppTL library.

If defined, indicates that json may leverage CppTL library If defined, indicates that cpptl vector based map should be used instead of std::map as Value container.

8.4.1.15 #define JSON_VERSION_H_INCLUDED

8.4.1.16 #define JSON_WRITER_H_INCLUDED

8.4.1.17 #define JSONCPP_DEPRECATED(*message*)

8.4.1.18 #define JSONCPP_ISTREAM std::istream

8.4.1.19 #define JSONCPP_ISTRINGSTREAM std::istringstream

8.4.1.20 #define JSONCPP_NORETURN

8.4.1.21 #define JSONCPP_OSTREAM std::ostream

8.4.1.22 #define JSONCPP_OSTRINGSTREAM std::ostringstream

8.4.1.23 #define JSONCPP_OVERRIDE override

8.4.1.24 #define JSONCPP_STRING std::string

8.4.1.25 #define JSONCPP_USING_SECURE_MEMORY 0

8.4.1.26 #define JSONCPP_VERSION_HEXA ((JSONCPP_VERSION_MAJOR << 24) | (JSONCPP_VERSION_MINOR << 16) | (JSONCPP_VERSION_PATCH << 8))

8.4.1.27 #define JSONCPP_VERSION_MAJOR 1

8.4.1.28 #define JSONCPP_VERSION_MINOR 7

8.4.1.29 #define JSONCPP_VERSION_PATCH 2

8.4.1.30 #define JSONCPP_VERSION_QUALIFIER

8.4.1.31 #define JSONCPP_VERSION_STRING "1.7.2"

8.5 /home/pranav/Repositories/zcm/include/operation_queue.hpp File Reference

This file declares the Operation_Queue class.

```
#include <iostream>
#include <queue>
#include <mutex>
#include <thread>
#include <functional>
#include "operation_types.hpp"
```

Classes

- class zcm::Operation_Queue

  Operation_Queue class.
- struct zcm::Operation_Queue::PriorityOrdering

Namespaces

- zcm

8.5.1 Detailed Description

This file declares the Operation_Queue class.

Author

Pranav Srinivas Kumar

Date

2016.04.24

8.6 /home/pranav/Repositories/zcm/include/operation_types.hpp File Reference

This file declares Operation Types.

```
#include <iostream>
#include <functional>
#include "zmq.hpp"
```

Classes

- class zcm::Base_Operation

  Base Operation class.
- class zcm::Timer_Operation

  Timer Operation class.
- class zcm::Subscriber_Operation

  Subscriber Operation class.
- class zcm::Server_Operation

  Server Operation class.

Namespaces

- zcm

8.6.1 Detailed Description

This file declares Operation Types.

Author

Pranav Srinivas Kumar

Date

2016.04.24

8.7 /home/pranav/Repositories/zcm/include/publisher.hpp File Reference

This file declares the Publisher class.

```
#include <iostream>
#include <zmq.hpp>
```

Classes

- class zcm::Publisher
  Publisher class.

Namespaces

- zcm

8.7.1 Detailed Description

This file declares the Publisher class.

Author

Pranav Srinivas Kumar

Date

2016.04.24

8.8 /home/pranav/Repositories/zcm/include/server.hpp File Reference

This file declares the Server class.

```
#include <iostream>
#include <vector>
#include <map>
#include <sstream>
#include <zmq.hpp>
#include "operation_queue.hpp"
```

Classes

- class zcm::Server

  Server class.

Namespaces

- zcm

8.8.1 Detailed Description

This file declares the Server class.

Author

Pranav Srinivas Kumar

Date

2016.04.24

8.9 /home/pranav/Repositories/zcm/include/subscriber.hpp File Reference

This file declares the Subscriber class.

```
#include <iostream>
#include <vector>
#include <map>
#include <sstream>
#include <zmq.hpp>
#include "operation_queue.hpp"
```

Classes

- class zcm::Subscriber

  Subscriber class.

Namespaces

- zcm

8.9.1 Detailed Description

This file declares the Subscriber class.

Author

Pranav Srinivas Kumar

Date

2016.04.24

8.10 /home/pranav/Repositories/zcm/include/timer.hpp File Reference

This file declares the Timer class.

```
#include <iostream>
#include <string>
#include <chrono>
#include <ratio>
#include <thread>
#include "operation_queue.hpp"
```

Classes

- class zcm::Timer

  Timer class.

