

ASN1C

ASN.1 Compiler
Version 6.5
XML Runtime
Reference Manual

Contents

1	Main Page	1
2	Module Index	2
2.1	Modules	2
3	Data Structure Index	3
3.1	Class Hierarchy	3
4	Data Structure Index	4
4.1	Data Structures	4
5	File Index	5
5.1	File List	5
6	Module Documentation	6
6.1	ASN.1-XML encode/decode functions.	6
6.1.1	Function Documentation	7
6.1.1.1	rtAsn1XmlAddAnyAttr	7
6.1.1.2	rtAsn1XmlEncGenTime	8
6.1.1.3	rtAsn1XmlEncObjId	8
6.1.1.4	rtAsn1XmlEncOpenType	8
6.1.1.5	rtAsn1XmlEncOpenTypeExt	9
6.1.1.6	rtAsn1XmlEncReal	9
6.1.1.7	rtAsn1XmlEncRelOID	10
6.1.1.8	rtAsn1XmlEncUnivStr	10
6.1.1.9	rtAsn1XmlEncUTCTime	10
6.1.1.10	rtAsn1XmlFmtAttrStr	11
6.1.1.11	rtAsn1XmlParseAttrStr	11
6.1.1.12	rtAsn1XmlpDecDynBitStr	12
6.1.1.13	rtAsn1XmlpDecGenTime	12

6.1.1.14	rtAsn1XmlpDecObjId	12
6.1.1.15	rtAsn1XmlpDecReal	13
6.1.1.16	rtAsn1XmlpDecRelOID	13
6.1.1.17	rtAsn1XmlpDecUnivStr	13
6.1.1.18	rtAsn1XmlpDecUTCTime	14
6.1.1.19	rtXmlpDecListOfASN1DynBitStr	14
6.2	XML decode functions	15
6.2.1	Function Documentation	17
6.2.1.1	rtXmlDecBase64Binary	17
6.2.1.2	rtXmlDecBase64Str	18
6.2.1.3	rtXmlDecBase64StrValue	18
6.2.1.4	rtXmlDecBigInt	19
6.2.1.5	rtXmlDecBool	19
6.2.1.6	rtXmlDecDate	19
6.2.1.7	rtXmlDecDateTime	20
6.2.1.8	rtXmlDecDecimal	20
6.2.1.9	rtXmlDecDouble	20
6.2.1.10	rtXmlDecDynBase64Str	21
6.2.1.11	rtXmlDecDynHexStr	21
6.2.1.12	rtXmlDecDynUTF8Str	21
6.2.1.13	rtXmlDecEmptyElement	22
6.2.1.14	rtXmlDecGDay	22
6.2.1.15	rtXmlDecGMonth	22
6.2.1.16	rtXmlDecGMonthDay	23
6.2.1.17	rtXmlDecGYear	23
6.2.1.18	rtXmlDecGYearMonth	23
6.2.1.19	rtXmlDecHexBinary	24
6.2.1.20	rtXmlDecHexStr	24
6.2.1.21	rtXmlDecInt	24
6.2.1.22	rtXmlDecInt16	25
6.2.1.23	rtXmlDecInt64	25
6.2.1.24	rtXmlDecInt8	25
6.2.1.25	rtXmlDecNSAttr	26
6.2.1.26	rtXmlDecQName	26
6.2.1.27	rtXmlDecTime	27
6.2.1.28	rtXmlDecUInt	27
6.2.1.29	rtXmlDecUInt16	27

6.2.1.30	rtXmlDecUInt64	28
6.2.1.31	rtXmlDecUInt8	28
6.2.1.32	rtXmlDecUTF8Str	28
6.2.1.33	rtXmlDecXmlStr	29
6.2.1.34	rtXmlDecXSIAAttr	29
6.2.1.35	rtXmlDecXSIAAttrs	30
6.2.1.36	rtXmlParseElementName	30
6.2.1.37	rtXmlParseElemQName	30
6.3	XML encode functions	31
6.3.1	Define Documentation	38
6.3.1.1	rtXmlFinalizeMemBuf	38
6.3.1.2	rtXmlGetEncBufLen	38
6.3.1.3	rtXmlGetEncBufPtr	38
6.3.2	Function Documentation	38
6.3.2.1	rtXmlEncAny	38
6.3.2.2	rtXmlEncAnyAttr	39
6.3.2.3	rtXmlEncAnyTypeValue	39
6.3.2.4	rtXmlEncBase64Binary	39
6.3.2.5	rtXmlEncBase64BinaryAttr	40
6.3.2.6	rtXmlEncBase64StrValue	40
6.3.2.7	rtXmlEncBigInt	41
6.3.2.8	rtXmlEncBigIntAttr	41
6.3.2.9	rtXmlEncBigIntValue	41
6.3.2.10	rtXmlEncBinStrValue	42
6.3.2.11	rtXmlEncBitString	42
6.3.2.12	rtXmlEncBOM	43
6.3.2.13	rtXmlEncBool	43
6.3.2.14	rtXmlEncBoolAttr	43
6.3.2.15	rtXmlEncBoolValue	44
6.3.2.16	rtXmlEncComment	44
6.3.2.17	rtXmlEncDate	44
6.3.2.18	rtXmlEncDateTime	45
6.3.2.19	rtXmlEncDateTimeValue	45
6.3.2.20	rtXmlEncDateValue	45
6.3.2.21	rtXmlEncDecimal	46
6.3.2.22	rtXmlEncDecimalAttr	46
6.3.2.23	rtXmlEncDecimalValue	46

6.3.2.24	rtXmlEncDouble	47
6.3.2.25	rtXmlEncDoubleAttr	47
6.3.2.26	rtXmlEncDoubleNormalValue	48
6.3.2.27	rtXmlEncDoubleValue	48
6.3.2.28	rtXmlEncEmptyElement	48
6.3.2.29	rtXmlEncEndDocument	49
6.3.2.30	rtXmlEncEndElement	49
6.3.2.31	rtXmlEncEndSoapElems	49
6.3.2.32	rtXmlEncEndSoapEnv	50
6.3.2.33	rtXmlEncFloat	50
6.3.2.34	rtXmlEncFloatAttr	51
6.3.2.35	rtXmlEncGDay	51
6.3.2.36	rtXmlEncGDayValue	51
6.3.2.37	rtXmlEncGMonth	52
6.3.2.38	rtXmlEncGMonthDay	52
6.3.2.39	rtXmlEncGMonthDayValue	52
6.3.2.40	rtXmlEncGMonthValue	53
6.3.2.41	rtXmlEncGYear	53
6.3.2.42	rtXmlEncGYearMonth	53
6.3.2.43	rtXmlEncGYearMonthValue	54
6.3.2.44	rtXmlEncGYearValue	54
6.3.2.45	rtXmlEncHexBinary	54
6.3.2.46	rtXmlEncHexBinaryAttr	55
6.3.2.47	rtXmlEncHexStrValue	55
6.3.2.48	rtXmlEncIndent	55
6.3.2.49	rtXmlEncInt	56
6.3.2.50	rtXmlEncInt64	56
6.3.2.51	rtXmlEncInt64Attr	56
6.3.2.52	rtXmlEncInt64Value	57
6.3.2.53	rtXmlEncIntAttr	57
6.3.2.54	rtXmlEncIntPattern	58
6.3.2.55	rtXmlEncIntValue	58
6.3.2.56	rtXmlEncNamedBits	58
6.3.2.57	rtXmlEncNSAttrs	59
6.3.2.58	rtXmlEncReal10	59
6.3.2.59	rtXmlEncSoapArrayTypeAttr	60
6.3.2.60	rtXmlEncStartDocument	60

6.3.2.61	rtXmlEncStartElement	60
6.3.2.62	rtXmlEncStartSoapElems	61
6.3.2.63	rtXmlEncStartSoapEnv	61
6.3.2.64	rtXmlEncString	61
6.3.2.65	rtXmlEncStringValue	62
6.3.2.66	rtXmlEncStringValue2	62
6.3.2.67	rtXmlEncTermStartElement	63
6.3.2.68	rtXmlEncTime	63
6.3.2.69	rtXmlEncTimeValue	63
6.3.2.70	rtXmlEncUInt	64
6.3.2.71	rtXmlEncUInt64	64
6.3.2.72	rtXmlEncUInt64Attr	64
6.3.2.73	rtXmlEncUInt64Value	65
6.3.2.74	rtXmlEncUIntAttr	65
6.3.2.75	rtXmlEncUIntValue	66
6.3.2.76	rtXmlEncUnicodeStr	66
6.3.2.77	rtXmlEncUTF8Attr	66
6.3.2.78	rtXmlEncUTF8Attr2	67
6.3.2.79	rtXmlEncUTF8Str	67
6.3.2.80	rtXmlEncXSAttrs	67
6.3.2.81	rtXmlEncXSINilAttr	68
6.3.2.82	rtXmlEncXSITypeAttr	68
6.3.2.83	rtXmlFreeInputSource	68
6.3.2.84	rtXmlGetIndent	69
6.3.2.85	rtXmlGetIndentChar	69
6.3.2.86	rtXmlGetWriteBOM	69
6.3.2.87	rtXmlPrintNSAttrs	69
6.3.2.88	rtXmlSetEncBufPtr	70
6.4	XML utility functions.	71
6.4.1	Function Documentation	71
6.4.1.1	rtXmlWriteToFile	71
6.5	XML pull-parser decode functions.	72
6.5.1	Function Documentation	77
6.5.1.1	rtXmlEncAttrC14N	77
6.5.1.2	rtXmlpCountListItems	77
6.5.1.3	rtXmlpCreateReader	77
6.5.1.4	rtXmlpDecAny	78

6.5.1.5	rtXmlpDecAnyAttrStr	78
6.5.1.6	rtXmlpDecAnyElem	79
6.5.1.7	rtXmlpDecBase64Str	79
6.5.1.8	rtXmlpDecBigInt	79
6.5.1.9	rtXmlpDecBitString	80
6.5.1.10	rtXmlpDecBool	80
6.5.1.11	rtXmlpDecDate	81
6.5.1.12	rtXmlpDecDateTime	81
6.5.1.13	rtXmlpDecDecimal	81
6.5.1.14	rtXmlpDecDouble	82
6.5.1.15	rtXmlpDecDoubleExt	82
6.5.1.16	rtXmlpDecDynBase64Str	82
6.5.1.17	rtXmlpDecDynBitString	83
6.5.1.18	rtXmlpDecDynHexStr	83
6.5.1.19	rtXmlpDecDynUnicodeStr	84
6.5.1.20	rtXmlpDecDynUTF8Str	84
6.5.1.21	rtXmlpDecGDay	84
6.5.1.22	rtXmlpDecGMonth	85
6.5.1.23	rtXmlpDecGMonthDay	85
6.5.1.24	rtXmlpDecGYear	85
6.5.1.25	rtXmlpDecGYearMonth	86
6.5.1.26	rtXmlpDecHexStr	86
6.5.1.27	rtXmlpDecInt	87
6.5.1.28	rtXmlpDecInt16	87
6.5.1.29	rtXmlpDecInt64	87
6.5.1.30	rtXmlpDecInt8	88
6.5.1.31	rtXmlpDecNamedBits	88
6.5.1.32	rtXmlpDecStrList	88
6.5.1.33	rtXmlpDecTime	89
6.5.1.34	rtXmlpDecUInt	89
6.5.1.35	rtXmlpDecUInt16	89
6.5.1.36	rtXmlpDecUInt64	90
6.5.1.37	rtXmlpDecUInt8	90
6.5.1.38	rtXmlpDecUTF8Str	90
6.5.1.39	rtXmlpDecXmlStr	91
6.5.1.40	rtXmlpDecXmlStrList	91
6.5.1.41	rtXmlpDecXSIAAttr	92

6.5.1.42	rtXmlpDecXSIAattrs	92
6.5.1.43	rtXmlpDecXSISTypeAttr	92
6.5.1.44	rtXmlpForceDecodeAsGroup	93
6.5.1.45	rtXmlpGetAttributeCount	93
6.5.1.46	rtXmlpGetAttributeID	93
6.5.1.47	rtXmlpGetCurrentLevel	94
6.5.1.48	rtXmlpGetNextAllElemID	94
6.5.1.49	rtXmlpGetNextAllElemID16	94
6.5.1.50	rtXmlpGetNextElem	95
6.5.1.51	rtXmlpGetNextElemID	95
6.5.1.52	rtXmlpGetNextSeqElemID	96
6.5.1.53	rtXmlpGetReader	96
6.5.1.54	rtXmlpGetXmInsAttrs	96
6.5.1.55	rtXmlpGetXSISTypeAttr	97
6.5.1.56	rtXmlpGetXSISTypeIndex	97
6.5.1.57	rtXmlpHasAttributes	97
6.5.1.58	rtXmlpHideAttributes	98
6.5.1.59	rtXmlpIsDecodeAsGroup	98
6.5.1.60	rtXmlpIsEmptyElement	98
6.5.1.61	rtXmlpIsLastEventDone	98
6.5.1.62	rtXmlpIsUTF8Encoding	99
6.5.1.63	rtXmlpListHasItem	99
6.5.1.64	rtXmlpLookupXSISTypeIndex	99
6.5.1.65	rtXmlpMarkLastEventActive	100
6.5.1.66	rtXmlpMarkPos	100
6.5.1.67	rtXmlpMatchEndTag	100
6.5.1.68	rtXmlpMatchStartTag	100
6.5.1.69	rtXmlpNeedDecodeAttributes	101
6.5.1.70	rtXmlpReadBytes	101
6.5.1.71	rtXmlpResetMarkedPos	101
6.5.1.72	rtXmlpRewindToMarkedPos	102
6.5.1.73	rtXmlpSelectAttribute	102
6.5.1.74	rtXmlpSetListMode	102
6.5.1.75	rtXmlpSetMixedContentMode	102
6.5.1.76	rtXmlpSetNamespaceTable	103
6.5.1.77	rtXmlpSetWhiteSpaceMode	103
6.6	XML run-time error status codes	104

6.6.1	Detailed Description	105
6.6.2	Define Documentation	105
6.6.2.1	XML_E_BASE	105
6.6.2.2	XML_E_ELEMMISRQ	106
6.6.2.3	XML_E_ELEMSISRQ	106
6.6.2.4	XML_E_FLDABSENT	106
6.6.2.5	XML_E_NOMATCH	106
6.6.2.6	XML_E_NSURINOTFOU	106
6.6.2.7	XML_E_TAGMISMATCH	106
6.6.2.8	XML_OK_EOB	106
6.6.2.9	XML_OK_FRAG	107
7	Data Structure Documentation	108
7.1	OSDecimalFmt Struct Reference	108
7.1.1	Detailed Description	108
7.2	OSDoubleFmt Struct Reference	109
7.2.1	Detailed Description	109
7.3	OSIntegerFmt Struct Reference	110
7.3.1	Detailed Description	110
7.4	OSXMLCtxtInfo Struct Reference	111
7.4.1	Detailed Description	111
7.5	OSXMLDecodeBuffer Class Reference	112
7.5.1	Detailed Description	113
7.5.2	Constructor & Destructor Documentation	113
7.5.2.1	OSXMLDecodeBuffer	113
7.5.2.2	OSXMLDecodeBuffer	113
7.5.2.3	OSXMLDecodeBuffer	113
7.5.3	Member Function Documentation	113
7.5.3.1	decodeXML	113
7.5.3.2	init	114
7.5.3.3	isA	114
7.5.3.4	parseElementName	114
7.5.3.5	parseElemQName	115
7.5.3.6	setMaxErrors	115
7.5.4	Field Documentation	115
7.5.4.1	mbOwnStream	115
7.6	OSXMLElemIDRec Struct Reference	116

7.6.1	Detailed Description	116
7.7	OSXMLEncodeBuffer Class Reference	117
7.7.1	Detailed Description	118
7.7.2	Constructor & Destructor Documentation	118
7.7.2.1	OSXMLEncodeBuffer	118
7.7.3	Member Function Documentation	118
7.7.3.1	addXMLHeader	118
7.7.3.2	addXMLText	118
7.7.3.3	getMsgLen	119
7.7.3.4	init	119
7.7.3.5	isA	119
7.7.3.6	setFragment	119
7.7.3.7	write	119
7.7.3.8	write	120
7.8	OSXMLEncodeStream Class Reference	121
7.8.1	Detailed Description	122
7.8.2	Constructor & Destructor Documentation	122
7.8.2.1	OSXMLEncodeStream	122
7.8.2.2	OSXMLEncodeStream	122
7.8.3	Member Function Documentation	123
7.8.3.1	encodeAttr	123
7.8.3.2	encodeText	123
7.8.3.3	endElement	123
7.8.3.4	getMsgPtr	124
7.8.3.5	getStream	124
7.8.3.6	init	124
7.8.3.7	isA	124
7.8.3.8	startDocument	124
7.8.3.9	startElement	125
7.8.3.10	termStartElement	125
7.8.4	Field Documentation	125
7.8.4.1	mbOwnStream	125
7.8.4.2	mpCtxt	125
7.8.4.3	mpStream	126
7.9	OSXMLFacets Struct Reference	127
7.9.1	Detailed Description	127
7.10	OSXMLGroupDesc Struct Reference	128

7.10.1	Detailed Description	128
7.11	OSXMLItemDescr Struct Reference	129
7.11.1	Detailed Description	129
7.12	OSXMLMessageBuffer Class Reference	130
7.12.1	Detailed Description	131
7.12.2	Constructor & Destructor Documentation	131
7.12.2.1	OSXMLMessageBuffer	131
7.12.3	Member Function Documentation	131
7.12.3.1	getIndent	131
7.12.3.2	getIndentChar	131
7.12.3.3	getWriteBOM	131
7.12.3.4	setAppInfo	132
7.12.3.5	setFormatting	132
7.12.3.6	setIndent	132
7.12.3.7	setIndentChar	132
7.12.3.8	setNamespace	132
7.12.3.9	setWriteBOM	133
7.13	OSXMLNameFragments Struct Reference	134
7.13.1	Detailed Description	134
7.14	OSXMLQName Struct Reference	135
7.14.1	Detailed Description	135
7.15	OSXMLSortedAttrOffset Struct Reference	136
7.15.1	Detailed Description	136
7.16	OSXMLStrFragment Struct Reference	137
7.16.1	Detailed Description	137
7.17	OSXSDAnyType Struct Reference	138
7.17.1	Detailed Description	138
8	File Documentation	139
8.1	osrtxml.h File Reference	139
8.1.1	Detailed Description	159
8.1.2	Define Documentation	159
8.1.2.1	IS_XMLNSATTR	159
8.1.2.2	IS_XSIATTR	159
8.1.2.3	OSXMLQNAMEEQUALS	159
8.1.2.4	OSXMLSETUTF8DECPTR	159
8.1.3	Function Documentation	160

8.1.3.1	<code>rtSaxGetAttrValue</code>	160
8.1.3.2	<code>rtSaxGetElemID</code>	160
8.1.3.3	<code>rtSaxGetElemID8</code>	160
8.1.3.4	<code>rtSaxHasXMLNSAttrs</code>	161
8.1.3.5	<code>rtSaxIsEmptyBuffer</code>	161
8.1.3.6	<code>rtSaxSortAttrs</code>	161
8.1.3.7	<code>rtSaxStrListMatch</code>	162
8.1.3.8	<code>rtSaxStrListParse</code>	162
8.1.3.9	<code>rtXmlCmpBase64Str</code>	162
8.1.3.10	<code>rtXmlCmpHexStr</code>	162
8.1.3.11	<code>rtXmlCreateFileInputSource</code>	163
8.1.3.12	<code>rtXmlInitContext</code>	163
8.1.3.13	<code>rtXmlInitContextUsingKey</code>	163
8.1.3.14	<code>rtXmlInitCtxtAppInfo</code>	164
8.1.3.15	<code>rtXmlMatchBase64Str</code>	164
8.1.3.16	<code>rtXmlMatchDate</code>	164
8.1.3.17	<code>rtXmlMatchDateTime</code>	164
8.1.3.18	<code>rtXmlMatchGDay</code>	165
8.1.3.19	<code>rtXmlMatchGMonth</code>	165
8.1.3.20	<code>rtXmlMatchGMonthDay</code>	165
8.1.3.21	<code>rtXmlMatchGYear</code>	165
8.1.3.22	<code>rtXmlMatchGYearMonth</code>	166
8.1.3.23	<code>rtXmlMatchHexStr</code>	166
8.1.3.24	<code>rtXmlMatchTime</code>	166
8.1.3.25	<code>rtXmlMemFreeAnyAttrs</code>	166
8.1.3.26	<code>rtXmlNewQName</code>	167
8.1.3.27	<code>rtXmlPrepareContext</code>	167
8.1.3.28	<code>rtXmlSetEncC14N</code>	167
8.1.3.29	<code>rtXmlSetEncDocHdr</code>	167
8.1.3.30	<code>rtXmlSetEncodingStr</code>	168
8.1.3.31	<code>rtXmlSetEncXSINamespace</code>	168
8.1.3.32	<code>rtXmlSetEncXSINilAttr</code>	168
8.1.3.33	<code>rtXmlSetFormatting</code>	168
8.1.3.34	<code>rtXmlSetIndent</code>	169
8.1.3.35	<code>rtXmlSetIndentChar</code>	169
8.1.3.36	<code>rtXmlSetNamespacesSet</code>	169
8.1.3.37	<code>rtXmlSetNoNSSchemaLocation</code>	170

8.1.3.38	rtXmlSetNSPrefixLinks	170
8.1.3.39	rtXmlSetSchemaLocation	170
8.1.3.40	rtXmlSetSoapVersion	170
8.1.3.41	rtXmlSetWriteBOM	171
8.1.3.42	rtXmlSetXSITypeAttr	171
8.2	OSXMLDecodeBuffer.h File Reference	172
8.2.1	Detailed Description	172
8.3	OSXMLEncodeBuffer.h File Reference	173
8.3.1	Detailed Description	173
8.4	OSXMLEncodeStream.h File Reference	174
8.4.1	Detailed Description	174
8.5	OSXMLMessageBuffer.h File Reference	175
8.5.1	Detailed Description	175
8.6	rtXmlErrCodes.h File Reference	176
8.6.1	Detailed Description	177

Chapter 1

Main Page

C XML Runtime Library Functions

The **C run-time XML library** contains functions used to encode/decode XML data. These functions are identified by their *rtXml* prefixes.

The categories of functions provided are as follows:

- XML pull-parser code.
- Functions functions to encode C types to XML.
- Functions to decode XML to C data types.
- Functions to encode XML element tags.
- Functions to encode XML attributes in sorted order for C14N.
- SAX parser interfaces.
- Context management functions.

Chapter 2

Module Index

2.1 Modules

Here is a list of all modules:

ASN.1-XML encode/decode functions.	6
XML decode functions.	15
XML encode functions.	31
XML utility functions.	71
XML pull-parser decode functions.	72
XML run-time error status codes.	104

Chapter 3

Data Structure Index

3.1 Class Hierarchy

This inheritance list is sorted roughly, but not completely, alphabetically:

OSDecimalFmt	108
OSDoubleFmt	109
OSIntegerFmt	110
OSXMLCtxtInfo	111
OSXMLElemIDRec	116
OSXMLFacets	127
OSXMLGroupDesc	128
OSXMLItemDescr	129
OSXMLMessageBuffer	130
OSXMLDecodeBuffer	112
OSXMLEncodeBuffer	117
OSXMLEncodeStream	121
OSXMLNameFragments	134
OSXMLQName	135
OSXMLSortedAttrOffset	136
OSXMLStrFragment	137
OSXSAnyType	138

Chapter 4

Data Structure Index

4.1 Data Structures

Here are the data structures with brief descriptions:

OSDecimalFmt	108
OSDoubleFmt	109
OSIntegerFmt	110
OSXMLCtxtInfo	111
OSXMLDecodeBuffer (Derived from the OSXMLMessageBuffer base class)	112
OSXMLElemIDRec	116
OSXMLEncodeBuffer (Derived from the OSXMLMessageBuffer base class)	117
OSXMLEncodeStream (Derived from the OSXMLMessageBuffer base class)	121
OSXMLFacets	127
OSXMLGroupDesc	128
OSXMLItemDescr	129
OSXMLMessageBuffer (The XML message buffer class is derived from the OSMessageBuffer base class)	130
OSXMLNameFragments	134
OSXMLQName	135
OSXMLSortedAttrOffset	136
OSXMLStrFragment	137
OSXSAnyType	138

Chapter 5

File Index

5.1 File List

Here is a list of all documented files with brief descriptions:

asn1xml.h	??
osrxml.h (XML low-level C encode/decode functions)	139
OSXMLDecodeBuffer.h (XML decode buffer or stream class definition)	172
OSXMLEncodeBuffer.h (XML encode message buffer class definition)	173
OSXMLEncodeStream.h (XML encode stream class definition)	174
OSXMLMessageBuffer.h (XML encode/decode buffer and stream base class)	175
rtXmlErrCodes.h (List of numeric status codes that can be returned by ASN1C run-time functions and generated code)	176

Chapter 6

Module Documentation

6.1 ASN.1-XML encode/decode functions.

Functions

- EXTERNXML int [rtAsn1XmlpDecGenTime](#) (OSCTXT *pctxt, const char **outdata)
This function decodes the contents of an ASN.1 Generalized type.
- EXTERNXML int [rtAsn1XmlpDecReal](#) (OSCTXT *pctxt, OSREAL *pvalue)
This function decodes the contents of an ASN.1 REAL type.
- EXTERNXML int [rtAsn1XmlpDecObjId](#) (OSCTXT *pctxt, ASN1OBJID *pvalue)
This function decodes the contents of an ASN.1 OBJECT IDENTIFIER type.
- EXTERNXML int [rtAsn1XmlpDecUnivStr](#) (OSCTXT *pctxt, const OS32BITCHAR **ppdata, OSUINT32 *pnchars)
This function decodes the contents of an ASN.1 UNIVERSAL string type.
- EXTERNXML int [rtAsn1XmlpDecUTCTime](#) (OSCTXT *pctxt, const char **outdata)
This function decodes the contents of an ASN.1 UTCTime type.
- EXTERNXML int [rtAsn1XmlEncGenTime](#) (OSCTXT *pctxt, const char *value, const OSUTF8CHAR *elemName, const OSUTF8CHAR *nsPrefix)
This function encodes a variable of the ASN.1 GeneralizedTime type.
- EXTERNXML int [rtAsn1XmlEncUTCTime](#) (OSCTXT *pctxt, const char *value, const OSUTF8CHAR *elemName, const OSUTF8CHAR *nsPrefix)
This function encodes a variable of the ASN.1 UTCTime type.
- EXTERNXML int [rtAsn1XmlEncObjId](#) (OSCTXT *pctxt, const ASN1OBJID *pvalue, const OSUTF8CHAR *elemName, const OSUTF8CHAR *nsPrefix)
This function encodes a variable of the ASN.1 OBJECT IDENTIFIER type.
- EXTERNXML int [rtAsn1XmlEncReal](#) (OSCTXT *pctxt, OSREAL value, const OSUTF8CHAR *elemName, const OSUTF8CHAR *nsPrefix)
This function encodes a variable of the ASN.1 REAL type.

- EXTERNXML int [rtAsn1XmlEncRelOID](#) (OSCTXT *pctx, const ASN1OBJID *pvalue, const OSUTF8CHAR *elemName, const OSUTF8CHAR *nsPrefix)
This function encodes a variable of the ASN.1 RELATIVE-OID type.
- EXTERNXML int [rtAsn1XmlEncOpenType](#) (OSCTXT *pctx, const OSOCTET *data, OSUINT32 noctx, const OSUTF8CHAR *elemName, const OSUTF8CHAR *nsPrefix)
This function encodes a variable of the ASN.1 open type.
- EXTERNXML int [rtAsn1XmlEncOpenTypeExt](#) (OSCTXT *pctx, OSRTDList *pElemList)
This function encodes an ASN.1 open type extension.
- EXTERNXML int [rtAsn1XmlEncUnivStr](#) (OSCTXT *pctx, const OS32BITCHAR *value, OSUINT32 nchars, const OSUTF8CHAR *elemName, OSXMLNamespace *pNS)
This function encodes a variable of the ASN.1 UNIVERSAL string type.
- EXTERNXML int [rtAsn1XmlFmtAttrStr](#) (OSCTXT *pctx, const OSUTF8CHAR *name, const OSUTF8CHAR *value, OSUTF8CHAR **pAttrStr)
This function formats a name-value XML pair into a name="value" attribute string.
- EXTERNXML int [rtAsn1XmlParseAttrStr](#) (OSCTXT *pctx, const OSUTF8CHAR *pAttrStr, OSUTF8NVP *pNVPair)
This function parses an XML name-value pair from an attribute string.
- EXTERNXML int [rtAsn1XmlAddAnyAttr](#) (OSCTXT *pctx, const OSUTF8CHAR *name, const OSUTF8CHAR *value, OSRTDList *plist)
This function formats an attribute string and adds it to the attribute list.
- EXTERNXML int [rtAsn1XmlpDecDynBitStr](#) (OSCTXT *pctx, ASN1DynBitStr *pvalue)
This function decodes a bit string value.
- EXTERNXML int [rtXmlpDecListOfASN1DynBitStr](#) (OSCTXT *pctx, OSRTDList *plist)
This function decodes a list of space-separated bit strings and returns each bit string as a separate item on the given list.
- EXTERNXML int [rtAsn1XmlpDecRelOID](#) (OSCTXT *pctx, ASN1OBJID *pvalue)
This function decodes the contents of an ASN.1 RELATIVE-OID type.

6.1.1 Function Documentation

6.1.1.1 EXTERNXML int [rtAsn1XmlAddAnyAttr](#) (OSCTXT *pctx, const OSUTF8CHAR *name, const OSUTF8CHAR *value, OSRTDList *plist)

This function formats an attribute string and adds it to the attribute list.

Parameters

pctx A pointer to a context structure. This provides a storage area for the function to store all working variables that must be maintained between function calls.

name The name of the new attribute.

value The value of the new attribute.

plist The attribute list.

6.1.1.2 EXTERNXML int rtAsn1XmlEncGenTime (OSCTXT * *pctxt*, const char * *value*, const OSUTF8CHAR * *elemName*, const OSUTF8CHAR * *nsPrefix*)

This function encodes a variable of the ASN.1 GeneralizedTime type.

It performs conversion from ASN.1 time format into the XML dateTime format.

Parameters

pctxt A pointer to a context structure. This provides a storage area for the function to store all working variables that must be maintained between function calls.

value A pointer to a null-terminated C character string to be encoded. It should contain UTCTime in ASN.1 format.

elemName XML element name. A name must be provided. If an empty string is passed (""), no element tag is added to the encoded value.

nsPrefix XML namespace prefix. If not null, will be prepended to *elemName* to form a qualified name.

Returns

Completion status of operation:

- 0 (0) = success,
- negative return value is error.

6.1.1.3 EXTERNXML int rtAsn1XmlEncObjId (OSCTXT * *pctxt*, const ASN1OBJID * *pvalue*, const OSUTF8CHAR * *elemName*, const OSUTF8CHAR * *nsPrefix*)

This function encodes a variable of the ASN.1 OBJECT IDENTIFIER type.

Parameters

pctxt A pointer to a context structure. This provides a storage area for the function to store all working variables that must be maintained between function calls.

pvalue A pointer to an object identifier structure. This structure contains an integer to hold the number of subidentifiers in the object and an array to hold the subidentifier values.

elemName XML element name. A name must be provided. If an empty string is passed (""), no element tag is added to the encoded value.

nsPrefix XML namespace prefix. If not null, will be prepended to *elemName* to form a qualified name.

Returns

Completion status of operation:

- 0 (0) = success,
- negative return value is error.

6.1.1.4 EXTERNXML int rtAsn1XmlEncOpenType (OSCTXT * *pctxt*, const OSOCTET * *data*, OSUINT32 *noct*, const OSUTF8CHAR * *elemName*, const OSUTF8CHAR * *nsPrefix*)

This function encodes a variable of the ASN.1 open type.

It copies the data as it exists in the structure to the encode buffer or stream.

Parameters

pctxt A pointer to a context structure. This provides a storage area for the function to store all working variables that must be maintained between function calls.

data A pointer to a buffer containing the open type data.

nocts Number of bytes in the data buffer to encode.

elemName XML element name. A name must be provided. If an empty string is passed (""), no element tag is added to the encoded value.

nsPrefix XML namespace prefix. If not null, will be prepended to *elemName* to form a qualified name.

Returns

Completion status of operation:

- 0 (0) = success,
- negative return value is error.

6.1.1.5 EXTERNXML int rtAsn1XmlEncOpenTypeExt (OSCTXT * *pctxt*, OSRTDList * *pElemList*)

This function encodes an ASN.1 open type extension.

This occurs in a SEQUENCE or SET type when a ... is present. The type is represented as a list of open type structures.

Parameters

pctxt A pointer to a context structure. This provides a storage area for the function to store all working variables that must be maintained between function calls.

pElemList Linked list of ASN.1 open type structures.

Returns

Completion status of operation:

- 0 (0) = success,
- negative return value is error.

6.1.1.6 EXTERNXML int rtAsn1XmlEncReal (OSCTXT * *pctxt*, OSREAL *value*, const OSUTF8CHAR * *elemName*, const OSUTF8CHAR * *nsPrefix*)

This function encodes a variable of the ASN.1 REAL type.

Parameters

pctxt A pointer to a context structure. This provides a storage area for the function to store all working variables that must be maintained between function calls.

pvalue A pointer to OSREAL value.

elemName XML element name. A name must be provided. If an empty string is passed (""), no element tag is added to the encoded value.

nsPrefix XML namespace prefix. If not null, will be prepended to *elemName* to form a qualified name.

Returns

Completion status of operation:

- 0 (0) = success,
- negative return value is error.

6.1.1.7 EXTERNXML int rtAsn1XmlEncRelOID (OSCTXT * *pctxt*, const ASN1OBJID * *pvalue*, const OSUTF8CHAR * *elemName*, const OSUTF8CHAR * *nsPrefix*)

This function encodes a variable of the ASN.1 RELATIVE-OID type.

Parameters

pctxt A pointer to a context structure. This provides a storage area for the function to store all working variables that must be maintained between function calls.

pvalue A pointer to an object identifier structure. This structure contains an integer to hold the number of subidentifiers in the object and an array to hold the subidentifier values.

elemName XML element name. A name must be provided. If an empty string is passed (""), no element tag is added to the encoded value.

nsPrefix XML namespace prefix. If not null, will be prepended to *elemName* to form a qualified name.

Returns

Completion status of operation:

- 0 (0) = success,
- negative return value is error.

6.1.1.8 EXTERNXML int rtAsn1XmlEncUnivStr (OSCTXT * *pctxt*, const OS32BITCHAR * *value*, OSUINT32 *nchars*, const OSUTF8CHAR * *elemName*, OSXMLNamespace * *pNS*)

This function encodes a variable of the ASN.1 UNIVERSAL string type.

Parameters

pctxt A pointer to a context structure. This provides a storage area for the function to store all working variables that must be maintained between function calls.

value Array of universal characters to be encoded. Each character is represented as a 32-bit integer.

nchars Number of characters to encode.

elemName XML element name. A name must be provided. If an empty string is passed (""), no element tag is added to the encoded value.

pNS XML namespace information (prefix and URI).

Returns

Completion status of operation:

- 0 (0) = success,
- negative return value is error.

6.1.1.9 EXTERNXML int rtAsn1XmlEncUTCTime (OSCTXT * *pctxt*, const char * *value*, const OSUTF8CHAR * *elemName*, const OSUTF8CHAR * *nsPrefix*)

This function encodes a variable of the ASN.1 UTCTime type.

It performs conversion from ASN.1 time format into the XML dateTime format.

Parameters

pctxt A pointer to a context structure. This provides a storage area for the function to store all working variables that must be maintained between function calls.

value A pointer to a null-terminated C character string to be encoded. It should contain UTCTime in ASN.1 format.

elemName XML element name. A name must be provided. If an empty string is passed (""), no element tag is added to the encoded value.

nsPrefix XML namespace prefix. If not null, will be prepended to elemName to form a qualified name.

Returns

Completion status of operation:

- 0 (0) = success,
- negative return value is error.

6.1.1.10 EXTERNXML int rtAsn1XmlFmtAttrStr (OSCTXT * *pctxt*, const OSUTF8CHAR * *name*, const OSUTF8CHAR * *value*, OSUTF8CHAR ** *pAttrStr*)

This function formats a name-value XML pair into a name="value" attribute string.

Parameters

pctxt A pointer to a context structure. This provides a storage area for the function to store all working variables that must be maintained between function calls.

name A pointer to an XML element name. A name must be provided.

value A pointer to the corresponding element value.

pAttrStr The resulting name="value" string.

Returns

Completion status of operation:

- 0 (0) = success,
- negative return value is error.

6.1.1.11 EXTERNXML int rtAsn1XmlParseAttrStr (OSCTXT * *pctxt*, const OSUTF8CHAR * *pAttrStr*, OSUTF8NVP * *pNVPair*)

This function parses an XML name-value pair from an attribute string.

Parameters

pctxt A pointer to a context structure. This provides a storage area for the function to store all working variables that must be maintained between function calls.

pAttrStr The name-value string to be parsed.

pNVPair A pointer to an XML name-value pair structure filled in by invoking this method.

Returns

Completion status of operation:

- 0 (0) = success,
- negative return value is error.

6.1.1.12 EXTERNXML int rtAsn1XmlpDecDynBitStr (OSCTXT * *pctxt*, ASN1DynBitStr * *pvalue*)

This function decodes a bit string value.

The string consists of a series of '1' and '0' characters. This is the dynamic version in which memory is allocated for the returned binary string variable. Bits are stored from MSB to LSB order.

Parameters

pctxt Pointer to context block structure.

pvalue Pointer to a variable to receive the decoded boolean value.

Returns

Completion status of operation:

- 0 = success,
- negative return value is error.

6.1.1.13 EXTERNXML int rtAsn1XmlpDecGenTime (OSCTXT * *pctxt*, const char ** *outdata*)

This function decodes the contents of an ASN.1 Generalized type.

Input is expected to be a string of OSUTF8CHAR characters returned by an XML pull parser. The encoding is expected to be in xsd:dateTime format (not in the XER format).

Parameters

pctxt Pointer to context block structure.

outdata Pointer to a pointer to receive decoded UTF-8 string. Memory is allocated for this string using the run-time memory manager.

Returns

Completion status of operation:

- 0 = success,
- negative return value is error.

6.1.1.14 EXTERNXML int rtAsn1XmlpDecObjId (OSCTXT * *pctxt*, ASN1OBJID * *pvalue*)

This function decodes the contents of an ASN.1 OBJECT IDENTIFIER type.

Input is expected to be a string of OSUTF8CHAR characters returned by an XML pull parser.

Parameters

pctxt Pointer to context block structure.

pvalue Pointer to ASN.1 object identifier value to receive decoded result.

Returns

Completion status of operation:

- 0 = success,
- negative return value is error.

6.1.1.15 EXTERNXML int rtAsn1XmlpDecReal (OSCTXT * *pctxt*, OSREAL * *pvalue*)

This function decodes the contents of an ASN.1 REAL type.

Input is expected to be returned by an XML pull parser.

This method recognizes the basic-XER encoding for a REAL, which consists of the elements <PLUS-INFINITY/>, <MINUS-INFINITY/>, and <NOT-A-NUMBER/>, and realnumber with an optional negative sign.

Parameters

pctxt Pointer to context block structure.

pvalue Pointer to OSREAL to value to receive decoded result.

Returns

Completion status of operation:

- 0 = success,
- negative return value is error.

6.1.1.16 EXTERNXML int rtAsn1XmlpDecRelOID (OSCTXT * *pctxt*, ASN1OBJID * *pvalue*)

This function decodes the contents of an ASN.1 RELATIVE-OID type.

Input is expected to be a string of OSUTF8CHAR characters returned by an XML pull parser.

Parameters

pctxt Pointer to context block structure.

pvalue Pointer to ASN.1 object identifier value to receive decoded result.

Returns

Completion status of operation:

- 0 = success,
- negative return value is error.

6.1.1.17 EXTERNXML int rtAsn1XmlpDecUnivStr (OSCTXT * *pctxt*, const OS32BITCHAR ** *ppdata*, OSUINT32 * *pchars*)

This function decodes the contents of an ASN.1 UNIVERSAL string type.

Input is expected to be a string of OSUTF8CHAR characters returned by an XML pull parser.

Parameters

pctxt Pointer to context block structure.

ppdata Pointer to 32-bit character string value to receive decoded result.

pchars Pointer to length value to receive decoded length in characters.

Returns

Completion status of operation:

- 0 = success,
- negative return value is error.

6.1.1.18 EXTERNXML int rtAsn1XmlpDecUTCTime (OSCTXT * *pctxt*, const char ** *outdata*)

This function decodes the contents of an ASN.1 UTCTime type.

Input is expected to be a string of OSUTF8CHAR characters returned by an XML pull parser. The encoding is expected to be in xsd:dateTime format (not in the XER format).

Parameters

pctxt Pointer to context block structure.

outdata Pointer to a pointer to receive decoded UTF-8 string. Memory is allocated for this string using the run-time memory manager.

Returns

Completion status of operation:

- 0 = success,
- negative return value is error.

6.1.1.19 EXTERNXML int rtXmlpDecListOfASN1DynBitStr (OSCTXT * *pctxt*, OSRTDList * *plist*)

This function decodes a list of space-separated bit strings and returns each bit string as a separate item on the given list.

The string consists of a series of '1' and '0' characters. Memory is allocated for the list nodes and token values using the rtx memory management functions. Bits are stored from MSB to LSB order.

Parameters

pctxt A pointer to a context structure. This provides a storage area for the function to store all working variables that must be maintained between function calls.

plist A pointer to a linked list structure to which the parsed bit string values will be added.

Returns

Completion status of operation:

- 0 = success,
- negative return value is error.

6.2 XML decode functions.

Functions

- EXTERNXML int [rtXmlDecBase64Binary](#) (OSRTMEMBUF *pMemBuf, const OSUTF8CHAR *inpdata, int length)
This function decodes the contents of a Base64-encoded binary data type into a memory buffer.
- EXTERNXML int [rtXmlDecBase64Str](#) (OSCTXT *pctxt, OSOCTET *pvalue, OSUINT32 *pnocts, OSINT32 bufsize)
This function decodes a contents of a Base64-encode binary string into a static memory structure.
- EXTERNXML int [rtXmlDecBase64StrValue](#) (OSCTXT *pctxt, OSOCTET *pvalue, OSUINT32 *pnocts, size_t bufSize, size_t srcDataLen)
This function decodes a contents of a Base64-encode binary string into the specified octet array.
- EXTERNXML int [rtXmlDecBigInt](#) (OSCTXT *pctxt, const OSUTF8CHAR **ppvalue)
This function will decode a variable of the XSD integer type.
- EXTERNXML int [rtXmlDecBool](#) (OSCTXT *pctxt, OSBOOL *pvalue)
This function decodes a variable of the boolean type.
- EXTERNXML int [rtXmlDecDate](#) (OSCTXT *pctxt, OSXSDDateTime *pvalue)
This function decodes a variable of the XSD 'date' type.
- EXTERNXML int [rtXmlDecTime](#) (OSCTXT *pctxt, OSXSDDateTime *pvalue)
This function decodes a variable of the XSD 'time' type.
- EXTERNXML int [rtXmlDecDateTime](#) (OSCTXT *pctxt, OSXSDDateTime *pvalue)
This function decodes a variable of the XSD 'dateTime' type.
- EXTERNXML int [rtXmlDecDecimal](#) (OSCTXT *pctxt, OSREAL *pvalue)
This function decodes the contents of a decimal data type.
- EXTERNXML int [rtXmlDecDouble](#) (OSCTXT *pctxt, OSREAL *pvalue)
This function decodes the contents of a float or double data type.
- EXTERNXML int [rtXmlDecDynBase64Str](#) (OSCTXT *pctxt, OSDynOctStr *pvalue)
This function decodes a contents of a Base64-encode binary string.
- EXTERNXML int [rtXmlDecDynHexStr](#) (OSCTXT *pctxt, OSDynOctStr *pvalue)
This function decodes a contents of a hexBinary string.
- EXTERNXML int [rtXmlDecEmptyElement](#) (OSCTXT *pctxt)
This function is used to enforce a requirement that an element be empty.
- EXTERNXML int [rtXmlDecUTF8Str](#) (OSCTXT *pctxt, OSUTF8CHAR *outdata, size_t max_len)
This function decodes the contents of a UTF-8 string data type.
- EXTERNXML int [rtXmlDecDynUTF8Str](#) (OSCTXT *pctxt, const OSUTF8CHAR **outdata)

This function decodes the contents of a UTF-8 string data type.

- EXTERNXML int [rtXmlDecHexBinary](#) (OSRTMEMBUF *pMemBuf, const OSUTF8CHAR *inpdata, int length)

This function decodes the contents of a hex-encoded binary data type into a memory buffer.

- EXTERNXML int [rtXmlDecHexStr](#) (OSCTXT *pctxt, OSOCTET *pvalue, OSUINT32 *pnocts, OSINT32 bufsize)

This function decodes the contents of a hexBinary string into a static memory structure.

- EXTERNXML int [rtXmlDecHexStrValue](#) (OSCTXT *pctxt, const OSUTF8CHAR *const inpdata, size_t nbytes, OSOCTET *pvalue, OSUINT32 *pnbits, OSINT32 bufsize)
- EXTERNXML int [rtXmlDecGYear](#) (OSCTXT *pctxt, OSXSDDateTime *pvalue)

This function decodes a variable of the XSD 'gYear' type.

- EXTERNXML int [rtXmlDecGYearMonth](#) (OSCTXT *pctxt, OSXSDDateTime *pvalue)

This function decodes a variable of the XSD 'gYearMonth' type.

- EXTERNXML int [rtXmlDecGMonth](#) (OSCTXT *pctxt, OSXSDDateTime *pvalue)

This function decodes a variable of the XSD 'gMonth' type.

- EXTERNXML int [rtXmlDecGMonthDay](#) (OSCTXT *pctxt, OSXSDDateTime *pvalue)

This function decodes a variable of the XSD 'gMonthDay' type.

- EXTERNXML int [rtXmlDecGDay](#) (OSCTXT *pctxt, OSXSDDateTime *pvalue)

This function decodes a variable of the XSD 'gDay' type.

- EXTERNXML int [rtXmlDecInt](#) (OSCTXT *pctxt, OSINT32 *pvalue)

This function decodes the contents of a 32-bit integer data type.

- EXTERNXML int [rtXmlDecInt8](#) (OSCTXT *pctxt, OSINT8 *pvalue)

This function decodes the contents of an 8-bit integer data type (i.e.

- EXTERNXML int [rtXmlDecInt16](#) (OSCTXT *pctxt, OSINT16 *pvalue)

This function decodes the contents of a 16-bit integer data type.

- EXTERNXML int [rtXmlDecInt64](#) (OSCTXT *pctxt, OSINT64 *pvalue)

This function decodes the contents of a 64-bit integer data type.

- EXTERNXML int [rtXmlDecUInt](#) (OSCTXT *pctxt, OSUINT32 *pvalue)

This function decodes the contents of an unsigned 32-bit integer data type.

- EXTERNXML int [rtXmlDecUInt8](#) (OSCTXT *pctxt, OSUINT8 *pvalue)

This function decodes the contents of an unsigned 8-bit integer data type (i.e.

- EXTERNXML int [rtXmlDecUInt16](#) (OSCTXT *pctxt, OSUINT16 *pvalue)

This function decodes the contents of an unsigned 16-bit integer data type.

- EXTERNXML int [rtXmlDecUInt64](#) (OSCTXT *pctxt, OSUINT64 *pvalue)

This function decodes the contents of an unsigned 64-bit integer data type.

- EXTERNXML int [rtXmlDecNSAttr](#) (OSCTXT *pctxt, const OSUTF8CHAR *attrName, const OSUTF8CHAR *attrValue, OSRTDList *pNSAttrs, const OSUTF8CHAR *nsTable[], OSUINT32 nsTableRowCount)
This function decodes an XML namespace attribute (xmlns).
- EXTERNXML const OSUTF8CHAR * [rtXmlDecQName](#) (OSCTXT *pctxt, const OSUTF8CHAR *qname, const OSUTF8CHAR **prefix)
This function decodes an XML qualified name string (QName) type.
- EXTERNXML int [rtXmlDecXSIAAttr](#) (OSCTXT *pctxt, const OSUTF8CHAR *attrName, const OSUTF8CHAR *attrValue)
This function decodes XML schema instance (XSI) attribute.
- EXTERNXML int [rtXmlDecXSIAAttrs](#) (OSCTXT *pctxt, const OSUTF8CHAR *const *attrs, const char *typeName)
This function decodes XML schema instance (XSI) attributes.
- EXTERNXML int [rtXmlDecXmlStr](#) (OSCTXT *pctxt, OSXMLSTRING *outdata)
This function decodes the contents of an XML string data type.
- EXTERNXML int [rtXmlParseElementName](#) (OSCTXT *pctxt, OSUTF8CHAR **ppName)
This function parses the initial tag from an XML message.
- EXTERNXML int [rtXmlParseElemQName](#) (OSCTXT *pctxt, OSXMLQName *pQName)
This function parses the initial tag from an XML message.

6.2.1 Function Documentation

6.2.1.1 EXTERNXML int [rtXmlDecBase64Binary](#) (OSRTMEMBUF *pMemBuf, const OSUTF8CHAR *inpdata, int length)

This function decodes the contents of a Base64-encoded binary data type into a memory buffer.

Input is expected to be a string of UTF-8 characters returned by an XML parser. The decoded data will be put into the memory buffer starting from the current position and bit offset. After all data is decoded the octet string may be fetched out.

This function is normally used in the 'characters' SAX handler.

Parameters

pMemBuf Memory buffer to which decoded binary data is to be appended.

inpdata Pointer to a source string to be decoded.

length Length of the source string (in characters).

Returns

Completion status of operation:

- 0 = success,
- negative return value is error.

6.2.1.2 EXTERNXML int rtXmlDecBase64Str (OSCTXT * *pctxt*, OSOCTET * *pvalue*, OSUINT32 * *pnocts*, OSINT32 *bufsize*)

This function decodes a contents of a Base64-encode binary string into a static memory structure.

The octet string must be Base64 encoded. This function call is used to decode a sized base64Binary string production.

Parameters

pctxt A pointer to a context structure. This provides a storage area for the function to store all working variables that must be maintained between function calls.

pvalue A pointer to a variable to receive the decoded bit string. This is assumed to be a static array large enough to hold the number of octets specified in the bufsize input parameter.

pnocts A pointer to an integer value to receive the decoded number of octets.

bufsize The size (in octets) of the sized octet string. An error will occur if the number of octets in the decoded string is larger than this value.

Returns

Completion status of operation:

- 0 = success,
- negative return value is error.

6.2.1.3 EXTERNXML int rtXmlDecBase64StrValue (OSCTXT * *pctxt*, OSOCTET * *pvalue*, OSUINT32 * *pnocts*, size_t *bufSize*, size_t *srcDataLen*)

This function decodes a contents of a Base64-encode binary string into the specified octet array.

The octet string must be Base64 encoded. This function call is used internally to decode both sized and non-sized base64binary string production.

Parameters

pctxt A pointer to a context structure. This provides a storage area for the function to store all working variables that must be maintained between function calls.

pvalue A pointer to a variable to receive the decoded bit string. This is assumed to be a static array large enough to hold the number of octets specified in the bufsize input parameter.

pnocts A pointer to an integer value to receive the decoded number of octets.

bufSize A maximum size (in octets) of *pvalue* buffer. An error will occur if the number of octets in the decoded string is larger than this value.

srcDataLen An actual source data length (in octets) without whitespaces.

Returns

Completion status of operation:

- 0 = success,
- negative return value is error.

6.2.1.4 EXTERNXML int rtXmlDecBigInt (OSCTXT * *pctxt*, const OSUTF8CHAR ** *ppvalue*)

This function will decode a variable of the XSD integer type.

In this case, the integer is assumed to be of a larger size than can fit in a C or C++ long type (normally 32 or 64 bits). For example, parameters used to calculate security values are typically larger than these sizes.

These variables are stored in character string constant variables. The radix should be 10. If it is necessary to convert to another radix, then use `rtxBigIntSetStr` or `rtxBigIntToString` functions.

Parameters

pctxt Pointer to context block structure.

ppvalue Pointer to a pointer to receive decoded UTF-8 string. Dynamic memory is allocated for the variable using the `rtMemAlloc` function. The decoded variable is represented as a string starting with appropriate prefix.

Returns

Completion status of operation:

- 0 = success,
- negative return value is error.

6.2.1.5 EXTERNXML int rtXmlDecBool (OSCTXT * *pctxt*, OSBOOL * *pvalue*)

This function decodes a variable of the boolean type.

Parameters

pctxt Pointer to context block structure.

pvalue Pointer to a variable to receive the decoded boolean value.

Returns

Completion status of operation:

- 0 = success,
- negative return value is error.

6.2.1.6 EXTERNXML int rtXmlDecDate (OSCTXT * *pctxt*, OSXSDDateTime * *pvalue*)

This function decodes a variable of the XSD 'date' type.

Input is expected to be a string of characters returned by an XML parser. The string should have CCYY-MM-DD format.

Parameters

pctxt Pointer to context block structure.

pvalue OSXSDDateTime type pointer points to a OSXSDDateTime value to receive decoded result.

Returns

Completion status of operation:

- 0 = success,
- negative return value is error.

6.2.1.7 EXTERNXML int rtXmlDecDateTime (OSCTXT * *pctxt*, OSXSDDateTime * *pvalue*)

This function decodes a variable of the XSD 'dateTime' type.

Input is expected to be a string of characters returned by an XML parser.

Parameters

pctxt Pointer to context block structure.

pvalue OSXSDDateTime type pointer points to a OSXSDDateTime value to receive decoded result.

Returns

Completion status of operation:

- 0 = success,
- negative return value is error.

6.2.1.8 EXTERNXML int rtXmlDecDecimal (OSCTXT * *pctxt*, OSREAL * *pvalue*)

This function decodes the contents of a decimal data type.

Input is expected to be a string of characters returned by an XML parser.

Parameters

pctxt Pointer to context block structure.

pvalue Pointer to 64-bit double value to receive decoded result.

Returns

Completion status of operation:

- 0 = success,
- negative return value is error.

6.2.1.9 EXTERNXML int rtXmlDecDouble (OSCTXT * *pctxt*, OSREAL * *pvalue*)

This function decodes the contents of a float or double data type.

Input is expected to be a string of characters returned by an XML parser.

Parameters

pctxt Pointer to context block structure.

pvalue Pointer to 64-bit double value to receive decoded result.

Returns

Completion status of operation:

- 0 = success,
- negative return value is error.

6.2.1.10 EXTERNXML int rtXmlDecDynBase64Str (OSCTXT * *pctxt*, OSDynOctStr * *pvalue*)

This function decodes a contents of a Base64-encode binary string.

The octet string must be Base64 encoded. This function will allocate dynamic memory to store the decoded result.

Parameters

pctxt A pointer to a context structure. This provides a storage area for the function to store all working variables that must be maintained between function calls.

pvalue A pointer to a dynamic octet string structure to receive the decoded octet string. Dynamic memory is allocated to hold the string using the `rtxMemAlloc` function.

Returns

Completion status of operation:

- 0 = success,
- negative return value is error.

6.2.1.11 EXTERNXML int rtXmlDecDynHexStr (OSCTXT * *pctxt*, OSDynOctStr * *pvalue*)

This function decodes a contents of a hexBinary string.

This function will allocate dynamic memory to store the decoded result.

Parameters

pctxt A pointer to a context structure. This provides a storage area for the function to store all working variables that must be maintained between function calls.

pvalue A pointer to a dynamic octet string structure to receive the decoded octet string. Dynamic memory is allocated to hold the string using the `rtxMemAlloc` function.

Returns

Completion status of operation:

- 0 = success,
- negative return value is error.

6.2.1.12 EXTERNXML int rtXmlDecDynUTF8Str (OSCTXT * *pctxt*, const OSUTF8CHAR ** *outdata*)

This function decodes the contents of a UTF-8 string data type.

Input is expected to be a string of UTF-8 or Unicode characters returned by an XML parser.

Parameters

pctxt Pointer to context block structure.

outdata Pointer to a pointer to receive decoded UTF-8 string. Memory is allocated for this string using the run-time memory manager.

Returns

Completion status of operation:

- 0 = success,
- negative return value is error.

6.2.1.13 EXTERNXML int rtXmlDecEmptyElement (OSCTXT * *pctxt*)

This function is used to enforce a requirement that an element be empty.

An error is returned in the current element has any element or character children. The last event must be the start tag.

Parameters

pctxt A pointer to a context structure. This provides a storage area for the function to store all working variables that must be maintained between function calls.

Returns

Completion status of operation:

- 0 = success,
- negative return value is error.

6.2.1.14 EXTERNXML int rtXmlDecGDay (OSCTXT * *pctxt*, OSXSDDateTime * *pvalue*)

This function decodes a variable of the XSD 'gDay' type.

Input is expected to be a string of characters returned by an XML parser. The string should have ---DD[+hh:mm|Z] format.

Parameters

pctxt Pointer to context block structure.

pvalue OSXSDDateTime type pointer points to a OSXSDDateTime value to receive decoded result.

Returns

Completion status of operation:

- 0 = success,
- negative return value is error.

6.2.1.15 EXTERNXML int rtXmlDecGMonth (OSCTXT * *pctxt*, OSXSDDateTime * *pvalue*)

This function decodes a variable of the XSD 'gMonth' type.

Input is expected to be a string of characters returned by an XML parser. The string should have --MM[+hh:mm|Z] format.

Parameters

pctxt Pointer to context block structure.

pvalue OSXSDDateTime type pointer points to a OSXSDDateTime value to receive decoded result.

Returns

Completion status of operation:

- 0 = success,
- negative return value is error.

6.2.1.16 EXTERNXML int rtXmlDecGMonthDay (OSCTXT * *pctxt*, OSXSDDateTime * *pvalue*)

This function decodes a variable of the XSD 'gMonthDay' type.

Input is expected to be a string of characters returned by an XML parser. The string should have --MM-DD[-+hh:mm|Z] format.

Parameters

pctxt Pointer to context block structure.

pvalue OSXSDDateTime type pointer points to a OSXSDDateTime value to receive decoded result.

Returns

Completion status of operation:

- 0 = success,
- negative return value is error.

6.2.1.17 EXTERNXML int rtXmlDecGYear (OSCTXT * *pctxt*, OSXSDDateTime * *pvalue*)

This function decodes a variable of the XSD 'gYear' type.

Input is expected to be a string of characters returned by an XML parser. The string should have CCYY[-+hh:mm|Z] format.

Parameters

pctxt Pointer to context block structure.

pvalue OSXSDDateTime type pointer points to a OSXSDDateTime value to receive decoded result.

Returns

Completion status of operation:

- 0 = success,
- negative return value is error.

6.2.1.18 EXTERNXML int rtXmlDecGYearMonth (OSCTXT * *pctxt*, OSXSDDateTime * *pvalue*)

This function decodes a variable of the XSD 'gYearMonth' type.

Input is expected to be a string of characters returned by an XML parser. The string should have CCYY-MM[-+hh:mm|Z] format.

Parameters

pctxt Pointer to context block structure.

pvalue OSXSDDateTime type pointer points to a OSXSDDateTime value to receive decoded result.

Returns

Completion status of operation:

- 0 = success,
- negative return value is error.

6.2.1.19 EXTERNXML int rtXmlDecHexBinary (OSRTMEMBUF * *pMemBuf*, const OSUTF8CHAR * *inpdata*, int *length*)

This function decodes the contents of a hex-encoded binary data type into a memory buffer.

Input is expected to be a string of UTF-8 characters returned by an XML parser. The decoded data will be put into the given memory buffer starting from the current position and bit offset. After all data is decoded the octet string may be fetched out.

This function is normally used in the 'characters' SAX handler.

Parameters

pMemBuf Pointer to memory buffer onto which the decoded binary data will be appended.

inpdata Pointer to a source string to be decoded.

length Length of the source string (in characters).

Returns

Completion status of operation:

- 0 = success,
- negative return value is error.

6.2.1.20 EXTERNXML int rtXmlDecHexStr (OSCTXT * *pctxt*, OSOCTET * *pvalue*, OSUINT32 * *pnocts*, OSINT32 *bufsize*)

This function decodes the contents of a hexBinary string into a static memory structure.

Parameters

pctxt A pointer to a context structure. This provides a storage area for the function to store all working variables that must be maintained between function calls.

pvalue A pointer to a variable to receive the decoded bit string. This is assumed to be a static array large enough to hold the number of octets specified in the *bufsize* input parameter.

pnocts A pointer to an integer value to receive the decoded number of octets.

bufsize The size (in octets) of the sized octet string. An error will occur if the number of octets in the decoded string is larger than this value.

Returns

Completion status of operation:

- 0 = success,
- negative return value is error.

6.2.1.21 EXTERNXML int rtXmlDecInt (OSCTXT * *pctxt*, OSINT32 * *pvalue*)

This function decodes the contents of a 32-bit integer data type.

Input is expected to be a string of OSUTF8CHAR characters returned by an XML parser.

Parameters

pctxt Pointer to context block structure.

pvalue Pointer to 32-bit integer value to receive decoded result.

Returns

Completion status of operation:

- 0 = success,
- negative return value is error.

6.2.1.22 EXTERNXML int rtXmlDecInt16 (OSCTXT * *pctxt*, OSINT16 * *pvalue*)

This function decodes the contents of a 16-bit integer data type.

Input is expected to be a string of OSUTF8CHAR characters returned by an XML parser.

Parameters

pctxt Pointer to context block structure.

pvalue Pointer to 16-bit integer value to receive decoded result.

Returns

Completion status of operation:

- 0 = success,
- negative return value is error.

6.2.1.23 EXTERNXML int rtXmlDecInt64 (OSCTXT * *pctxt*, OSINT64 * *pvalue*)

This function decodes the contents of a 64-bit integer data type.

Input is expected to be a string of OSUTF8CHAR characters returned by an XML parser.

Parameters

pctxt Pointer to context block structure.

pvalue Pointer to 64-bit integer value to receive decoded result.

Returns

Completion status of operation:

- 0 = success,
- negative return value is error.

6.2.1.24 EXTERNXML int rtXmlDecInt8 (OSCTXT * *pctxt*, OSINT8 * *pvalue*)

This function decodes the contents of an 8-bit integer data type (i.e.

a signed byte type in the range of -128 to 127). Input is expected to be a string of OSUTF8CHAR characters returned by an XML parser.

Parameters

pctxt Pointer to context block structure.

pvalue Pointer to 8-bit integer value to receive decoded result.

Returns

Completion status of operation:

- 0 = success,
- negative return value is error.

6.2.1.25 EXTERNXML int rtXmlDecNSAttr (OSCTXT * *pctxt*, const OSUTF8CHAR * *attrName*, const OSUTF8CHAR * *attrValue*, OSRTDList * *pNSAttrs*, const OSUTF8CHAR * *nsTable*[], OSUINT32 *nsTableRowCount*)

This function decodes an XML namespace attribute (xmlns).

It is assumed that the given attribute name is either 'xmlns' or 'xmlns:prefix'. The XML namespace prefix and URI are added to the given attribute list structure. The parsed namespace is also added to the namespace stack in the given context.

Parameters

pctxt Pointer to context structure.

attrName Name of the XML namespace attribute. This is assumed to contain either 'xmlns' (a default namespace declaration) or 'xmlns:prefix' where prefix is a namespace prefix.

attrValue XML namespace attribute value (a URI).

pNSAttrs List to receive parsed namespace values.

nsTable Namespace URI's parsed from schema.

nsTableRowCount Number of rows (URI's) in namespace table.

Returns

Zero if success or negative error code.

6.2.1.26 EXTERNXML const OSUTF8CHAR* rtXmlDecQName (OSCTXT * *pctxt*, const OSUTF8CHAR * *qname*, const OSUTF8CHAR ** *prefix*)

This function decodes an XML qualified name string (QName) type.

This is a type that contains an optional namespace prefix followed by a colon and the local part of the name:

[NS 5] QName ::= (Prefix ':')? LocalPart

[NS 6] Prefix ::= NCName

[NS 7] LocalPart ::= NCName

Parameters

pctxt Pointer to context block structure.

qname String containing XML QName to be decoded.

prefix Pointer to string pointer to receive decoded prefix. This is optional. If NULL, the prefix will not be returned. If not-NULL, the prefix will be returned in memory allocated using `rtxMemAlloc` which must be freed using one of the `rtxMemFree` functions.

Returns

Pointer to local part of string. This is pointer to a location within the given string (i.e. a pointer to the character after the ':' or to the beginning of the string if it contains no colon). This pointer does not need to be freed.

6.2.1.27 EXTERNXML int rtXmlDecTime (OSCTXT * *pctxt*, OSXSDDateTime * *pvalue*)

This function decodes a variable of the XSD 'time' type.

Input is expected to be a string of characters returned by an XML parser. The string should have one of following formats:

(1) hh-mm-ss.ss used if *tz_flag* = false (2) hh-mm-ss.ssZ used if *tz_flag* = false and *tzo* = 0 (3) hh-mm-ss.ss+HH:MM if *tz_flag* = false and *tzo* > 0 (4) hh-mm-ss.ss-HH:MM-HH:MM if *tz_flag* = false and *tzo* < 0

Parameters

pctxt Pointer to context block structure.

pvalue OSXSDDateTime type pointer points to a OSXSDDateTime value to receive decoded result.

Returns

Completion status of operation:

- 0 = success,
- negative return value is error.

6.2.1.28 EXTERNXML int rtXmlDecUInt (OSCTXT * *pctxt*, OSUINT32 * *pvalue*)

This function decodes the contents of an unsigned 32-bit integer data type.

Input is expected to be a string of OSUTF8CHAR characters returned by an XML parser.

Parameters

pctxt Pointer to context block structure.

pvalue Pointer to unsigned 32-bit integer value to receive decoded result.

Returns

Completion status of operation:

- 0 = success,
- negative return value is error.

6.2.1.29 EXTERNXML int rtXmlDecUInt16 (OSCTXT * *pctxt*, OSUINT16 * *pvalue*)

This function decodes the contents of an unsigned 16-bit integer data type.

Input is expected to be a string of OSUTF8CHAR characters returned by an XML parser.

Parameters

pctxt Pointer to context block structure.

pvalue Pointer to unsigned 16-bit integer value to receive decoded result.

Returns

Completion status of operation:

- 0 = success,
- negative return value is error.

6.2.1.30 EXTERNXML int rtXmlDecUInt64 (OSCTXT * *pctxt*, OSUINT64 * *pvalue*)

This function decodes the contents of an unsigned 64-bit integer data type.

Input is expected to be a string of OSUTF8CHAR characters returned by an XML parser.

Parameters

pctxt Pointer to context block structure.

pvalue Pointer to unsigned 64-bit integer value to receive decoded result.

Returns

Completion status of operation:

- 0 = success,
- negative return value is error.

6.2.1.31 EXTERNXML int rtXmlDecUInt8 (OSCTXT * *pctxt*, OSUINT8 * *pvalue*)

This function decodes the contents of an unsigned 8-bit integer data type (i.e.

a signed byte type in the range of 0 to 255). Input is expected to be a string of OSUTF8CHAR characters returned by an XML parser.

Parameters

pctxt Pointer to context block structure.

pvalue Pointer to unsigned 8-bit integer value to receive decoded result.

Returns

Completion status of operation:

- 0 = success,
- negative return value is error.

6.2.1.32 EXTERNXML int rtXmlDecUTF8Str (OSCTXT * *pctxt*, OSUTF8CHAR * *outdata*, size_t *max_len*)

This function decodes the contents of a UTF-8 string data type.

Input is expected to be a string of UTF-8 or Unicode characters returned by an XML parser.

Parameters

pctxt Pointer to context block structure.

outdata Pointer to a block of memory to receive decoded UTF8 string.

max_len Size of memory block.

Returns

Completion status of operation:

- 0 = success,
- negative return value is error.

6.2.1.33 EXTERNXML int rtXmlDecXmlStr (OSCTXT * *pctxt*, OSXMLSTRING * *outdata*)

This function decodes the contents of an XML string data type.

This type contains a pointer to a UTF-8 character string plus flags that can be set to alter the encoding of the string (for example, the cdata flag allows the string to be encoded in a CDATA section). Input is expected to be a string of UTF-8 characters returned by an XML parser.

Parameters

pctxt Pointer to context block structure.

outdata Pointer to an XML string structure to receive the decoded string. Memory is allocated for the string using the run-time memory manager.

Returns

Completion status of operation:

- 0 = success,
- negative return value is error.

6.2.1.34 EXTERNXML int rtXmlDecXSIAttr (OSCTXT * *pctxt*, const OSUTF8CHAR * *attrName*, const OSUTF8CHAR * *attrValue*)

This function decodes XML schema instance (XSI) attribute.

These attributes include the XSI namespace declaration, the XSD schema location attribute, and the XSD no namespace schema location attribute.

Parameters

pctxt Pointer to context block structure.

attrName Attribute's name to be decoded

attrValue Attribute's value to be decoded

Returns

Completion status of operation:

- 0 = success,
- negative return value is error.

6.2.1.35 EXTERNXML int rtXmlDecXSIAttrs (OSCTXT * *pctxt*, const OSUTF8CHAR *const * *attrs*, const char * *typeName*)

This function decodes XML schema instance (XSI) attributes.

These attributes include the XSI namespace declaration, the XSD schema location attribute, and the XSD no namespace schema location attribute.

Parameters

pctxt Pointer to context block structure.

attrs Attributes-values array [attr, value]. Should be null-terminated.

typeName Name of parent type to add in error log, if would be necessary.

Returns

Completion status of operation:

- 0 = success,
- negative return value is error.

6.2.1.36 EXTERNXML int rtXmlParseElementName (OSCTXT * *pctxt*, OSUTF8CHAR ** *ppName*)

This function parses the initial tag from an XML message.

If the tag is a QName, only the local part of the name is returned.

Parameters

pctxt Pointer to OSCTXT structure

ppName Pointer to a pointer to receive decoded UTF-8 string. Dynamic memory is allocated for the variable using the `rtxMemAlloc` function.

Returns

Completion status of operation:

- 0 = success,
- negative return value is error.

6.2.1.37 EXTERNXML int rtXmlParseElemQName (OSCTXT * *pctxt*, OSXMLQName * *pQName*)

This function parses the initial tag from an XML message.

Parameters

pctxt Pointer to OSCTXT structure

pQName Pointer to a QName structure to receive parsed name prefix and local name. Dynamic memory is allocated for both name parts using the `rtxMemAlloc` function.

Returns

Completion status of operation:

- 0 = success,
- negative return value is error.

6.3 XML encode functions.

Defines

- #define **rtxPrintNSAttrs**(name, data) rtxPrintNSAttrs(name,&data)
- #define **rtXmlFinalizeMemBuf**(pMemBuf)
- #define **rtXmlGetEncBufPtr**(pctx) (pctx)->buffer.data
This macro returns the start address of the encoded XML message.
- #define **rtXmlGetEncBufLen**(pctx) (pctx)->buffer.byteIndex
This macro returns the length of the encoded XML message.

Functions

- EXTERNXML int **rtXmlEncAny** (OSCTXT *pctx, OSXMLSTRING *pvalue, const OSUTF8CHAR *elemName, OSXMLNamespace *pNS)
This function encodes a variable of the XSD any type.
- EXTERNXML int **rtXmlEncAnyStr** (OSCTXT *pctx, const OSUTF8CHAR *pvalue, const OSUTF8CHAR *elemName, OSXMLNamespace *pNS)
- EXTERNXML int **rtXmlEncAnyTypeValue** (OSCTXT *pctx, const OSUTF8CHAR *pvalue)
This function encodes a variable of the XSD anyType type.
- EXTERNXML int **rtXmlEncAnyAttr** (OSCTXT *pctx, OSRTDList *pAnyAttrList)
This function encodes a list of OSAnyAttr attributes in which the name and value are given as a UTF-8 string.
- EXTERNXML int **rtXmlEncBase64Binary** (OSCTXT *pctx, OSUINT32 noctx, const OSOCTET *value, const OSUTF8CHAR *elemName, OSXMLNamespace *pNS)
This function encodes a variable of the XSD base64Binary type.
- EXTERNXML int **rtXmlEncBase64BinaryAttr** (OSCTXT *pctx, OSUINT32 noctx, const OSOCTET *value, const OSUTF8CHAR *attrName, size_t attrNameLen)
This function encodes a variable of the XSD base64Binary type as an attribute.
- EXTERNXML int **rtXmlEncBase64StrValue** (OSCTXT *pctx, OSUINT32 noctx, const OSOCTET *value)
This function encodes a variable of the XSD base64Binary type.
- EXTERNXML int **rtXmlEncBigInt** (OSCTXT *pctx, const OSUTF8CHAR *value, const OSUTF8CHAR *elemName, OSXMLNamespace *pNS)
This function encodes a variable of the XSD integer type.
- EXTERNXML int **rtXmlEncBigIntAttr** (OSCTXT *pctx, const OSUTF8CHAR *value, const OSUTF8CHAR *attrName, size_t attrNameLen)
This function encodes an XSD integer attribute value.
- EXTERNXML int **rtXmlEncBigIntValue** (OSCTXT *pctx, const OSUTF8CHAR *value)
This function encodes an XSD integer attribute value.

- EXTERNXML int [rtXmlEncBitString](#) (OSCTXT *pctx, OSUINT32 nbits, const OSOCTET *value, const OSUTF8CHAR *elemName, OSXMLNamespace *pNS)
This function encodes a variable of the ASN.1 BIT STRING type.
- EXTERNXML int [rtXmlEncBinStrValue](#) (OSCTXT *pctx, OSUINT32 nbits, const OSOCTET *data)
This function encodes a binary string value as a sequence of '1's and '0's.
- EXTERNXML int [rtXmlEncBool](#) (OSCTXT *pctx, OSBOOL value, const OSUTF8CHAR *elemName, OSXMLNamespace *pNS)
This function encodes a variable of the XSD boolean type.
- EXTERNXML int [rtXmlEncBoolValue](#) (OSCTXT *pctx, OSBOOL value)
This function encodes a variable of the XSD boolean type.
- EXTERNXML int [rtXmlEncBoolAttr](#) (OSCTXT *pctx, OSBOOL value, const OSUTF8CHAR *attrName, size_t attrNameLen)
This function encodes an XSD boolean attribute value.
- EXTERNXML int [rtXmlEncComment](#) (OSCTXT *pctx, const OSUTF8CHAR *comment)
This function encodes an XML comment.
- EXTERNXML int [rtXmlEncDate](#) (OSCTXT *pctx, const OSXSDDateTime *pvalue, const OSUTF8CHAR *elemName, OSXMLNamespace *pNS)
This function encodes a variable of the XSD 'date' type as a string.
- EXTERNXML int [rtXmlEncDateValue](#) (OSCTXT *pctx, const OSXSDDateTime *pvalue)
This function encodes a variable of the XSD 'date' type as a string.
- EXTERNXML int [rtXmlEncTime](#) (OSCTXT *pctx, const OSXSDDateTime *pvalue, const OSUTF8CHAR *elemName, OSXMLNamespace *pNS)
This function encodes a variable of the XSD 'time' type as a string.
- EXTERNXML int [rtXmlEncTimeValue](#) (OSCTXT *pctx, const OSXSDDateTime *pvalue)
This function encodes a variable of the XSD 'time' type as a string.
- EXTERNXML int [rtXmlEncDateTime](#) (OSCTXT *pctx, const OSXSDDateTime *pvalue, const OSUTF8CHAR *elemName, OSXMLNamespace *pNS)
This function encodes a numeric date/time value into an XML string representation.
- EXTERNXML int [rtXmlEncDateTimeValue](#) (OSCTXT *pctx, const OSXSDDateTime *pvalue)
This function encodes a numeric date/time value into an XML string representation.
- EXTERNXML int [rtXmlEncDecimal](#) (OSCTXT *pctx, OSREAL value, const OSUTF8CHAR *elemName, OSXMLNamespace *pNS, const [OSDecimalFmt](#) *pFmtSpec)
This function encodes a variable of the XSD decimal type.
- EXTERNXML int [rtXmlEncDecimalAttr](#) (OSCTXT *pctx, OSREAL value, const OSUTF8CHAR *attrName, size_t attrNameLen, const [OSDecimalFmt](#) *pFmtSpec)
This function encodes a variable of the XSD decimal type as an attribute.

- EXTERNXML int [rtXmlEncDecimalValue](#) (OSCTXT *pctx, OSREAL value, const [OSDecimalFmt](#) *pFmtSpec, char *pDestBuf, size_t destBufSize)
This function encodes a value of the XSD decimal type.
- EXTERNXML int [rtXmlEncDouble](#) (OSCTXT *pctx, OSREAL value, const OSUTF8CHAR *elemName, OSXMLNamespace *pNS, const [OSDoubleFmt](#) *pFmtSpec)
This function encodes a variable of the XSD double type.
- EXTERNXML int [rtXmlEncDoubleAttr](#) (OSCTXT *pctx, OSREAL value, const OSUTF8CHAR *attrName, size_t attrNameLen, const [OSDoubleFmt](#) *pFmtSpec)
This function encodes a variable of the XSD double type as an attribute.
- EXTERNXML int [rtXmlEncDoubleNormalValue](#) (OSCTXT *pctx, OSREAL value, const [OSDoubleFmt](#) *pFmtSpec, int defaultPrecision)
This function encodes a normal (not +/-INF or NaN) value of the XSD double or float type.
- EXTERNXML int [rtXmlEncDoubleValue](#) (OSCTXT *pctx, OSREAL value, const [OSDoubleFmt](#) *pFmtSpec, int defaultPrecision)
This function encodes a value of the XSD double or float type.
- EXTERNXML int [rtXmlEncEmptyElement](#) (OSCTXT *pctx, const OSUTF8CHAR *elemName, OSXMLNamespace *pNS, OSRTDList *pNSAttrs, OSBOOL terminate)
This function encodes an empty element tag value (<elemName/>).
- EXTERNXML int [rtXmlEncEndDocument](#) (OSCTXT *pctx)
This function adds trailer information and a null terminator at the end of the XML document being encoded.
- EXTERNXML int [rtXmlEncEndElement](#) (OSCTXT *pctx, const OSUTF8CHAR *elemName, OSXMLNamespace *pNS)
This function encodes an end element tag value (</elemName>).
- EXTERNXML int [rtXmlEncEndSoapEnv](#) (OSCTXT *pctx)
This function encodes a SOAP envelope end element tag (<SOAP-ENV:Envelope/>).
- EXTERNXML int [rtXmlEncEndSoapElements](#) (OSCTXT *pctx, OSXMLSOAPMsgType msgtype)
This function encodes SOAP end element tags.
- EXTERNXML int [rtXmlEncFloat](#) (OSCTXT *pctx, OSREAL value, const OSUTF8CHAR *elemName, OSXMLNamespace *pNS, const [OSDoubleFmt](#) *pFmtSpec)
This function encodes a variable of the XSD float type.
- EXTERNXML int [rtXmlEncFloatAttr](#) (OSCTXT *pctx, OSREAL value, const OSUTF8CHAR *attrName, size_t attrNameLen, const [OSDoubleFmt](#) *pFmtSpec)
This function encodes a variable of the XSD float type as an attribute.
- EXTERNXML int [rtXmlEncGYear](#) (OSCTXT *pctx, const OSXSDDateTime *pvalue, const OSUTF8CHAR *elemName, OSXMLNamespace *pNS)
This function encodes a numeric gYear element into an XML string representation.
- EXTERNXML int [rtXmlEncGYearMonth](#) (OSCTXT *pctx, const OSXSDDateTime *pvalue, const OSUTF8CHAR *elemName, OSXMLNamespace *pNS)

This function encodes a numeric gYearMonth element into an XML string representation.

- EXTERNXML int [rtXmlEncGMonth](#) (OSCTXT *pctxt, const OSXSDDateTime *pvalue, const OSUTF8CHAR *elemName, OSXMLNamespace *pNS)

This function encodes a numeric gMonth element into an XML string representation.

- EXTERNXML int [rtXmlEncGMonthDay](#) (OSCTXT *pctxt, const OSXSDDateTime *pvalue, const OSUTF8CHAR *elemName, OSXMLNamespace *pNS)

This function encodes a numeric gMonthDay element into an XML string representation.

- EXTERNXML int [rtXmlEncGDay](#) (OSCTXT *pctxt, const OSXSDDateTime *pvalue, const OSUTF8CHAR *elemName, OSXMLNamespace *pNS)

This function encodes a numeric gDay element into an XML string representation.

- EXTERNXML int [rtXmlEncGYearValue](#) (OSCTXT *pctxt, const OSXSDDateTime *pvalue)

This function encodes a numeric gYear value into an XML string representation.

- EXTERNXML int [rtXmlEncGYearMonthValue](#) (OSCTXT *pctxt, const OSXSDDateTime *pvalue)

This function encodes a numeric gYearMonth value into an XML string representation.

- EXTERNXML int [rtXmlEncGMonthValue](#) (OSCTXT *pctxt, const OSXSDDateTime *pvalue)

This function encodes a numeric gMonth value into an XML string representation.

- EXTERNXML int [rtXmlEncGMonthDayValue](#) (OSCTXT *pctxt, const OSXSDDateTime *pvalue)

This function encodes a numeric gMonthDay value into an XML string representation.

- EXTERNXML int [rtXmlEncGDayValue](#) (OSCTXT *pctxt, const OSXSDDateTime *pvalue)

This function encodes a numeric gDay value into an XML string representation.

- EXTERNXML int [rtXmlEncHexBinary](#) (OSCTXT *pctxt, OSUINT32 nocts, const OSOCTET *value, const OSUTF8CHAR *elemName, OSXMLNamespace *pNS)

This function encodes a variable of the XSD hexBinary type.

- EXTERNXML int [rtXmlEncHexBinaryAttr](#) (OSCTXT *pctxt, OSUINT32 nocts, const OSOCTET *value, const OSUTF8CHAR *attrName, size_t attrNameLen)

This function encodes a variable of the XSD hexBinary type as an attribute.

- EXTERNXML int [rtXmlEncHexStrValue](#) (OSCTXT *pctxt, OSUINT32 nocts, const OSOCTET *data)

This function encodes a variable of the XSD hexBinary type.

- EXTERNXML int [rtXmlEncIndent](#) (OSCTXT *pctxt)

This function adds indentation whitespace to the output stream.

- EXTERNXML int [rtXmlEncInt](#) (OSCTXT *pctxt, OSINT32 value, const OSUTF8CHAR *elemName, OSXMLNamespace *pNS)

This function encodes a variable of the XSD integer type.

- EXTERNXML int [rtXmlEncIntValue](#) (OSCTXT *pctxt, OSINT32 value)

This function encodes a variable of the XSD integer type.