Namespaces

- zcm

8.10.1 Detailed Description

This file declares the Timer class.

Author

Pranav Srinivas Kumar

Date

2016.04.24

8.11 /home/pranav/Repositories/zcm/src/actor.cpp File Reference

This file contains definitions for the Actor class.

```
#include "actor.hpp"
```

Namespaces

- zcm

8.11.1 Detailed Description

This file contains definitions for the Actor class.

Author

Pranav Srinivas Kumar

Date

2016.04.24

8.12 /home/pranav/Repositories/zcm/src/client.cpp File Reference

This file contains definitions for the Client class.

```
#include "client.hpp"
```

Namespaces

- zcm

8.12.1 Detailed Description

This file contains definitions for the Client class.

Author

Pranav Srinivas Kumar

Date

2016.04.24

8.13 /home/pranav/Repositories/zcm/src/component.cpp File Reference

This file contains definitions for the Component class.

```
#include "component.hpp"
```

Namespaces

- zcm

8.13.1 Detailed Description

This file contains definitions for the Component class.

Author

Pranav Srinivas Kumar

Date

2016.04.24

8.14 /home/pranav/Repositories/zcm/src/json.cpp File Reference

```
#include "json.hpp"
#include <json/assertions.h>
#include <json/reader.h>
#include <json/value.h>
#include "json_tool.h"
#include <utility>
#include <cstdio>
#include <cassert>
#include <cstring>
#include <istream>
#include <sstream>
#include <memory>
#include <set>
#include <limits>
#include <json/writer.h>
#include <math.h>
#include <cstddef>
#include <algorithm>
#include "json_valueiterator.inl"
#include <iomanip>
#include <cmath>
```

Classes

- class Json::OurFeatures
- class Json::OurReader
- struct Json::OurReader::StructuredError
- class Json::OurReader::Token
- class Json::OurReader::ErrorInfo
- class Json::OurCharReader
- struct Json::CommentStyle

  Scoped enums are not available until C++11.
- struct Json::BuiltStyledStreamWriter

Namespaces

- Json

  JSON (JavaScript Object Notation).

Macros

- #define LIB_JSONCPP_JSON_TOOL_H_INCLUDED

  Json-cpp amalgated source (http://jsoncpp.sourceforge.net/).
- #define JSON_ASSERT_UNREACHABLE assert(false)
- #define ALIGNAS(byte_alignment)
- #define isfinite std::isfinite

Typedefs

- typedef char Json::UIntToStringBuffer[uintToStringBufferSize]
- typedef std::auto_ptr< CharReader > Json::CharReaderPtr
- typedef std::auto_ptr< StreamWriter > Json::StreamWriterPtr

Enumerations

- enum { Json::uintToStringBufferSize = 3 * sizeof(LargestUInt) + 1 }

Functions

- static JSONCPP_STRING Json::codePointToUTF8 (unsigned int cp)

  Converts a unicode code-point to UTF-8.
- static bool Json::isControlCharacter (char ch)

  Returns true if ch is a control character (in range [1,31]).
- static void Json::uintToString (LargestUInt value, char *&current)

  Converts an unsigned integer to string.
- static void Json::fixNumericLocale (char *begin, char *end)

  Change ',' to '.
- static bool Json::containsNewLine (Reader::Location begin, Reader::Location end)
- static JSONCPP_STRING Json::normalizeEOL (Reader::Location begin, Reader::Location end)
- static void Json::getValidReaderKeys (std::set< JSONCPP_STRING > *valid_keys)

- bool Json::parseFromStream (CharReader::Factory const &fact, JSONCPP_ISTREAM &sin, Value *root, JSONCPP_STRING *errs)
- JSONCPP_ISTREAM & Json::operator>> (JSONCPP_ISTREAM &, Value &)

  Read from 'sin' into 'root'.
- static const unsigned char Json::ALIGNAS (8) kNull[sizeof(Value)]
- template<typename T , typename U >
  static bool Json::InRange (double d, T min, U max)
- static char * Json::duplicateStringValue (const char *value, size_t length)

  Duplicates the specified string value.
- static char * Json::duplicateAndPrefixStringValue (const char *value, unsigned int length)
- static void Json::decodePrefixedString (bool isPrefixed, char const *prefixed, unsigned *length, char const **value)
- static void Json::releasePrefixedStringValue (char *value)