- EXTERNXML int [rtXmlEncIntAttr](#) (OSCTXT *pctxt, OSINT32 value, const OSUTF8CHAR *attrName, size_t attrNameLen)
This function encodes a variable of the XSD integer type as an attribute (name="value").
- EXTERNXML int [rtXmlEncIntPattern](#) (OSCTXT *pctxt, OSINT32 value, const OSUTF8CHAR *elemName, OSXMLNamespace *pNS, const OSUTF8CHAR *pattern)
This function encodes a variable of the XSD integer type using a pattern to specify the format of the integer value.
- EXTERNXML int [rtXmlEncIntPatternValue](#) (OSCTXT *pctxt, OSINT32 value, const OSUTF8CHAR *pattern)
- EXTERNXML int [rtXmlEncUIntPattern](#) (OSCTXT *pctxt, OSUINT32 value, const OSUTF8CHAR *elemName, OSXMLNamespace *pNS, const OSUTF8CHAR *pattern)
- EXTERNXML int [rtXmlEncUIntPatternValue](#) (OSCTXT *pctxt, OSUINT32 value, const OSUTF8CHAR *pattern)
- EXTERNXML int [rtXmlEncInt64](#) (OSCTXT *pctxt, OSINT64 value, const OSUTF8CHAR *elemName, OSXMLNamespace *pNS)
This function encodes a variable of the XSD integer type.
- EXTERNXML int [rtXmlEncInt64Pattern](#) (OSCTXT *pctxt, OSINT64 value, const OSUTF8CHAR *elemName, OSXMLNamespace *pNS, const OSUTF8CHAR *pattern)
- EXTERNXML int [rtXmlEncInt64Value](#) (OSCTXT *pctxt, OSINT64 value)
This function encodes a variable of the XSD integer type.
- EXTERNXML int [rtXmlEncInt64PatternValue](#) (OSCTXT *pctxt, OSINT64 value, const OSUTF8CHAR *pattern)
- EXTERNXML int [rtXmlEncInt64Attr](#) (OSCTXT *pctxt, OSINT64 value, const OSUTF8CHAR *attrName, size_t attrNameLen)
This function encodes a variable of the XSD integer type as an attribute (name="value").
- EXTERNXML int [rtXmlEncNamedBits](#) (OSCTXT *pctxt, const OSBitMapItem *pBitMap, OSUINT32 nbits, const OSOCTET *pvalue, const OSUTF8CHAR *elemName, OSXMLNamespace *pNS)
This function encodes a variable of the ASN.1 BIT STRING type.
- EXTERNXML int [rtXmlEncNamedBitsValue](#) (OSCTXT *pctxt, const OSBitMapItem *pBitMap, OSUINT32 nbits, const OSOCTET *pvalue)
- EXTERNXML int [rtXmlEncNSAttrs](#) (OSCTXT *pctxt, OSRTDList *pNSAttrs)
This function encodes namespace declaration attributes at the beginning of an XML document.
- EXTERNXML int [rtXmlPrintNSAttrs](#) (const char *name, const OSRTDList *data)
This function prints a list of namespace attributes.
- EXTERNXML int [rtXmlEncReal10](#) (OSCTXT *pctxt, const OSUTF8CHAR *pvalue, const OSUTF8CHAR *elemName, OSXMLNamespace *pNS)
This function encodes a variable of the ASN.1 REAL base 10 type.
- EXTERNXML int [rtXmlEncSoapArrayTypeAttr](#) (OSCTXT *pctxt, const OSUTF8CHAR *name, const OSUTF8CHAR *value, size_t itemCount)
This function encodes the special SOAP encoding attrType attribute which specifies the number and type of elements in a SOAP array.
- EXTERNXML int [rtXmlEncSoapArrayTypeAttr2](#) (OSCTXT *pctxt, const OSUTF8CHAR *name, size_t nameLen, const OSUTF8CHAR *value, size_t valueLen, size_t itemCount)

- EXTERNXML int [rtXmlEncStartDocument](#) (OSCTXT *pctxt)
This function encodes the XML header text at the beginning of an XML document.
- EXTERNXML int [rtXmlEncBOM](#) (OSCTXT *pctxt)
This function encodes the Unicode byte order mark header at the start of the document.
- EXTERNXML int [rtXmlEncStartElement](#) (OSCTXT *pctxt, const OSUTF8CHAR *elemName, OSXML-
Namespace *pNS, OSRTDList *pNSAttrs, OSBOOL terminate)
This function encodes a start element tag value (<elemName>).
- EXTERNXML int [rtXmlEncStartSoapEnv](#) (OSCTXT *pctxt, OSRTDList *pNSAttrs)
This function encodes a SOAP envelope start element tag.
- EXTERNXML int [rtXmlEncStartSoapElems](#) (OSCTXT *pctxt, OSXMLSOAPMsgType msgtype)
This function encodes a SOAP envelope start element tag and an optional SOAP body or fault tag.
- EXTERNXML int [rtXmlEncString](#) (OSCTXT *pctxt, OSXMLSTRING *pxmlstr, const OSUTF8CHAR
*elemName, OSXMLNamespace *pNS)
This function encodes a variable of the XSD string type.
- EXTERNXML int [rtXmlEncStringValue](#) (OSCTXT *pctxt, const OSUTF8CHAR *value)
This function encodes a variable of the XSD string type.
- EXTERNXML int [rtXmlEncStringValue2](#) (OSCTXT *pctxt, const OSUTF8CHAR *value, size_t valueLen)
This function encodes a variable of the XSD string type.
- EXTERNXML int [rtXmlEncTermStartElement](#) (OSCTXT *pctxt)
This function terminates a currently open XML start element by adding either a '>' or '>' (if empty) terminator.
- EXTERNXML int [rtXmlEncUnicodeStr](#) (OSCTXT *pctxt, const OSUNICHAR *value, OSUINT32 nchars,
const OSUTF8CHAR *elemName, OSXMLNamespace *pNS)
This function encodes a Unicode string value.
- EXTERNXML int [rtXmlEncUTF8Attr](#) (OSCTXT *pctxt, const OSUTF8CHAR *name, const OSUTF8CHAR
*value)
This function encodes an attribute in which the name and value are given as a null-terminated UTF-8 strings.
- EXTERNXML int [rtXmlEncUTF8Attr2](#) (OSCTXT *pctxt, const OSUTF8CHAR *name, size_t nameLen, const
OSUTF8CHAR *value, size_t valueLen)
This function encodes an attribute in which the name and value are given as a UTF-8 strings with lengths.
- EXTERNXML int [rtXmlEncUTF8Str](#) (OSCTXT *pctxt, const OSUTF8CHAR *value, const OSUTF8CHAR
*elemName, OSXMLNamespace *pNS)
This function encodes a UTF-8 string value.
- EXTERNXML int [rtXmlEncUInt](#) (OSCTXT *pctxt, OSUINT32 value, const OSUTF8CHAR *elemName, OS-
XMLNamespace *pNS)
This function encodes a variable of the XSD unsigned integer type.
- EXTERNXML int [rtXmlEncUIntValue](#) (OSCTXT *pctxt, OSUINT32 value)
This function encodes a variable of the XSD unsigned integer type.

- EXTERNXML int [rtXmlEncUIntAttr](#) (OSCTXT *pctx, OSUINT32 value, const OSUTF8CHAR *attrName, size_t attrNameLen)
This function encodes a variable of the XSD unsigned integer type as an attribute (name="value").
- EXTERNXML int [rtXmlEncUInt64](#) (OSCTXT *pctx, OSUINT64 value, const OSUTF8CHAR *elemName, OSXMLNamespace *pNS)
This function encodes a variable of the XSD integer type.
- EXTERNXML int [rtXmlEncUInt64Pattern](#) (OSCTXT *pctx, OSUINT64 value, const OSUTF8CHAR *elemName, OSXMLNamespace *pNS, const OSUTF8CHAR *pattern)
- EXTERNXML int [rtXmlEncUInt64Value](#) (OSCTXT *pctx, OSUINT64 value)
This function encodes a variable of the XSD integer type.
- EXTERNXML int [rtXmlEncUInt64PatternValue](#) (OSCTXT *pctx, OSUINT64 value, const OSUTF8CHAR *pattern)
- EXTERNXML int [rtXmlEncUInt64Attr](#) (OSCTXT *pctx, OSUINT64 value, const OSUTF8CHAR *attrName, size_t attrNameLen)
This function encodes a variable of the XSD integer type as an attribute (name="value").
- EXTERNXML int [rtXmlEncXSIAattrs](#) (OSCTXT *pctx, OSBOOL needXSI)
This function encodes XML schema instance (XSI) attributes at the beginning of an XML document.
- EXTERNXML int [rtXmlEncXSITypeAttr](#) (OSCTXT *pctx, const OSUTF8CHAR *value)
This function encodes an XML schema instance (XSI) type attribute value (xsi:type="value").
- EXTERNXML int [rtXmlEncXSINilAttr](#) (OSCTXT *pctx)
This function encodes an XML nil attribute (xsi:nil="true").
- EXTERNXML int [rtXmlFreeInputSource](#) (OSCTXT *pctx)
This function closes an input source that was previously created with one of the create input source functions such as 'rtXmlCreateFileInputSource'.
- EXTERNXML OSBOOL [rtXmlStrCmpAsc](#) (const OSUTF8CHAR *text1, const char *text2)
- EXTERNXML OSBOOL [rtXmlStrnCmpAsc](#) (const OSUTF8CHAR *text1, const char *text2, size_t len)
- EXTERNXML int [rtXmlSetEncBufPtr](#) (OSCTXT *pctx, OSOCTET *bufaddr, size_t bufsiz)
This function is used to set the internal buffer within the run-time library encoding context.
- EXTERNXML int [rtXmlGetIndent](#) (OSCTXT *pctx)
This function returns current XML output indent value.
- EXTERNXML OSBOOL [rtXmlGetWriteBOM](#) (OSCTXT *pctx)
This function returns whether the Unicode byte order mark will be encoded.
- EXTERNXML int [rtXmlGetIndentChar](#) (OSCTXT *pctx)
This function returns current XML output indent character value (default is space).

6.3.1 Define Documentation

6.3.1.1 #define rtXmlFinalizeMemBuf(pMemBuf)

Value:

```
do { \  
(pMemBuf)->pctxt->buffer.data = (pMemBuf)->buffer + (pMemBuf)->startidx; \  
(pMemBuf)->pctxt->buffer.size = \  
((pMemBuf)->usedcnt - (pMemBuf)->startidx); \  
(pMemBuf)->pctxt->buffer.dynamic = FALSE; \  
(pMemBuf)->pctxt->buffer.byteIndex = 0; \  
rtxMemBufReset (pMemBuf); \  
} while (0)
```

Definition at line 2440 of file osrtxml.h.

6.3.1.2 #define rtXmlGetEncBufLen(pctxt) (pctxt)->buffer.byteIndex

This macro returns the length of the encoded XML message.

Parameters

pctxt Pointer to a context structure.

Definition at line 2489 of file osrtxml.h.

6.3.1.3 #define rtXmlGetEncBufPtr(pctxt) (pctxt)->buffer.data

This macro returns the start address of the encoded XML message.

If a static buffer was used, this is simply the start address of the buffer. If dynamic encoding was done, this will return the start address of the dynamic buffer allocated by the encoder.

Parameters

pctxt Pointer to a context structure.

Definition at line 2482 of file osrtxml.h.

6.3.2 Function Documentation

6.3.2.1 EXTERNXML int rtXmlEncAny (OSCTXT * pctxt, OSXMLSTRING * pvalue, const OSUTF8CHAR * elemName, OSXMLNamespace * pNS)

This function encodes a variable of the XSD any type.

This is considered to be a fully-wrapped element of any type (for example: <myType>myData</myType>)

Parameters

pctxt Pointer to context block structure.

pvalue Value to be encoded. This is a string containing the fully-encoded XML text to be copied to the output stream.

elemName XML element name. A name must be provided. If an empty string is passed (""), no element tag is added to the encoded value.

pNS Pointer to namespace structure.

Returns

Completion status of operation:

- 0 = success,
- negative return value is error.

6.3.2.2 EXTERNXML int rtXmlEncAnyAttr (OSCTXT * *pctxt*, OSRTDList * *pAnyAttrList*)

This function encodes a list of OSAnyAttr attributes in which the name and value are given as a UTF-8 string.

Parameters

pctxt Pointer to context block structure.

pAnyAttrList List of attributes.

Returns

Completion status of operation:

- 0 = success,
- negative return value is error.

6.3.2.3 EXTERNXML int rtXmlEncAnyTypeValue (OSCTXT * *pctxt*, const OSUTF8CHAR * *pvalue*)

This function encodes a variable of the XSD anyType type.

This is considered to be a fully-wrapped element of any type, possibly containing attributes. (for example: * <myType>myData</myType>)

Parameters

pctxt Pointer to context block structure.

pvalue Value to be encoded.

Returns

Completion status of operation:

- 0 = success,
- negative return value is error.

6.3.2.4 EXTERNXML int rtXmlEncBase64Binary (OSCTXT * *pctxt*, OSUINT32 *nocts*, const OSOCTET * *value*, const OSUTF8CHAR * *elemName*, OSXMLNamespace * *pNS*)

This function encodes a variable of the XSD base64Binary type.

Parameters

pctxt Pointer to context block structure.

nocts Number of octets in the value string.

value Value to be encoded.

elemName XML element name. A name must be provided. If an empty string is passed (""), no element tag is added to the encoded value.

pNS Pointer to namespace structure.

Returns

Completion status of operation:

- 0 = success,
- negative return value is error.

6.3.2.5 EXTERNXML int rtXmlEncBase64BinaryAttr (OSCTXT * *pctxt*, OSUINT32 *nocts*, const OSOCTET * *value*, const OSUTF8CHAR * *attrName*, size_t *attrNameLen*)

This function encodes a variable of the XSD base64Binary type as an attribute.

Parameters

pctxt Pointer to context block structure.

nocts Number of octets in the value string.

value Value to be encoded.

attrName XML attribute name. A name must be provided.

attrNameLen Length in bytes of the attribute name.

Returns

Completion status of operation:

- 0 = success,
- negative return value is error.

6.3.2.6 EXTERNXML int rtXmlEncBase64StrValue (OSCTXT * *pctxt*, OSUINT32 *nocts*, const OSOCTET * *value*)

This function encodes a variable of the XSD base64Binary type.

It just puts the encoded value in the destination buffer or stream without any tags.

Parameters

pctxt Pointer to context block structure.

nocts Number of octets in the value string.

value Value to be encoded.

Returns

Completion status of operation:

- 0 = success,
- negative return value is error.

6.3.2.7 EXTERNXML int rtXmlEncBigInt (OSCTXT * *pctxt*, const OSUTF8CHAR * *value*, const OSUTF8CHAR * *elemName*, OSXMLNamespace * *pNS*)

This function encodes a variable of the XSD integer type.

In this case, the integer is assumed to be of a larger size than can fit in a C or C++ long type (normally 32 or 64 bits). For example, parameters used to calculate security values are typically larger than these sizes.

Items of this type are stored in character string constant variables. They can be represented as decimal strings (with no prefixes), as hexadecimal strings starting with a "0x" prefix, as octal strings starting with a "0o" prefix or as binary strings starting with a "0b" prefix. Other radices are currently not supported.

Parameters

pctxt Pointer to context block structure.

value A pointer to a character string containing the value to be encoded.

elemName XML element name. A name must be provided. If an empty string is passed (""), no element tag is added to the encoded value.

pNS Pointer to namespace structure.

Returns

Completion status of operation:

- 0 = success,
- negative return value is error.

6.3.2.8 EXTERNXML int rtXmlEncBigIntAttr (OSCTXT * *pctxt*, const OSUTF8CHAR * *value*, const OSUTF8CHAR * *attrName*, size_t *attrNameLen*)

This function encodes an XSD integer attribute value.

In this case, the integer is assumed to be of a larger size than can fit in a C or C++ long type (normally 32 or 64 bits).

Parameters

pctxt Pointer to context block structure.

value A pointer to a character string containing the value to be encoded.

attrName XML attribute name. A name must be provided.

attrNameLen Length in bytes of the attribute name.

Returns

Completion status of operation:

- 0 = success,
- negative return value is error.

6.3.2.9 EXTERNXML int rtXmlEncBigIntValue (OSCTXT * *pctxt*, const OSUTF8CHAR * *value*)

This function encodes an XSD integer attribute value.

In this case, the integer is assumed to be of a larger size than can fit in a C or C++ long type (normally 32 or 64 bits). This function just puts the encoded value in the destination buffer or stream without any tags.

Parameters

pctxt Pointer to context block structure.

value A pointer to a character string containing the value to be encoded.

Returns

Completion status of operation:

- 0 = success,
- negative return value is error.

6.3.2.10 EXTERNXML int rtXmlEncBinStrValue (OSCTXT * *pctxt*, OSUINT32 *nbits*, const OSOCTET * *data*)

This function encodes a binary string value as a sequence of '1's and '0's.

Parameters

pctxt Pointer to context block structure.

nbits Number of bits in the value string.

data Value to be encoded.

Returns

Completion status of operation:

- 0 = success,
- negative return value is error.

6.3.2.11 EXTERNXML int rtXmlEncBitString (OSCTXT * *pctxt*, OSUINT32 *nbits*, const OSOCTET * *value*, const OSUTF8CHAR * *elemName*, OSXMLNamespace * *pNS*)

This function encodes a variable of the ASN.1 BIT STRING type.

The encoded data is a sequence of '1's and '0's. This is only used if named bits are not specified in the string (

See also

[rtXmlEncNamedBits](#)).

Parameters

pctxt Pointer to context block structure.

nbits Number of bits in the bit string.

value Value to be encoded.

elemName XML element name. A name must be provided. If an empty string is passed (""), no element tag is added to the encoded value.

pNS Pointer to namespace structure.

Returns

Completion status of operation:

- 0 = success,
- negative return value is error.

6.3.2.12 EXTERNXML int rtXmlEncBOM (OSCTXT * *pctxt*)

This function encodes the Unicode byte order mark header at the start of the document. It is called by rtXmlEncStartDocument and does not need to be called manually.

Parameters

pctxt Pointer to context block structure.

Returns

Completion status of operation:

- 0 = success,
- negative return value is error.

6.3.2.13 EXTERNXML int rtXmlEncBool (OSCTXT * *pctxt*, OSBOOL *value*, const OSUTF8CHAR * *elemName*, OSXMLNamespace * *pNS*)

This function encodes a variable of the XSD boolean type.

Parameters

pctxt Pointer to context block structure.

value Boolean value to be encoded.

elemName XML element name. A name must be provided. If an empty string is passed (""), no element tag is added to the encoded value.

pNS Pointer to namespace structure.

Returns

Completion status of operation:

- 0 = success,
- negative return value is error.

6.3.2.14 EXTERNXML int rtXmlEncBoolAttr (OSCTXT * *pctxt*, OSBOOL *value*, const OSUTF8CHAR * *attrName*, size_t *attrNameLen*)

This function encodes an XSD boolean attribute value.

Parameters

pctxt Pointer to context block structure.

value Boolean value to be encoded.

attrName XML attribute name. A name must be provided.

attrNameLen Length in bytes of the attribute name.

Returns

Completion status of operation:

- 0 = success,
- negative return value is error.

6.3.2.15 EXTERNXML int rtXmlEncBoolValue (OSCTXT * *pctxt*, OSBOOL *value*)

This function encodes a variable of the XSD boolean type.

It just puts the encoded value in the destination buffer or stream without any tags.

Parameters

pctxt Pointer to context block structure.

value Boolean value to be encoded.

Returns

Completion status of operation:

- 0 = success,
- negative return value is error.

6.3.2.16 EXTERNXML int rtXmlEncComment (OSCTXT * *pctxt*, const OSUTF8CHAR * *comment*)

This function encodes an XML comment.

The given text will be inserted in between XML comment start and end elements ().

Parameters

pctxt Pointer to context block structure.

comment The comment text.

Returns

Completion status of operation:

- 0 = success,
- negative return value is error.

6.3.2.17 EXTERNXML int rtXmlEncDate (OSCTXT * *pctxt*, const OSXSDDateTime * *pvalue*, const OSUTF8CHAR * *elemName*, OSXMLNamespace * *pNS*)

This function encodes a variable of the XSD 'date' type as a string.

This version of the function is used to encode an OSXSDDateTime value into CCYY-MM-DD format.

Parameters

pctxt Pointer to context block structure.

pvalue OSXSDDateTime type pointer points to a OSXSDDateTime value to be encoded.

elemName XML element name. A name must be provided. If an empty string is passed (""), no element tag is added to the encoded value.

pNS Pointer to namespace structure.

Returns

Completion status of operation:

- 0 = success,
- negative return value is error.

6.3.2.18 EXTERNXML int rtXmlEncDateTime (OSCTXT * *pctxt*, const OSXSDDateTime * *pvalue*, const OSUTF8CHAR * *elemName*, OSXMLNamespace * *pNS*)

This function encodes a numeric date/time value into an XML string representation.

Parameters

pctxt Pointer to context block structure.

pvalue Pointer to value to be encoded.

elemName XML element name. A name must be provided. If an empty string is passed (""), no element tag is added to the encoded value.

pNS Pointer to namespace structure.

Returns

Completion status of operation:

- 0 = success,
- negative return value is error.

6.3.2.19 EXTERNXML int rtXmlEncDateTimeValue (OSCTXT * *pctxt*, const OSXSDDateTime * *pvalue*)

This function encodes a numeric date/time value into an XML string representation.

It just puts the encoded value in the destination buffer or stream without any tags.

Parameters

pctxt Pointer to context block structure.

pvalue Pointer to value to be encoded.

Returns

Completion status of operation:

- 0 = success,
- negative return value is error.

6.3.2.20 EXTERNXML int rtXmlEncDateValue (OSCTXT * *pctxt*, const OSXSDDateTime * *pvalue*)

This function encodes a variable of the XSD 'date' type as a string.

This version of the function is used to encode an OSXSDDateTime value into CCYY-MM-DD format. This function just puts the encoded value in the destination buffer or stream without any tags.

Parameters

pctxt Pointer to context block structure.

pvalue OSXSDDateTime type pointer points to a OSXSDDateTime value to be encoded.

Returns

Completion status of operation:

- 0 = success,
- negative return value is error.

6.3.2.21 EXTERNXML int rtXmlEncDecimal (OSCTXT * *pctxt*, OSREAL *value*, const OSUTF8CHAR * *elemName*, OSXMLNamespace * *pNS*, const OSDecimalFmt * *pFmtSpec*)

This function encodes a variable of the XSD decimal type.

Parameters

pctxt Pointer to context block structure.

value Value to be encoded.

elemName XML element name. A name must be provided. If an empty string is passed (""), no element tag is added to the encoded value.

pNS Pointer to namespace structure.

pFmtSpec Pointer to format specification structure.

Returns

Completion status of operation:

- 0 = success,
- negative return value is error.

6.3.2.22 EXTERNXML int rtXmlEncDecimalAttr (OSCTXT * *pctxt*, OSREAL *value*, const OSUTF8CHAR * *attrName*, size_t *attrNameLen*, const OSDecimalFmt * *pFmtSpec*)

This function encodes a variable of the XSD decimal type as an attribute.

Parameters

pctxt Pointer to context block structure.

value Value to be encoded.

attrName XML attribute name. A name must be provided.

attrNameLen Length of XML attribute name.

pFmtSpec Pointer to format specification structure.

Returns

Completion status of operation:

- 0 = success,
- negative return value is error.

6.3.2.23 EXTERNXML int rtXmlEncDecimalValue (OSCTXT * *pctxt*, OSREAL *value*, const OSDecimalFmt * *pFmtSpec*, char * *pDestBuf*, size_t *destBufSize*)

This function encodes a value of the XSD decimal type.

It just puts the encoded value in the destination buffer or stream without any tags.

Parameters

pctxt Pointer to context block structure.

value Value to be encoded.

pFmtSpec Pointer to format specification structure.

pDestBuf Pointer to a destination buffer. If NULL (destBufSize should be 0) the encoded value will be put in `pctx->buffer` or in stream associated with the `pctx`.

destBufSize The size of the destination buffer. Must be 0, if `pDestBuf` is NULL.

Returns

Completion status of operation:

- 0 = success,
- negative return value is error.

6.3.2.24 EXTERNXML int rtXmlEncDouble (OSCTXT * *pctx*, OSREAL *value*, const OSUTF8CHAR * *elemName*, OSXMLNamespace * *pNS*, const OSDoubleFmt * *pFmtSpec*)

This function encodes a variable of the XSD double type.

Parameters

pctx Pointer to context block structure.

value Value to be encoded.

elemName XML element name. A name must be provided. If an empty string is passed (""), no element tag is added to the encoded value.

pNS Pointer to namespace structure.

pFmtSpec Pointer to format specification structure.

Returns

Completion status of operation:

- 0 = success,
- negative return value is error.

6.3.2.25 EXTERNXML int rtXmlEncDoubleAttr (OSCTXT * *pctx*, OSREAL *value*, const OSUTF8CHAR * *attrName*, size_t *attrNameLen*, const OSDoubleFmt * *pFmtSpec*)

This function encodes a variable of the XSD double type as an attribute.

Parameters

pctx Pointer to context block structure.

value Value to be encoded.

attrName XML attribute name. A name must be provided.

attrNameLen Length of XML attribute name.

pFmtSpec Pointer to format specification structure.

Returns

Completion status of operation:

- 0 = success,
- negative return value is error.

6.3.2.26 EXTERNXML int rtXmlEncDoubleNormalValue (OSCTXT * *pctxt*, OSREAL *value*, const OSDoubleFmt * *pFmtSpec*, int *defaultPrecision*)

This function encodes a normal (not +/-INF or NaN) value of the XSD double or float type.

It just puts the encoded value in the destination buffer or stream without any tags.

Parameters

pctxt Pointer to context block structure.

value Value to be encoded.

pFmtSpec Pointer to format specification structure.

defaultPrecision Default precision of the value. For float, it is 6, for double it is 15.

Returns

Completion status of operation:

- 0 = success,
- negative return value is error.

6.3.2.27 EXTERNXML int rtXmlEncDoubleValue (OSCTXT * *pctxt*, OSREAL *value*, const OSDoubleFmt * *pFmtSpec*, int *defaultPrecision*)

This function encodes a value of the XSD double or float type.

It just puts the encoded value in the destination buffer or stream without any tags. Special real values +/-INF and NaN are encoded as "INF", "-INF", and "NaN", respectively.

Parameters

pctxt Pointer to context block structure.

value Value to be encoded.

pFmtSpec Pointer to format specification structure.

defaultPrecision Default precision of the value. For float, it is 6, for double it is 15.

Returns

Completion status of operation:

- 0 = success,
- negative return value is error.

6.3.2.28 EXTERNXML int rtXmlEncEmptyElement (OSCTXT * *pctxt*, const OSUTF8CHAR * *elemName*, OSXMLNamespace * *pNS*, OSRTDList * *pNSAttrs*, OSBOOL *terminate*)

This function encodes an empty element tag value (<elemName/>).

Parameters

pctxt Pointer to context block structure.

elemName XML element name.

pNS XML namespace information (prefix and URI).
pNSAttrs List of namespace attributes to be added to element.
terminate Add closing '>' character.

Returns

Completion status of operation:

- 0 = success,
- negative return value is error.

6.3.2.29 EXTERNXML int rtXmlEncEndDocument (OSCTXT * *pctxt*)

This function adds trailer information and a null terminator at the end of the XML document being encoded.

Parameters

pctxt Pointer to context block structure.

Returns

Completion status of operation:

- 0 = success,
- negative return value is error.

6.3.2.30 EXTERNXML int rtXmlEncEndElement (OSCTXT * *pctxt*, const OSUTF8CHAR * *elemName*, OSXMLNamespace * *pNS*)

This function encodes an end element tag value (</elemName>).

Parameters

pctxt Pointer to context block structure.
elemName XML element name.
pNS XML namespace information (prefix and URI).

Returns

Completion status of operation:

- 0 = success,
- negative return value is error.

6.3.2.31 EXTERNXML int rtXmlEncEndSoapElems (OSCTXT * *pctxt*, OSXMLSOAPMsgType *msgtype*)

This function encodes SOAP end element tags.

It will add a SOAP body or fault end tag based on the SOAP message type argument. It will then add an envelope end element tag.

Parameters

- pctxt* Pointer to context block structure.
- msgtype* SOAP message type (body, fault, or none)

Returns

Completion status of operation:

- 0 = success,
- negative return value is error.

6.3.2.32 EXTERNXML int rtXmlEncEndSoapEnv (OSCTXT * *pctxt*)

This function encodes a SOAP envelope end element tag (<SOAP-ENV:Envelope/>).

Parameters

- pctxt* Pointer to context block structure.

Returns

Completion status of operation:

- 0 = success,
- negative return value is error.

6.3.2.33 EXTERNXML int rtXmlEncFloat (OSCTXT * *pctxt*, OSREAL *value*, const OSUTF8CHAR * *elemName*, OSXMLNamespace * *pNS*, const OSDoubleFmt * *pFmtSpec*)

This function encodes a variable of the XSD float type.

Parameters

- pctxt* Pointer to context block structure.
- value* Value to be encoded.
- elemName* XML element name. A name must be provided. If an empty string is passed (""), no element tag is added to the encoded value.
- pNS* XML namespace information (prefix and URI).
- pFmtSpec* Pointer to format specification structure.

Returns

Completion status of operation:

- 0 = success,
- negative return value is error.

6.3.2.34 EXTERNXML int rtXmlEncFloatAttr (OSCTXT * *pctxt*, OSREAL *value*, const OSUTF8CHAR * *attrName*, size_t *attrNameLen*, const OSDoubleFmt * *pFmtSpec*)

This function encodes a variable of the XSD float type as an attribute.

Parameters

- pctxt* Pointer to context block structure.
- value* Value to be encoded.
- attrName* XML attribute name. A name must be provided.
- attrNameLen* Length of XML attribute name.
- pFmtSpec* Pointer to format specification structure.

Returns

Completion status of operation:

- 0 = success,
- negative return value is error.

6.3.2.35 EXTERNXML int rtXmlEncGDay (OSCTXT * *pctxt*, const OSXSDDateTime * *pvalue*, const OSUTF8CHAR * *elemName*, OSXMLNamespace * *pNS*)

This function encodes a numeric gDay element into an XML string representation.

Parameters

- pctxt* Pointer to context block structure.
- pvalue* Pointer to value to be encoded.
- elemName* XML element name. A name must be provided. If an empty string is passed (""), no element tag is added to the encoded value.
- pNS* XML namespace information (prefix and URI).

Returns

Completion status of operation:

- 0 = success,
- negative return value is error.

6.3.2.36 EXTERNXML int rtXmlEncGDayValue (OSCTXT * *pctxt*, const OSXSDDateTime * *pvalue*)

This function encodes a numeric gDay value into an XML string representation.

It just puts the encoded value into the buffer or stream without any tags.

Parameters

- pctxt* Pointer to context block structure.
- pvalue* Pointer to value to be encoded.

Returns

Completion status of operation:

- 0 = success,
- negative return value is error.

6.3.2.37 EXTERNXML int rtXmlEncGMonth (OSCTXT * *pctxt*, const OSXSDDateTime * *pvalue*, const OSUTF8CHAR * *elemName*, OSXMLNamespace * *pNS*)

This function encodes a numeric gMonth element into an XML string representation.

Parameters

pctxt Pointer to context block structure.

pvalue Pointer to value to be encoded.

elemName XML element name. A name must be provided. If an empty string is passed (""), no element tag is added to the encoded value.

pNS XML namespace information (prefix and URI).

Returns

Completion status of operation:

- 0 = success,
- negative return value is error.

6.3.2.38 EXTERNXML int rtXmlEncGMonthDay (OSCTXT * *pctxt*, const OSXSDDateTime * *pvalue*, const OSUTF8CHAR * *elemName*, OSXMLNamespace * *pNS*)

This function encodes a numeric gMonthDay element into an XML string representation.

Parameters

pctxt Pointer to context block structure.

pvalue Pointer to value to be encoded.

elemName XML element name. A name must be provided. If an empty string is passed (""), no element tag is added to the encoded value.

pNS XML namespace information (prefix and URI).

Returns

Completion status of operation:

- 0 = success,
- negative return value is error.

6.3.2.39 EXTERNXML int rtXmlEncGMonthDayValue (OSCTXT * *pctxt*, const OSXSDDateTime * *pvalue*)

This function encodes a numeric gMonthDay value into an XML string representation.

It just puts the encoded value into the buffer or stream without any tags.

Parameters

pctxt Pointer to context block structure.

pvalue Pointer to value to be encoded.

Returns

Completion status of operation:

- 0 = success,
- negative return value is error.

6.3.2.40 EXTERNXML int rtXmlEncGMonthValue (OSCTXT * *pctxt*, const OSXSDDateTime * *pvalue*)

This function encodes a numeric gMonth value into an XML string representation.

It just puts the encoded value into the buffer or stream without any tags.

Parameters

pctxt Pointer to context block structure.

pvalue Pointer to value to be encoded.

Returns

Completion status of operation:

- 0 = success,
- negative return value is error.

6.3.2.41 EXTERNXML int rtXmlEncGYear (OSCTXT * *pctxt*, const OSXSDDateTime * *pvalue*, const OSUTF8CHAR * *elemName*, OSXMLNamespace * *pNS*)

This function encodes a numeric gYear element into an XML string representation.

Parameters

pctxt Pointer to context block structure.

pvalue Pointer to value to be encoded.

elemName XML element name. A name must be provided. If an empty string is passed (""), no element tag is added to the encoded value.

pNS XML namespace information (prefix and URI).

Returns

Completion status of operation:

- 0 = success,
- negative return value is error.

6.3.2.42 EXTERNXML int rtXmlEncGYearMonth (OSCTXT * *pctxt*, const OSXSDDateTime * *pvalue*, const OSUTF8CHAR * *elemName*, OSXMLNamespace * *pNS*)

This function encodes a numeric gYearMonth element into an XML string representation.

Parameters

pctxt Pointer to context block structure.

pvalue Pointer to value to be encoded.

elemName XML element name. A name must be provided. If an empty string is passed (""), no element tag is added to the encoded value.

pNS XML namespace information (prefix and URI).

Returns

Completion status of operation:

- 0 = success,
- negative return value is error.

6.3.2.43 EXTERNXML int rtXmlEncGYearMonthValue (OSCTXT * *pctxt*, const OSXSDDateTime * *pvalue*)

This function encodes a numeric gYearMonth value into an XML string representation.

It just puts the encoded value into the buffer or stream without any tags.

Parameters

pctxt Pointer to context block structure.

pvalue Pointer to value to be encoded.

Returns

Completion status of operation:

- 0 = success,
- negative return value is error.

6.3.2.44 EXTERNXML int rtXmlEncGYearValue (OSCTXT * *pctxt*, const OSXSDDateTime * *pvalue*)

This function encodes a numeric gYear value into an XML string representation.

It just puts the encoded value into the buffer or stream without any tags.

Parameters

pctxt Pointer to context block structure.

pvalue Pointer to value to be encoded.

Returns

Completion status of operation:

- 0 = success,
- negative return value is error.

6.3.2.45 EXTERNXML int rtXmlEncHexBinary (OSCTXT * *pctxt*, OSUINT32 *nocts*, const OSOCTET * *value*, const OSUTF8CHAR * *elemName*, OSXMLNamespace * *pNS*)

This function encodes a variable of the XSD hexBinary type.

Parameters

pctxt Pointer to context block structure.

nocts Number of octets in the value string.

value Value to be encoded.

elemName XML element name. A name must be provided. If an empty string is passed (""), no element tag is added to the encoded value.

pNS XML namespace information (prefix and URI).

Returns

Completion status of operation:

- 0 = success,
- negative return value is error.

6.3.2.46 EXTERNXML int rtXmlEncHexBinaryAttr (OSCTXT * *pctxt*, OSUINT32 *nocts*, const OSOCTET * *value*, const OSUTF8CHAR * *attrName*, size_t *attrNameLen*)

This function encodes a variable of the XSD hexBinary type as an attribute.

Parameters

- pctxt* Pointer to context block structure.
- nocts* Number of octets in the value string.
- value* Value to be encoded.
- attrName* XML attribute name. A name must be provided.
- attrNameLen* Length of XML attribute name.

Returns

- Completion status of operation:
- 0 = success,
 - negative return value is error.

6.3.2.47 EXTERNXML int rtXmlEncHexStrValue (OSCTXT * *pctxt*, OSUINT32 *nocts*, const OSOCTET * *data*)

This function encodes a variable of the XSD hexBinary type.

It just puts the encoded value in the destination buffer or stream without any tags.

Parameters

- pctxt* Pointer to context block structure.
- nocts* Number of octets in the value string.
- data* Value to be encoded.

Returns

- Completion status of operation:
- 0 = success,
 - negative return value is error.

6.3.2.48 EXTERNXML int rtXmlEncIndent (OSCTXT * *pctxt*)

This function adds indentation whitespace to the output stream.

The amount of indentation to add is determined by the level member variable in the context structure and the OSXML-LINDENT constant value.

Parameters

- pctxt* Pointer to context block structure.

Returns

- Completion status of operation:
- 0 = success,
 - negative return value is error.

6.3.2.49 EXTERNXML int rtXmlEncInt (OSCTXT * *pctxt*, OSINT32 *value*, const OSUTF8CHAR * *elemName*, OSXMLNamespace * *pNS*)

This function encodes a variable of the XSD integer type.

Parameters

pctxt Pointer to context block structure.

value Value to be encoded.

elemName XML element name. A name must be provided. If an empty string is passed (""), no element tag is added to the encoded value.

pNS XML namespace information (prefix and URI).

Returns

Completion status of operation:

- 0 = success,
- negative return value is error.

6.3.2.50 EXTERNXML int rtXmlEncInt64 (OSCTXT * *pctxt*, OSINT64 *value*, const OSUTF8CHAR * *elemName*, OSXMLNamespace * *pNS*)

This function encodes a variable of the XSD integer type.

This version of the function is used for 64-bit integer values.

Parameters

pctxt Pointer to context block structure.

value Value to be encoded.

elemName XML element name. A name must be provided. If an empty string is passed (""), no element tag is added to the encoded value.

pNS XML namespace information (prefix and URI).

Returns

Completion status of operation:

- 0 = success,
- negative return value is error.

6.3.2.51 EXTERNXML int rtXmlEncInt64Attr (OSCTXT * *pctxt*, OSINT64 *value*, const OSUTF8CHAR * *attrName*, size_t *attrNameLen*)

This function encodes a variable of the XSD integer type as an attribute (name="value").

This version of the function is used for 64-bit integer values.

Parameters

pctxt Pointer to context block structure.

value Value to be encoded.

attrName XML attribute name.

attrNameLen Length (in bytes) of the attribute name.

Returns

Completion status of operation:

- 0 = success,
- negative return value is error.

6.3.2.52 EXTERNXML int rtXmlEncInt64Value (OSCTXT * *pctxt*, OSINT64 *value*)

This function encodes a variable of the XSD integer type.

This version of the function is used for 64-bit integer values. It just puts the encoded value in the destination buffer or stream without any tags.

Parameters

pctxt Pointer to context block structure.

value Value to be encoded.

Returns

Completion status of operation:

- 0 = success,
- negative return value is error.

6.3.2.53 EXTERNXML int rtXmlEncIntAttr (OSCTXT * *pctxt*, OSINT32 *value*, const OSUTF8CHAR * *attrName*, size_t *attrNameLen*)

This function encodes a variable of the XSD integer type as an attribute (name="value").

Parameters

pctxt Pointer to context block structure.

value Value to be encoded.

attrName XML attribute name.

attrNameLen Length (in bytes) of the attribute name.

Returns

Completion status of operation:

- 0 = success,
- negative return value is error.

6.3.2.54 EXTERNXML int rtXmlEncIntPattern (OSCTXT * *pctxt*, OSINT32 *value*, const OSUTF8CHAR * *elemName*, OSXMLNamespace * *pNS*, const OSUTF8CHAR * *pattern*)

This function encodes a variable of the XSD integer type using a pattern to specify the format of the integer value.

Parameters

pctxt Pointer to context block structure.

value Value to be encoded.

elemName XML element name. A name must be provided. If an empty string is passed (""), no element tag is added to the encoded value.

pNS XML namespace information (prefix and URI).

pattern Pattern of the encoded value.

Returns

Completion status of operation:

- 0 = success,
- negative return value is error.

6.3.2.55 EXTERNXML int rtXmlEncIntValue (OSCTXT * *pctxt*, OSINT32 *value*)

This function encodes a variable of the XSD integer type.

It just puts the encoded value in the destination buffer or stream without any tags.

Parameters

pctxt Pointer to context block structure.

value Value to be encoded.

Returns

Completion status of operation:

- 0 = success,
- negative return value is error.

6.3.2.56 EXTERNXML int rtXmlEncNamedBits (OSCTXT * *pctxt*, const OSBitMapItem * *pBitMap*, OSUINT32 *nbits*, const OSOCTET * *pvalue*, const OSUTF8CHAR * *elemName*, OSXMLNamespace * *pNS*)

This function encodes a variable of the ASN.1 BIT STRING type.

In this case, a set of named bits was provided in the schema for the bit values. The encoding is a list of the named bit identifiers corresponding to each set bit in the bit string value.

Parameters

pctxt Pointer to context block structure.

pBitMap Bit map equating symbolic bit names to bit numbers.

nbits Number of bits in the bit string value.

pvalue Bit string value to be encoded.

elemName XML element name. A name must be provided. If an empty string is passed (""), no element tag is added to the encoded value.

pNS Pointer to namespace structure.

Returns

Completion status of operation:

- 0 = success,
- negative return value is error.

6.3.2.57 EXTERNXML int rtXmlEncNSAttrs (OSCTXT * *pctxt*, OSRTDList * *pNSAttrs*)

This function encodes namespace declaration attributes at the beginning of an XML document.

The attributes to be encoded are stored in the namespace list provided, or within the context if a NULL pointer is passed for *pNSAttrs*. Namespaces are added to this list by using the namespace utility functions.

Parameters

pctxt Pointer to context block structure.

pNSAttrs Pointer to list of namespace attributes.

Returns

Completion status of operation:

- 0 = success,
- negative return value is error.

6.3.2.58 EXTERNXML int rtXmlEncReal10 (OSCTXT * *pctxt*, const OSUTF8CHAR * *pvalue*, const OSUTF8CHAR * *elemName*, OSXMLNamespace * *pNS*)

This function encodes a variable of the ASN.1 REAL base 10 type.

Parameters

pctxt A pointer to a context structure. This provides a storage area for the function to store all working variables that must be maintained between function calls.

pvalue A pointer to an REAL base 10 value.

elemName XML element name. A name must be provided. If an empty string is passed (""), no element tag is added to the encoded value.

pNS XML namespace information (prefix and URI).

Returns

Completion status of operation:

- 0 (0) = success,
- negative return value is error.

6.3.2.59 EXTERNXML int rtXmlEncSoapArrayTypeAttr (OSCTXT * *pctxt*, const OSUTF8CHAR * *name*, const OSUTF8CHAR * *value*, size_t *itemCount*)

This function encodes the special SOAP encoding attrType attribute which specifies the number and type of elements in a SOAP array.

The form of this attribute is 'attrType="<type>[count]"'.

Parameters

- pctxt* Pointer to context block structure.
- name* Attribute name (NS prefix + arrayType)
- value* UTF-8 string value to be encoded.
- itemCount* Count of the number of elements in the array.

Returns

Completion status of operation:

- 0 = success,
- negative return value is error.

6.3.2.60 EXTERNXML int rtXmlEncStartDocument (OSCTXT * *pctxt*)

This function encodes the XML header text at the beginning of an XML document.

This is normally the following:

```
<?xml version="1.0" encoding="UTF-8"?>
```

Parameters

- pctxt* Pointer to context block structure.

Returns

Completion status of operation:

- 0 = success,
- negative return value is error.

6.3.2.61 EXTERNXML int rtXmlEncStartElement (OSCTXT * *pctxt*, const OSUTF8CHAR * *elemName*, OSXMLNamespace * *pNS*, OSRTDList * *pNSAttrs*, OSBOOL *terminate*)

This function encodes a start element tag value (<elemName>).

Parameters

- pctxt* Pointer to context block structure.
- elemName* XML element name.
- pNS* XML namespace information (prefix and URI). If the prefix is NULL, this method will search the context's namespace stack for a prefix to use.
- pNSAttrs* List of namespace attributes to be added to element.

terminate Add closing '>' character.

Returns

Completion status of operation:

- 0 = success,
- negative return value is error.

6.3.2.62 EXTERNXML int rtXmlEncStartSoapElems (OSCTXT * *pctxt*, OSXMLSOAPMsgType *msgtype*)

This function encodes a SOAP envelope start element tag and an optional SOAP body or fault tag.

This includes all of the standard SOAP namespace attributes.

Parameters

pctxt Pointer to context block structure.

msgtype SOAP message type (body, fault, or none)

Returns

Completion status of operation:

- 0 = success,
- negative return value is error.

6.3.2.63 EXTERNXML int rtXmlEncStartSoapEnv (OSCTXT * *pctxt*, OSRTDList * *pNSAttrs*)

This function encodes a SOAP envelope start element tag.

This includes all of the standard SOAP namespace attributes.

Parameters

pctxt Pointer to context block structure.

pNSAttrs List of namespace attributes to be added to SOAP envelope.

Returns

Completion status of operation:

- 0 = success,
- negative return value is error.

6.3.2.64 EXTERNXML int rtXmlEncString (OSCTXT * *pctxt*, OSXMLSTRING * *pxmlstr*, const OSUTF8CHAR * *elemName*, OSXMLNamespace * *pNS*)

This function encodes a variable of the XSD string type.

Parameters

pctxt Pointer to context block structure.

pxmlstr XML string value to be encoded.

elemName XML element name. A name must be provided. If an empty string is passed (""), no element tag is added to the encoded value.

pNS XML namespace information (prefix and URI).

Returns

Completion status of operation:

- 0 = success,
- negative return value is error.

6.3.2.65 EXTERNXML int rtXmlEncStringValue (OSCTXT * *pctxt*, const OSUTF8CHAR * *value*)

This function encodes a variable of the XSD string type.

Parameters

pctxt Pointer to context block structure.

value XML string value to be encoded.

Returns

Completion status of operation:

- 0 = success,
- negative return value is error.

6.3.2.66 EXTERNXML int rtXmlEncStringValue2 (OSCTXT * *pctxt*, const OSUTF8CHAR * *value*, size_t *valueLen*)

This function encodes a variable of the XSD string type.

Parameters

pctxt Pointer to context block structure.

value XML string value to be encoded.

valueLen UTF-8 string value length (in octets).

Returns

Completion status of operation:

- 0 = success,
- negative return value is error.

6.3.2.67 EXTERNXML int rtXmlEncTermStartElement (OSCTXT * *pctxt*)

This function terminates a currently open XML start element by adding either a '>' or '/>' (if empty) terminator. It will also add XSI attributes to the element.

Parameters

pctxt Pointer to context block structure.

Returns

Completion status of operation:

- 0 = success,
- negative return value is error.

6.3.2.68 EXTERNXML int rtXmlEncTime (OSCTXT * *pctxt*, const OSXSDDateTime * *pvalue*, const OSUTF8CHAR * *elemName*, OSXMLNamespace * *pNS*)

This function encodes a variable of the XSD 'time' type as a string.

This version of the function is used to encode OSXSDDateTime value into any of following format in different condition as stated below. (1) hh-mm-ss.ss used if *tz_flag* = false (2) hh-mm-ss.ssZ used if *tz_flag* = false and *tzo* = 0 (3) hh-mm-ss.ss+HH:MM if *tz_flag* = false and *tzo* > 0 (4) hh-mm-ss.ss-HH:MM-HH:MM if *tz_flag* = false and *tzo* < 0

Parameters

pctxt Pointer to context block structure.

pvalue OSXSDDateTime type pointer points to a OSXSDDateTime value to be encoded.

elemName XML element name. A name must be provided. If an empty string is passed (""), no element tag is added to the encoded value.

pNS Pointer to namespace structure.

Returns

Completion status of operation:

- 0 = success,
- negative return value is error.

6.3.2.69 EXTERNXML int rtXmlEncTimeValue (OSCTXT * *pctxt*, const OSXSDDateTime * *pvalue*)

This function encodes a variable of the XSD 'time' type as a string.

This version of the function just puts the encoded value in the destination buffer or stream without any tags.

Parameters

pctxt Pointer to context block structure.

pvalue OSXSDDateTime type pointer points to a OSXSDDateTime value to be encoded.

Returns

Completion status of operation:

- 0 = success,
- negative return value is error.

6.3.2.70 EXTERNXML int rtXmlEncUInt (OSCTXT * *pctxt*, OSUINT32 *value*, const OSUTF8CHAR * *elemName*, OSXMLNamespace * *pNS*)

This function encodes a variable of the XSD unsigned integer type.

Parameters

pctxt Pointer to context block structure.

value Value to be encoded.

elemName XML element name. A name must be provided. If an empty string is passed (""), no element tag is added to the encoded value.

pNS XML namespace information (prefix and URI).

Returns

Completion status of operation:

- 0 = success,
- negative return value is error.

6.3.2.71 EXTERNXML int rtXmlEncUInt64 (OSCTXT * *pctxt*, OSUINT64 *value*, const OSUTF8CHAR * *elemName*, OSXMLNamespace * *pNS*)

This function encodes a variable of the XSD integer type.

This version of the function is used when constraints cause an unsigned 64-bit integer variable to be used.

Parameters

pctxt Pointer to context block structure.

value Value to be encoded.

elemName XML element name. A name must be provided. If an empty string is passed (""), no element tag is added to the encoded value.

pNS XML namespace information (prefix and URI).

Returns

Completion status of operation:

- 0 = success,
- negative return value is error.

6.3.2.72 EXTERNXML int rtXmlEncUInt64Attr (OSCTXT * *pctxt*, OSUINT64 *value*, const OSUTF8CHAR * *attrName*, size_t *attrNameLen*)

This function encodes a variable of the XSD integer type as an attribute (name="value").

This version of the function is used for unsigned 64-bit integer values.

Parameters

pctxt Pointer to context block structure.

value Value to be encoded.

attrName XML attribute name.

attrNameLen Length (in bytes) of the attribute name.

Returns

Completion status of operation:

- 0 = success,
- negative return value is error.

6.3.2.73 EXTERNXML int rtXmlEncUInt64Value (OSCTXT * *pctxt*, OSUINT64 *value*)

This function encodes a variable of the XSD integer type.

This version of the function is used when constraints cause an unsigned 64-bit integer variable to be used. It writes the encoded value to the destination buffer or stream without any tags.

Parameters

pctxt Pointer to context block structure.

value Value to be encoded.

Returns

Completion status of operation:

- 0 = success,
- negative return value is error.

6.3.2.74 EXTERNXML int rtXmlEncUIntAttr (OSCTXT * *pctxt*, OSUINT32 *value*, const OSUTF8CHAR * *attrName*, size_t *attrNameLen*)

This function encodes a variable of the XSD unsigned integer type as an attribute (name="value").

Parameters

pctxt Pointer to context block structure.

value Value to be encoded.

attrName XML attribute name.

attrNameLen Length (in bytes) of the attribute name.

Returns

Completion status of operation:

- 0 = success,
- negative return value is error.

6.3.2.75 EXTERNXML int rtXmlEncUIntValue (OSCTXT * *pctxt*, OSUINT32 *value*)

This function encodes a variable of the XSD unsigned integer type.

It just puts the encoded value in the destination buffer or stream without any tags.

Parameters

pctxt Pointer to context block structure.

value Value to be encoded.

Returns

Completion status of operation:

- 0 = success,
- negative return value is error.

6.3.2.76 EXTERNXML int rtXmlEncUnicodeStr (OSCTXT * *pctxt*, const OSUNICHAR * *value*, OSUINT32 *nchars*, const OSUTF8CHAR * *elemName*, OSXMLNamespace * *pNS*)

This function encodes a Unicode string value.

Parameters

pctxt Pointer to context block structure.

value Value to be encoded. This is a pointer to an array of 16-bit integer values.

nchars Number of characters in value array.

elemName XML element name. A name must be provided. If an empty string is passed (""), no element tag is added to the encoded value.

pNS XML namespace information (prefix and URI).

Returns

Completion status of operation:

- 0 = success,
- negative return value is error.

6.3.2.77 EXTERNXML int rtXmlEncUTF8Attr (OSCTXT * *pctxt*, const OSUTF8CHAR * *name*, const OSUTF8CHAR * *value*)

This function encodes an attribute in which the name and value are given as a null-terminated UTF-8 strings.

Parameters

pctxt Pointer to context block structure.

name Attribute name.

value UTF-8 string value to be encoded.

Returns

Completion status of operation:

- 0 = success,
- negative return value is error.

6.3.2.78 EXTERNXML int rtXmlEncUTF8Attr2 (OSCTXT * *pctxt*, const OSUTF8CHAR * *name*, size_t *nameLen*, const OSUTF8CHAR * *value*, size_t *valueLen*)

This function encodes an attribute in which the name and value are given as a UTF-8 strings with lengths.

Parameters

- pctxt* Pointer to context block structure.
- name* Attribute name.
- nameLen* Attribute name length (in octets).
- value* UTF-8 string value to be encoded.
- valueLen* UTF-8 string value length (in octets).

Returns

Completion status of operation:

- 0 = success,
- negative return value is error.

6.3.2.79 EXTERNXML int rtXmlEncUTF8Str (OSCTXT * *pctxt*, const OSUTF8CHAR * *value*, const OSUTF8CHAR * *elemName*, OSXMLNamespace * *pNS*)

This function encodes a UTF-8 string value.

Parameters

- pctxt* Pointer to context block structure.
- value* Value to be encoded.
- elemName* XML element name. A name must be provided. If an empty string is passed (""), no element tag is added to the encoded value.
- pNS* XML namespace information (prefix and URI).

Returns

Completion status of operation:

- 0 = success,
- negative return value is error.

6.3.2.80 EXTERNXML int rtXmlEncXSIAttrs (OSCTXT * *pctxt*, OSBOOL *needXSI*)

This function encodes XML schema instance (XSI) attributes at the beginning of an XML document.

The encoded attributes include the XSI namespace declaration, the XSD schema location attribute, and the XSD no namespace schema location attribute.

The XSI namespace declaration will only be added to the document if schema location attributes exist or the 'needXSI' flag (see below) is set.

Parameters

- pctxt* Pointer to context block structure.

needXSI This flag is set to true to indicate the XSI namespace declaration is required to support XML items in the main document body such as `xsi:type` or `xsi:nil`.

Returns

Completion status of operation:

- 0 = success,
- negative return value is error.

6.3.2.81 EXTERNXML int rtXmlEncXSINilAttr (OSCTXT * *pctxt*)

This function encodes an XML nil attribute (`xsi:nil="true"`).

Parameters

pctxt Pointer to context block structure.

Returns

Completion status of operation:

- 0 = success,
- negative return value is error.

6.3.2.82 EXTERNXML int rtXmlEncXSITypeAttr (OSCTXT * *pctxt*, const OSUTF8CHAR * *value*)

This function encodes an XML schema instance (XSI) type attribute value (`xsi:type="value"`).

Parameters

pctxt Pointer to context block structure.

value XSI type attribute value.

Returns

Completion status of operation:

- 0 = success,
- negative return value is error.

6.3.2.83 EXTERNXML int rtXmlFreeInputSource (OSCTXT * *pctxt*)

This function closes an input source that was previously created with one of the create input source functions such as `'rtXmlCreateFileInputSource'`.

Parameters

pctxt Pointer to context block structure.

Returns

Completion status of operation:

- 0 = success,
- negative return value is error.

6.3.2.84 EXTERNXML int rtXmlGetIndent (OSCTXT * *pctxt*)

This function returns current XML output indent value.

Parameters

pctxt Pointer to OSCTXT structure

Returns

Current indent value (≥ 0) if OK, negative status code if error.

6.3.2.85 EXTERNXML int rtXmlGetIndentChar (OSCTXT * *pctxt*)

This function returns current XML output indent character value (default is space).

Parameters

pctxt Pointer to OSCTXT structure

Returns

Current indent character (> 0) if OK, negative status code if error.

6.3.2.86 EXTERNXML OSBOOL rtXmlGetWriteBOM (OSCTXT * *pctxt*)

This function returns whether the Unicode byte order mark will be encoded.

Parameters

pctxt Pointer to OSCTXT structure.

Returns

TRUE if BOM is to be encoded, FALSE if not or if context uninitialized.

6.3.2.87 EXTERNXML int rtXmlPrintNSAttrs (const char * *name*, const OSRTDList * *data*)

This function prints a list of namespace attributes.

Parameters

name Name to print.

data List of namespace attributes.

Returns

Completion status of operation:

- 0 = success,
- negative return value is error.

6.3.2.88 EXTERNXML int rtXmlSetEncBufPtr (OSCTXT * *pctxt*, OSOCTET * *bufaddr*, size_t *bufsiz*)

This function is used to set the internal buffer within the run-time library encoding context.

It must be called after the context variable is initialized by the `rtxInitContext` function and before any other compiler generated or run-time library encode function.

Parameters

pctxt Pointer to a context structure. This provides a storage area for the function to store all working variables that must be maintained between function calls.

bufaddr A pointer to a memory buffer to use to encode a message. The buffer should be declared as an array of unsigned characters (OCTETs). This parameter can be set to NULL to specify dynamic encoding (i.e., the encode functions will dynamically allocate a buffer to hold the encoded message).

bufsiz The length of the memory buffer in bytes. Should be set to zero if NULL was specified for *bufaddr* (i.e. dynamic encoding was selected).

6.4 XML utility functions.

Functions

- EXTERNXML int **rtXmlWriteToFile** (OSCTXT *pctxt, const char *filename)
This function writes the encoded XML message stored in the context message buffer out to a file.
- EXTERNXML int **rtXmlWriteUTF16ToFile** (OSCTXT *pctxt, const char *filename)
- EXTERNXML void **rtXmlTreatWhitespaces** (OSCTXT *pctxt, int whiteSpaceType)
- EXTERNXML int **rtXmlCheckBuffer** (OSCTXT *pctxt, size_t byte_count)

6.4.1 Function Documentation

6.4.1.1 EXTERNXML int rtXmlWriteToFile (OSCTXT *pctxt, const char *filename)

This function writes the encoded XML message stored in the context message buffer out to a file.

Parameters

pctxt Pointer to OSCTXT structure.

filename Full path to file to which XML is to be written.

Returns

0 - if success, negative value if error.

6.5 XML pull-parser decode functions.

Defines

- #define **OSXMLREALENC_OBJSYS** 0x1F
- #define **OSXMLREALENC_BXER** 0x10
- #define **OSXMLREALENC_EXERMODS** 0x1B
- #define **OSXMLREALENC_EXERDECIMAL** 0x03

Functions

- EXTERNXML int **rtXmlpDecAny** (OSCTXT *pctxt, const OSUTF8CHAR **pvalue)
This function decodes an arbitrary XML section of code as defined by the XSD any type (xsd:any).
- EXTERNXML int **rtXmlpDecAnyAttrStr** (OSCTXT *pctxt, const OSUTF8CHAR **ppAttrStr, size_t index)
This function decodes an any attribute string.
- EXTERNXML int **rtXmlpDecAnyElem** (OSCTXT *pctxt, const OSUTF8CHAR **pvalue)
This function decodes an arbitrary XML section of code as defined by the XSD any type (xsd:any).
- EXTERNXML int **rtXmlpDecBase64Str** (OSCTXT *pctxt, OSOCTET *pvalue, OSUINT32 *pnocts, OSINT32 bufsize)
This function decodes a contents of a Base64-encode binary string into a static memory structure.
- EXTERNXML int **rtXmlpDecBigInt** (OSCTXT *pctxt, const OSUTF8CHAR **pvalue)
This function will decode a variable of the XSD integer type.
- EXTERNXML int **rtXmlpDecBitString** (OSCTXT *pctxt, OSOCTET *pvalue, OSUINT32 *pnbits, OSUINT32 bufsize)
This function decodes a bit string value.
- EXTERNXML int **rtXmlpDecBool** (OSCTXT *pctxt, OSBOOL *pvalue)
This function decodes a variable of the boolean type.
- EXTERNXML int **rtXmlpDecDate** (OSCTXT *pctxt, OSXSDDateTime *pvalue)
This function decodes a variable of the XSD 'date' type.
- EXTERNXML int **rtXmlpDecDateTime** (OSCTXT *pctxt, OSXSDDateTime *pvalue)
This function decodes a variable of the XSD 'dateTime' type.
- EXTERNXML int **rtXmlpDecDecimal** (OSCTXT *pctxt, OSREAL *pvalue, int totalDigits, int fractionDigits)
This function decodes the contents of a decimal data type.
- EXTERNXML int **rtXmlpDecDouble** (OSCTXT *pctxt, OSREAL *pvalue)
This function decodes the contents of a float or double data type.
- EXTERNXML int **rtXmlpDecDoubleExt** (OSCTXT *pctxt, OSUINT8 flags, OSREAL *pvalue)
This function decodes the contents of a float or double data type.

- EXTERNXML int [rtXmlpDecDynBase64Str](#) (OSCTXT *pctxt, OSDynOctStr *pvalue)
This function decodes a contents of a Base64-encode binary string.
- EXTERNXML int [rtXmlpDecDynBitString](#) (OSCTXT *pctxt, OSDynOctStr *pvalue)
This function decodes a bit string value.
- EXTERNXML int [rtXmlpDecDynHexStr](#) (OSCTXT *pctxt, OSDynOctStr *pvalue)
This function decodes a contents of a hexBinary string.
- EXTERNXML int [rtXmlpDecDynUnicodeStr](#) (OSCTXT *pctxt, const OSUNICHAR **ppdata, OSUINT32 *pnchars)
This function decodes a Unicode string data type.
- EXTERNXML int [rtXmlpDecDynUTF8Str](#) (OSCTXT *pctxt, const OSUTF8CHAR **outdata)
This function decodes the contents of a UTF-8 string data type.
- EXTERNXML int [rtXmlpDecUTF8Str](#) (OSCTXT *pctxt, OSUTF8CHAR *out, size_t max_len)
This function decodes the contents of a UTF-8 string data type.
- EXTERNXML int [rtXmlpDecGDay](#) (OSCTXT *pctxt, OSXSDDateTime *pvalue)
This function decodes a variable of the XSD 'gDay' type.
- EXTERNXML int [rtXmlpDecGMonth](#) (OSCTXT *pctxt, OSXSDDateTime *pvalue)
This function decodes a variable of the XSD 'gMonth' type.
- EXTERNXML int [rtXmlpDecGMonthDay](#) (OSCTXT *pctxt, OSXSDDateTime *pvalue)
This function decodes a variable of the XSD 'gMonthDay' type.
- EXTERNXML int [rtXmlpDecGYear](#) (OSCTXT *pctxt, OSXSDDateTime *pvalue)
This function decodes a variable of the XSD 'gYear' type.
- EXTERNXML int [rtXmlpDecGYearMonth](#) (OSCTXT *pctxt, OSXSDDateTime *pvalue)
This function decodes a variable of the XSD 'gYearMonth' type.
- EXTERNXML int [rtXmlpDecHexStr](#) (OSCTXT *pctxt, OSOCTET *pvalue, OSUINT32 *pnocets, OSINT32 bufsize)
This function decodes the contents of a hexBinary string into a static memory structure.
- EXTERNXML int [rtXmlpDecInt](#) (OSCTXT *pctxt, OSINT32 *pvalue)
This function decodes the contents of a 32-bit integer data type.
- EXTERNXML int [rtXmlpDecInt8](#) (OSCTXT *pctxt, OSINT8 *pvalue)
This function decodes the contents of an 8-bit integer data type (i.e.
- EXTERNXML int [rtXmlpDecInt16](#) (OSCTXT *pctxt, OSINT16 *pvalue)
This function decodes the contents of a 16-bit integer data type.
- EXTERNXML int [rtXmlpDecInt64](#) (OSCTXT *pctxt, OSINT64 *pvalue)
This function decodes the contents of a 64-bit integer data type.

- EXTERNXML int [rtXmlpDecNamedBits](#) (OSCTXT *pctx, const OSBitMapItem *pBitMap, OSOCTET *pvalue, OSUINT32 *pnbits, OSUINT32 bufsize)
This function decodes the contents of a named bit field.
- EXTERNXML int [rtXmlpDecStrList](#) (OSCTXT *pctx, OSRTDList *plist)
This function decodes a list of space-separated tokens and returns each token as a separate item on the given list.
- EXTERNXML int [rtXmlpDecTime](#) (OSCTXT *pctx, OSXSDDateTime *pvalue)
This function decodes a variable of the XSD 'time' type.
- EXTERNXML int [rtXmlpDecUInt](#) (OSCTXT *pctx, OSUINT32 *pvalue)
This function decodes the contents of an unsigned 32-bit integer data type.
- EXTERNXML int [rtXmlpDecUInt8](#) (OSCTXT *pctx, OSOCTET *pvalue)
This function decodes the contents of an unsigned 8-bit integer data type (i.e.
- EXTERNXML int [rtXmlpDecUInt16](#) (OSCTXT *pctx, OSUINT16 *pvalue)
This function decodes the contents of an unsigned 16-bit integer data type.
- EXTERNXML int [rtXmlpDecUInt64](#) (OSCTXT *pctx, OSUINT64 *pvalue)
This function decodes the contents of an unsigned 64-bit integer data type.
- EXTERNXML int [rtXmlpDecXmlStr](#) (OSCTXT *pctx, OSXMLSTRING *outdata)
This function decodes the contents of an XML string data type.
- EXTERNXML int [rtXmlpDecXmlStrList](#) (OSCTXT *pctx, OSRTDList *plist)
This function decodes a list of space-separated tokens and returns each token as a separate item on the given list.
- EXTERNXML int [rtXmlpDecXSIAttr](#) (OSCTXT *pctx, const OSXMLNameFragments *attrName)
This function decodes XSI (XML Schema Instance) and XML namespace attributes that may be present in any arbitrary XML element within a document.
- EXTERNXML int [rtXmlpDecXSITypeAttr](#) (OSCTXT *pctx, const OSXMLNameFragments *attrName, const OSUTF8CHAR **ppAttrValue)
This function decodes the contents of an XSI (XML Schema Instance) type attribute (xsi:type).
- EXTERNXML int [rtXmlpGetAttributeID](#) (const OSXMLStrFragment *attrName, OSINT16 nsidx, size_t nAttr, const OSXMLAttrDescr attrNames[], OSUINT32 attrPresent[])
This function finds an attribute in the descriptor table.
- EXTERNXML int [rtXmlpGetNextElem](#) (OSCTXT *pctx, OSXMLElemDescr *pElem, OSINT32 level)
This function parse the next element start tag.
- EXTERNXML int [rtXmlpGetNextElemID](#) (OSCTXT *pctx, const OSXMLElemIDRec *tab, size_t nrows, OSINT32 level, OSBOOL continueParse)
This function parses the next start tag and finds the index of the element name in the descriptor table.
- EXTERNXML int [rtXmlpMarkLastEventActive](#) (OSCTXT *pctx)
This function marks current tag as unprocessed.

- EXTERNXML int [rtXmlpMatchStartTag](#) (OSCTXT *pctxt, const OSUTF8CHAR *elemLocalName, OSINT16 nsidx)
This function parses the next start tag that matches with given name.
- EXTERNXML int [rtXmlpMatchEndTag](#) (OSCTXT *pctxt, OSINT32 level)
This function parse next end tag that matches with given name.
- EXTERNXML OSBOOL [rtXmlpHasAttributes](#) (OSCTXT *pctxt)
This function checks accessibility of attributes.
- EXTERNXML int [rtXmlpGetAttributeCount](#) (OSCTXT *pctxt)
This function returns number of attributes in last processed start tag.
- EXTERNXML int [rtXmlpSelectAttribute](#) (OSCTXT *pctxt, [OSXMLNameFragments](#) *pAttr, OSINT16 *nsidx, size_t index)
This function selects attribute to decode.
- EXTERNXML OSINT32 [rtXmlpGetCurrentLevel](#) (OSCTXT *pctxt)
This function returns current nesting level.
- EXTERNXML void [rtXmlpSetWhiteSpaceMode](#) (OSCTXT *pctxt, [OSXMLWhiteSpaceMode](#) whiteSpaceMode)
Sets the whitespace treatment mode.
- EXTERNXML OSBOOL [rtXmlpSetMixedContentMode](#) (OSCTXT *pctxt, OSBOOL mixedContentMode)
Sets mixed content mode.
- EXTERNXML void [rtXmlpSetListMode](#) (OSCTXT *pctxt)
Sets list mode.
- EXTERNXML OSBOOL [rtXmlpListHasItem](#) (OSCTXT *pctxt)
Check for end of decoded token list.
- EXTERNXML void [rtXmlpCountListItems](#) (OSCTXT *pctxt, OSSIZE *itemCnt)
Count tokens in list.
- EXTERNXML int [rtXmlpGetNextSeqElemID](#) (OSCTXT *pctxt, const [OSXMLElemIDRec](#) *tab, const [OSXMLGroupDesc](#) *pGroup, int curID, int lastMandatoryID, OSBOOL groupMode)
This function parses the next start tag and find index of element name in descriptor table.
- EXTERNXML int [rtXmlpGetNextAllElemID](#) (OSCTXT *pctxt, const [OSXMLElemIDRec](#) *tab, size_t nrows, const OSUINT8 *pOrder, OSUINT32 nOrder, OSUINT32 maxOrder, int anyID)
This function parses the next start tag and finds index of element name in descriptor table.
- EXTERNXML int [rtXmlpGetNextAllElemID16](#) (OSCTXT *pctxt, const [OSXMLElemIDRec](#) *tab, size_t nrows, const OSUINT16 *pOrder, OSUINT32 nOrder, OSUINT32 maxOrder, int anyID)
This function parses the next start tag and finds index of element name in descriptor table.
- EXTERNXML void [rtXmlpSetNamespaceTable](#) (OSCTXT *pctxt, const OSUTF8CHAR *namespaceTable[], size_t nmNamespaces)
Sets user namespace table.

- EXTERNXML int [rtXmlpCreateReader](#) (OSCTXT *pctx)

Creates pull parser reader structure within the context.
- EXTERNXML void [rtXmlpHideAttributes](#) (OSCTXT *pctx)

Disable access to attributes.
- EXTERNXML OSBOOL [rtXmlpNeedDecodeAttributes](#) (OSCTXT *pctx)

This function checks if attributes were previously decoded.
- EXTERNXML void [rtXmlpMarkPos](#) (OSCTXT *pctx)

Save current decode position.
- EXTERNXML void [rtXmlpRewindToMarkedPos](#) (OSCTXT *pctx)

Rewind to saved decode position.
- EXTERNXML void [rtXmlpResetMarkedPos](#) (OSCTXT *pctx)

Reset saved decode position.
- EXTERNXML int [rtXmlpGetXSITypeAttr](#) (OSCTXT *pctx, const OSUTF8CHAR **ppAttrValue, OSINT16 *nsidx, size_t *pLocalOffs)

This function decodes the contents of an XSI (XML Schema Instance) type attribute (xsi:type).
- EXTERNXML int [rtXmlpGetXmlnsAttrs](#) (OSCTXT *pctx, OSRTDList *pNSAttrs)

This function decodes namespace attributes from start tag and adds them to the given list.
- EXTERNXML int [rtXmlpDecXSIAttrs](#) (OSCTXT *pctx)

This function decodes XSI (XML Schema Instance) that may be present in any arbitrary XML element within a document.
- EXTERNXML OSBOOL [rtXmlpIsEmptyElement](#) (OSCTXT *pctx)

Check element content: empty or not.
- EXTERNXML int [rtXmlEncAttrC14N](#) (OSCTXT *pctx)

This function used only in C14 mode.
- EXTERNXML struct OSXMLReader * [rtXmlpGetReader](#) (OSCTXT *pctx)

This function fetches the XML reader structure from the context for use in low-level pull parser calls.
- EXTERNXML OSBOOL [rtXmlpIsLastEventDone](#) (OSCTXT *pctx)

Check processing status of current tag.
- EXTERNXML int [rtXmlpGetXSITypeIndex](#) (OSCTXT *pctx, const OSXMLItemDescr typetab[], size_t typetabsiz)

This function decodes the contents of an XSI (XML Schema Instance) type attribute (xsi:type) and find type index in descriptor table.
- EXTERNXML int [rtXmlpLookupXSITypeIndex](#) (OSCTXT *pctx, const OSUTF8CHAR *pXsiType, OSINT16 xsiTypeIdx, const OSXMLItemDescr typetab[], size_t typetabsiz)

This function find index of XSI (XML Schema Instance) type in descriptor table.
- EXTERNXML void [rtXmlpForceDecodeAsGroup](#) (OSCTXT *pctx)

Disable skipping of unknown elements in optional sequence tail.

- EXTERNXML OSBOOL [rtXmlIsDecodeAsGroup](#) (OSCTXT *pctxt)
This function checks if "decode as group" mode was forced.
- EXTERNXML OSBOOL [rtXmlIsUTF8Encoding](#) (OSCTXT *pctxt)
This function checks if the encoding specified in XML header is UTF-8.
- EXTERNXML int [rtXmlReadBytes](#) (OSCTXT *pctxt, OSOCTET *pbuf, size_t nbytes)
This function reads the specified number of bytes directly from the underlying XML parser stream.

6.5.1 Function Documentation

6.5.1.1 EXTERNXML int rtXmlEncAttrC14N (OSCTXT * pctxt)

This function used only in C14 mode.

It provide attributes sorting.

Parameters

pctxt Pointer to context block structure.

Returns

Completion status of operation:

- 0 = success,
- negative return value is error.

6.5.1.2 EXTERNXML void rtXmlCountListItems (OSCTXT * pctxt, OSSIZE * itemCnt)

Count tokens in list.

Parameters

pctxt Pointer to context block structure.

itemCnt Pointer to number of elements in list.

Returns

Token number. For element content function check accessed part of content only. Returned value may be below then real token number.

6.5.1.3 EXTERNXML int rtXmlCreateReader (OSCTXT * pctxt)

Creates pull parser reader structure within the context.

Parameters

pctxt Pointer to context block structure.

Returns

Completion status of operation:

- 0 = success,
- negative return value is error.

6.5.1.4 EXTERNXML int rtXmlpDecAny (OSCTXT * *pctxt*, const OSUTF8CHAR ** *pvalue*)

This function decodes an arbitrary XML section of code as defined by the XSD any type (xsd:any).

The decoded XML fragment is returned as a string in the form as it appears in the document. Memory is allocated for the string using the rtxMemAlloc function.

Parameters

pctxt Pointer to context block structure.

pvalue Pointer to UTF8 character string pointer to receive decoded XML fragment. Memory is allocated for the string using the run-time memory manager.

Returns

Completion status of operation:

- 0 = success,
- negative return value is error.

6.5.1.5 EXTERNXML int rtXmlpDecAnyAttrStr (OSCTXT * *pctxt*, const OSUTF8CHAR ** *ppAttrStr*, size_t *index*)

This function decodes an any attribute string.

The full attribute string (name="value") is decoded and returned on the string output argument. Memory is allocated for the string using the rtxMemAlloc function.

Parameters

pctxt Pointer to context block structure.

ppAttrStr Pointer to UTF8 character string pointer to receive decoded attribute string. Memory is allocated for the string using the run-time memory manager.

index Index of attribute.

Returns

Completion status of operation:

- 0 = success,
- negative return value is error.

6.5.1.6 EXTERNXML int rtXmlpDecAnyElem (OSCTXT * *pctxt*, const OSUTF8CHAR ** *pvalue*)

This function decodes an arbitrary XML section of code as defined by the XSD any type (xsd:any).

The decoded XML fragment is returned as a string in the form as it appears in the document. Memory is allocated for the string using the `rtxMemAlloc` function. The difference between this function and `rtXmlpDecAny` is that this function preserves the full encoded XML fragment including the start and end elements tags and attributes. `rtXmlpDecAny` decodes the contents within the start and end tags.

Parameters

pctxt Pointer to context block structure.

pvalue Pointer to UTF8 character string pointer to receive decoded XML fragment. Memory is allocated for the string using the run-time memory manager.

Returns

Completion status of operation:

- 0 = success,
- negative return value is error.

6.5.1.7 EXTERNXML int rtXmlpDecBase64Str (OSCTXT * *pctxt*, OSOCTET * *pvalue*, OSUINT32 * *pnocts*, OSINT32 *bufsize*)

This function decodes a contents of a Base64-encode binary string into a static memory structure.

The octet string must be Base64 encoded. This function call is used to decode a sized base64Binary string production. Input is expected to be a string of OSUTF8CHAR characters returned by an XML pull parser.

Parameters

pctxt A pointer to a context structure. This provides a storage area for the function to store all working variables that must be maintained between function calls.

pvalue A pointer to a variable to receive the decoded bit string. This is assumed to be a static array large enough to hold the number of octets specified in the `bufsize` input parameter.

pnocts A pointer to an integer value to receive the decoded number of octets.

bufsize The size (in octets) of the sized octet string. An error will occur if the number of octets in the decoded string is larger than this value.

Returns

Completion status of operation:

- 0 = success,
- negative return value is error.

6.5.1.8 EXTERNXML int rtXmlpDecBigInt (OSCTXT * *pctxt*, const OSUTF8CHAR ** *pvalue*)

This function will decode a variable of the XSD integer type.

In this case, the integer is assumed to be of a larger size than can fit in a C or C++ long type (normally 32 or 64 bits). For example, parameters used to calculate security values are typically larger than these sizes.

These variables are stored in character string constant variables. The radix should be 10. If it is necessary to convert to another radix, then use `rtxBigIntSetStr` or `rtxBigIntToString` functions. Input is expected to be a string of OSUTF8CHAR characters returned by an XML pull parser.

Parameters

pctxt Pointer to context block structure.

pvalue Pointer to a pointer to receive decoded UTF-8 string. Dynamic memory is allocated for the variable using the `rtMemAlloc` function. The decoded variable is represented as a string starting with appropriate prefix.

Returns

Completion status of operation:

- 0 = success,
- negative return value is error.

6.5.1.9 EXTERNXML int rtXmlpDecBitString (OSCTXT * *pctxt*, OSOCTET * *pvalue*, OSUINT32 * *pnbits*, OSUINT32 *bufsize*)

This function decodes a bit string value.

The string consists of '1' and '0' characters. This is the static version in which the user provides a pre-allocated memory buffer to receive the decoded data. One byte in a memory buffer can hold 8 characters of encoded data. Bits are stored from MSB to LSB order.

Parameters

pctxt Pointer to context block structure.

pvalue Pointer to a variable to receive the decoded boolean value.

pnbits Pointer to hold decoded number of bits.

bufsize Size of buffer passed in *pvalue* argument.

Returns

Completion status of operation:

- 0 = success,
- negative return value is error.

6.5.1.10 EXTERNXML int rtXmlpDecBool (OSCTXT * *pctxt*, OSBOOL * *pvalue*)

This function decodes a variable of the boolean type.

Input is expected to be a string of OSUTF8CHAR characters returned by an XML pull parser.

Parameters

pctxt Pointer to context block structure.

pvalue Pointer to a variable to receive the decoded boolean value.

Returns

Completion status of operation:

- 0 = success,
- negative return value is error.

6.5.1.11 EXTERNXML int rtXmlpDecDate (OSCTXT * *pctxt*, OSXSDDateTime * *pvalue*)

This function decodes a variable of the XSD 'date' type.

Input is expected to be a string of characters returned by an XML pull parser. The string should have CCYY-MM-DD format.

Parameters

pctxt Pointer to context block structure.

pvalue OSXSDDateTime type pointer points to a OSXSDDateTime value to receive decoded result.

Returns

Completion status of operation:

- 0 = success,
- negative return value is error.

6.5.1.12 EXTERNXML int rtXmlpDecDateTime (OSCTXT * *pctxt*, OSXSDDateTime * *pvalue*)

This function decodes a variable of the XSD 'dateTime' type.

Input is expected to be a string of characters returned by an XML pull parser.

Parameters

pctxt Pointer to context block structure.

pvalue OSXSDDateTime type pointer points to a OSXSDDateTime value to receive decoded result.

Returns

Completion status of operation:

- 0 = success,
- negative return value is error.

6.5.1.13 EXTERNXML int rtXmlpDecDecimal (OSCTXT * *pctxt*, OSREAL * *pvalue*, int *totalDigits*, int *fractionDigits*)

This function decodes the contents of a decimal data type.

Input is expected to be a string of OSUTF8CHAR characters returned by an XML pull parser.

Parameters

pctxt Pointer to context block structure.

pvalue Pointer to 64-bit double value to receive decoded result.

totalDigits Number of total digits in the decimal number from XSD totalDigits facet value. Argument should be set to -1 if facet not given.

fractionDigits Number of fraction digits in the decimal number from XSD fractionDigits facet value. Argument should be set to -1 if facet not given.

Returns

Completion status of operation:

- 0 = success,
- negative return value is error.

6.5.1.14 EXTERNXML int rtXmlpDecDouble (OSCTXT * *pctxt*, OSREAL * *pvalue*)

This function decodes the contents of a float or double data type.

Input is expected to be a string of OSUTF8CHAR characters returned by an XML pull parser.

Parameters

pctxt Pointer to context block structure.

pvalue Pointer to 64-bit double value to receive decoded result.

Returns

Completion status of operation:

- 0 = success,
- negative return value is error.

6.5.1.15 EXTERNXML int rtXmlpDecDoubleExt (OSCTXT * *pctxt*, OSUINT8 *flags*, OSREAL * *pvalue*)

This function decodes the contents of a float or double data type.

Input is expected to be a string of OSUTF8CHAR characters returned by an XML pull parser.

Parameters

pctxt Pointer to context block structure.

flags Specifies alternatives allowed in the lexical value. See OSXMLREALENC* constants. bit 0 (rightmost) set: recognize INF, -INF, NaN text values bit 1 set: recognize leading '+' on normal reals bit 2 set: recognize leading '+' on INF bit 3 set: recognize leading zeros in exponent bit 4 set: recognize exponents

pvalue Pointer to 64-bit double value to receive decoded result.

Returns

Completion status of operation:

- 0 = success,
- negative return value is error.

6.5.1.16 EXTERNXML int rtXmlpDecDynBase64Str (OSCTXT * *pctxt*, OSDynOctStr * *pvalue*)

This function decodes a contents of a Base64-encode binary string.

The octet string must be Base64 encoded. This function will allocate dynamic memory to store the decoded result. Input is expected to be a string of OSUTF8CHAR characters returned by an XML pull parser.

Parameters

pctxt A pointer to a context structure. This provides a storage area for the function to store all working variables that must be maintained between function calls.

pvalue A pointer to a dynamic octet string structure to receive the decoded octet string. Dynamic memory is allocated for the string using the `rtxMemAlloc` function.

Returns

Completion status of operation:

- 0 = success,
- negative return value is error.

6.5.1.17 EXTERNXML `int rtXmlpDecDynBitString (OSCTXT * pctxt, OSDynOctStr * pvalue)`

This function decodes a bit string value.

The string consists of a series of '1' and '0' characters. This is the dynamic version in which memory is allocated for the returned binary string variable. Bits are stored from MSB to LSB order.

Parameters

pctxt Pointer to context block structure.

pvalue Pointer to a variable to receive the decoded boolean value.

Returns

Completion status of operation:

- 0 = success,
- negative return value is error.

6.5.1.18 EXTERNXML `int rtXmlpDecDynHexStr (OSCTXT * pctxt, OSDynOctStr * pvalue)`

This function decodes a contents of a hexBinary string.

This function will allocate dynamic memory to store the decoded result. Input is expected to be a string of OS-UTF8CHAR characters returned by an XML pull parser.

Parameters

pctxt A pointer to a context structure. This provides a storage area for the function to store all working variables that must be maintained between function calls.

pvalue A pointer to a dynamic octet string structure to receive the decoded octet string. Dynamic memory is allocated to hold the string using the `rtxMemAlloc` function.

Returns

Completion status of operation:

- 0 = success,
- negative return value is error.

6.5.1.19 EXTERNXML int rtXmlpDecDynUnicodeStr (OSCTXT * *pctxt*, const OSUNICHAR ** *ppdata*, OSUINT32 * *pnchars*)

This function decodes a Unicode string data type.

The input is assumed to be in UTF-8 format. This function reads each character and converts it into its Unicode equivalent.

Parameters

pctxt Pointer to context block structure.

ppdata Pointer to Unicode character string. A Unicode character string is represented as an array of unsigned 16-bit integers in C. Memory is allocated for the string using the run-time memory manager.

pnchars Pointer to integer variables to receive the number of characters in the string.

Returns

Completion status of operation:

- 0 = success,
- negative return value is error.

6.5.1.20 EXTERNXML int rtXmlpDecDynUTF8Str (OSCTXT * *pctxt*, const OSUTF8CHAR ** *outdata*)

This function decodes the contents of a UTF-8 string data type.

Input is expected to be a string of OSUTF8CHAR characters returned by an XML pull parser.

Parameters

pctxt Pointer to context block structure.

outdata Pointer to a pointer to receive decoded UTF-8 string. Memory is allocated for this string using the run-time memory manager.

Returns

Completion status of operation:

- 0 = success,
- negative return value is error.

6.5.1.21 EXTERNXML int rtXmlpDecGDay (OSCTXT * *pctxt*, OSXSDDateTime * *pvalue*)

This function decodes a variable of the XSD 'gDay' type.