  Free the string duplicated by duplicateStringValue()/duplicateAndPrefixStringValue().
- static void Json::releaseStringValue (char *value, unsigned)
- JSONCPP_NORETURN void Json::throwRuntimeError (JSONCPP_STRING const &msg)

  used internally
- JSONCPP_NORETURN void Json::throwLogicError (JSONCPP_STRING const &msg)

  used internally
- static bool Json::IsIntegral (double d)
- static bool Json::containsControlCharacter (const char *str)
- static bool Json::containsControlCharacter0 (const char *str, unsigned len)
- JSONCPP_STRING Json::valueToString (LargestInt value)
- JSONCPP_STRING Json::valueToString (LargestUInt value)
- JSONCPP_STRING Json::valueToString (double value, bool useSpecialFloats, unsigned int precision)
- JSONCPP_STRING Json::valueToString (double value)
- JSONCPP_STRING Json::valueToString (bool value)
- JSONCPP_STRING Json::valueToQuotedString (const char *value)
- static char const * Json::strnpbrk (char const *s, char const *accept, size_t n)
- static JSONCPP_STRING Json::valueToQuotedStringN (const char *value, unsigned length)
- static void Json::getValidWriterKeys (std::set< JSONCPP_STRING > *valid_keys)
- JSONCPP_STRING Json::writeString (StreamWriter::Factory const &factory, Value const &root)

  Write into stringstream, then return string, for convenience.
- JSONCPP_OSTREAM & Json::operator<< (JSONCPP_OSTREAM &, const Value &root)

  Output using the StyledStreamWriter.

Variables

- static int const stackLimit_g = 1000
- static int stackDepth_g = 0
- const unsigned char & Json::kNullRef = kNull[0]

8.14.1 Macro Definition Documentation

8.14.1.1 #define ALIGNAS(*byte_alignment*)

8.14.1.2 #define isfinite std::isfinite

8.14.1.3 #define JSON_ASSERT_UNREACHABLE assert(false)

8.14.1.4 #define LIB_JSONCPP_JSON_TOOL_H_INCLUDED

Json-cpp amalgated source (http://jsoncpp.sourceforge.net/).

It is intended to be used with #include "json/json.h"

8.14.2 Variable Documentation

8.14.2.1 int stackDepth_g = 0 [static]

8.14.2.2 int const stackLimit_g = 1000 [static]

8.15 /home/pranav/Repositories/zcm/src/operation_queue.cpp File Reference

This file contains definitions for the Operation_Queue class.

```
#include "operation_queue.hpp"
```

Namespaces

- zcm

8.15.1 Detailed Description

This file contains definitions for the Operation_Queue class.

Author

Pranav Srinivas Kumar

Date

2016.04.24

8.16 /home/pranav/Repositories/zcm/src/operation_types.cpp File Reference

This file contains definitions for various Operation Types.

```
#include "operation_types.hpp"
```

Namespaces

- zcm

8.16.1 Detailed Description

This file contains definitions for various Operation Types.

Author

Pranav Srinivas Kumar

Date

2016.04.24

8.17 /home/pranav/Repositories/zcm/src/publisher.cpp File Reference

This file contains definitions for the Publisher class.

```
#include "publisher.hpp"
```

Namespaces

- zcm

8.17.1 Detailed Description

This file contains definitions for the Publisher class.

Author

Pranav Srinivas Kumar

Date

2016.04.24

8.18 /home/pranav/Repositories/zcm/src/server.cpp File Reference

This file contains definitions for the Server class.

```
#include "server.hpp"
```

Namespaces

- zcm

8.18.1 Detailed Description

This file contains definitions for the Server class.

Author

Pranav Srinivas Kumar

Date

2016.04.24

8.19 /home/pranav/Repositories/zcm/src/subscriber.cpp File Reference

This file contains definitions for the Subscriber class.

```
#include "subscriber.hpp"
```

Namespaces

- zcm

8.19.1 Detailed Description

This file contains definitions for the Subscriber class.

Author

Pranav Srinivas Kumar

Date

2016.04.24

8.20 /home/pranav/Repositories/zcm/src/timer.cpp File Reference

This file contains definitions for the Timer class.

```
#include "timer.hpp"
```

Namespaces

- zcm

8.20.1 Detailed Description

This file contains definitions for the Timer class.

Author

Pranav Srinivas Kumar

Date

2016.04.24