Input is expected to be a string of characters returned by an XML pull parser. The string should have ---DD[-+hh:mm|Z] format.

Parameters

pctxt Pointer to context block structure.

pvalue OSXSDDateTime type pointer points to a OSXSDDateTime value to receive decoded result.

Returns

Completion status of operation:

- 0 = success,
- negative return value is error.

6.5.1.22 EXTERNXML int rtXmlpDecGMonth (OSCTXT * *pctxt*, OSXSDDateTime * *pvalue*)

This function decodes a variable of the XSD 'gMonth' type.

Input is expected to be a string of characters returned by an XML pull parser. The string should have --MM[-+hh:mm|Z] format.

Parameters

pctxt Pointer to context block structure.

pvalue OSXSDDateTime type pointer points to a OSXSDDateTime value to receive decoded result.

Returns

Completion status of operation:

- 0 = success,
- negative return value is error.

6.5.1.23 EXTERNXML int rtXmlpDecGMonthDay (OSCTXT * *pctxt*, OSXSDDateTime * *pvalue*)

This function decodes a variable of the XSD 'gMonthDay' type.

Input is expected to be a string of characters returned by an XML pull parser. The string should have --MM-DD[-+hh:mm|Z] format.

Parameters

pctxt Pointer to context block structure.

pvalue OSXSDDateTime type pointer points to a OSXSDDateTime value to receive decoded result.

Returns

Completion status of operation:

- 0 = success,
- negative return value is error.

6.5.1.24 EXTERNXML int rtXmlpDecGYear (OSCTXT * *pctxt*, OSXSDDateTime * *pvalue*)

This function decodes a variable of the XSD 'gYear' type.

Input is expected to be a string of characters returned by an XML pull parser. The string should have CCYY[-+hh:mm|Z] format.

Parameters

pctxt Pointer to context block structure.

pvalue OSXSDDateTime type pointer points to a OSXSDDateTime value to receive decoded result.

Returns

Completion status of operation:

- 0 = success,
- negative return value is error.

6.5.1.25 EXTERNXML int rtXmlpDecGYearMonth (OSCTXT * *pctxt*, OSXSDDateTime * *pvalue*)

This function decodes a variable of the XSD 'gYearMonth' type.

Input is expected to be a string of characters returned by an XML pull parser. The string should have CCYY-MM[-hh:mm][Z] format.

Parameters

pctxt Pointer to context block structure.

pvalue OSXSDDateTime type pointer points to a OSXSDDateTime value to receive decoded result.

Returns

Completion status of operation:

- 0 = success,
- negative return value is error.

6.5.1.26 EXTERNXML int rtXmlpDecHexStr (OSCTXT * *pctxt*, OSOCTET * *pvalue*, OSUINT32 * *pnocts*, OSINT32 *bufsize*)

This function decodes the contents of a hexBinary string into a static memory structure.

Input is expected to be a string of OSUTF8CHAR characters returned by an XML pull parser.

Parameters

pctxt A pointer to a context structure. This provides a storage area for the function to store all working variables that must be maintained between function calls.

pvalue A pointer to a variable to receive the decoded bit string. This is assumed to be a static array large enough to hold the number of octets specified in the bufsize input parameter.

pnocts A pointer to an integer value to receive the decoded number of octets.

bufsize The size (in octets) of the sized octet string. An error will occur if the number of octets in the decoded string is larger than this value.

Returns

Completion status of operation:

- 0 = success,
- negative return value is error.

6.5.1.27 EXTERNXML int rtXmlpDecInt (OSCTXT * *pctxt*, OSINT32 * *pvalue*)

This function decodes the contents of a 32-bit integer data type.

Input is expected to be a string of OSUTF8CHAR characters returned by an XML pull parser.

Parameters

pctxt Pointer to context block structure.

pvalue Pointer to 32-bit integer value to receive decoded result.

Returns

Completion status of operation:

- 0 = success,
- negative return value is error.

6.5.1.28 EXTERNXML int rtXmlpDecInt16 (OSCTXT * *pctxt*, OSINT16 * *pvalue*)

This function decodes the contents of a 16-bit integer data type.

Input is expected to be a string of OSUTF8CHAR characters returned by an XML pull parser.

Parameters

pctxt Pointer to context block structure.

pvalue Pointer to 16-bit integer value to receive decoded result.

Returns

Completion status of operation:

- 0 = success,
- negative return value is error.

6.5.1.29 EXTERNXML int rtXmlpDecInt64 (OSCTXT * *pctxt*, OSINT64 * *pvalue*)

This function decodes the contents of a 64-bit integer data type.

Input is expected to be a string of OSUTF8CHAR characters returned by an XML pull parser.

Parameters

pctxt Pointer to context block structure.

pvalue Pointer to 64-bit integer value to receive decoded result.

Returns

Completion status of operation:

- 0 = success,
- negative return value is error.

6.5.1.30 EXTERNXML int rtXmlpDecInt8 (OSCTXT * *pctxt*, OSINT8 * *pvalue*)

This function decodes the contents of an 8-bit integer data type (i.e.

a signed byte type in the range of -128 to 127). Input is expected to be a string of OSUTF8CHAR characters returned by an XML pull parser.

Parameters

pctxt Pointer to context block structure.

pvalue Pointer to 8-bit integer value to receive decoded result.

Returns

Completion status of operation:

- 0 = success,
- negative return value is error.

6.5.1.31 EXTERNXML int rtXmlpDecNamedBits (OSCTXT * *pctxt*, const OSBitMapItem * *pBitMap*, OSOCTET * *pvalue*, OSUINT32 * *pnbits*, OSUINT32 *bufsize*)

This function decodes the contents of a named bit field.

This is a space-separated list of token values in which each token corresponds to a bit field in a bit map.

Parameters

pctxt Pointer to context block structure.

pBitMap Pointer to bit map structure that defined token to bit mappings.

pvalue Pointer to buffer to receive decoded bit map.

pnbits Number of bits in decoded bit map.

bufsize Size of buffer passed in to receive decoded bit values.

Returns

Completion status of operation:

- 0 = success,
- negative return value is error.

6.5.1.32 EXTERNXML int rtXmlpDecStrList (OSCTXT * *pctxt*, OSRTDList * *plist*)

This function decodes a list of space-separated tokens and returns each token as a separate item on the given list.

Memory is allocated for the list nodes and token values using the rtx memory management functions.

Parameters

pctxt A pointer to a context structure. This provides a storage area for the function to store all working variables that must be maintained between function calls.

plist A pointer to a linked list structure to which the parsed token values will be added.

Returns

Completion status of operation:

- 0 = success,
- negative return value is error.

6.5.1.33 EXTERNXML int rtXmlpDecTime (OSCTXT * *pctxt*, OSXSDDateTime * *pvalue*)

This function decodes a variable of the XSD 'time' type.

Input is expected to be a string of characters returned by an XML pull parser. The string should have one of following formats:

(1) hh-mm-ss.ss used if *tz_flag* = false (2) hh-mm-ss.ssZ used if *tz_flag* = false and *tzo* = 0 (3) hh-mm-ss.ss+HH:MM if *tz_flag* = false and *tzo* > 0 (4) hh-mm-ss.ss-HH:MM-HH:MM if *tz_flag* = false and *tzo* < 0

Parameters

pctxt Pointer to context block structure.

pvalue OSXSDDateTime type pointer points to a OSXSDDateTime value to receive decoded result.

Returns

Completion status of operation:

- 0 = success,
- negative return value is error.

6.5.1.34 EXTERNXML int rtXmlpDecUInt (OSCTXT * *pctxt*, OSUINT32 * *pvalue*)

This function decodes the contents of an unsigned 32-bit integer data type.

Input is expected to be a string of OSUTF8CHAR characters returned by an XML pull parser.

Parameters

pctxt Pointer to context block structure.

pvalue Pointer to unsigned 32-bit integer value to receive decoded result.

Returns

Completion status of operation:

- 0 = success,
- negative return value is error.

6.5.1.35 EXTERNXML int rtXmlpDecUInt16 (OSCTXT * *pctxt*, OSUINT16 * *pvalue*)

This function decodes the contents of an unsigned 16-bit integer data type.

Input is expected to be a string of OSUTF8CHAR characters returned by an XML pull parser.

Parameters

pctxt Pointer to context block structure.

pvalue Pointer to unsigned 16-bit integer value to receive decoded result.

Returns

Completion status of operation:

- 0 = success,
- negative return value is error.

6.5.1.36 EXTERNXML int rtXmlpDecUInt64 (OSCTXT * *pctxt*, OSUINT64 * *pvalue*)

This function decodes the contents of an unsigned 64-bit integer data type.

Input is expected to be a string of OSUTF8CHAR characters returned by an XML pull parser.

Parameters

pctxt Pointer to context block structure.

pvalue Pointer to unsigned 64-bit integer value to receive decoded result.

Returns

Completion status of operation:

- 0 = success,
- negative return value is error.

6.5.1.37 EXTERNXML int rtXmlpDecUInt8 (OSCTXT * *pctxt*, OSOCTET * *pvalue*)

This function decodes the contents of an unsigned 8-bit integer data type (i.e.

a signed byte type in the range of 0 to 255). Input is expected to be a string of OSUTF8CHAR characters returned by an XML pull parser.

Parameters

pctxt Pointer to context block structure.

pvalue Pointer to unsigned 8-bit integer value to receive decoded result.

Returns

Completion status of operation:

- 0 = success,
- negative return value is error.

6.5.1.38 EXTERNXML int rtXmlpDecUTF8Str (OSCTXT * *pctxt*, OSUTF8CHAR * *out*, size_t *max_len*)

This function decodes the contents of a UTF-8 string data type.

Input is expected to be a string of OSUTF8CHAR characters returned by an XML pull parser.

Parameters

pctxt Pointer to context block structure.

out Pointer to an array of OSUTF8CHAR to receive decoded UTF-8 string.

max_len Length of out array.

Returns

Completion status of operation:

- 0 = success,
- negative return value is error.

6.5.1.39 EXTERNXML int rtXmlpDecXmlStr (OSCTXT * *pctxt*, OSXMLSTRING * *outdata*)

This function decodes the contents of an XML string data type.

This type contains a pointer to a UTF-8 character string plus flags that can be set to alter the encoding of the string (for example, the cdata flag allows the string to be encoded in a CDATA section). Input is expected to be a string of UTF-8 characters returned by an XML parser.

Parameters

pctxt Pointer to context block structure.

outdata Pointer to an XML string structure to receive the decoded string. Memory is allocated for the string using the run-time memory manager.

Returns

Completion status of operation:

- 0 = success,
- negative return value is error.

6.5.1.40 EXTERNXML int rtXmlpDecXmlStrList (OSCTXT * *pctxt*, OSRTDList * *plist*)

This function decodes a list of space-separated tokens and returns each token as a separate item on the given list.

Memory is allocated for the list nodes and token values using the rtx memory management functions. List contains OSXMLSTRING structures.

Parameters

pctxt A pointer to a context structure. This provides a storage area for the function to store all working variables that must be maintained between function calls.

plist A pointer to a linked list structure to which the parsed token values will be added.

Returns

Completion status of operation:

- 0 = success,
- negative return value is error.

6.5.1.41 **EXTERNXML int rtXmlpDecXSIAAttr (OSCTXT * *pctxt*, const OSXMLNameFragments * *attrName*)**

This function decodes XSI (XML Schema Instance) and XML namespace attributes that may be present in any arbitrary XML element within a document.

Parameters

pctxt A pointer to a context structure. This provides a storage area for the function to store all working variables that must be maintained between function calls.

attrName A pointer to a structure holding various parts of an attribute name. The parts are in the form of string fragments meaning they are not null terminated. The user must be careful to use the value and length when working with them.

Returns

Completion status of operation:

- 0 = success,
- negative return value is error.

6.5.1.42 **EXTERNXML int rtXmlpDecXSIAAttrs (OSCTXT * *pctxt*)**

This function decodes XSI (XML Schema Instance) that may be present in any arbitrary XML element within a document.

Parameters

pctxt Pointer to context block structure.

Returns

Completion status of operation:

- 0 = success,
- negative return value is error.

6.5.1.43 **EXTERNXML int rtXmlpDecXSISTypeAttr (OSCTXT * *pctxt*, const OSXMLNameFragments * *attrName*, const OSUTF8CHAR ** *ppAttrValue*)**

This function decodes the contents of an XSI (XML Schema Instance) type attribute (xsi:type).

Parameters

pctxt A pointer to a context structure. This provides a storage area for the function to store all working variables that must be maintained between function calls.

attrName A pointer to a structure holding various parts of an attribute name. The parts are in the form of string fragments meaning they are not null terminated. The user must be careful to use the value and length when working with them.

ppAttrValue A pointer to a pointer to a UTF8 character string to receive the decoded XSI type name.

Returns

Completion status of operation:

- 0 = success,
- 1 = OK, but attrName was not xsi:type (i.e. no attribute match)
- negative return value is error.

6.5.1.44 EXTERNXML void rtXmlpForceDecodeAsGroup (OSCTXT * *pctxt*)

Disable skipping of unknown elements in optional sequence tail.

Function used in outer types to break decode on first unknown element after decoding mandatory sequence part.

Parameters

pctxt Pointer to context block structure.

6.5.1.45 EXTERNXML int rtXmlpGetAttributeCount (OSCTXT * *pctxt*)

This function returns number of attributes in last processed start tag.

Parameters

pctxt Pointer to context block structure.

Returns

Completion status of operation:

- zero or positive value is attributes number,
- negative return value is error.

6.5.1.46 EXTERNXML int rtXmlpGetAttributeID (const OSXMLStrFragment * *attrName*, OSINT16 *nsidx*, size_t *nAttr*, const OSXMLAttrDescr *attrNames*[], OSUINT32 *attrPresent*[])

This function finds an attribute in the descriptor table.

Parameters

attrName A pointer to a structure holding various parts of an attribute name. The parts are in the form of string fragments meaning they are not null terminated. The user must be careful to use the value and length when working with them.

nsidx Namespace index:

- 0 = attribute is unqualified,
- positive value is user namespace from generated namespace table,
- negative value is predefined namespace like XSD instance and ect.

nAttr Number of descriptors in table.

attrNames Attributes descriptor table.

attrPresent Bit array to mark already decoded attributes. It is used to identify duplicate attributes.

Returns

Completion status of operation:

- positive or zero return value is attribute index in descriptor table,
- negative return value is error.

6.5.1.47 EXTERNXML OSINT32 rtXmlpGetCurrentLevel (OSCTXT * *pctxt*)

This function returns current nesting level.

Parameters

pctxt Pointer to context block structure.

Returns

Current nesting level.

6.5.1.48 EXTERNXML int rtXmlpGetNextAllElemID (OSCTXT * *pctxt*, const OSXMLElemIDRec * *tab*, size_t *nrows*, const OSUINT8 * *pOrder*, OSUINT32 *nOrder*, OSUINT32 *maxOrder*, int *anyID*)

This function parses the next start tag and finds index of element name in descriptor table.

It used for decode "all" content model in strict mode.

Parameters

pctxt Pointer to context block structure.

tab Elements descriptor table.

nrows Number of descriptors in table.

pOrder Pointer to array to receive elements order.

nOrder Last element's index in order array.

maxOrder Size of order array.

anyID Identifier of xsd:any element.

Returns

Completion status of operation:

- positive or zero value is element identifier,
- negative return value is error.

6.5.1.49 EXTERNXML int rtXmlpGetNextAllElemID16 (OSCTXT * *pctxt*, const OSXMLElemIDRec * *tab*, size_t *nrows*, const OSUINT16 * *pOrder*, OSUINT32 *nOrder*, OSUINT32 *maxOrder*, int *anyID*)

This function parses the next start tag and finds index of element name in descriptor table.

It used for decode "all" content model in strict mode. This variant used when xsd:all has above 256 elements.

Parameters

pctxt Pointer to context block structure.

tab Elements descriptor table.

nrows Number of descriptors in table.

pOrder Pointer to array to receive elements order.

nOrder Last element's index in order array.

maxOrder Size of order array.

anyID Identifier of xsd:any element.

Returns

Completion status of operation:

- positive or zero value is element identifier,
- negative return value is error.

6.5.1.50 EXTERNXML int rtXmlpGetNextElem (OSCTXT * *pctxt*, OSXMLElemDescr * *pElem*, OSINT32 *level*)

This function parse the next element start tag.

Parameters

pctxt Pointer to context block structure.

pElem Pointer to a structure to receive the decoded element descriptor.

level Nesting level of parsed start tag. When value equal -1 parsed next start tag.

Returns

Completion status of operation:

- 0 = success,
- negative return value is error.

6.5.1.51 EXTERNXML int rtXmlpGetNextElemID (OSCTXT * *pctxt*, const OSXMLElemIDRec * *tab*, size_t *nrows*, OSINT32 *level*, OSBOOL *continueParse*)

This function parses the next start tag and finds the index of the element name in the descriptor table.

Parameters

pctxt Pointer to context block structure.

tab Elements descriptor table.

nrows Number of descriptors in table.

level Nesting level of parsed start tag. When value equal -1 function parse next start tag.

continueParse When value equals TRUE function skips unrecognized elements.

Returns

Completion status of operation:

- positive or zero value is element identifier,
- negative return value is error.

6.5.1.52 EXTERNXML int rtXmlpNextSeqElemID (OSCTXT * *pctxt*, const OSXMLElemIDRec * *tab*, const OSXMLGroupDesc * *pGroup*, int *curID*, int *lastMandatoryID*, OSBOOL *groupMode*)

This function parses the next start tag and find index of element name in descriptor table.

It is used to decode sequences in strict mode.

Parameters

pctxt Pointer to context block structure.

tab Elements descriptor table.

pGroup Decode groups table.

curID Current decode group.

lastMandatoryID Identifier of last mandatory element.

groupMode This parameter must be setted to TRUE when decode groups or base types.

Returns

Completion status of operation:

- positive or zero value is element identifier,
- negative return value is error.

6.5.1.53 EXTERNXML struct OSXMLReader* rtXmlpGetReader (OSCTXT * *pctxt*) [read]

This function fetches the XML reader structure from the context for use in low-level pull parser calls.

If the reader structure does not exist, it is created and initialized.

Parameters

pctxt Pointer to context block structure.

Returns

Pointer to XML reader structure or NULL if an error occurred.

6.5.1.54 EXTERNXML int rtXmlpGetXmlnsAttrs (OSCTXT * *pctxt*, OSRTDList * *pNSAttrs*)

This function decodes namespace attributes from start tag and adds them to the given list.

Parameters

pctxt Pointer to context block structure.

pNSAttrs A pointer to a linked list of OSXMLNamespace structures.

Returns

Completion status of operation:

- 0 = success,
- negative return value is error.

6.5.1.55 EXTERNXML int rtXmlpGetXSITypeAttr (OSCTXT * *pctxt*, const OSUTF8CHAR ** *ppAttrValue*, OSINT16 * *nsidx*, size_t * *pLocalOffs*)

This function decodes the contents of an XSI (XML Schema Instance) type attribute (xsi:type).

Parameters

pctxt Pointer to context block structure.

ppAttrValue A pointer to a pointer to a UTF8 character string to received the decoded XSI type QName.

nsidx A pointer to OSINT16 value to received the decoded XSI type namespace index.

pLocalOffs A pointer to size_t value to received the local name offset in *ppAttrValue*. When *pLocalOffs* value equal NULL function return in *ppAttrValue* local name only.

Returns

Completion status of operation:

- 0 = success,
- negative return value is error.

6.5.1.56 EXTERNXML int rtXmlpGetXSITypeIndex (OSCTXT * *pctxt*, const OSXMLItemDescr *typetab*[], size_t *typetabsiz*)

This function decodes the contents of an XSI (XML Schema Instance) type attribute (xsi:type) and find type index in descriptor table.

Parameters

pctxt Pointer to context block structure.

typetab XSI types descriptor table.

typetabsiz Number of descriptors in table.

Returns

Completion status of operation:

- positive or zero value is type index,
- negative return value is error.

6.5.1.57 EXTERNXML OSBOOL rtXmlpHasAttributes (OSCTXT * *pctxt*)

This function checks accessibility of attributes.

Parameters

pctxt Pointer to context block structure.

Returns

Completion status of operation:

- TRUE = attributes are present and access is enabled,
- FALSE = attributes are absent or access is disabled.

6.5.1.58 EXTERNXML void rtXmlpHideAttributes (OSCTXT * *pctxt*)

Disable access to attributes.

Function used in derived types to disable repeated decode in base type.

Parameters

pctxt Pointer to context block structure.

6.5.1.59 EXTERNXML OSBOOL rtXmlpIsDecodeAsGroup (OSCTXT * *pctxt*)

This function checks if "decode as group" mode was forced.

Parameters

pctxt Pointer to context block structure.

Returns

State of mode:

- TRUE = need decode as group,
- FALSE = normal sequence decoding.

6.5.1.60 EXTERNXML OSBOOL rtXmlpIsEmptyElement (OSCTXT * *pctxt*)

Check element content: empty or not.

Parameters

pctxt Pointer to context block structure.

Returns

Status of element content:

- TRUE = element is empty,
- FALSE = element has content.

6.5.1.61 EXTERNXML OSBOOL rtXmlpIsLastEventDone (OSCTXT * *pctxt*)

Check processing status of current tag.

Parameters

pctxt Pointer to context block structure.

Returns

Status of element content:

- TRUE = tag marked as processed,
- FALSE = tag will be processed again.

6.5.1.62 EXTERNXML OSBOOL rtXmlpIsUTF8Encoding (OSCTXT * *pctxt*)

This function checks if the encoding specified in XML header is UTF-8.

Parameters

pctxt Pointer to context block structure.

Returns

State of mode:

- TRUE = is in UTF-8 encoding,
- FALSE = is not in UTF-8 encoding.

6.5.1.63 EXTERNXML OSBOOL rtXmlpListHasItem (OSCTXT * *pctxt*)

Check for end of decoded token list.

Parameters

pctxt Pointer to context block structure.

Returns

State of decoded list:

- TRUE = list is not finished,
- FALSE = all tokens was decoded.

6.5.1.64 EXTERNXML int rtXmlpLookupXSITypeIndex (OSCTXT * *pctxt*, const OSUTF8CHAR * *pXsiType*, OSINT16 *xsiTypeIdx*, const OSXMLItemDescr *typetab*[], size_t *typetabsiz*)

This function find index of XSI (XML Schema Instance) type in descriptor table.

Parameters

pctxt Pointer to context block structure.

pXsiType A pointer to XSI type name.

xsiTypeIdx A XSI type namespace index.

typetab XSI types descriptor table.

typetabsiz Number of descriptors in table.

Returns

Completion status of operation:

- positive or zero value is type index,
- negative return value is error.

6.5.1.65 EXTERNXML int rtXmlpMarkLastEventActive (OSCTXT * *pctxt*)

This function marks current tag as unprocessed.

This will cause the element to be processed again in the next pull-parser function.

Parameters

pctxt Pointer to context block structure.

Returns

Completion status of operation:

- 0 = success,
- negative return value is error.

6.5.1.66 EXTERNXML void rtXmlpMarkPos (OSCTXT * *pctxt*)

Save current decode position.

Parameters

pctxt Pointer to context block structure.

6.5.1.67 EXTERNXML int rtXmlpMatchEndTag (OSCTXT * *pctxt*, OSINT32 *level*)

This function parse next end tag that matches with given name.

Parameters

pctxt Pointer to context block structure.

level Nesting level of parsed start tag. When value equal -1 function parse next end tag with current level.

Returns

Completion status of operation:

- 0 = success,
- negative return value is error.

6.5.1.68 EXTERNXML int rtXmlpMatchStartTag (OSCTXT * *pctxt*, const OSUTF8CHAR * *elemLocalName*, OSINT16 *nsidx*)

This function parses the next start tag that matches with given name.

Parameters

pctxt Pointer to context block structure.

elemLocalName Name of parsed element.

nsidx Namespace index:

- 0 = attribute is unqualified,

- positive value is user namespace from generated namespace table,
- negative value is predefined namespace like XSD instance and ect.

Returns

Completion status of operation:

- 0 = success,
- negative return value is error.

6.5.1.69 EXTERNXML OSBOOL rtXmlpNeedDecodeAttributes (OSCTXT * *pctxt*)

This function checks if attributes were previously decoded.

Parameters

pctxt Pointer to context block structure.

Returns

State of attributes:

- TRUE = attributes was not decoded,
- FALSE = attributes had been decoded.

6.5.1.70 EXTERNXML int rtXmlpReadBytes (OSCTXT * *pctxt*, OSOCTET * *pbuf*, size_t *nbytes*)

This function reads the specified number of bytes directly from the underlying XML parser stream.

It has no effect on any of the parser state variables.

Parameters

pctxt Pointer to context block structure.

pbuf Pointer to static buffer (byte array) to receive data. The buffer must be at least large enough to hold the requested number of bytes.

nbytes Number of bytes to read.

Returns

State of mode:

- TRUE = is in UTF-8 encoding,
- FALSE = is not in UTF-8 encoding.

6.5.1.71 EXTERNXML void rtXmlpResetMarkedPos (OSCTXT * *pctxt*)

Reset saved decode position.

Parameters

pctxt Pointer to context block structure.

6.5.1.72 EXTERNXML void rtXmlpRewindToMarkedPos (OSCTXT * *pctxt*)

Rewind to saved decode position.

Parameters

pctxt Pointer to context block structure.

6.5.1.73 EXTERNXML int rtXmlpSelectAttribute (OSCTXT * *pctxt*, OSXMLNameFragments * *pAttr*, OSINT16 * *nsidx*, size_t *index*)

This function selects attribute to decode.

Parameters

pctxt Pointer to context block structure.

pAttr Pointer to structure to receive the various parts of an attribute name.

nsidx Pointer to value to receive namespace index:

- 0 = attribute is unqualified,
- positive value is user namespace from generated namespace table,
- negative value is predefined namespace like XSD instance and ect.

index Index of selected attribute.

Returns

Completion status of operation:

- positive or zero return value is attribute index in descriptor table,
- negative return value is error.

6.5.1.74 EXTERNXML void rtXmlpSetListMode (OSCTXT * *pctxt*)

Sets list mode.

Attribute value or element content is decoded by tokens.

Parameters

pctxt Pointer to context block structure.

6.5.1.75 EXTERNXML OSBOOL rtXmlpSetMixedContentMode (OSCTXT * *pctxt*, OSBOOL *mixedContentMode*)

Sets mixed content mode.

Parameters

pctxt Pointer to context block structure.

mixedContentMode Enable/disable mixed mode.

Returns

Previously state of mixed mode.

6.5.1.76 EXTERNXML void rtXmlpSetNamespaceTable (OSCTXT * *pctxt*, const OSUTF8CHAR * *namespaceTable*[], size_t *nmNamespaces*)

Sets user namespace table.

Parameters

- pctxt* Pointer to context block structure.
- namespaceTable* Array of namespace URI strings.
- nmNamespaces* Number of namespaces in table.

6.5.1.77 EXTERNXML void rtXmlpSetWhiteSpaceMode (OSCTXT * *pctxt*, OSXMLWhiteSpaceMode *whiteSpaceMode*)

Sets the whitespace treatment mode.

This mode affects the content and attribute values reading. For example, if OSXMLWSM_COLLAPSE mode is set then all spaces in returned data will be already collapsed.

Parameters

- pctxt* Pointer to context block structure.
- whiteSpaceMode* White space mode.

Returns

Previously set whitespace mode.

6.6 XML run-time error status codes.

This is a list of status codes that can be returned by XML run-time functions and generated code.

Defines

- #define `XML_OK_EOB` 0x7fffffff
End of block marker.
- #define `XML_OK_FRAG` `XML_OK_EOB`
Maintained for backward compatibility.
- #define `XML_E_BASE` -200
Error base.
- #define `XML_E_GENERR` (`XML_E_BASE`)
General error.
- #define `XML_E_INVSYMBOL` (`XML_E_BASE-1`)
An invalid XML symbol (character) was detected at the given point in the parse stream.
- #define `XML_E_TAGMISMATCH` (`XML_E_BASE-2`)
Start/end tag mismatch.
- #define `XML_E_DUPLATTR` (`XML_E_BASE-3`)
Duplicate attribute found.
- #define `XML_E_BADCHARREF` (`XML_E_BASE-4`)
Bad character reference found.
- #define `XML_E_INVMODE` (`XML_E_BASE-5`)
Invalid mode.
- #define `XML_E_UNEXPEOF` (`XML_E_BASE-6`)
Unexpected end of file (document).
- #define `XML_E_NOMATCH` (`XML_E_BASE-7`)
Current tag is not matched to specified one.
- #define `XML_E_ELEMMISRQ` (`XML_E_BASE-8`)
Missing required element.
- #define `XML_E_ELEMSISRQ` (`XML_E_BASE-9`)
Missing required elements.
- #define `XML_E_TOOFWELEMS` (`XML_E_BASE-10`)
The number of elements in a repeating collection was less than the number of elements specified in the XSD minOccurs facet for this type or element.
- #define `XML_E_UNEXPSTARTTAG` (`XML_E_BASE-11`)

Unexpected start tag.

- #define `XML_E_UNEXPENDTAG` (XML_E_BASE-12)
Unexpected end tag.
- #define `XML_E_IDNOTFOU` (XML_E_BASE-13)
Expected identifier not found.
- #define `XML_E_INVTYPEINFO` (XML_E_BASE-14)
Unknown xsi:type.
- #define `XML_E_NSURINOTFOU` (XML_E_BASE-15)
Namespace URI not defined for given prefix.
- #define `XML_E_KEYNOTFOU` (XML_E_BASE-16)
Keyref constraint has some key that not present in refered constraint.
- #define `XML_E_DUPLKEY` (XML_E_BASE-17)
Key or unique constraint has duplicated key.
- #define `XML_E_FLDABSENT` (XML_E_BASE-18)
Some key has no full set of fields.
- #define `XML_E_DUPLFLD` (XML_E_BASE-19)
Some key has more than one value for field.
- #define `XML_E_NOTEMPTY` (XML_E_BASE-20)
An element was not empty when expected.

6.6.1 Detailed Description

This is a list of status codes that can be returned by XML run-time functions and generated code. In many cases, additional information and parameters for the different errors are stored in the context structure at the time the error is raised. This additional information can be output using the `rtxErrPrint` or `rtxErrLogUsingCB` run-time functions.

6.6.2 Define Documentation

6.6.2.1 #define XML_E_BASE -200

Error base.

XML specific errors start at this base number to distinguish them from common and other error types.

Definition at line 60 of file `rtXmlErrCodes.h`.

6.6.2.2 #define XML_E_ELEMMISRQ (XML_E_BASE-8)

Missing required element.

This status code is returned by the decoder when the decoder knows exactly which element is absent.

Definition at line 121 of file rtXmlErrCodes.h.

6.6.2.3 #define XML_E_ELEMSMISRQ (XML_E_BASE-9)

Missing required elements.

This status code is returned by the decoder when the number of elements decoded for a given content model group is less than the required number of elements as specified in the schema.

Definition at line 128 of file rtXmlErrCodes.h.

6.6.2.4 #define XML_E_FLDABSENT (XML_E_BASE-18)

Some key has no full set of fields.

It is not valid for key constraint.

Definition at line 199 of file rtXmlErrCodes.h.

6.6.2.5 #define XML_E_NOMATCH (XML_E_BASE-7)

Current tag is not matched to specified one.

Informational code.

Definition at line 115 of file rtXmlErrCodes.h.

6.6.2.6 #define XML_E_NSURINOTFOU (XML_E_BASE-15)

Namespace URI not defined for given prefix.

A namespace URI was not defined using an xmlns attribute for the given prefix.

Definition at line 166 of file rtXmlErrCodes.h.

6.6.2.7 #define XML_E_TAGMISMATCH (XML_E_BASE-2)

Start/end tag mismatch.

The parsed end tag does not match the start tag that was parsed earlier at this level. Indicates document is not well-formed.

Definition at line 90 of file rtXmlErrCodes.h.

6.6.2.8 #define XML_OK_EOB 0x7fffffff

End of block marker.

Definition at line 51 of file rtXmlErrCodes.h.

6.6.2.9 #define XML_OK_FRAG XML_OK_EOB

Maintained for backward compatibility.

Definition at line 54 of file rtXmlErrCodes.h.

Chapter 7

Data Structure Documentation

7.1 OSDecimalFmt Struct Reference

Data Fields

- OSINT8 **totalDigits**
- OSINT8 **fractionDigits**
- OSINT8 **fractionMinDigits**
- OSINT8 **integerMaxDigits**
- OSINT8 **integerMinDigits**
- OSBOOL **signPresent**
- OSBOOL **pointPresent**
- OSUINT8 **nPatterns**
- const char *const * **patterns**

7.1.1 Detailed Description

Definition at line 247 of file osrxml.h.

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

- [osrxml.h](#)

7.2 OSDoubleFmt Struct Reference

Data Fields

- OSINT8 **totalDigits**
- OSINT8 **fractionDigits**
- OSINT8 **fractionMinDigits**
- OSINT8 **integerMaxDigits**
- OSINT8 **integerMinDigits**
- OSINT8 **expSymbol**
- OSINT16 **expMinValue**
- OSINT16 **expMaxValue**
- OSINT8 **expDigits**
- OSBOOL **signPresent**
- OSBOOL **pointPresent**
- OSBOOL **expPresent**
- OSBOOL **expSignPresent**

7.2.1 Detailed Description

Definition at line 268 of file osrxml.h.

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

- [osrxml.h](#)

7.3 OSIntegerFmt Struct Reference

Data Fields

- OSINT8 `integerMaxDigits`
- OSBOOL `signPresent`

7.3.1 Detailed Description

Definition at line 240 of file `osrxml.h`.

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

- [osrxml.h](#)

7.4 OSXMLCtxtInfo Struct Reference

Data Fields

- OSFreeCtxtAppInfoPtr **pFreeFunc**
- OSResetCtxtAppInfoPtr **pResetFunc**
- OSUTF8CHAR * **schemaLocation**
- OSUTF8CHAR * **noNSSchemaLoc**
- OSUTF8CHAR * **xsiTypeAttr**
- OSXMLEncoding **encoding**
- OSRTDList **namespaceList**
- OSRTDList **encodedNSList**
- OSRTDList **sortedAttrList**
- OSXMLNSPfxLinkStack **nsPfxLinkStack**
- OSXMLNSURITable **nsURITable**
- OSRTMEMBUF **memBuf**
- OSINT32 **mSaxLevel**
- OSINT32 **mSkipLevel**
- OSUINT32 **maxSaxErrors**
- OSUINT32 **errorsCnt**
- OSUINT8 **indent**
- OSBOOL **mbCdataProcessed**
- char **indentChar**
- OSUINT8 **soapVersion**
- [OSXMLFacets](#) **facets**
- const OSUTF8CHAR * **encodingStr**
- OSXMLBOM **byteOrderMark**
- struct OSXMLReader * **pXmlPPReader**
- OSRTBuffer **savedBuffer**
- OSRTFLAGS **savedFlags**
- OSOCTET * **attrsBuff**
- size_t **attrsBuffSize**
- size_t **attrStartPos**

7.4.1 Detailed Description

Definition at line 175 of file `osrxml.h`.

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

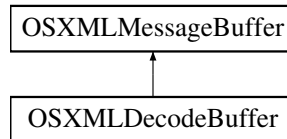
- [osrxml.h](#)

7.5 OSXMLDecodeBuffer Class Reference

The [OSXMLDecodeBuffer](#) class is derived from the [OSXMLMessageBuffer](#) base class.

```
#include <OSXMLDecodeBuffer.h>
```

Inheritance diagram for OSXMLDecodeBuffer:



Public Member Functions

- [OSXMLDecodeBuffer](#) (const char *xmlFile)
This version of the [OSXMLDecodeBuffer](#) constructor takes a name of a file that contains XML data to be decoded and constructs a buffer.
- [OSXMLDecodeBuffer](#) (const OSOCTET *msgbuf, size_t bufsiz)
This version of the [OSXMLDecodeBuffer](#) constructor takes parameters describing a message in memory to be decoded and constructs a buffer.
- [OSXMLDecodeBuffer](#) (OSRTInputStream &inputStream)
This version of the [OSXMLDecodeBuffer](#) constructor takes a reference to the OSInputStream object.
- EXTXMLMETHOD int [decodeXML](#) (OSXMLReaderClass *pReader)
This method decodes an XML message associated with this buffer.
- virtual EXTXMLMETHOD int [init](#) ()
This method initializes the decode message buffer.
- EXTXMLMETHOD int [parseElementName](#) (OSUTF8CHAR **ppName)
This method parses the initial tag from an XML message.
- EXTXMLMETHOD int [parseElemQName](#) (OSXMLQName *pQName)
This method parses the initial tag from an XML message.
- EXTXMLMETHOD OSUINT32 [setMaxErrors](#) (OSUINT32 maxErrors)
This method sets the maximum number of errors returned by the SAX parser.
- virtual OSBOOL [isA](#) (int bufferType)
This is a virtual method that must be overridden by derived classes to allow identification of the class.

Protected Attributes

- OSRTInputStream * [mpInputStream](#)
Input source for message to be decoded.

- OSBOOL `mbOwnStream`

This is set to true if this object creates the underlying stream object.

7.5.1 Detailed Description

The `OSXMLDecodeBuffer` class is derived from the `OSXMLMessageBuffer` base class. It contains variables and methods specific to decoding XML messages. It is used to manage an input buffer or stream containing a message to be decoded.

Note that the XML decode buffer object does not take a message buffer argument because buffer management is handled by the XML parser.

Definition at line 45 of file `OSXMLDecodeBuffer.h`.

7.5.2 Constructor & Destructor Documentation

7.5.2.1 `OSXMLDecodeBuffer::OSXMLDecodeBuffer (const char * xmlFile)`

This version of the `OSXMLDecodeBuffer` constructor takes a name of a file that contains XML data to be decoded and constructs a buffer.

Parameters

xmlFile A pointer to name of file to be decoded.

7.5.2.2 `OSXMLDecodeBuffer::OSXMLDecodeBuffer (const OSOCTET * msgbuf, size_t bufsiz)`

This version of the `OSXMLDecodeBuffer` constructor takes parameters describing a message in memory to be decoded and constructs a buffer.

Parameters

msgbuf A pointer to a buffer containing an XML message.

bufsiz Size of the message buffer.

7.5.2.3 `OSXMLDecodeBuffer::OSXMLDecodeBuffer (OSRTInputStream & inputStream)`

This version of the `OSXMLDecodeBuffer` constructor takes a reference to the `OSInputStream` object.

The stream is assumed to have been previously initialized to point at an encoded XML message.

Parameters

inputStream reference to the `OSInputStream` object

7.5.3 Member Function Documentation

7.5.3.1 `EXTXMLMETHOD int OSXMLDecodeBuffer::decodeXML (OSXMLReaderClass * pReader)`

This method decodes an XML message associated with this buffer.

Returns

stat Status of the operation. Possible values are 0 if successful or one of the negative error status codes defined in Appendix A of the C/C++ runtime Common Functions Reference Manual.

Parameters

pReader Pointer to OSXMLReaderClass object.

Returns

Completion status.

7.5.3.2 virtual EXTXMLMETHOD int OSXMLDecodeBuffer::init () [virtual]

This method initializes the decode message buffer.

Returns

Completion status of operation:

- 0 (0) = success,
- negative return value is error.

7.5.3.3 virtual OSBOOL OSXMLDecodeBuffer::isA (int *bufferType*) [inline, virtual]

This is a virtual method that must be overridden by derived classes to allow identification of the class.

The base class variant is abstract. This method matches an enumerated identifier defined in the base class. One identifier is declared for each of the derived classes.

Parameters

bufferType Enumerated identifier specifying a derived class. This type is defined as a public access type in the OSRTMessageBufferIF base interface. Possible values include BEREncode, BERDecode, PEREncode, PERDecode, XMLEncode, and XMLDecode.

Returns

Boolean result of the match operation. True if the *bufferType* argument is XMLDecode. argument.

Definition at line 161 of file OSXMLDecodeBuffer.h.

7.5.3.4 EXTXMLMETHOD int OSXMLDecodeBuffer::parseElementName (OSUTF8CHAR ** *ppName*)

This method parses the initial tag from an XML message.

If the tag is a QName, only the local part of the name is returned.

Parameters

ppName Pointer to a pointer to receive decoded UTF-8 string. Dynamic memory is allocated for the variable using the `rtxMemAlloc` function.

Returns

Completion status of operation:

- 0 = success,
- negative return value is error.

7.5.3.5 EXTXMLMETHOD int OSXMLDecodeBuffer::parseElemQName (OSXMLQName * *pQName*)

This method parses the initial tag from an XML message.

Parameters

pQName Pointer to a QName structure to receive parsed name prefix and local name. Dynamic memory is allocated for both name parts using the `rtxMemAlloc` function.

Returns

Completion status of operation:

- 0 = success,
- negative return value is error.

7.5.3.6 EXTXMLMETHOD OSUINT32 OSXMLDecodeBuffer::setMaxErrors (OSUINT32 *maxErrors*)

This method sets the maximum number of errors returned by the SAX parser.

Parameters

maxErrors The desired number of maximum errors.

Returns

The previously set maximum number of errors.

7.5.4 Field Documentation

7.5.4.1 OSBOOL OSXMLDecodeBuffer::mbOwnStream [protected]

This is set to true if this object creates the underlying stream object.

In this case, the stream will be deleted in the object's destructor.

Definition at line 57 of file `OSXMLDecodeBuffer.h`.

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

- [OSXMLDecodeBuffer.h](#)

7.6 OSXMLElemIDRec Struct Reference

Data Fields

- [OSXMLElemDescr](#) descr
- OSUINT16 id

7.6.1 Detailed Description

Definition at line 127 of file osrtxml.h.

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

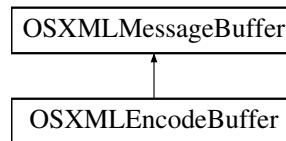
- [osrtxml.h](#)

7.7 OSXMLEncodeBuffer Class Reference

The `OSXMLEncodeBuffer` class is derived from the `OSXMLMessageBuffer` base class.

```
#include <OSXMLEncodeBuffer.h>
```

Inheritance diagram for `OSXMLEncodeBuffer`:



Public Member Functions

- EXTXMLMETHOD `OSXMLEncodeBuffer ()`
Default constructor.
- EXTXMLMETHOD `OSXMLEncodeBuffer (OSOCKET *pMsgBuf, size_t msgBufLen)`
This constructor allows a static message buffer to be specified to receive the encoded message.
- int `addXMLHeader (const OSUTF8CHAR *version=OSUTF8("1.0"), const OSUTF8CHAR *encoding=OSUTF8(OSXMLHDRUTF8), OSBOOL newLine=TRUE)`
This method adds XML header text to the output buffer with the given version number and encoding attributes.
- EXTXMLMETHOD int `addXMLText (const OSUTF8CHAR *text)`
This method adds encoded XML text to the encode buffer.
- virtual size_t `getMsgLen ()`
This method returns the length of a previously encoded XML message.
- virtual EXTXMLMETHOD int `init ()`
This method reinitializes the encode buffer to allow a new message to be encoded.
- virtual OSBOOL `isA (int bufferType)`
This is a virtual method that must be overridden by derived classes to allow identification of the class.
- void `nullTerminate ()`
This method adds a null-terminator character (") at the current buffer position.
- EXTXMLMETHOD void `setFragment (OSBOOL value=TRUE)`
This method sets a flag indicating that the data is to be encoded as an XML fragment instead of as a complete XML document (i.e.
- virtual EXTXMLMETHOD long `write (const char *filename)`
This method writes the encoded message to the given file.
- virtual EXTXMLMETHOD long `write (FILE *fp)`
This version of the write method writes to a file that is specified by a FILE pointer.

Protected Member Functions

- **OSXMLEncodeBuffer** (OSRTContext *pContext)

7.7.1 Detailed Description

The [OSXMLEncodeBuffer](#) class is derived from the [OSXMLMessageBuffer](#) base class. It contains variables and methods specific to encoding XML messages. It is used to manage the buffer into which a message is to be encoded.

Definition at line 38 of file OSXMLEncodeBuffer.h.

7.7.2 Constructor & Destructor Documentation

7.7.2.1 EXTXMLMETHOD OSXMLEncodeBuffer::OSXMLEncodeBuffer (OSOCKET *pMsgBuf, size_t msgBufLen)

This constructor allows a static message buffer to be specified to receive the encoded message.

Parameters

- pMsgBuf* A pointer to a fixed size message buffer to receive the encoded message.
msgBufLen Size of the fixed-size message buffer.

7.7.3 Member Function Documentation

7.7.3.1 int OSXMLEncodeBuffer::addXMLHeader (const OSUTF8CHAR * version = OSUTF8 ("1.0"), const OSUTF8CHAR * encoding = OSUTF8 (OSXMLHDRUTF8), OSBOOL newLine = TRUE)

This method adds XML header text to the output buffer with the given version number and encoding attributes.

Parameters

- version* XML version (default is 1.0)
encoding Character encoding (default is UTF-8)
newLine Add newline char at end of header

Returns

Zero if success or negative error code.

7.7.3.2 EXTXMLMETHOD int OSXMLEncodeBuffer::addXMLText (const OSUTF8CHAR * text)

This method adds encoded XML text to the encode buffer.

It is assumed that the user has already processed the text to do character escaping, etc.. The text is copied directly to the buffer as-is.

Parameters

- text* Encoded XML text to be added to the buffer.

Returns

Zero if success or negative error code.

7.7.3.3 **virtual size_t OSXMLEncodeBuffer::getMsgLen () [inline, virtual]**

This method returns the length of a previously encoded XML message.

Returns

Length of the XML message encapsulated within this buffer object.

Definition at line 90 of file OSXMLEncodeBuffer.h.

7.7.3.4 **virtual EXTXMLMETHOD int OSXMLEncodeBuffer::init () [virtual]**

This method reinitializes the encode buffer to allow a new message to be encoded.

This makes it possible to reuse one message buffer object in a loop to encode multiple messages. After this method is called, any previously encoded message in the buffer will be overwritten on the next encode call.

7.7.3.5 **virtual OSBOOL OSXMLEncodeBuffer::isA (int *bufferType*) [inline, virtual]**

This is a virtual method that must be overridden by derived classes to allow identification of the class.

The base class variant is abstract. This method matches an enumerated identifier defined in the base class. One identifier is declared for each of the derived classes.

Parameters

bufferType Enumerated identifier specifying a derived class. This type is defined as a public access type in the OSRTMessageBufferIF base interface. Possible values include BEREncode, BERDecode, PEREncode, PERDecode, XMLEncode, and XMLDecode.

Returns

Boolean result of the match operation. True if the *bufferType* argument is XMLEncode. argument.

Definition at line 118 of file OSXMLEncodeBuffer.h.

7.7.3.6 **EXTXMLMETHOD void OSXMLEncodeBuffer::setFragment (OSBOOL *value* = TRUE)**

This method sets a flag indicating that the data is to be encoded as an XML fragment instead of as a complete XML document (i.e.

an XML header will not be added).

7.7.3.7 **virtual EXTXMLMETHOD long OSXMLEncodeBuffer::write (FILE **fp*) [virtual]**

This version of the write method writes to a file that is specified by a FILE pointer.

Parameters

fp Pointer to FILE structure to which the encoded message will be written.

Returns

Number of octets actually written. This value may be less than the actual message length if an error occurs.

7.7.3.8 virtual EXXMLMETHOD long OSXMLEncodeBuffer::write (const char **filename*) [virtual]

This method writes the encoded message to the given file.

Parameters

filename The name of file to which the encoded message will be written.

Returns

Number of octets actually written. This value may be less than the actual message length if an error occurs.

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

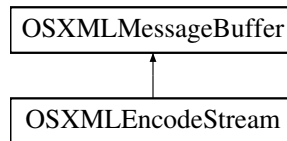
- [OSXMLEncodeBuffer.h](#)

7.8 OSXMLEncodeStream Class Reference

The `OSXMLEncodeStream` class is derived from the `OSXMLMessageBuffer` base class.

```
#include <OSXMLEncodeStream.h>
```

Inheritance diagram for `OSXMLEncodeStream`:



Public Member Functions

- EXTXMLMETHOD `OSXMLEncodeStream` (`OSRTOutputStream &outputStream`)
This version of the `OSXMLEncodeStream` constructor takes a reference to the `OSOutputStream` object.
- `OSXMLEncodeStream` (`OSRTOutputStream *pOutputStream`, `OSBOOL ownStream=TRUE`)
This version of the `OSXMLEncodeStream` constructor takes a pointer to the `OSRTOutputStream` object.
- EXTXMLMETHOD `int encodeAttr` (`const OSUTF8CHAR *name`, `const OSUTF8CHAR *value`)
This function encodes an attribute in which the name and value are given as null-terminated UTF-8 strings.
- EXTXMLMETHOD `int encodeText` (`const OSUTF8CHAR *value`)
This method encodes XML textual content.
- EXTXMLMETHOD `int endDocument` ()
This method ends an XML document by flushing any remaining data to the stream.
- EXTXMLMETHOD `int endElement` (`const OSUTF8CHAR *elemName`, `OSXMLNamespace *pNS=0`)
This method encodes an end element tag value (`</elemName>`).
- virtual EXTXMLMETHOD `int init` ()
This method reinitializes the encode stream to allow a new message to be encoded.
- virtual `OSBOOL isA` (`int bufferType`)
This is a virtual method that must be overridden by derived classes to allow identification of the class.
- virtual `const OSOCTET * getMsgPtr` ()
This is a virtual method that must be overridden by derived classes to allow access to the stored message.
- `OSRTOutputStream * getStream` () `const`
This method returns the output stream associated with the object.
- EXTXMLMETHOD `int startDocument` ()
This method writes information to start an XML document to the encode stream.
- EXTXMLMETHOD `int startElement` (`const OSUTF8CHAR *elemName`, `OSXMLNamespace *pNS=0`, `OSRTDList *pNSAttrs=0`, `OSBOOL terminate=FALSE`)

This method writes information to start an XML element to the encode stream.

- EXTXMLMETHOD int [termStartElement](#) ()

This method terminates a currently open XML start element by adding either a '>' or '/>' (if empty) terminator.

Protected Attributes

- OSRTOutputStream * [mpStream](#)

A pointer to an OSRTOutputStream object.

- OSBOOL [mbOwnStream](#)

TRUE if the OSXMLEncodeStream object will close and free the stream in the destructor.

- OSCTXT * [mpCtxt](#)

Internal pointer to the context structure associated with the stream for making C function calls.

7.8.1 Detailed Description

The [OSXMLEncodeStream](#) class is derived from the [OSXMLMessageBuffer](#) base class. It contains variables and methods specific to streaming encoding XML messages. It is used to manage the stream into which a message is to be encoded.

Definition at line 40 of file OSXMLEncodeStream.h.

7.8.2 Constructor & Destructor Documentation

7.8.2.1 EXTXMLMETHOD OSXMLEncodeStream::OSXMLEncodeStream (OSRTOutputStream & *outputStream*)

This version of the [OSXMLEncodeStream](#) constructor takes a reference to the OSOutputStream object.

The stream is assumed to have been previously initialized.

Parameters

outputStream reference to the OSOutputStream object

7.8.2.2 OSXMLEncodeStream::OSXMLEncodeStream (OSRTOutputStream * *pOutputStream*, OSBOOL *ownStream* = TRUE)

This version of the [OSXMLEncodeStream](#) constructor takes a pointer to the OSRTOutputStream object.

The stream is assumed to have been previously initialized. If *ownStream* is set to TRUE, then stream will be closed and freed in the destructor.

Parameters

pOutputStream reference to the OSOutputStream object

ownStream set ownership for the passed stream object.

7.8.3 Member Function Documentation

7.8.3.1 EXTXMLMETHOD int OSXMLEncodeStream::encodeAttr (const OSUTF8CHAR * *name*, const OSUTF8CHAR * *value*)

This function encodes an attribute in which the name and value are given as null-terminated UTF-8 strings.

Parameters

name Attribute name.

value UTF-8 string value to be encoded.

Returns

Completion status of operation:

- 0 = success,
- negative return value is error.

7.8.3.2 EXTXMLMETHOD int OSXMLEncodeStream::encodeText (const OSUTF8CHAR * *value*)

This method encodes XML textual content.

XML metadata characters such as '<' are escaped. The input value is specified in UTF-8 character format but may be transformed if a different character encoding is enabled.

Parameters

value UTF-8 string value to be encoded.

Returns

Completion status of operation:

- 0 = success,
- negative return value is error.

7.8.3.3 EXTXMLMETHOD int OSXMLEncodeStream::endElement (const OSUTF8CHAR * *elemName*, OSXMLNamespace * *pNS* = 0)

This method encodes an end element tag value (</elemName>).

Parameters

elemName XML element name.

pNS XML namespace information (prefix and URI).

Returns

Completion status of operation:

- 0 = success,
- negative return value is error.

7.8.3.4 **virtual const OSOCTET* OSXMLEncodeStream::getMsgPtr () [inline, virtual]**

This is a virtual method that must be overridden by derived classes to allow access to the stored message. The base class implementation returns a null value.

Returns

A pointer to the stored message.

Definition at line 154 of file OSXMLEncodeStream.h.

7.8.3.5 **OSRTOutputStream* OSXMLEncodeStream::getStream () const [inline]**

This method returns the output stream associated with the object.

Returns

A pointer to the output stream.

Definition at line 161 of file OSXMLEncodeStream.h.

7.8.3.6 **virtual EXTXMLMETHOD int OSXMLEncodeStream::init () [virtual]**

This method reinitializes the encode stream to allow a new message to be encoded.

This makes it possible to reuse one stream object in a loop to encode multiple messages.

7.8.3.7 **virtual OSBOOL OSXMLEncodeStream::isA (int *bufferType*) [inline, virtual]**

This is a virtual method that must be overridden by derived classes to allow identification of the class.

The base class variant is abstract. This method matches an enumerated identifier defined in the base class. One identifier is declared for each of the derived classes.

Parameters

bufferType Enumerated identifier specifying a derived class. This type is defined as a public access type in the OSRTMessageBufferIF base interface. Possible values include BEREncode, BERDecode, PEREncode, PERDecode, XMLEncode, and XMLDecode.

Returns

Boolean result of the match operation. True if the *bufferType* argument is XMLEncode. *argument*.

Definition at line 143 of file OSXMLEncodeStream.h.

7.8.3.8 **EXTXMLMETHOD int OSXMLEncodeStream::startDocument ()**

This method writes information to start an XML document to the encode stream.

This includes the XML header declaration.

7.8.3.9 EXTXMLMETHOD int OSXMLEncodeStream::startElement (const OSUTF8CHAR * *elemName*, OSXMLNamespace * *pNS* = 0, OSRTDList * *pNSAttrs* = 0, OSBOOL *terminate* = FALSE)

This method writes information to start an XML element to the encode stream.

It can leave the element open so that attributes can be added.

Parameters

elemName XML element name.

pNS XML namespace information (prefix and URI). If the prefix is NULL, this method will search the context's namespace stack for a prefix to use.

pNSAttrs List of namespace attributes to be added to element.

terminate Add closing '>' character.

Returns

Completion status of operation:

- 0 = success,
- negative return value is error.

7.8.3.10 EXTXMLMETHOD int OSXMLEncodeStream::termStartElement ()

This method terminates a currently open XML start element by adding either a '>' or '/>' (if empty) terminator.

It will also add XSI attributes to the element. Note that it is important to use this method to terminate the element rather than writing a closing angle bracket text to the stream directly due to the way state is maintained in the context.

Returns

Completion status of operation:

- 0 = success,
- negative return value is error.

7.8.4 Field Documentation

7.8.4.1 OSBOOL OSXMLEncodeStream::mbOwnStream [protected]

TRUE if the [OSXMLEncodeStream](#) object will close and free the stream in the destructor.

Definition at line 47 of file OSXMLEncodeStream.h.

7.8.4.2 OSCTXT* OSXMLEncodeStream::mpCtxt [protected]

Internal pointer to the context structure associated with the stream for making C function calls.

Definition at line 51 of file OSXMLEncodeStream.h.

7.8.4.3 OSRTOutputStream* OSXMLEncodeStream::mpStream [protected]

A pointer to an OSRTOutputStream object.

Definition at line 43 of file OSXMLEncodeStream.h.

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

- [OSXMLEncodeStream.h](#)

7.9 OSXMLFacets Struct Reference

Data Fields

- int **totalDigits**
- int **fractionDigits**

7.9.1 Detailed Description

Definition at line 103 of file osrxml.h.

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

- [osrxml.h](#)

7.10 OSXMLGroupDesc Struct Reference

Data Fields

- int **row**
- int **num**
- int **anyCase**

7.10.1 Detailed Description

Definition at line 132 of file osrxml.h.

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

- [osrxml.h](#)

7.11 OSXMLItemDescr Struct Reference

Data Fields

- [OSXMLStrFragment](#) **localName**
- OSINT16 **nsidx**

7.11.1 Detailed Description

Definition at line 119 of file osrxml.h.

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

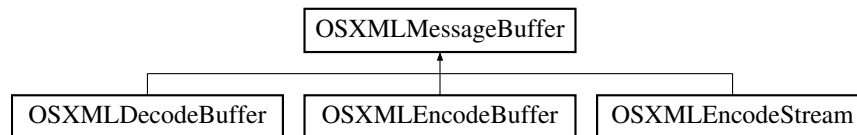
- [osrxml.h](#)

7.12 OSXMLMessageBuffer Class Reference

The XML message buffer class is derived from the OSMessageBuffer base class.

```
#include <OSXMLMessageBuffer.h>
```

Inheritance diagram for OSXMLMessageBuffer:



Public Member Functions

- virtual EXTXMLMETHOD void * [getAppInfo](#) ()
The getAppInfo method returns the pointer to application context information.
- EXTXMLMETHOD int [getIndent](#) ()
This method returns current XML output indent value.
- EXTXMLMETHOD int [getIndentChar](#) ()
This method returns current XML output indent character value (default is space).
- EXTXMLMETHOD OSBOOL [getWriteBOM](#) ()
This function returns whether writing the Unicode BOM is currently enabled or disabled.
- virtual EXTXMLMETHOD void [setNamespace](#) (const OSUTF8CHAR *prefix, const OSUTF8CHAR *uri, OSRTDList *pNSAttrs=0)
This method sets a namespace in the context namespace list.
- virtual EXTXMLMETHOD void [setAppInfo](#) (void *pXMLInfo)
This method sets application specific context information within the common context structure.
- EXTXMLMETHOD void [setFormatting](#) (OSBOOL doFormatting)
This method sets XML output formatting to the given value.
- EXTXMLMETHOD void [setIndent](#) (OSUINT8 indent)
This method sets XML output indent to the given value.
- EXTXMLMETHOD void [setIndentChar](#) (char indentChar)
This method sets XML output indent character to the given value.
- EXTXMLMETHOD void [setWriteBOM](#) (OSBOOL write)
This method sets whether to write the Unicode byte order mark before the XML header.

Protected Member Functions

- EXTXMLMETHOD [OSXMLMessageBuffer](#) (Type *bufferType*, OSRTCContext **pContext*=0)

The protected constructor creates a new context and sets the buffer class type.

7.12.1 Detailed Description

The XML message buffer class is derived from the OSMessageBuffer base class. It is the base class for the [OSXML-LEncodeBuffer](#) and [OSXMLDecodeBuffer](#) classes. It contains variables and methods specific to encoding or decoding XML messages. It is used to manage the buffer into which a message is to be encoded or decoded.

Definition at line 42 of file OSXMLMessageBuffer.h.

7.12.2 Constructor & Destructor Documentation

- 7.12.2.1 EXTXMLMETHOD [OSXMLMessageBuffer::OSXMLMessageBuffer](#) (Type *bufferType*, OSRTCContext * *pContext* = 0) [**protected**]

The protected constructor creates a new context and sets the buffer class type.

Parameters

bufferType Type of message buffer that is being created (for example, XMLEncode or XMLDecode).

pContext Pointer to a context to use. If NULL, new context will be allocated.

7.12.3 Member Function Documentation

- 7.12.3.1 EXTXMLMETHOD [int OSXMLMessageBuffer::getIndent](#) ()

This method returns current XML output indent value.

Returns

Current indent value (≥ 0) if OK, negative status code if error.

- 7.12.3.2 EXTXMLMETHOD [int OSXMLMessageBuffer::getIndentChar](#) ()

This method returns current XML output indent character value (default is space).

Returns

Current indent character (> 0) if OK, negative status code if error.

- 7.12.3.3 EXTXMLMETHOD [OSBOOL OSXMLMessageBuffer::getWriteBOM](#) ()

This function returns whether writing the Unicode BOM is currently enabled or disabled.

Returns

TRUE if writing BOM is enabled, FALSE otherwise.

**7.12.3.4 virtual EXTXMLMETHOD void OSXMLMessageBuffer::setAppInfo (void * *pXMLInfo*)
[virtual]**

This method sets application specific context information within the common context structure.

For XML encoding/decoding, this is a structure of type *OSXMLCtxtInfo*.

Parameters

pXMLInfo Pointer to context information.

7.12.3.5 EXTXMLMETHOD void OSXMLMessageBuffer::setFormatting (OSBOOL *doFormatting*)

This method sets XML output formatting to the given value.

If TRUE (the default), the XML document is formatted with indentation and newlines. If FALSE, all whitespace between elements is suppressed. Turning formatting off can provide more compressed documents and also a more canonical representation which is important for security applications.

Parameters

doFormatting Boolean value indicating if formatting is to be done

Returns

Status of operation: 0 if OK, negative status code if error.

7.12.3.6 EXTXMLMETHOD void OSXMLMessageBuffer::setIndent (OSUINT8 *indent*)

This method sets XML output indent to the given value.

Parameters

indent Number of spaces per indent. Default is 3.

7.12.3.7 EXTXMLMETHOD void OSXMLMessageBuffer::setIndentChar (char *indentChar*)

This method sets XML output indent character to the given value.

Parameters

indentChar Indent character. Default is space.

**7.12.3.8 virtual EXTXMLMETHOD void OSXMLMessageBuffer::setNamespace (const OSUTF8CHAR *
prefix, const OSUTF8CHAR * *uri*, OSRTDList * *pNSAttrs* = 0) [virtual]**

This method sets a namespace in the context namespace list.

If the given namespace URI does not exist in the list, the namespace is added. If the URI is found, the value of the namespace prefix will be changed to the given prefix.

Parameters

prefix Namespace prefix

uri Namespace URI

pNSAttrs Namespace list to which namespace is to be added

7.12.3.9 EXTMLMETHOD void OSXMLMessageBuffer::setWriteBOM (OSBOOL *write*)

This method sets whether to write the Unicode byte order mark before the XML header.

Parameters

write TRUE if BOM should be written, FALSE otherwise.

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

- [OSXMLMessageBuffer.h](#)

7.13 OSXMLNameFragments Struct Reference

Data Fields

- [OSXMLStrFragment](#) **mQName**
- [OSXMLStrFragment](#) **mLocalName**
- [OSXMLStrFragment](#) **mPrefix**

7.13.1 Detailed Description

Definition at line 113 of file osrxml.h.

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

- [osrxml.h](#)

7.14 OSXMLQName Struct Reference

Data Fields

- const OSUTF8CHAR * **nsPrefix**
- const OSUTF8CHAR * **ncName**

7.14.1 Detailed Description

Definition at line 233 of file osrxml.h.

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

- [osrxml.h](#)

7.15 OSXMLSortedAttrOffset Struct Reference

Data Fields

- size_t **offset**
- size_t **length**
- size_t **prefixLength**
- size_t **nameLength**

7.15.1 Detailed Description

Definition at line 297 of file osrtxml.h.

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

- [osrtxml.h](#)

7.16 OSXMLStrFragment Struct Reference

Data Fields

- const OSUTF8CHAR * **value**
- size_t **length**

7.16.1 Detailed Description

Definition at line 108 of file osrxml.h.

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

- [osrxml.h](#)

7.17 OSXSDAnyType Struct Reference

Data Fields

- OSXMLSTRING **value**
- OSRTDList **attrs**

7.17.1 Detailed Description

Definition at line 138 of file osrxml.h.

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

- [osrxml.h](#)

Chapter 8

File Documentation

8.1 osrtxml.h File Reference

XML low-level C encode/decode functions.

```
#include "rtxsrc/rtxCommon.h"  
#include "rtxmlsrc/rtSaxDefs.h"  
#include "rtxsrc/rtxDList.h"  
#include "rtxsrc/rtxMemBuf.h"  
#include "rtxmlsrc/rtXmlExternDefs.h"  
#include "rtxmlsrc/rtXmlErrCodes.h"  
#include "rtxmlsrc/rtXmlNamespace.h"
```

Data Structures

- struct [OSXMLFacets](#)
- struct [OSXMLStrFragment](#)
- struct [OSXMLNameFragments](#)
- struct [OSXMLItemDescr](#)
- struct [OSXMLElemIDRec](#)
- struct [OSXMLGroupDesc](#)
- struct [OSXSDAnyType](#)
- struct [OSXMLCtxtInfo](#)
- struct [OSXMLQName](#)
- struct [OSIntegerFmt](#)
- struct [OSDecimalFmt](#)
- struct [OSDoubleFmt](#)
- struct [OSXMLSortedAttrOffset](#)

Defines

- #define [OSXMLNS12](#)
- #define [OSUPCASE](#) 0x00008000

- #define **OSTERMSTART** 0x00004000
- #define **OEMPTYELEM** 0x00002000
- #define **OSQUALATTR** 0x00001000
- #define **OSXMLFRAG** 0x00000800
- #define **OSXMLNSSET** 0x00000400
- #define **OSXMLC14N** 0x00000200
- #define **OSXSIATTR** 0x00000100
- #define **OSXMLNOCMPNS** 0x00000080
- #define **OSXSINIL** 0x00000040
- #define **OSXMLNOBLANKS** 0x00000020
- #define **OSHASDEFAULT** 0x00000010
- #define **OSASN1XER** 0x00000008
- #define **OSXMLFRAGSEQUAL**(frag1, frag2) (frag1.length==frag2.length && !memcmp(frag1.value,frag2.value,frag1.length))
- #define **OSXMLQNAMEEQUALS**(xnamefrag, qnametext)
- #define **OSXMLSETUTF8DECPTR**(pctxt, str)
- #define **IS_XMLNSATTR**(name)
- #define **IS_XSIATTR**(name)
- #define **OSXMLINDENT** 3
- #define **rtXmlErrAddStrParm** rtxErrAddStrParm
- #define **rtXPrintNSAttrs**(name, data) rtXPrintNSAttrs(name,&data)
- #define **rtXmlFinalizeMemBuf**(pMemBuf)
- #define **rtXmlGetEncBufPtr**(pctxt) (pctxt)->buffer.data
This macro returns the start address of the encoded XML message.
- #define **rtXmlGetEncBufLen**(pctxt) (pctxt)->buffer.byteIndex
This macro returns the length of the encoded XML message.
- #define **OSXMLREALENC_OBJSYS** 0x1F
- #define **OSXMLREALENC_BXER** 0x10
- #define **OSXMLREALENC_EXERMODS** 0x1B
- #define **OSXMLREALENC_EXERDECIMAL** 0x03

Typedefs

- typedef struct **OSXMLFacets** **OSXMLFacets**
- typedef struct **OSXMLItemDescr** **OSXMLItemDescr**
- typedef **OSXMLItemDescr** **OSXMLAttrDescr**
- typedef **OSXMLItemDescr** **OSXMLElemDescr**
- typedef struct **OSXMLElemIDRec** **OSXMLElemIDRec**
- typedef struct **OSXMLGroupDesc** **OSXMLGroupDesc**
- typedef struct **OSXSDAnyType** **OSXSDAnyType**
- typedef struct **OSXMLQName** **OSXMLQName**
- typedef struct **OSIntegerFmt** **OSIntegerFmt**
- typedef struct **OSDecimalFmt** **OSDecimalFmt**
- typedef struct **OSDoubleFmt** **OSDoubleFmt**

Enumerations

- enum **OSXMLEncoding** {
OSXMLUTF8, OSXMLUTF16, OSXMLUTF16BE, OSXMLUTF16LE,
OSXMLLATIN1 }
 - enum **OSXMLSOAPMsgType** { OSSOAPNONE, OSSOAPHEADER, OSSOAPBODY, OSSOAPFAULT }
 - enum **OSXMLBOM** {
OSXMLBOM_NO_BOM, OSXMLBOM_UTF32_BE, OSXMLBOM_UTF32_LE, OSXMLBOM_UTF16_BE,
OSXMLBOM_UTF16_LE, OSXMLBOM_UTF8, OSXMLBOM_CHECK }
 - enum **OSXMLREALEncoding** { OSXMLREALOBJSYS, OSXMLREALBXER, OSXMLREALEXERMODS, OSXMLREALEXERDEC }
 - enum **OSXMLState** {
OSXMLINIT, OSXMLHEADER, OSXMLSTART, OSXMLATTR,
OSXMLDATA, OSXMLEND }
 - enum **OSXMLWhiteSpaceMode** { OSXMLWSM_PRESERVE = 0, OSXMLWSM_REPLACE, OSXMLWSM_COLLAPSE }
- Whitespace treatment options.*

Functions

- EXTERNXML int **rtXmlInitContext** (OSCTXT *pctxt)
This function initializes a context variable for XML encoding or decoding.
- EXTERNXML int **rtXmlInitContextUsingKey** (OSCTXT *pctxt, const OSOCTET *key, size_t keylen)
This function initializes a context using a run-time key.
- EXTERNXML int **rtXmlInitCtxtAppInfo** (OSCTXT *pctxt)
This function initializes the XML application info section of the given context.
- EXTERNXML int **rtXmlCreateFileInputSource** (OSCTXT *pctxt, const char *filepath)
This function creates an XML document file input source.
- EXTERNXML OSBOOL **rtXmlCmpQName** (const OSUTF8CHAR *qname1, const OSUTF8CHAR *name2, const OSUTF8CHAR *nsPrefix2)
- EXTERNXML int **rtXmlGetBase64StrDecodedLen** (const OSUTF8CHAR *inpdata, size_t srcDataSize, size_t *pNumOcts, size_t *pSrcDataLen)
- EXTERNXML void **rtXmlMemFreeAnyAttrs** (OSCTXT *pctxt, OSRTDList *pAnyAttrList)
This function frees a list of anyAttribute that is a member of OSXSDAnyType structure.
- EXTERNXML int **rtXmlDecBase64Binary** (OSRTMEMBUF *pMemBuf, const OSUTF8CHAR *inpdata, int length)
This function decodes the contents of a Base64-encoded binary data type into a memory buffer.
- EXTERNXML int **rtXmlDecBase64Str** (OSCTXT *pctxt, OSOCTET *pvalue, OSUINT32 *pnocts, OSINT32 bufsize)
This function decodes a contents of a Base64-encode binary string into a static memory structure.

- EXTERNXML int [rtXmlDecBase64StrValue](#) (OSCTXT *pctxt, OSOCTET *pvalue, OSUINT32 *pnocts, size_t bufSize, size_t srcDataLen)
This function decodes a contents of a Base64-encode binary string into the specified octet array.
- EXTERNXML int [rtXmlDecBigInt](#) (OSCTXT *pctxt, const OSUTF8CHAR **ppvalue)
This function will decode a variable of the XSD integer type.
- EXTERNXML int [rtXmlDecBool](#) (OSCTXT *pctxt, OSBOOL *pvalue)
This function decodes a variable of the boolean type.
- EXTERNXML int [rtXmlDecDate](#) (OSCTXT *pctxt, OSXSDDateTime *pvalue)
This function decodes a variable of the XSD 'date' type.
- EXTERNXML int [rtXmlDecTime](#) (OSCTXT *pctxt, OSXSDDateTime *pvalue)
This function decodes a variable of the XSD 'time' type.
- EXTERNXML int [rtXmlDecDateTime](#) (OSCTXT *pctxt, OSXSDDateTime *pvalue)
This function decodes a variable of the XSD 'dateTime' type.
- EXTERNXML int [rtXmlDecDecimal](#) (OSCTXT *pctxt, OSREAL *pvalue)
This function decodes the contents of a decimal data type.
- EXTERNXML int [rtXmlDecDouble](#) (OSCTXT *pctxt, OSREAL *pvalue)
This function decodes the contents of a float or double data type.
- EXTERNXML int [rtXmlDecDynBase64Str](#) (OSCTXT *pctxt, OSDynOctStr *pvalue)
This function decodes a contents of a Base64-encode binary string.
- EXTERNXML int [rtXmlDecDynHexStr](#) (OSCTXT *pctxt, OSDynOctStr *pvalue)
This function decodes a contents of a hexBinary string.
- EXTERNXML int [rtXmlDecEmptyElement](#) (OSCTXT *pctxt)
This function is used to enforce a requirement that an element be empty.
- EXTERNXML int [rtXmlDecUTF8Str](#) (OSCTXT *pctxt, OSUTF8CHAR *outdata, size_t max_len)
This function decodes the contents of a UTF-8 string data type.
- EXTERNXML int [rtXmlDecDynUTF8Str](#) (OSCTXT *pctxt, const OSUTF8CHAR **outdata)
This function decodes the contents of a UTF-8 string data type.
- EXTERNXML int [rtXmlDecHexBinary](#) (OSRTMEMBUF *pMemBuf, const OSUTF8CHAR *inpdata, int length)
This function decodes the contents of a hex-encoded binary data type into a memory buffer.
- EXTERNXML int [rtXmlDecHexStr](#) (OSCTXT *pctxt, OSOCTET *pvalue, OSUINT32 *pnocts, OSINT32 bufsize)
This function decodes the contents of a hexBinary string into a static memory structure.
- EXTERNXML int [rtXmlDecHexStrValue](#) (OSCTXT *pctxt, const OSUTF8CHAR *const inpdata, size_t nbytes, OSOCTET *pvalue, OSUINT32 *pnbits, OSINT32 bufsize)

- EXTERNXML int [rtXmlDecGYear](#) (OSCTXT *pctxt, OSXSDDateTime *pvalue)
This function decodes a variable of the XSD 'gYear' type.
- EXTERNXML int [rtXmlDecGYearMonth](#) (OSCTXT *pctxt, OSXSDDateTime *pvalue)
This function decodes a variable of the XSD 'gYearMonth' type.
- EXTERNXML int [rtXmlDecGMonth](#) (OSCTXT *pctxt, OSXSDDateTime *pvalue)
This function decodes a variable of the XSD 'gMonth' type.
- EXTERNXML int [rtXmlDecGMonthDay](#) (OSCTXT *pctxt, OSXSDDateTime *pvalue)
This function decodes a variable of the XSD 'gMonthDay' type.
- EXTERNXML int [rtXmlDecGDay](#) (OSCTXT *pctxt, OSXSDDateTime *pvalue)
This function decodes a variable of the XSD 'gDay' type.
- EXTERNXML int [rtXmlDecInt](#) (OSCTXT *pctxt, OSINT32 *pvalue)
This function decodes the contents of a 32-bit integer data type.
- EXTERNXML int [rtXmlDecInt8](#) (OSCTXT *pctxt, OSINT8 *pvalue)
This function decodes the contents of an 8-bit integer data type (i.e.
- EXTERNXML int [rtXmlDecInt16](#) (OSCTXT *pctxt, OSINT16 *pvalue)
This function decodes the contents of a 16-bit integer data type.
- EXTERNXML int [rtXmlDecInt64](#) (OSCTXT *pctxt, OSINT64 *pvalue)
This function decodes the contents of a 64-bit integer data type.
- EXTERNXML int [rtXmlDecUInt](#) (OSCTXT *pctxt, OSUINT32 *pvalue)
This function decodes the contents of an unsigned 32-bit integer data type.
- EXTERNXML int [rtXmlDecUInt8](#) (OSCTXT *pctxt, OSUINT8 *pvalue)
This function decodes the contents of an unsigned 8-bit integer data type (i.e.
- EXTERNXML int [rtXmlDecUInt16](#) (OSCTXT *pctxt, OSUINT16 *pvalue)
This function decodes the contents of an unsigned 16-bit integer data type.
- EXTERNXML int [rtXmlDecUInt64](#) (OSCTXT *pctxt, OSUINT64 *pvalue)
This function decodes the contents of an unsigned 64-bit integer data type.
- EXTERNXML int [rtXmlDecNSAttr](#) (OSCTXT *pctxt, const OSUTF8CHAR *attrName, const OSUTF8CHAR *attrValue, OSRTDList *pNSAttrs, const OSUTF8CHAR *nsTable[], OSUINT32 nsTableRowCount)
This function decodes an XML namespace attribute (xmlns).
- EXTERNXML const OSUTF8CHAR * [rtXmlDecQName](#) (OSCTXT *pctxt, const OSUTF8CHAR *qname, const OSUTF8CHAR **prefix)
This function decodes an XML qualified name string (QName) type.
- EXTERNXML int [rtXmlDecXSIAttr](#) (OSCTXT *pctxt, const OSUTF8CHAR *attrName, const OS-
UTF8CHAR *attrValue)
This function decodes XML schema instance (XSI) attribute.

- EXTERNXML int [rtXmlDecXSIAttrs](#) (OSCTXT *pctxt, const OSUTF8CHAR *const *attrs, const char *typeName)
This function decodes XML schema instance (XSI) attributes.
- EXTERNXML int [rtXmlDecXmlStr](#) (OSCTXT *pctxt, OSXMLSTRING *outdata)
This function decodes the contents of an XML string data type.
- EXTERNXML int [rtXmlParseElementName](#) (OSCTXT *pctxt, OSUTF8CHAR **ppName)
This function parses the initial tag from an XML message.
- EXTERNXML int [rtXmlParseElemQName](#) (OSCTXT *pctxt, OSXMLQName *pQName)
This function parses the initial tag from an XML message.
- EXTERNXML int [rtXmlEncAny](#) (OSCTXT *pctxt, OSXMLSTRING *pvalue, const OSUTF8CHAR *elemName, OSXMLNamespace *pNS)
This function encodes a variable of the XSD any type.
- EXTERNXML int [rtXmlEncAnyStr](#) (OSCTXT *pctxt, const OSUTF8CHAR *pvalue, const OSUTF8CHAR *elemName, OSXMLNamespace *pNS)
- EXTERNXML int [rtXmlEncAnyTypeValue](#) (OSCTXT *pctxt, const OSUTF8CHAR *pvalue)
This function encodes a variable of the XSD anyType type.
- EXTERNXML int [rtXmlEncAnyAttr](#) (OSCTXT *pctxt, OSRTDList *pAnyAttrList)
This function encodes a list of OSAnyAttr attributes in which the name and value are given as a UTF-8 string.
- EXTERNXML int [rtXmlEncBase64Binary](#) (OSCTXT *pctxt, OSUINT32 nocts, const OSOCTET *value, const OSUTF8CHAR *elemName, OSXMLNamespace *pNS)
This function encodes a variable of the XSD base64Binary type.
- EXTERNXML int [rtXmlEncBase64BinaryAttr](#) (OSCTXT *pctxt, OSUINT32 nocts, const OSOCTET *value, const OSUTF8CHAR *attrName, size_t attrNameLen)
This function encodes a variable of the XSD base64Binary type as an attribute.
- EXTERNXML int [rtXmlEncBase64StringValue](#) (OSCTXT *pctxt, OSUINT32 nocts, const OSOCTET *value)
This function encodes a variable of the XSD base64Binary type.
- EXTERNXML int [rtXmlEncBigInt](#) (OSCTXT *pctxt, const OSUTF8CHAR *value, const OSUTF8CHAR *elemName, OSXMLNamespace *pNS)
This function encodes a variable of the XSD integer type.
- EXTERNXML int [rtXmlEncBigIntAttr](#) (OSCTXT *pctxt, const OSUTF8CHAR *value, const OSUTF8CHAR *attrName, size_t attrNameLen)
This function encodes an XSD integer attribute value.
- EXTERNXML int [rtXmlEncBigIntValue](#) (OSCTXT *pctxt, const OSUTF8CHAR *value)
This function encodes an XSD integer attribute value.
- EXTERNXML int [rtXmlEncBitString](#) (OSCTXT *pctxt, OSUINT32 nbits, const OSOCTET *value, const OSUTF8CHAR *elemName, OSXMLNamespace *pNS)
This function encodes a variable of the ASN.1 BIT STRING type.

- EXTERNXML int [rtXmlEncBinStrValue](#) (OSCTXT *pctxt, OSUINT32 nbits, const OSOCTET *data)
This function encodes a binary string value as a sequence of '1's and '0's.
- EXTERNXML int [rtXmlEncBool](#) (OSCTXT *pctxt, OSBOOL value, const OSUTF8CHAR *elemName, OSXMLNamespace *pNS)
This function encodes a variable of the XSD boolean type.
- EXTERNXML int [rtXmlEncBoolValue](#) (OSCTXT *pctxt, OSBOOL value)
This function encodes a variable of the XSD boolean type.
- EXTERNXML int [rtXmlEncBoolAttr](#) (OSCTXT *pctxt, OSBOOL value, const OSUTF8CHAR *attrName, size_t attrNameLen)
This function encodes an XSD boolean attribute value.
- EXTERNXML int [rtXmlEncComment](#) (OSCTXT *pctxt, const OSUTF8CHAR *comment)
This function encodes an XML comment.
- EXTERNXML int [rtXmlEncDate](#) (OSCTXT *pctxt, const OSXSDDateTime *pvalue, const OSUTF8CHAR *elemName, OSXMLNamespace *pNS)
This function encodes a variable of the XSD 'date' type as a string.
- EXTERNXML int [rtXmlEncDateValue](#) (OSCTXT *pctxt, const OSXSDDateTime *pvalue)
This function encodes a variable of the XSD 'date' type as a string.
- EXTERNXML int [rtXmlEncTime](#) (OSCTXT *pctxt, const OSXSDDateTime *pvalue, const OSUTF8CHAR *elemName, OSXMLNamespace *pNS)
This function encodes a variable of the XSD 'time' type as a string.
- EXTERNXML int [rtXmlEncTimeValue](#) (OSCTXT *pctxt, const OSXSDDateTime *pvalue)
This function encodes a variable of the XSD 'time' type as a string.
- EXTERNXML int [rtXmlEncDateTime](#) (OSCTXT *pctxt, const OSXSDDateTime *pvalue, const OSUTF8CHAR *elemName, OSXMLNamespace *pNS)
This function encodes a numeric date/time value into an XML string representation.
- EXTERNXML int [rtXmlEncDateTimeValue](#) (OSCTXT *pctxt, const OSXSDDateTime *pvalue)
This function encodes a numeric date/time value into an XML string representation.
- EXTERNXML int [rtXmlEncDecimal](#) (OSCTXT *pctxt, OSREAL value, const OSUTF8CHAR *elemName, OSXMLNamespace *pNS, const [OSDecimalFmt](#) *pFmtSpec)
This function encodes a variable of the XSD decimal type.
- EXTERNXML int [rtXmlEncDecimalAttr](#) (OSCTXT *pctxt, OSREAL value, const OSUTF8CHAR *attrName, size_t attrNameLen, const [OSDecimalFmt](#) *pFmtSpec)
This function encodes a variable of the XSD decimal type as an attribute.
- EXTERNXML int [rtXmlEncDecimalValue](#) (OSCTXT *pctxt, OSREAL value, const [OSDecimalFmt](#) *pFmtSpec, char *pDestBuf, size_t destBufSize)
This function encodes a value of the XSD decimal type.

- EXTERNXML int [rtXmlEncDouble](#) (OSCTXT *pctx, OSREAL value, const OSUTF8CHAR *elemName, OSXMLNamespace *pNS, const [OSDoubleFmt](#) *pFmtSpec)
This function encodes a variable of the XSD double type.
- EXTERNXML int [rtXmlEncDoubleAttr](#) (OSCTXT *pctx, OSREAL value, const OSUTF8CHAR *attrName, size_t attrNameLen, const [OSDoubleFmt](#) *pFmtSpec)
This function encodes a variable of the XSD double type as an attribute.
- EXTERNXML int [rtXmlEncDoubleNormalValue](#) (OSCTXT *pctx, OSREAL value, const [OSDoubleFmt](#) *pFmtSpec, int defaultPrecision)
This function encodes a normal (not +/-INF or NaN) value of the XSD double or float type.
- EXTERNXML int [rtXmlEncDoubleValue](#) (OSCTXT *pctx, OSREAL value, const [OSDoubleFmt](#) *pFmtSpec, int defaultPrecision)
This function encodes a value of the XSD double or float type.
- EXTERNXML int [rtXmlEncEmptyElement](#) (OSCTXT *pctx, const OSUTF8CHAR *elemName, OSXMLNamespace *pNS, OSRTDList *pNSAttrs, OSBOOL terminate)
This function encodes an empty element tag value (<elemName/>).
- EXTERNXML int [rtXmlEncEndDocument](#) (OSCTXT *pctx)
This function adds trailer information and a null terminator at the end of the XML document being encoded.
- EXTERNXML int [rtXmlEncEndElement](#) (OSCTXT *pctx, const OSUTF8CHAR *elemName, OSXMLNamespace *pNS)
This function encodes an end element tag value (</elemName>).
- EXTERNXML int [rtXmlEncEndSoapEnv](#) (OSCTXT *pctx)
This function encodes a SOAP envelope end element tag (<SOAP-ENV:Envelope/>).
- EXTERNXML int [rtXmlEncEndSoapElems](#) (OSCTXT *pctx, OSXMLSOAPMsgType msgtype)
This function encodes SOAP end element tags.
- EXTERNXML int [rtXmlEncFloat](#) (OSCTXT *pctx, OSREAL value, const OSUTF8CHAR *elemName, OSXMLNamespace *pNS, const [OSDoubleFmt](#) *pFmtSpec)
This function encodes a variable of the XSD float type.
- EXTERNXML int [rtXmlEncFloatAttr](#) (OSCTXT *pctx, OSREAL value, const OSUTF8CHAR *attrName, size_t attrNameLen, const [OSDoubleFmt](#) *pFmtSpec)
This function encodes a variable of the XSD float type as an attribute.
- EXTERNXML int [rtXmlEncGYear](#) (OSCTXT *pctx, const OSXSDDateTime *pvalue, const OSUTF8CHAR *elemName, OSXMLNamespace *pNS)
This function encodes a numeric gYear element into an XML string representation.
- EXTERNXML int [rtXmlEncGYearMonth](#) (OSCTXT *pctx, const OSXSDDateTime *pvalue, const OSUTF8CHAR *elemName, OSXMLNamespace *pNS)
This function encodes a numeric gYearMonth element into an XML string representation.
- EXTERNXML int [rtXmlEncGMonth](#) (OSCTXT *pctx, const OSXSDDateTime *pvalue, const OSUTF8CHAR *elemName, OSXMLNamespace *pNS)

This function encodes a numeric gMonth element into an XML string representation.

- EXTERNXML int [rtXmlEncGMonthDay](#) (OSCTXT *pctxt, const OSXSDDateTime *pvalue, const OSUTF8CHAR *elemName, OSXMLNamespace *pNS)

This function encodes a numeric gMonthDay element into an XML string representation.

- EXTERNXML int [rtXmlEncGDay](#) (OSCTXT *pctxt, const OSXSDDateTime *pvalue, const OSUTF8CHAR *elemName, OSXMLNamespace *pNS)

This function encodes a numeric gDay element into an XML string representation.

- EXTERNXML int [rtXmlEncGYearValue](#) (OSCTXT *pctxt, const OSXSDDateTime *pvalue)

This function encodes a numeric gYear value into an XML string representation.

- EXTERNXML int [rtXmlEncGYearMonthValue](#) (OSCTXT *pctxt, const OSXSDDateTime *pvalue)

This function encodes a numeric gYearMonth value into an XML string representation.

- EXTERNXML int [rtXmlEncGMonthValue](#) (OSCTXT *pctxt, const OSXSDDateTime *pvalue)

This function encodes a numeric gMonth value into an XML string representation.

- EXTERNXML int [rtXmlEncGMonthDayValue](#) (OSCTXT *pctxt, const OSXSDDateTime *pvalue)

This function encodes a numeric gMonthDay value into an XML string representation.

- EXTERNXML int [rtXmlEncGDayValue](#) (OSCTXT *pctxt, const OSXSDDateTime *pvalue)

This function encodes a numeric gDay value into an XML string representation.

- EXTERNXML int [rtXmlEncHexBinary](#) (OSCTXT *pctxt, OSUINT32 nocts, const OSOCTET *value, const OSUTF8CHAR *elemName, OSXMLNamespace *pNS)

This function encodes a variable of the XSD hexBinary type.

- EXTERNXML int [rtXmlEncHexBinaryAttr](#) (OSCTXT *pctxt, OSUINT32 nocts, const OSOCTET *value, const OSUTF8CHAR *attrName, size_t attrNameLen)

This function encodes a variable of the XSD hexBinary type as an attribute.

- EXTERNXML int [rtXmlEncHexStrValue](#) (OSCTXT *pctxt, OSUINT32 nocts, const OSOCTET *data)

This function encodes a variable of the XSD hexBinary type.

- EXTERNXML int [rtXmlEncIndent](#) (OSCTXT *pctxt)

This function adds indentation whitespace to the output stream.

- EXTERNXML int [rtXmlEncInt](#) (OSCTXT *pctxt, OSINT32 value, const OSUTF8CHAR *elemName, OSXMLNamespace *pNS)

This function encodes a variable of the XSD integer type.

- EXTERNXML int [rtXmlEncIntValue](#) (OSCTXT *pctxt, OSINT32 value)

This function encodes a variable of the XSD integer type.

- EXTERNXML int [rtXmlEncIntAttr](#) (OSCTXT *pctxt, OSINT32 value, const OSUTF8CHAR *attrName, size_t attrNameLen)

This function encodes a variable of the XSD integer type as an attribute (name="value").

- EXTERNXML int [rtXmlEncIntPattern](#) (OSCTXT *pctxt, OSINT32 value, const OSUTF8CHAR *elemName, OSXMLNamespace *pNS, const OSUTF8CHAR *pattern)

This function encodes a variable of the XSD integer type using a pattern to specify the format of the integer value.

- EXTERNXML int [rtXmlEncIntPatternValue](#) (OSCTXT *pctxt, OSINT32 value, const OSUTF8CHAR *pattern)
- EXTERNXML int [rtXmlEncUIntPattern](#) (OSCTXT *pctxt, OSUINT32 value, const OSUTF8CHAR *elemName, OSXMLNamespace *pNS, const OSUTF8CHAR *pattern)
- EXTERNXML int [rtXmlEncUIntPatternValue](#) (OSCTXT *pctxt, OSUINT32 value, const OSUTF8CHAR *pattern)
- EXTERNXML int [rtXmlEncInt64](#) (OSCTXT *pctxt, OSINT64 value, const OSUTF8CHAR *elemName, OSXMLNamespace *pNS)

This function encodes a variable of the XSD integer type.

- EXTERNXML int [rtXmlEncInt64Pattern](#) (OSCTXT *pctxt, OSINT64 value, const OSUTF8CHAR *elemName, OSXMLNamespace *pNS, const OSUTF8CHAR *pattern)
- EXTERNXML int [rtXmlEncInt64Value](#) (OSCTXT *pctxt, OSINT64 value)

This function encodes a variable of the XSD integer type.

- EXTERNXML int [rtXmlEncInt64PatternValue](#) (OSCTXT *pctxt, OSINT64 value, const OSUTF8CHAR *pattern)
- EXTERNXML int [rtXmlEncInt64Attr](#) (OSCTXT *pctxt, OSINT64 value, const OSUTF8CHAR *attrName, size_t attrNameLen)

This function encodes a variable of the XSD integer type as an attribute (name="value").

- EXTERNXML int [rtXmlEncNamedBits](#) (OSCTXT *pctxt, const OSBitMapItem *pBitMap, OSUINT32 nbits, const OSOCTET *pvalue, const OSUTF8CHAR *elemName, OSXMLNamespace *pNS)

This function encodes a variable of the ASN.1 BIT STRING type.

- EXTERNXML int [rtXmlEncNamedBitsValue](#) (OSCTXT *pctxt, const OSBitMapItem *pBitMap, OSUINT32 nbits, const OSOCTET *pvalue)
- EXTERNXML int [rtXmlEncNSAttrs](#) (OSCTXT *pctxt, OSRTDList *pNSAttrs)

This function encodes namespace declaration attributes at the beginning of an XML document.

- EXTERNXML int [rtXmlPrintNSAttrs](#) (const char *name, const OSRTDList *data)

This function prints a list of namespace attributes.

- EXTERNXML int [rtXmlEncReal10](#) (OSCTXT *pctxt, const OSUTF8CHAR *pvalue, const OSUTF8CHAR *elemName, OSXMLNamespace *pNS)

This function encodes a variable of the ASN.1 REAL base 10 type.

- EXTERNXML int [rtXmlEncSoapArrayTypeAttr](#) (OSCTXT *pctxt, const OSUTF8CHAR *name, const OSUTF8CHAR *value, size_t itemCount)

This function encodes the special SOAP encoding attrType attribute which specifies the number and type of elements in a SOAP array.

- EXTERNXML int [rtXmlEncSoapArrayTypeAttr2](#) (OSCTXT *pctxt, const OSUTF8CHAR *name, size_t nameLen, const OSUTF8CHAR *value, size_t valueLen, size_t itemCount)
- EXTERNXML int [rtXmlEncStartDocument](#) (OSCTXT *pctxt)

This function encodes the XML header text at the beginning of an XML document.

- EXTERNXML int [rtXmlEncBOM](#) (OSCTXT *pctxt)
This function encodes the Unicode byte order mark header at the start of the document.
- EXTERNXML int [rtXmlEncStartElement](#) (OSCTXT *pctxt, const OSUTF8CHAR *elemName, OSXML-
Namespace *pNS, OSRTDList *pNSAttrs, OSBOOL terminate)
This function encodes a start element tag value (<elemName>).
- EXTERNXML int [rtXmlEncStartSoapEnv](#) (OSCTXT *pctxt, OSRTDList *pNSAttrs)
This function encodes a SOAP envelope start element tag.
- EXTERNXML int [rtXmlEncStartSoapElems](#) (OSCTXT *pctxt, OSXMLSOAPMsgType msgtype)
This function encodes a SOAP envelope start element tag and an optional SOAP body or fault tag.
- EXTERNXML int [rtXmlEncString](#) (OSCTXT *pctxt, OSXMLSTRING *pxmlstr, const OSUTF8CHAR
*elemName, OSXMLNamespace *pNS)
This function encodes a variable of the XSD string type.
- EXTERNXML int [rtXmlEncStringValue](#) (OSCTXT *pctxt, const OSUTF8CHAR *value)
This function encodes a variable of the XSD string type.
- EXTERNXML int [rtXmlEncStringValue2](#) (OSCTXT *pctxt, const OSUTF8CHAR *value, size_t valueLen)
This function encodes a variable of the XSD string type.
- EXTERNXML int [rtXmlEncTermStartElement](#) (OSCTXT *pctxt)
This function terminates a currently open XML start element by adding either a '>' or '/>' (if empty) terminator.
- EXTERNXML int [rtXmlEncUnicodeStr](#) (OSCTXT *pctxt, const OSUNICHAR *value, OSUINT32 nchars,
const OSUTF8CHAR *elemName, OSXMLNamespace *pNS)
This function encodes a Unicode string value.
- EXTERNXML int [rtXmlEncUTF8Attr](#) (OSCTXT *pctxt, const OSUTF8CHAR *name, const OSUTF8CHAR
*value)
This function encodes an attribute in which the name and value are given as a null-terminated UTF-8 strings.
- EXTERNXML int [rtXmlEncUTF8Attr2](#) (OSCTXT *pctxt, const OSUTF8CHAR *name, size_t nameLen, const
OSUTF8CHAR *value, size_t valueLen)
This function encodes an attribute in which the name and value are given as a UTF-8 strings with lengths.
- EXTERNXML int [rtXmlEncUTF8Str](#) (OSCTXT *pctxt, const OSUTF8CHAR *value, const OSUTF8CHAR
*elemName, OSXMLNamespace *pNS)
This function encodes a UTF-8 string value.
- EXTERNXML int [rtXmlEncUInt](#) (OSCTXT *pctxt, OSUINT32 value, const OSUTF8CHAR *elemName, OS-
XMLNamespace *pNS)
This function encodes a variable of the XSD unsigned integer type.
- EXTERNXML int [rtXmlEncUIntValue](#) (OSCTXT *pctxt, OSUINT32 value)
This function encodes a variable of the XSD unsigned integer type.
- EXTERNXML int [rtXmlEncUIntAttr](#) (OSCTXT *pctxt, OSUINT32 value, const OSUTF8CHAR *attrName,
size_t attrNameLen)

This function encodes a variable of the XSD unsigned integer type as an attribute (name="value").

- EXTERNXML int **rtXmlEncUInt64** (OSCTXT *pctxt, OSUINT64 value, const OSUTF8CHAR *elemName, OSXMLNamespace *pNS)

This function encodes a variable of the XSD integer type.

- EXTERNXML int **rtXmlEncUInt64Pattern** (OSCTXT *pctxt, OSUINT64 value, const OSUTF8CHAR *elemName, OSXMLNamespace *pNS, const OSUTF8CHAR *pattern)
- EXTERNXML int **rtXmlEncUInt64Value** (OSCTXT *pctxt, OSUINT64 value)

This function encodes a variable of the XSD integer type.

- EXTERNXML int **rtXmlEncUInt64PatternValue** (OSCTXT *pctxt, OSUINT64 value, const OSUTF8CHAR *pattern)
- EXTERNXML int **rtXmlEncUInt64Attr** (OSCTXT *pctxt, OSUINT64 value, const OSUTF8CHAR *attrName, size_t attrNameLen)

This function encodes a variable of the XSD integer type as an attribute (name="value").

- EXTERNXML int **rtXmlEncXSIAttrs** (OSCTXT *pctxt, OSBOOL needXSI)

This function encodes XML schema instance (XSI) attributes at the beginning of an XML document.

- EXTERNXML int **rtXmlEncXSITypeAttr** (OSCTXT *pctxt, const OSUTF8CHAR *value)

This function encodes an XML schema instance (XSI) type attribute value (xsi:type="value").

- EXTERNXML int **rtXmlEncXSINilAttr** (OSCTXT *pctxt)

This function encodes an XML nil attribute (xsi:nil="true").

- EXTERNXML int **rtXmlFreeInputSource** (OSCTXT *pctxt)

This function closes an input source that was previously created with one of the create input source functions such as 'rtXmlCreateFileInputSource'.

- EXTERNXML OSBOOL **rtXmlStrCmpAsc** (const OSUTF8CHAR *text1, const char *text2)
- EXTERNXML OSBOOL **rtXmlStrnCmpAsc** (const OSUTF8CHAR *text1, const char *text2, size_t len)
- EXTERNXML int **rtXmlSetEncBufPtr** (OSCTXT *pctxt, OSOCTET *bufaddr, size_t bufsiz)

This function is used to set the internal buffer within the run-time library encoding context.

- EXTERNXML int **rtXmlGetIndent** (OSCTXT *pctxt)

This function returns current XML output indent value.

- EXTERNXML OSBOOL **rtXmlGetWriteBOM** (OSCTXT *pctxt)

This function returns whether the Unicode byte order mark will be encoded.

- EXTERNXML int **rtXmlGetIndentChar** (OSCTXT *pctxt)

This function returns current XML output indent character value (default is space).

- EXTERNXML int **rtXmlPrepareContext** (OSCTXT *pctxt)

This function prepares the context for another encode by setting the state back to OSXMLINIT and moving the buffer's cursor back to the beginning of the buffer.

- EXTERNXML int **rtXmlSetEncC14N** (OSCTXT *pctxt, OSBOOL value)

This function sets the option to encode in C14N mode.

- EXTERNXML int [rtXmlSetEncXSINamespace](#) (OSCTXT *pctxt, OSBOOL value)
This function sets a flag in the context that indicates the XSI namespace declaration (xmlns:xsi) should be added to the encoded XML instance.
- EXTERNXML int [rtXmlSetEncXSINilAttr](#) (OSCTXT *pctxt, OSBOOL value)
This function sets a flag in the context that indicates the XSI attribute declaration (xmlns:xsi) should be added to the encoded XML instance.
- EXTERNXML int [rtXmlSetDigitsFacets](#) (OSCTXT *pctxt, int totalDigits, int fractionDigits)
- EXTERNXML int [rtXmlSetEncDocHdr](#) (OSCTXT *pctxt, OSBOOL value)
This function sets the option to add the XML document header (i.e.
- EXTERNXML int [rtXmlSetEncodingStr](#) (OSCTXT *pctxt, const OSUTF8CHAR *encodingStr)
This function sets the XML output encoding to the given value.
- EXTERNXML int [rtXmlSetFormatting](#) (OSCTXT *pctxt, OSBOOL doFormatting)
This function sets XML output formatting to the given value.
- EXTERNXML int [rtXmlSetIndent](#) (OSCTXT *pctxt, OSUINT8 indent)
This function sets XML output indent to the given value.
- EXTERNXML int [rtXmlSetIndentChar](#) (OSCTXT *pctxt, char indentChar)
This function sets XML output indent character to the given value.
- EXTERNXML void [rtXmlSetNamespacesSet](#) (OSCTXT *pctxt, OSBOOL value)
This function sets the context 'namespaces are set' flag.
- EXTERNXML int [rtXmlSetNSPrefixLinks](#) (OSCTXT *pctxt, OSRTDList *pNSAttrs)
This function sets namespace prefix/URI links in the namespace prefix stack in the context structure.
- EXTERNXML int [rtXmlSetSchemaLocation](#) (OSCTXT *pctxt, const OSUTF8CHAR *schemaLocation)
This function sets the XML Schema Instance (xsi) schema location attribute to be added to an encoded document.
- EXTERNXML int [rtXmlSetNoNSSchemaLocation](#) (OSCTXT *pctxt, const OSUTF8CHAR *schemaLocation)
This function sets the XML Schema Instance (xsi) no namespace schema location attribute to be added to an encoded document.
- EXTERNXML void [rtXmlSetSoapVersion](#) (OSCTXT *pctxt, OSUINT8 version)
This function sets the SOAP version number.
- EXTERNXML int [rtXmlSetXSITypeAttr](#) (OSCTXT *pctxt, const OSUTF8CHAR *xsiType)
This function sets the XML Schema Instance (xsi) type attribute value.
- EXTERNXML int [rtXmlSetWriteBOM](#) (OSCTXT *pctxt, OSBOOL write)
This function sets whether the Unicode byte order mark is encoded.
- EXTERNXML int [rtXmlMatchHexStr](#) (OSCTXT *pctxt, size_t minLength, size_t maxLength)
This function tests the context buffer for containing a correct hexadecimal string.
- EXTERNXML int [rtXmlMatchBase64Str](#) (OSCTXT *pctxt, size_t minLength, size_t maxLength)

This function tests the context buffer for containing a correct base64 string.

- EXTERNXML int **rtXmlMatchDate** (OSCTXT *pctxt)

This function tests the context buffer for containing a correct date string.

- EXTERNXML int **rtXmlMatchTime** (OSCTXT *pctxt)

This function tests the context buffer for containing a correct time string.

- EXTERNXML int **rtXmlMatchDateTime** (OSCTXT *pctxt)

This function tests the context buffer for containing a correct dateTime string.

- EXTERNXML int **rtXmlMatchGYear** (OSCTXT *pctxt)

This function tests the context buffer for containing a correct gYear string.

- EXTERNXML int **rtXmlMatchGYearMonth** (OSCTXT *pctxt)

This function tests the context buffer for containing a correct gYearMonth string.

- EXTERNXML int **rtXmlMatchGMonth** (OSCTXT *pctxt)

This function tests the context buffer for containing a correct gMonth string.

- EXTERNXML int **rtXmlMatchGMonthDay** (OSCTXT *pctxt)

This function tests the context buffer for containing a correct gMonthDay string.

- EXTERNXML int **rtXmlMatchGDay** (OSCTXT *pctxt)

This function tests the context buffer for containing a correct gDay string.

- EXTERNXML OSUTF8CHAR * **rtXmlNewQName** (OSCTXT *pctxt, const OSUTF8CHAR *localName, const OSUTF8CHAR *prefix)

This function creates a new QName given the localName and prefix parts.

- EXTERNXML OSBOOL **rtXmlCmpBase64Str** (OSUINT32 nocts1, const OSOCTET *data1, const OSUTF8CHAR *data2)

This function compares an array of octets to a base64 string.

- EXTERNXML OSBOOL **rtXmlCmpHexStr** (OSUINT32 nocts1, const OSOCTET *data1, const OSUTF8CHAR *data2)

This function compares an array of octets to a hex string.

- EXTERNXML OSBOOL **rtXmlCmpHexChar** (OSUTF8CHAR ch, OSOCTET hexval)

- EXTERNXML int **rtSaxGetAttributeID** (const OSUTF8CHAR *attrName, size_t nAttr, const OSUTF8CHAR *attrNames[], OSUINT32 attrPresent[])

- EXTERNXML const OSUTF8CHAR * **rtSaxGetAttrValue** (const OSUTF8CHAR *attrName, const OSUTF8CHAR *const *attrs)

This function looks up an attribute in the attribute array returned by SAX to the startElement function.

- EXTERNXML OSINT16 **rtSaxGetElemID** (OSINT16 *pState, OSINT16 prevElemIdx, const OSUTF8CHAR *localName, OSINT32 nsidx, const OSSAXElemTableRec idtab[], const OSINT16 *fstab, OSINT16 fstabRows, OSINT16 fstabCols)

This function looks up a sequence element name in the given element info array.

- EXTERNXML OSINT16 **rtSaxGetElemID8** (OSINT16 *pState, OSINT16 prevElemIdx, const OSUTF8CHAR *localName, OSINT32 nsidx, const OSSAXElemTableRec idtab[], const OSINT8 *fstab, OSINT16 fstabRows, OSINT16 fstabCols)

This function is a space optimized version of rtSaxGetElemID.

- EXTERNXML OSINT16 **rtSaxFindElemID** (OSINT16 *pState, OSINT16 prevElemIdx, const OSUTF8CHAR *localName, OSINT32 nsidx, const OSSAXElemTableRec idtab[], const OSINT16 *fstab, OSINT16 fstabRows, OSINT16 fstabCols)
- EXTERNXML OSINT16 **rtSaxFindElemID8** (OSINT16 *pState, OSINT16 prevElemIdx, const OSUTF8CHAR *localName, OSINT32 nsidx, const OSSAXElemTableRec idtab[], const OSINT8 *fstab, OSINT16 fstabRows, OSINT16 fstabCols)
- EXTERNXML OSBOOL **rtSaxHasXMLNSAttrs** (const OSUTF8CHAR *const *attrs)

This function checks if the given attribute list contains one or more XML namespace attributes (xmlns).

- EXTERNXML OSBOOL **rtSaxIsEmptyBuffer** (OSCTXT *pctxt)

This function checks if the buffer in the context is empty or not.

- EXTERNXML OSINT16 **rtSaxLookupElemID** (OSCTXT *pctxt, OSINT16 *pState, OSINT16 prevElemIdx, const OSUTF8CHAR *localName, const OSUTF8CHAR *qName, OSINT32 nsidx, const OSSAXElemTableRec idtab[], const OSINT16 *fstab, OSINT16 fstabRows, OSINT16 fstabCols)
- EXTERNXML OSINT16 **rtSaxLookupElemID8** (OSCTXT *pctxt, OSINT16 *pState, OSINT16 prevElemIdx, const OSUTF8CHAR *localName, const OSUTF8CHAR *qName, OSINT32 nsidx, const OSSAXElemTableRec idtab[], const OSINT8 *fstab, OSINT16 fstabRows, OSINT16 fstabCols)
- EXTERNXML int **rtSaxStrListParse** (OSCTXT *pctxt, OSRTMEMBUF *pMemBuf, OSRTDList *pvalue)

This function parses the list of strings.

- EXTERNXML int **rtSaxSortAttrs** (OSCTXT *pctxt, const OSUTF8CHAR *const *attrs, OSUINT16 **order)

This function sorts a SAX attribute list in ascending order based on attribute name.

- EXTERNXML int **rtSaxStrListMatch** (OSCTXT *pctxt)

This function matches the list of strings.

- EXTERNXML OSBOOL **rtSaxTestFinal** (OSINT16 state, OSINT16 currElemIdx, const int *fstab, int fstabRows, int fstabCols)
- EXTERNXML OSBOOL **rtSaxTestFinal8** (OSINT16 state, OSINT16 currElemIdx, const OSINT8 *fstab, int fstabRows, int fstabCols)
- EXTERNXML int **rtSaxSetSkipLevelToCurrent** (OSCTXT *pctxt, int stat)
- EXTERNXML OSUINT32 **rtSaxSetMaxErrors** (OSCTXT *pctxt, OSUINT32 maxErrors)
- EXTERNXML OSUINT32 **rtSaxGetMaxErrors** (OSCTXT *pctxt)
- EXTERNXML int **rtSaxTestAttributesPresent** (OSCTXT *pctxt, const OSUINT32 *attrPresent, const OSUINT32 *reqAttrMask, const OSUTF8CHAR *const *attrNames, size_t numOfAttrs, const char *parentTypeName)
- EXTERNXML OSBOOL **rtSaxIncErrors** (OSCTXT *pctxt)
- EXTERNXML int **rtSaxReportUnexpAttrs** (OSCTXT *pctxt, const OSUTF8CHAR *const *attrs, const char *typeName)
- EXTERNXML int **rtXmlWriteToFile** (OSCTXT *pctxt, const char *filename)

This function writes the encoded XML message stored in the context message buffer out to a file.

- EXTERNXML int **rtXmlWriteUTF16ToFile** (OSCTXT *pctxt, const char *filename)
- EXTERNXML void **rtXmlTreatWhitespaces** (OSCTXT *pctxt, int whiteSpaceType)
- EXTERNXML int **rtXmlCheckBuffer** (OSCTXT *pctxt, size_t byte_count)

- EXTERNXML void **rtErrXmlInit** (void)
- EXTERNXML int **rtXmlPutChar** (OSCTXT *pctx, const OSUTF8CHAR value)
- EXTERNXML int **rtXmlWriteChars** (OSCTXT *pctx, const OSUTF8CHAR *value, size_t len)
- EXTERNXML int **rtXmlDecAny** (OSCTXT *pctx, const OSUTF8CHAR **pvalue)
This function decodes an arbitrary XML section of code as defined by the XSD any type (xsd:any).
- EXTERNXML int **rtXmlDecAnyAttrStr** (OSCTXT *pctx, const OSUTF8CHAR **ppAttrStr, size_t index)
This function decodes an any attribute string.
- EXTERNXML int **rtXmlDecAnyElem** (OSCTXT *pctx, const OSUTF8CHAR **pvalue)
This function decodes an arbitrary XML section of code as defined by the XSD any type (xsd:any).
- EXTERNXML int **rtXmlDecBase64Str** (OSCTXT *pctx, OSOCTET *pvalue, OSUINT32 *pnocts, OSINT32 bufsize)
This function decodes a contents of a Base64-encode binary string into a static memory structure.
- EXTERNXML int **rtXmlDecBigInt** (OSCTXT *pctx, const OSUTF8CHAR **pvalue)
This function will decode a variable of the XSD integer type.
- EXTERNXML int **rtXmlDecBitString** (OSCTXT *pctx, OSOCTET *pvalue, OSUINT32 *pnbits, OSUINT32 bufsize)
This function decodes a bit string value.
- EXTERNXML int **rtXmlDecBool** (OSCTXT *pctx, OSBOOL *pvalue)
This function decodes a variable of the boolean type.
- EXTERNXML int **rtXmlDecDate** (OSCTXT *pctx, OSXSDDateTime *pvalue)
This function decodes a variable of the XSD 'date' type.
- EXTERNXML int **rtXmlDecDateTime** (OSCTXT *pctx, OSXSDDateTime *pvalue)
This function decodes a variable of the XSD 'dateTime' type.
- EXTERNXML int **rtXmlDecDecimal** (OSCTXT *pctx, OSREAL *pvalue, int totalDigits, int fractionDigits)
This function decodes the contents of a decimal data type.
- EXTERNXML int **rtXmlDecDouble** (OSCTXT *pctx, OSREAL *pvalue)
This function decodes the contents of a float or double data type.
- EXTERNXML int **rtXmlDecDoubleExt** (OSCTXT *pctx, OSUINT8 flags, OSREAL *pvalue)
This function decodes the contents of a float or double data type.
- EXTERNXML int **rtXmlDecDynBase64Str** (OSCTXT *pctx, OSDynOctStr *pvalue)
This function decodes a contents of a Base64-encode binary string.
- EXTERNXML int **rtXmlDecDynBitString** (OSCTXT *pctx, OSDynOctStr *pvalue)
This function decodes a bit string value.
- EXTERNXML int **rtXmlDecDynHexStr** (OSCTXT *pctx, OSDynOctStr *pvalue)
This function decodes a contents of a hexBinary string.

- EXTERNXML int [rtXmlpDecDynUnicodeStr](#) (OSCTXT *pctxt, const OSUNICHAR **ppdata, OSUINT32 *pnchars)
This function decodes a Unicode string data type.
- EXTERNXML int [rtXmlpDecDynUTF8Str](#) (OSCTXT *pctxt, const OSUTF8CHAR **outdata)
This function decodes the contents of a UTF-8 string data type.
- EXTERNXML int [rtXmlpDecUTF8Str](#) (OSCTXT *pctxt, OSUTF8CHAR *out, size_t max_len)
This function decodes the contents of a UTF-8 string data type.
- EXTERNXML int [rtXmlpDecGDay](#) (OSCTXT *pctxt, OSXSDDateTime *pvalue)
This function decodes a variable of the XSD 'gDay' type.
- EXTERNXML int [rtXmlpDecGMonth](#) (OSCTXT *pctxt, OSXSDDateTime *pvalue)
This function decodes a variable of the XSD 'gMonth' type.
- EXTERNXML int [rtXmlpDecGMonthDay](#) (OSCTXT *pctxt, OSXSDDateTime *pvalue)
This function decodes a variable of the XSD 'gMonthDay' type.
- EXTERNXML int [rtXmlpDecGYear](#) (OSCTXT *pctxt, OSXSDDateTime *pvalue)
This function decodes a variable of the XSD 'gYear' type.
- EXTERNXML int [rtXmlpDecGYearMonth](#) (OSCTXT *pctxt, OSXSDDateTime *pvalue)
This function decodes a variable of the XSD 'gYearMonth' type.
- EXTERNXML int [rtXmlpDecHexStr](#) (OSCTXT *pctxt, OSOCTET *pvalue, OSUINT32 *pnocts, OSINT32 bufsize)
This function decodes the contents of a hexBinary string into a static memory structure.
- EXTERNXML int [rtXmlpDecInt](#) (OSCTXT *pctxt, OSINT32 *pvalue)
This function decodes the contents of a 32-bit integer data type.
- EXTERNXML int [rtXmlpDecInt8](#) (OSCTXT *pctxt, OSINT8 *pvalue)
This function decodes the contents of an 8-bit integer data type (i.e.
- EXTERNXML int [rtXmlpDecInt16](#) (OSCTXT *pctxt, OSINT16 *pvalue)
This function decodes the contents of a 16-bit integer data type.
- EXTERNXML int [rtXmlpDecInt64](#) (OSCTXT *pctxt, OSINT64 *pvalue)
This function decodes the contents of a 64-bit integer data type.
- EXTERNXML int [rtXmlpDecNamedBits](#) (OSCTXT *pctxt, const OSBitMapItem *pBitMap, OSOCTET *pvalue, OSUINT32 *pnbits, OSUINT32 bufsize)
This function decodes the contents of a named bit field.
- EXTERNXML int [rtXmlpDecStrList](#) (OSCTXT *pctxt, OSRTDList *plist)
This function decodes a list of space-separated tokens and returns each token as a separate item on the given list.
- EXTERNXML int [rtXmlpDecTime](#) (OSCTXT *pctxt, OSXSDDateTime *pvalue)

This function decodes a variable of the XSD 'time' type.

- EXTERNXML int [rtXmlpDecUInt](#) (OSCTXT *pctxt, OSUINT32 *pvalue)
This function decodes the contents of an unsigned 32-bit integer data type.
- EXTERNXML int [rtXmlpDecUInt8](#) (OSCTXT *pctxt, OSOCTET *pvalue)
This function decodes the contents of an unsigned 8-bit integer data type (i.e.
- EXTERNXML int [rtXmlpDecUInt16](#) (OSCTXT *pctxt, OSUINT16 *pvalue)
This function decodes the contents of an unsigned 16-bit integer data type.
- EXTERNXML int [rtXmlpDecUInt64](#) (OSCTXT *pctxt, OSUINT64 *pvalue)
This function decodes the contents of an unsigned 64-bit integer data type.
- EXTERNXML int [rtXmlpDecXmlStr](#) (OSCTXT *pctxt, OSXMLSTRING *outdata)
This function decodes the contents of an XML string data type.
- EXTERNXML int [rtXmlpDecXmlStrList](#) (OSCTXT *pctxt, OSRTDList *plist)
This function decodes a list of space-separated tokens and returns each token as a separate item on the given list.
- EXTERNXML int [rtXmlpDecXSIAAttr](#) (OSCTXT *pctxt, const [OSXMLNameFragments](#) *attrName)
This function decodes XSI (XML Schema Instance) and XML namespace attributes that may be present in any arbitrary XML element within a document.
- EXTERNXML int [rtXmlpDecXSITypeAttr](#) (OSCTXT *pctxt, const [OSXMLNameFragments](#) *attrName, const OSUTF8CHAR **ppAttrValue)
This function decodes the contents of an XSI (XML Schema Instance) type attribute (xsi:type).
- EXTERNXML int [rtXmlpGetAttributeID](#) (const [OSXMLStrFragment](#) *attrName, OSINT16 nsidx, size_t nAttr, const [OSXMLAttrDescr](#) attrNames[], OSUINT32 attrPresent[])
This function finds an attribute in the descriptor table.
- EXTERNXML int [rtXmlpGetNextElem](#) (OSCTXT *pctxt, [OSXMLElemDescr](#) *pElem, OSINT32 level)
This function parse the next element start tag.
- EXTERNXML int [rtXmlpGetNextElemID](#) (OSCTXT *pctxt, const [OSXMLElemIDRec](#) *tab, size_t nrows, OSINT32 level, OSBOOL continueParse)
This function parses the next start tag and finds the index of the element name in the descriptor table.
- EXTERNXML int [rtXmlpMarkLastEventActive](#) (OSCTXT *pctxt)
This function marks current tag as unprocessed.
- EXTERNXML int [rtXmlpMatchStartTag](#) (OSCTXT *pctxt, const OSUTF8CHAR *elemLocalName, OSINT16 nsidx)
This function parses the next start tag that matches with given name.
- EXTERNXML int [rtXmlpMatchEndTag](#) (OSCTXT *pctxt, OSINT32 level)
This function parse next end tag that matches with given name.
- EXTERNXML OSBOOL [rtXmlpHasAttributes](#) (OSCTXT *pctxt)
This function checks accessibility of attributes.

- EXTERNXML int [rtXmlpGetAttributeCount](#) (OSCTXT *pctxt)
This function returns number of attributes in last processed start tag.
- EXTERNXML int [rtXmlpSelectAttribute](#) (OSCTXT *pctxt, [OSXMLNameFragments](#) *pAttr, OSINT16 *nsidx, size_t index)
This function selects attribute to decode.
- EXTERNXML OSINT32 [rtXmlpGetCurrentLevel](#) (OSCTXT *pctxt)
This function returns current nesting level.
- EXTERNXML void [rtXmlpSetWhiteSpaceMode](#) (OSCTXT *pctxt, [OSXMLWhiteSpaceMode](#) whiteSpaceMode)
Sets the whitespace treatment mode.
- EXTERNXML OSBOOL [rtXmlpSetMixedContentMode](#) (OSCTXT *pctxt, OSBOOL mixedContentMode)
Sets mixed content mode.
- EXTERNXML void [rtXmlpSetListMode](#) (OSCTXT *pctxt)
Sets list mode.
- EXTERNXML OSBOOL [rtXmlpListHasItem](#) (OSCTXT *pctxt)
Check for end of decoded token list.
- EXTERNXML void [rtXmlpCountListItems](#) (OSCTXT *pctxt, OSSIZE *itemCnt)
Count tokens in list.
- EXTERNXML int [rtXmlpGetNextSeqElemID](#) (OSCTXT *pctxt, const [OSXMLElemIDRec](#) *tab, const [OSXMLGroupDesc](#) *pGroup, int curID, int lastMandatoryID, OSBOOL groupMode)
This function parses the next start tag and find index of element name in descriptor table.
- EXTERNXML int [rtXmlpGetNextAllElemID](#) (OSCTXT *pctxt, const [OSXMLElemIDRec](#) *tab, size_t nrows, const OSUINT8 *pOrder, OSUINT32 nOrder, OSUINT32 maxOrder, int anyID)
This function parses the next start tag and finds index of element name in descriptor table.
- EXTERNXML int [rtXmlpGetNextAllElemID16](#) (OSCTXT *pctxt, const [OSXMLElemIDRec](#) *tab, size_t nrows, const OSUINT16 *pOrder, OSUINT32 nOrder, OSUINT32 maxOrder, int anyID)
This function parses the next start tag and finds index of element name in descriptor table.
- EXTERNXML void [rtXmlpSetNamespaceTable](#) (OSCTXT *pctxt, const OSUTF8CHAR *namespaceTable[], size_t nmNamespaces)
Sets user namespace table.
- EXTERNXML int [rtXmlpCreateReader](#) (OSCTXT *pctxt)
Creates pull parser reader structure within the context.
- EXTERNXML void [rtXmlpHideAttributes](#) (OSCTXT *pctxt)
Disable access to attributes.
- EXTERNXML OSBOOL [rtXmlpNeedDecodeAttributes](#) (OSCTXT *pctxt)

This function checks if attributes were previously decoded.

- EXTERNXML void [rtXmlpMarkPos](#) (OSCTXT *pctxt)
Save current decode position.
- EXTERNXML void [rtXmlpRewindToMarkedPos](#) (OSCTXT *pctxt)
Rewind to saved decode position.
- EXTERNXML void [rtXmlpResetMarkedPos](#) (OSCTXT *pctxt)
Reset saved decode position.
- EXTERNXML int [rtXmlpGetXSITypeAttr](#) (OSCTXT *pctxt, const OSUTF8CHAR **ppAttrValue, OSINT16 *nsidx, size_t *pLocalOffs)
This function decodes the contents of an XSI (XML Schema Instance) type attribute (xsi:type).
- EXTERNXML int [rtXmlpGetXmlnsAttrs](#) (OSCTXT *pctxt, OSRTDList *pNSAttrs)
This function decodes namespace attributes from start tag and adds them to the given list.
- EXTERNXML int [rtXmlpDecXSIAttrs](#) (OSCTXT *pctxt)
This function decodes XSI (XML Schema Instance) that may be present in any arbitrary XML element within a document.
- EXTERNXML OSBOOL [rtXmlpIsEmptyElement](#) (OSCTXT *pctxt)
Check element content: empty or not.
- EXTERNXML int [rtXmlEncAttrC14N](#) (OSCTXT *pctxt)
This function used only in C14 mode.
- EXTERNXML struct OSXMLReader * [rtXmlpGetReader](#) (OSCTXT *pctxt)
This function fetches the XML reader structure from the context for use in low-level pull parser calls.
- EXTERNXML OSBOOL [rtXmlpIsLastEventDone](#) (OSCTXT *pctxt)
Check processing status of current tag.
- EXTERNXML int [rtXmlpGetXSITypeIndex](#) (OSCTXT *pctxt, const OSXMLItemDescr typetab[], size_t typetabsiz)
This function decodes the contents of an XSI (XML Schema Instance) type attribute (xsi:type) and find type index in descriptor table.
- EXTERNXML int [rtXmlpLookupXSITypeIndex](#) (OSCTXT *pctxt, const OSUTF8CHAR *pXsiType, OSINT16 xsiTypeId, const OSXMLItemDescr typetab[], size_t typetabsiz)
This function find index of XSI (XML Schema Instance) type in descriptor table.
- EXTERNXML void [rtXmlpForceDecodeAsGroup](#) (OSCTXT *pctxt)
Disable skipping of unknown elements in optional sequence tail.
- EXTERNXML OSBOOL [rtXmlpIsDecodeAsGroup](#) (OSCTXT *pctxt)
This function checks if "decode as group" mode was forced.
- EXTERNXML OSBOOL [rtXmlpIsUTF8Encoding](#) (OSCTXT *pctxt)
This function checks if the encoding specified in XML header is UTF-8.

- EXTERNXML int `rtXmlpReadBytes` (OSCTXT *pctxt, OSOCTET *pbuf, size_t nbytes)
This function reads the specified number of bytes directly from the underlying XML parser stream.

8.1.1 Detailed Description

XML low-level C encode/decode functions.

Definition in file [osrxml.h](#).

8.1.2 Define Documentation

8.1.2.1 #define IS_XMLNSATTR(name)

Value:

```
((OSUTF8LEN(name) >= 5) && name[0] == 'x' && name[1] == 'm' && \
 name[2] == 'l' && name[3] == 'n' && name[4] == 's')
```

Definition at line 155 of file [osrxml.h](#).

8.1.2.2 #define IS_XSIATTR(name)

Value:

```
((OSUTF8LEN(name) >= 4) && name[0] == 'x' && name[1] == 's' && \
 name[2] == 'i' && name[3] == ':')
```

Definition at line 159 of file [osrxml.h](#).

8.1.2.3 #define OSXMLQNAMEEQUALS(xnamefrag, qnametext)

Value:

```
rtxUTF8StrnEqual \
(xnamefrag.mQName.value, OSUTF8(qnametext), xnamefrag.mQName.length)
```

Definition at line 148 of file [osrxml.h](#).

8.1.2.4 #define OSXMLSETUTF8DECPTR(pctxt, str)

Value:

```
rtxInitContextBuffer (pctxt, OSRISAFECONSTCAST (OSOCTET*, str), \
OSUTF8LEN (str))
```

Definition at line 151 of file [osrxml.h](#).

8.1.3 Function Documentation

8.1.3.1 EXTERNXML const OSUTF8CHAR* rtSaxGetAttrValue (const OSUTF8CHAR * attrName, const OSUTF8CHAR *const * attrs)

This function looks up an attribute in the attribute array returned by SAX to the startElement function.

Parameters

attrName Name of the attribute to find.

attrs Attribute array returned in SAX startElement function. This is an array of character strings containing name1, value1, name2, value2, ... List is terminated by a null name.

Returns

Pointer to character string containing attribute value or NULL if attrName not found.

8.1.3.2 EXTERNXML OSINT16 rtSaxGetElemID (OSINT16 * pState, OSINT16 prevElemIdx, const OSUTF8CHAR * localName, OSINT32 nsidx, const OSSAXElemTableRec idtab[], const OSINT16 * fstab, OSINT16 fstabRows, OSINT16 fstabCols)

This function looks up a sequence element name in the given element info array.

If ensures elements are received in the correct order and also sets the required element count variable.

Parameters

pState The pointer to state variable to be changed.

prevElemIdx Previous index of element. The search will be started from this element for better performance.

localName Local name of XML element

nsidx Namespace index

idtab Element ID table

fstab Finite state table

fstabRows Number of rows in fstab.

fstabCols Number of columns in fstab.

8.1.3.3 EXTERNXML OSINT16 rtSaxGetElemID8 (OSINT16 * pState, OSINT16 prevElemIdx, const OSUTF8CHAR * localName, OSINT32 nsidx, const OSSAXElemTableRec idtab[], const OSINT8 * fstab, OSINT16 fstabRows, OSINT16 fstabCols)

This function is a space optimized version of rtSaxGetElemID.

It operates with array of 8-bit integers (OSINT8) instead of 32-bit integers (int).

Parameters

pState The pointer to state variable to be changed.

prevElemIdx Previous index of element. The search will be started from this element + 1 for better performance.

localName Local name of XML element

nsidx Namespace index

idtab Element ID table

fstab Finite state table (array of 8-bit integers)

fstabRows Number of rows in *fstab*.

fstabCols Number of columns in *fstab*.

8.1.3.4 EXTERNXML OSBOOL rtSaxHasXMLNSAttrs (const OSUTF8CHAR *const * *attrs*)

This function checks if the given attribute list contains one or more XML namespace attributes (xmlns).

Parameters

attrs Attribute list in form passed by parser into SAX startElement function.

Returns

TRUE, if xmlns attribute found in list.

8.1.3.5 EXTERNXML OSBOOL rtSaxIsEmptyBuffer (OSCTXT * *pctxt*)

This function checks if the buffer in the context is empty or not.

Parameters

pctxt Pointer to OSCTXT structure

Returns

TRUE, if the buffer contains empty string.

8.1.3.6 EXTERNXML int rtSaxSortAttrs (OSCTXT * *pctxt*, const OSUTF8CHAR *const * *attrs*, OSUINT16 ** *order*)

This function sorts a SAX attribute list in ascending order based on attribute name.

It currently only supports unqualified attributes.

Parameters

pctxt Pointer to OSCTXT structure.

attrs Standard SAX attribute list. Entry *i* is attribute name and *i*+1 is value. List is terminated by a null name.

order Order array containing the order of sorted attributes. This array is allocated using `rtxMemAlloc`, it can be freed using `rtxMemFreePtr` or will be freed when the context is freed. The list holds indices to name items in the attribute list that is passed in.

Returns

If success, positive value contains number of attributes in *attrs*; if failure, negative status code.

8.1.3.7 EXTERNXML int rtSaxStrListMatch (OSCTXT * *pctxt*)

This function matches the list of strings.

It is used for matching NMTOKENS, IDREFS, NMENTITIES.

Parameters

pctxt Pointer to OSCTXT structure

Returns

0 - if success, negative value is error.

8.1.3.8 EXTERNXML int rtSaxStrListParse (OSCTXT * *pctxt*, OSRTMEMBUF * *pMemBuf*, OSRTDList * *pvalue*)

This function parses the list of strings.

It is used for parsing NMTOKENS, IDREFS, NMENTITIES.

Parameters

pctxt Pointer to OSCTXT structure. Can be NULL, if *pMemBuf* is not NULL.

pMemBuf Pointer to memory buffer structure. Can be NULL, if *pctxt* is not NULL.

pvalue Doubly-linked list for parsed strings.

Returns

0 - if success, negative value is error.

8.1.3.9 EXTERNXML OSBOOL rtXmlCmpBase64Str (OSUINT32 *noct1*, const OSOCTET * *data1*, const OSUTF8CHAR * *data2*)

This function compares an array of octets to a base64 string.

Parameters

noct1 Number of octets in *data1*.

data1 Pointer to array of OSOCTET.

data2 Pointer to null-terminated array of OSUTF8CHAR.

Returns

TRUE if *data2* is a base64 string representation of *data1*, false otherwise.

8.1.3.10 EXTERNXML OSBOOL rtXmlCmpHexStr (OSUINT32 *noct1*, const OSOCTET * *data1*, const OSUTF8CHAR * *data2*)

This function compares an array of octets to a hex string.

Parameters

- noctsl* Number of octets in data1.
- data1* Pointer to array of OSOCTET.
- data2* Pointer to null-terminated array of OSUTF8CHAR.

Returns

TRUE if data2 is a hex string representation of data1, false otherwise.

8.1.3.11 EXTERNXML int rtXmlCreateFileInputSource (OSCTXT * *pctxt*, const char * *filepath*)

This function creates an XML document file input source.
The document can then be decoded by invoking an XML decode function.

Parameters

- pctxt* Pointer to context block structure.
- filepath* Full pathname of XML document file to open.

Returns

Completion status of operation:

- 0 = success,
- negative return value is error.

8.1.3.12 EXTERNXML int rtXmlInitContext (OSCTXT * *pctxt*)

This function initializes a context variable for XML encoding or decoding.

Parameters

- pctxt* Pointer to OSCTXT structure

8.1.3.13 EXTERNXML int rtXmlInitContextUsingKey (OSCTXT * *pctxt*, const OSOCTET * *key*, size_t *keylen*)

This function initializes a context using a run-time key.

This form is required for evaluation and limited distribution software. The compiler will generate a macro for `rtXmlInitContext` in the `rtkey.h` file that will invoke this function with the generated run-time key.

Parameters

- pctxt* The pointer to the context structure variable to be initialized.
- key* Key data generated by ASN1C compiler.
- keylen* Key data field length.

Returns

Completion status of operation:

- 0 (ASN_OK) = success,
- negative return value is error.

8.1.3.14 EXTERNXML int rtXmlInitCtxAppInfo (OSCTXT * *pctxt*)

This function initializes the XML application info section of the given context.

Parameters

pctxt Pointer to OSCTXT structure

8.1.3.15 EXTERNXML int rtXmlMatchBase64Str (OSCTXT * *pctxt*, size_t *minLength*, size_t *maxLength*)

This function tests the context buffer for containing a correct base64 string.

It does not decode the value.

Parameters

pctxt Pointer to OSCTXT structure

minLength A minimal length of expected string.

maxLength A maximal length of expected string.

Returns

If the string in the context buffer is a correct one, function returns zero. Error code (negative) will be returned otherwise. Note, error record will NOT be added in the error's list of the context.

8.1.3.16 EXTERNXML int rtXmlMatchDate (OSCTXT * *pctxt*)

This function tests the context buffer for containing a correct date string.

It does not decode the value.

Parameters

pctxt Pointer to OSCTXT structure

Returns

If the string in the context buffer is a correct one, function returns zero. Error code (negative) will be returned otherwise. Note, error record will NOT be added in the error's list of the context.

8.1.3.17 EXTERNXML int rtXmlMatchDateTime (OSCTXT * *pctxt*)

This function tests the context buffer for containing a correct dateTime string.

It does not decode the value.

Parameters

pctxt Pointer to OSCTXT structure

Returns

If the string in the context buffer is a correct one, function returns zero. Error code (negative) will be returned otherwise. Note, error record will NOT be added in the error's list of the context.

8.1.3.18 EXTERNXML int rtXmlMatchGDay (OSCTXT * *pctxt*)

This function tests the context buffer for containing a correct gDay string.

It does not decode the value.

Parameters

pctxt Pointer to OSCTXT structure

Returns

If the string in the context buffer is a correct one, function returns zero. Error code (negative) will be returned otherwise. Note, error record will NOT be added in the error's list of the context.

8.1.3.19 EXTERNXML int rtXmlMatchGMonth (OSCTXT * *pctxt*)

This function tests the context buffer for containing a correct gMonth string.

It does not decode the value.

Parameters

pctxt Pointer to OSCTXT structure

Returns

If the string in the context buffer is a correct one, function returns zero. Error code (negative) will be returned otherwise. Note, error record will NOT be added in the error's list of the context.

8.1.3.20 EXTERNXML int rtXmlMatchGMonthDay (OSCTXT * *pctxt*)

This function tests the context buffer for containing a correct gMonthDay string.

It does not decode the value.

Parameters

pctxt Pointer to OSCTXT structure

Returns

If the string in the context buffer is a correct one, function returns zero. Error code (negative) will be returned otherwise. Note, error record will NOT be added in the error's list of the context.

8.1.3.21 EXTERNXML int rtXmlMatchGYear (OSCTXT * *pctxt*)

This function tests the context buffer for containing a correct gYear string.

It does not decode the value.

Parameters

pctxt Pointer to OSCTXT structure

Returns

If the string in the context buffer is a correct one, function returns zero. Error code (negative) will be returned otherwise. Note, error record will NOT be added in the error's list of the context.

8.1.3.22 EXTERNXML int rtXmlMatchGYearMonth (OSCTXT * *pctxt*)

This function tests the context buffer for containing a correct gYearMonth string.

It does not decode the value.

Parameters

pctxt Pointer to OSCTXT structure

Returns

If the string in the context buffer is a correct one, function returns zero. Error code (negative) will be returned otherwise. Note, error record will NOT be added in the error's list of the context.

8.1.3.23 EXTERNXML int rtXmlMatchHexStr (OSCTXT * *pctxt*, size_t *minLength*, size_t *maxLength*)

This function tests the context buffer for containing a correct hexadecimal string.

It does not decode the value.

Parameters

pctxt Pointer to OSCTXT structure

minLength A minimal length of expected string.

maxLength A maximal length of expected string.

Returns

If the string in the context buffer is a correct one, function returns zero. Error code (negative) will be returned otherwise. Note, error record will NOT be added in the error's list of the context.

8.1.3.24 EXTERNXML int rtXmlMatchTime (OSCTXT * *pctxt*)

This function tests the context buffer for containing a correct time string.

It does not decode the value.

Parameters

pctxt Pointer to OSCTXT structure

Returns

If the string in the context buffer is a correct one, function returns zero. Error code (negative) will be returned otherwise. Note, error record will NOT be added in the error's list of the context.

8.1.3.25 EXTERNXML void rtXmlMemFreeAnyAttrs (OSCTXT * *pctxt*, OSRtdList * *pAnyAttrList*)

This function frees a list of anyAttribute that is a member of [OSXSDAnyType](#) structure.

Parameters

pctxt Pointer to context block structure.

pAnyAttrList Pointer to list of anyAttribute that is to be freed.

8.1.3.26 EXTERNXML OSUTF8CHAR* rtXmlNewQName (OSCTXT * *pctxt*, const OSUTF8CHAR * *localName*, const OSUTF8CHAR * *prefix*)

This function creates a new QName given the localName and prefix parts.

Parameters

pctxt Pointer to a context structure.

localName Element local name.

prefix Namespace prefix.

Returns

QName value. Memory for the value will have been allocated by rtxMemAlloc and thus must be freed using one of the rtxMemFree functions. The value will be NULL if no dynamic memory was available.

8.1.3.27 EXTERNXML int rtXmlPrepareContext (OSCTXT * *pctxt*)

This function prepares the context for another encode by setting the state back to OSXMLINIT and moving the buffer's cursor back to the beginning of the buffer.

Parameters

pctxt Pointer to OSCTXT structure

Returns

0 if OK, negative status code if error.

8.1.3.28 EXTERNXML int rtXmlSetEncC14N (OSCTXT * *pctxt*, OSBOOL *value*)

This function sets the option to encode in C14N mode.

Parameters

pctxt Pointer to OSCTXT structure

value Boolean value: true = C14N mode enabled.

Returns

Status of operation: 0 if OK, negative status code if error.

8.1.3.29 EXTERNXML int rtXmlSetEncDocHdr (OSCTXT * *pctxt*, OSBOOL *value*)

This function sets the option to add the XML document header (i.e.

<?xml version="1.0" encoding="UTF-8"?>) to the XML output stream.

Parameters

pctxt Pointer to OSCTXT structure

value Boolean value: true = add document header

Returns

Status of operation: 0 if OK, negative status code if error.

8.1.3.30 EXTERNXML int rtXmlSetEncodingStr (OSCTXT * *pctxt*, const OSUTF8CHAR * *encodingStr*)

This function sets the XML output encoding to the given value.
Currently, UTF-8/UTF-16/ISO-8859-1 encodings are supported.

Parameters

pctxt Pointer to OSCTXT structure
encodingStr XML output encoding format

Returns

Status of operation: 0 if OK, negative status code if error.

8.1.3.31 EXTERNXML int rtXmlSetEncXSINamespace (OSCTXT * *pctxt*, OSBOOL *value*)

This function sets a flag in the context that indicates the XSI namespace declaration (xmlns:xsi) should be added to the encoded XML instance.

Parameters

pctxt Pointer to OSCTXT structure
value Boolean value: true = encode XSI namespace attribute.

Returns

Status of operation: 0 if OK, negative status code if error.

8.1.3.32 EXTERNXML int rtXmlSetEncXSINilAttr (OSCTXT * *pctxt*, OSBOOL *value*)

This function sets a flag in the context that indicates the XSI attribute declaration (xmlns:xsi) should be added to the encoded XML instance.

Parameters

pctxt Pointer to OSCTXT structure
value Boolean value: true = encode xsi:nil attribute.

Returns

Status of operation: 0 if OK, negative status code if error.

8.1.3.33 EXTERNXML int rtXmlSetFormatting (OSCTXT * *pctxt*, OSBOOL *doFormatting*)

This function sets XML output formatting to the given value.

If TRUE (the default), the XML document is formatted with indentation and newlines. If FALSE, all whitespace between elements is suppressed. Turning formatting off can provide more compressed documents and also a more canonical representation which is important for security applications. Also the function 'rtXmlSetIndent' might be used to set the exact size of indentation.

Parameters

pctxt Pointer to OSCTXT structure

doFormatting Boolean value indicating if formatting is to be done

Returns

Status of operation: 0 if OK, negative status code if error.

8.1.3.34 EXTERNXML int rtXmlSetIndent (OSCTXT * *pctxt*, OSUINT8 *indent*)

This function sets XML output indent to the given value.

Parameters

pctxt Pointer to OSCTXT structure

indent Number of spaces per indent. Default is 3.

Returns

Status of operation: 0 if OK, negative status code if error.

8.1.3.35 EXTERNXML int rtXmlSetIndentChar (OSCTXT * *pctxt*, char *indentChar*)

This function sets XML output indent character to the given value.

Parameters

pctxt Pointer to OSCTXT structure

indentChar Indent character. Default is space.

Returns

Status of operation: 0 if OK, negative status code if error.

8.1.3.36 EXTERNXML void rtXmlSetNamespacesSet (OSCTXT * *pctxt*, OSBOOL *value*)

This function sets the context 'namespaces are set' flag.

This indicates that namespace declarations have been set either by the decoder or externally by the end user. It is used by the encoder to know not to set the default namespaces specified in the schema before starting encoding.

Parameters

pctxt Pointer to OSCTXT structure.

value Boolean value to which flag is to be set.

8.1.3.37 EXTERNXML int rtXmlSetNoNSSchemaLocation (OSCTXT * *pctxt*, const OSUTF8CHAR * *schemaLocation*)

This function sets the XML Schema Instance (xsi) no namespace schema location attribute to be added to an encoded document.

This attribute is optional: if not set, no xsi:noNamespaceSchemaLocation attribute will be added.

Parameters

pctxt Pointer to OSCTXT structure
schemaLocation Schema location attribute value

Returns

Status of operation: 0 if OK, negative status code if error.

8.1.3.38 EXTERNXML int rtXmlSetNSPrefixLinks (OSCTXT * *pctxt*, OSRTDList * *pNSAttrs*)

This function sets namespace prefix/URI links in the namespace prefix stack in the context structure.

Parameters

pctxt Pointer to OSCTXT structure.
pNSAttrs List of namespace attributes.

Returns

Status of operation: 0 if OK, negative status code if error.

8.1.3.39 EXTERNXML int rtXmlSetSchemaLocation (OSCTXT * *pctxt*, const OSUTF8CHAR * *schemaLocation*)

This function sets the XML Schema Instance (xsi) schema location attribute to be added to an encoded document.

This attribute is optional: if not set, no xsi:schemaLocation attribute will be added.

Parameters

pctxt Pointer to OSCTXT structure
schemaLocation Schema location attribute value

Returns

Status of operation: 0 if OK, negative status code if error.

8.1.3.40 EXTERNXML void rtXmlSetSoapVersion (OSCTXT * *pctxt*, OSUINT8 *version*)

This function sets the SOAP version number.

Parameters

pctxt Pointer to OSCTXT structure
version SOAP version number as 2 digit integer (for example, 11 is SOAP version 1.1, 12 is version 1.2, etc.)

8.1.3.41 EXTERNXML int rtXmlSetWriteBOM (OSCTXT * *pctxt*, OSBOOL *write*)

This function sets whether the Unicode byte order mark is encoded.

Parameters

pctxt Pointer to OSCTXT structure

write TRUE to encode BOM, FALSE to not encode BOM.

Returns

Status of operation: 0 if OK, negative status code if error.

8.1.3.42 EXTERNXML int rtXmlSetXSITypeAttr (OSCTXT * *pctxt*, const OSUTF8CHAR * *xsiType*)

This function sets the XML Schema Instance (xsi) type attribute value.

This will cause an xsi:type attribute to be added to the top level element in an encoded XML instance.

Parameters

pctxt Pointer to OSCTXT structure

xsiType xsi:type attribute value

Returns

Status of operation: 0 if OK, negative status code if error.

8.2 OSXMLDecodeBuffer.h File Reference

XML decode buffer or stream class definition.

```
#include "rtxsrc/OSRTInputStream.h"  
#include "rtxmlsrc/OSXMLMessageBuffer.h"  
#include "rtxmlsrc/rtSaxCppParserIF.h"
```

Data Structures

- class [OSXMLDecodeBuffer](#)

The [OSXMLDecodeBuffer](#) class is derived from the [OSXMLMessageBuffer](#) base class.

8.2.1 Detailed Description

XML decode buffer or stream class definition.

Definition in file [OSXMLDecodeBuffer.h](#).

8.3 OSXMLEncodeBuffer.h File Reference

XML encode message buffer class definition.

```
#include "rtxmlsrc/OSXMLMessageBuffer.h"
```

Data Structures

- class [OSXMLEncodeBuffer](#)

The [OSXMLEncodeBuffer](#) class is derived from the [OSXMLMessageBuffer](#) base class.

8.3.1 Detailed Description

XML encode message buffer class definition.

Definition in file [OSXMLEncodeBuffer.h](#).

8.4 OSXMLEncodeStream.h File Reference

XML encode stream class definition.

```
#include "rtxsrc/OSRTOutputStream.h"  
#include "rtxmlsrc/OSXMLMessageBuffer.h"
```

Data Structures

- class [OSXMLEncodeStream](#)

The [OSXMLEncodeStream](#) class is derived from the [OSXMLMessageBuffer](#) base class.

8.4.1 Detailed Description

XML encode stream class definition.

Definition in file [OSXMLEncodeStream.h](#).

8.5 OSXMLMessageBuffer.h File Reference

XML encode/decode buffer and stream base class.

```
#include "rtxsrc/OSRTMsgBuf.h"
```

```
#include "rtxmlsrc/osrtxml.h"
```

Data Structures

- class [OSXMLMessageBuffer](#)

The XML message buffer class is derived from the OSMessageBuffer base class.

8.5.1 Detailed Description

XML encode/decode buffer and stream base class.

Definition in file [OSXMLMessageBuffer.h](#).

8.6 rtXmlErrCodes.h File Reference

List of numeric status codes that can be returned by ASN1C run-time functions and generated code.

```
#include "rtxsrc/rtxErrCodes.h"
```

Defines

- #define [XML_OK_EOB](#) 0x7fffffff
End of block marker.
- #define [XML_OK_FRAG](#) XML_OK_EOB
Maintained for backward compatibility.
- #define [XML_E_BASE](#) -200
Error base.
- #define [XML_E_GENERR](#) (XML_E_BASE)
General error.
- #define [XML_E_INVSYMBOL](#) (XML_E_BASE-1)
An invalid XML symbol (character) was detected at the given point in the parse stream.
- #define [XML_E_TAGMISMATCH](#) (XML_E_BASE-2)
Start/end tag mismatch.
- #define [XML_E_DUPLATTR](#) (XML_E_BASE-3)
Duplicate attribute found.
- #define [XML_E_BADCHARREF](#) (XML_E_BASE-4)
Bad character reference found.
- #define [XML_E_INVMODE](#) (XML_E_BASE-5)
Invalid mode.
- #define [XML_E_UNEXPEOF](#) (XML_E_BASE-6)
Unexpected end of file (document).
- #define [XML_E_NOMATCH](#) (XML_E_BASE-7)
Current tag is not matched to specified one.
- #define [XML_E_ELEMMISRQ](#) (XML_E_BASE-8)
Missing required element.
- #define [XML_E_ELEMSISRQ](#) (XML_E_BASE-9)
Missing required elements.
- #define [XML_E_TOOFWELEMS](#) (XML_E_BASE-10)
The number of elements in a repeating collection was less than the number of elements specified in the XSD minOccurs facet for this type or element.

- #define [XML_E_UNEXPSTARTTAG](#) (XML_E_BASE-11)
Unexpected start tag.
- #define [XML_E_UNEXPENDTAG](#) (XML_E_BASE-12)
Unexpected end tag.
- #define [XML_E_IDNOTFOU](#) (XML_E_BASE-13)
Expected identifier not found.
- #define [XML_E_INVTYPEINFO](#) (XML_E_BASE-14)
Unknown xsi:type.
- #define [XML_E_NSURINOTFOU](#) (XML_E_BASE-15)
Namespace URI not defined for given prefix.
- #define [XML_E_KEYNOTFOU](#) (XML_E_BASE-16)
Keyref constraint has some key that not present in refered constraint.
- #define [XML_E_DUPLKEY](#) (XML_E_BASE-17)
Key or unique constraint has duplicated key.
- #define [XML_E_FLDABSENT](#) (XML_E_BASE-18)
Some key has no full set of fields.
- #define [XML_E_DUPLFLD](#) (XML_E_BASE-19)
Some key has more than one value for field.
- #define [XML_E_NOTEMPTY](#) (XML_E_BASE-20)
An element was not empty when expected.

8.6.1 Detailed Description

List of numeric status codes that can be returned by ASN1C run-time functions and generated code.

Definition in file [rtXmlErrCodes.h](#).

Index

- addXMLHeader
 - OSXMLEncodeBuffer, 118
- addXMLText
 - OSXMLEncodeBuffer, 118
- ASN.1-XML encode/decode functions., 6
- asn1xml
 - rtAsn1XmlAddAnyAttr, 7
 - rtAsn1XmlEncGenTime, 7
 - rtAsn1XmlEncObjId, 8
 - rtAsn1XmlEncOpenType, 8
 - rtAsn1XmlEncOpenTypeExt, 9
 - rtAsn1XmlEncReal, 9
 - rtAsn1XmlEncRelOID, 9
 - rtAsn1XmlEncUnivStr, 10
 - rtAsn1XmlEncUTCTime, 10
 - rtAsn1XmlFmtAttrStr, 11
 - rtAsn1XmlParseAttrStr, 11
 - rtAsn1XmlpDecDynBitStr, 11
 - rtAsn1XmlpDecGenTime, 12
 - rtAsn1XmlpDecObjId, 12
 - rtAsn1XmlpDecReal, 12
 - rtAsn1XmlpDecRelOID, 13
 - rtAsn1XmlpDecUnivStr, 13
 - rtAsn1XmlpDecUTCTime, 13
 - rtXmlpDecListOfASN1DynBitStr, 14
- decodeXML
 - OSXMLDecodeBuffer, 113
- encodeAttr
 - OSXMLEncodeStream, 123
- encodeText
 - OSXMLEncodeStream, 123
- endElement
 - OSXMLEncodeStream, 123
- getIndent
 - OSXMLMessageBuffer, 131
- getIndentChar
 - OSXMLMessageBuffer, 131
- getMsgLen
 - OSXMLEncodeBuffer, 118
- getMsgPtr
 - OSXMLEncodeStream, 123
- getStream
 - OSXMLEncodeStream, 124
- getWriteBOM
 - OSXMLMessageBuffer, 131
- init
 - OSXMLDecodeBuffer, 114
 - OSXMLEncodeBuffer, 119
 - OSXMLEncodeStream, 124
- IS_XMLNSATTR
 - osrtxml.h, 159
- IS_XSIATTR
 - osrtxml.h, 159
- isA
 - OSXMLDecodeBuffer, 114
 - OSXMLEncodeBuffer, 119
 - OSXMLEncodeStream, 124
- mbOwnStream
 - OSXMLDecodeBuffer, 115
 - OSXMLEncodeStream, 125
- mpCtxt
 - OSXMLEncodeStream, 125
- mpStream
 - OSXMLEncodeStream, 125
- OSDecimalFmt, 108
- OSDoubleFmt, 109
- OSIntegerFmt, 110
- osrtxml.h, 139
 - IS_XMLNSATTR, 159
 - IS_XSIATTR, 159
 - OSXMLQNAMEEQUALS, 159
 - OSXMLSETUTF8DECPTR, 159
 - rtSaxGetAttrValue, 160
 - rtSaxGetElemID, 160
 - rtSaxGetElemID8, 160
 - rtSaxHasXMLNSAttrs, 161
 - rtSaxIsEmptyBuffer, 161
 - rtSaxSortAttrs, 161
 - rtSaxStrListMatch, 161
 - rtSaxStrListParse, 162
 - rtXmlCmpBase64Str, 162
 - rtXmlCmpHexStr, 162
 - rtXmlCreateFileInputSource, 163
 - rtXmlInitContext, 163
 - rtXmlInitContextUsingKey, 163
 - rtXmlInitCtxtAppInfo, 163

- rtXmlMatchBase64Str, 164
- rtXmlMatchDate, 164
- rtXmlMatchDateTime, 164
- rtXmlMatchGDay, 164
- rtXmlMatchGMonth, 165
- rtXmlMatchGMonthDay, 165
- rtXmlMatchGYear, 165
- rtXmlMatchGYearMonth, 165
- rtXmlMatchHexStr, 166
- rtXmlMatchTime, 166
- rtXmlMemFreeAnyAttrs, 166
- rtXmlNewQName, 166
- rtXmlPrepareContext, 167
- rtXmlSetEncC14N, 167
- rtXmlSetEncDocHdr, 167
- rtXmlSetEncodingStr, 167
- rtXmlSetEncXSINamespace, 168
- rtXmlSetEncXSINilAttr, 168
- rtXmlSetFormatting, 168
- rtXmlSetIndent, 169
- rtXmlSetIndentChar, 169
- rtXmlSetNamespacesSet, 169
- rtXmlSetNoNSSchemaLocation, 169
- rtXmlSetNSPrefixLinks, 170
- rtXmlSetSchemaLocation, 170
- rtXmlSetSoapVersion, 170
- rtXmlSetWriteBOM, 170
- rtXmlSetXSITypeAttr, 171
- OSXMLCtxtInfo, 111
- OSXMLDecodeBuffer, 112
 - decodeXML, 113
 - init, 114
 - isA, 114
 - mbOwnStream, 115
 - OSXMLDecodeBuffer, 113
 - parseElementName, 114
 - parseElemQName, 115
 - setMaxErrors, 115
- OSXMLDecodeBuffer.h, 172
- OSXMLElemIDRec, 116
- OSXMLEncodeBuffer, 117
 - addXMLHeader, 118
 - addXMLText, 118
 - getMsgLen, 118
 - init, 119
 - isA, 119
 - OSXMLEncodeBuffer, 118
 - setFragment, 119
 - write, 119
- OSXMLEncodeBuffer.h, 173
- OSXMLEncodeStream, 121
 - encodeAttr, 123
 - encodeText, 123
 - endElement, 123
 - getMsgPtr, 123
 - getStream, 124
 - init, 124
 - isA, 124
 - mbOwnStream, 125
 - mpCtxt, 125
 - mpStream, 125
 - OSXMLEncodeStream, 122
 - startDocument, 124
 - startElement, 124
 - termStartElement, 125
- OSXMLEncodeStream.h, 174
- OSXMLFacets, 127
- OSXMLGroupDesc, 128
- OSXMLItemDescr, 129
- OSXMLMessageBuffer, 130
 - getIndent, 131
 - getIndentChar, 131
 - getWriteBOM, 131
 - OSXMLMessageBuffer, 131
 - setAppInfo, 131
 - setFormatting, 132
 - setIndent, 132
 - setIndentChar, 132
 - setNamespace, 132
 - setWriteBOM, 133
- OSXMLMessageBuffer.h, 175
- OSXMLNameFragments, 134
- OSXMLQName, 135
- OSXMLQNAMEEQUALS
 - osrtxml.h, 159
- OSXMLSETUTF8DECPTR
 - osrtxml.h, 159
- OSXMLSortedAttrOffset, 136
- OSXMLStrFragment, 137
- OSXSDAnyType, 138
- parseElementName
 - OSXMLDecodeBuffer, 114
- parseElemQName
 - OSXMLDecodeBuffer, 115
- rtAsn1XmlAddAnyAttr
 - asn1xml, 7
- rtAsn1XmlEncGenTime
 - asn1xml, 7
- rtAsn1XmlEncObjId
 - asn1xml, 8
- rtAsn1XmlEncOpenType
 - asn1xml, 8
- rtAsn1XmlEncOpenTypeExt
 - asn1xml, 9
- rtAsn1XmlEncReal
 - asn1xml, 9

rtAsn1XmlEncRelOID
 asn1xml, 9
 rtAsn1XmlEncUnivStr
 asn1xml, 10
 rtAsn1XmlEncUTCtime
 asn1xml, 10
 rtAsn1XmlFmtAttrStr
 asn1xml, 11
 rtAsn1XmlParseAttrStr
 asn1xml, 11
 rtAsn1XmlpDecDynBitStr
 asn1xml, 11
 rtAsn1XmlpDecGenTime
 asn1xml, 12
 rtAsn1XmlpDecObjId
 asn1xml, 12
 rtAsn1XmlpDecReal
 asn1xml, 12
 rtAsn1XmlpDecRelOID
 asn1xml, 13
 rtAsn1XmlpDecUnivStr
 asn1xml, 13
 rtAsn1XmlpDecUTCtime
 asn1xml, 13
 rtSaxGetAttrValue
 osrtxml.h, 160
 rtSaxGetElemID
 osrtxml.h, 160
 rtSaxGetElemID8
 osrtxml.h, 160
 rtSaxHasXMLNSAttrs
 osrtxml.h, 161
 rtSaxIsEmptyBuffer
 osrtxml.h, 161
 rtSaxSortAttrs
 osrtxml.h, 161
 rtSaxStrListMatch
 osrtxml.h, 161
 rtSaxStrListParse
 osrtxml.h, 162
 rtXmlCmpBase64Str
 osrtxml.h, 162
 rtXmlCmpHexStr
 osrtxml.h, 162
 rtXmlCreateFileInputSource
 osrtxml.h, 163
 rtXmlDec
 rtXmlDecBase64Binary, 17
 rtXmlDecBase64Str, 17
 rtXmlDecBase64StrValue, 18
 rtXmlDecBigInt, 18
 rtXmlDecBool, 19
 rtXmlDecDate, 19
 rtXmlDecDateTime, 19
 rtXmlDecDecimal, 20
 rtXmlDecDouble, 20
 rtXmlDecDynBase64Str, 20
 rtXmlDecDynHexStr, 21
 rtXmlDecDynUTF8Str, 21
 rtXmlDecEmptyElement, 21
 rtXmlDecGDay, 22
 rtXmlDecGMonth, 22
 rtXmlDecGMonthDay, 22
 rtXmlDecGYear, 23
 rtXmlDecGYearMonth, 23
 rtXmlDecHexBinary, 23
 rtXmlDecHexStr, 24
 rtXmlDecInt, 24
 rtXmlDecInt16, 25
 rtXmlDecInt64, 25
 rtXmlDecInt8, 25
 rtXmlDecNSAttr, 26
 rtXmlDecQName, 26
 rtXmlDecTime, 27
 rtXmlDecUInt, 27
 rtXmlDecUInt16, 27
 rtXmlDecUInt64, 28
 rtXmlDecUInt8, 28
 rtXmlDecUTF8Str, 28
 rtXmlDecXmlStr, 29
 rtXmlDecXSIAAttr, 29
 rtXmlDecXSIAAttrs, 29
 rtXmlParseElementName, 30
 rtXmlParseElemQName, 30
 rtXmlDecBase64Binary
 rtXmlDec, 17
 rtXmlDecBase64Str
 rtXmlDec, 17
 rtXmlDecBase64StrValue
 rtXmlDec, 18
 rtXmlDecBigInt
 rtXmlDec, 18
 rtXmlDecBool
 rtXmlDec, 19
 rtXmlDecDate
 rtXmlDec, 19
 rtXmlDecDateTime
 rtXmlDec, 19
 rtXmlDecDecimal
 rtXmlDec, 20
 rtXmlDecDouble
 rtXmlDec, 20
 rtXmlDecDynBase64Str
 rtXmlDec, 20
 rtXmlDecDynHexStr
 rtXmlDec, 21
 rtXmlDecDynUTF8Str
 rtXmlDec, 21

- rtXmlDecEmptyElement
 - rtXmlDec, [21](#)
- rtXmlDecGDay
 - rtXmlDec, [22](#)
- rtXmlDecGMonth
 - rtXmlDec, [22](#)
- rtXmlDecGMonthDay
 - rtXmlDec, [22](#)
- rtXmlDecGYear
 - rtXmlDec, [23](#)
- rtXmlDecGYearMonth
 - rtXmlDec, [23](#)
- rtXmlDecHexBinary
 - rtXmlDec, [23](#)
- rtXmlDecHexStr
 - rtXmlDec, [24](#)
- rtXmlDecInt
 - rtXmlDec, [24](#)
- rtXmlDecInt16
 - rtXmlDec, [25](#)
- rtXmlDecInt64
 - rtXmlDec, [25](#)
- rtXmlDecInt8
 - rtXmlDec, [25](#)
- rtXmlDecNSAttr
 - rtXmlDec, [26](#)
- rtXmlDecQName
 - rtXmlDec, [26](#)
- rtXmlDecTime
 - rtXmlDec, [27](#)
- rtXmlDecUInt
 - rtXmlDec, [27](#)
- rtXmlDecUInt16
 - rtXmlDec, [27](#)
- rtXmlDecUInt64
 - rtXmlDec, [28](#)
- rtXmlDecUInt8
 - rtXmlDec, [28](#)
- rtXmlDecUTF8Str
 - rtXmlDec, [28](#)
- rtXmlDecXmlStr
 - rtXmlDec, [29](#)
- rtXmlDecXSIAttr
 - rtXmlDec, [29](#)
- rtXmlDecXSIAttrs
 - rtXmlDec, [29](#)
- rtXmlEnc
 - rtXmlEncAny, [38](#)
 - rtXmlEncAnyAttr, [39](#)
 - rtXmlEncAnyTypeValue, [39](#)
 - rtXmlEncBase64Binary, [39](#)
 - rtXmlEncBase64BinaryAttr, [40](#)
 - rtXmlEncBase64StrValue, [40](#)
 - rtXmlEncBigInt, [40](#)
 - rtXmlEncBigIntAttr, [41](#)
 - rtXmlEncBigIntValue, [41](#)
 - rtXmlEncBinStrValue, [42](#)
 - rtXmlEncBitString, [42](#)
 - rtXmlEncBOM, [42](#)
 - rtXmlEncBool, [43](#)
 - rtXmlEncBoolAttr, [43](#)
 - rtXmlEncBoolValue, [43](#)
 - rtXmlEncComment, [44](#)
 - rtXmlEncDate, [44](#)
 - rtXmlEncDateTime, [44](#)
 - rtXmlEncDateTimeValue, [45](#)
 - rtXmlEncDateValue, [45](#)
 - rtXmlEncDecimal, [45](#)
 - rtXmlEncDecimalAttr, [46](#)
 - rtXmlEncDecimalValue, [46](#)
 - rtXmlEncDouble, [47](#)
 - rtXmlEncDoubleAttr, [47](#)
 - rtXmlEncDoubleNormalValue, [47](#)
 - rtXmlEncDoubleValue, [48](#)
 - rtXmlEncEmptyElement, [48](#)
 - rtXmlEncEndDocument, [49](#)
 - rtXmlEncEndElement, [49](#)
 - rtXmlEncEndSoapElems, [49](#)
 - rtXmlEncEndSoapEnv, [50](#)
 - rtXmlEncFloat, [50](#)
 - rtXmlEncFloatAttr, [50](#)
 - rtXmlEncGDay, [51](#)
 - rtXmlEncGDayValue, [51](#)
 - rtXmlEncGMonth, [51](#)
 - rtXmlEncGMonthDay, [52](#)
 - rtXmlEncGMonthDayValue, [52](#)
 - rtXmlEncGMonthValue, [52](#)
 - rtXmlEncGYear, [53](#)
 - rtXmlEncGYearMonth, [53](#)
 - rtXmlEncGYearMonthValue, [53](#)
 - rtXmlEncGYearValue, [54](#)
 - rtXmlEncHexBinary, [54](#)
 - rtXmlEncHexBinaryAttr, [54](#)
 - rtXmlEncHexStrValue, [55](#)
 - rtXmlEncIndent, [55](#)
 - rtXmlEncInt, [55](#)
 - rtXmlEncInt64, [56](#)
 - rtXmlEncInt64Attr, [56](#)
 - rtXmlEncInt64Value, [57](#)
 - rtXmlEncIntAttr, [57](#)
 - rtXmlEncIntPattern, [57](#)
 - rtXmlEncIntValue, [58](#)
 - rtXmlEncNamedBits, [58](#)
 - rtXmlEncNSAttrs, [59](#)
 - rtXmlEncReal10, [59](#)
 - rtXmlEncSoapArrayTypeAttr, [59](#)
 - rtXmlEncStartDocument, [60](#)
 - rtXmlEncStartElement, [60](#)

- rtXmlEncStartSoapElems, [61](#)
- rtXmlEncStartSoapEnv, [61](#)
- rtXmlEncString, [61](#)
- rtXmlEncStringValue, [62](#)
- rtXmlEncStringValue2, [62](#)
- rtXmlEncTermStartElement, [62](#)
- rtXmlEncTime, [63](#)
- rtXmlEncTimeValue, [63](#)
- rtXmlEncUInt, [63](#)
- rtXmlEncUInt64, [64](#)
- rtXmlEncUInt64Attr, [64](#)
- rtXmlEncUInt64Value, [65](#)
- rtXmlEncUIntAttr, [65](#)
- rtXmlEncUIntValue, [65](#)
- rtXmlEncUnicodeStr, [66](#)
- rtXmlEncUTF8Attr, [66](#)
- rtXmlEncUTF8Attr2, [66](#)
- rtXmlEncUTF8Str, [67](#)
- rtXmlEncXSIAattrs, [67](#)
- rtXmlEncXSINilAttr, [68](#)
- rtXmlEncXSITypeAttr, [68](#)
- rtXmlFinalizeMemBuf, [38](#)
- rtXmlFreeInputSource, [68](#)
- rtXmlGetEncBufLen, [38](#)
- rtXmlGetEncBufPtr, [38](#)
- rtXmlGetIndent, [68](#)
- rtXmlGetIndentChar, [69](#)
- rtXmlGetWriteBOM, [69](#)
- rtXmlPrintNSAttrs, [69](#)
- rtXmlSetEncBufPtr, [69](#)
- rtXmlEncAny
 - rtXmlEnc, [38](#)
- rtXmlEncAnyAttr
 - rtXmlEnc, [39](#)
- rtXmlEncAnyTypeValue
 - rtXmlEnc, [39](#)
- rtXmlEncAttrC14N
 - rtXmlpDec, [77](#)
- rtXmlEncBase64Binary
 - rtXmlEnc, [39](#)
- rtXmlEncBase64BinaryAttr
 - rtXmlEnc, [40](#)
- rtXmlEncBase64StrValue
 - rtXmlEnc, [40](#)
- rtXmlEncBigInt
 - rtXmlEnc, [40](#)
- rtXmlEncBigIntAttr
 - rtXmlEnc, [41](#)
- rtXmlEncBigIntValue
 - rtXmlEnc, [41](#)
- rtXmlEncBinStrValue
 - rtXmlEnc, [42](#)
- rtXmlEncBitString
 - rtXmlEnc, [42](#)
- rtXmlEncBOM
 - rtXmlEnc, [42](#)
- rtXmlEncBool
 - rtXmlEnc, [43](#)
- rtXmlEncBoolAttr
 - rtXmlEnc, [43](#)
- rtXmlEncBoolValue
 - rtXmlEnc, [43](#)
- rtXmlEncComment
 - rtXmlEnc, [44](#)
- rtXmlEncDate
 - rtXmlEnc, [44](#)
- rtXmlEncDateTime
 - rtXmlEnc, [44](#)
- rtXmlEncDateTimeValue
 - rtXmlEnc, [45](#)
- rtXmlEncDateValue
 - rtXmlEnc, [45](#)
- rtXmlEncDecimal
 - rtXmlEnc, [45](#)
- rtXmlEncDecimalAttr
 - rtXmlEnc, [46](#)
- rtXmlEncDecimalValue
 - rtXmlEnc, [46](#)
- rtXmlEncDouble
 - rtXmlEnc, [47](#)
- rtXmlEncDoubleAttr
 - rtXmlEnc, [47](#)
- rtXmlEncDoubleNormalValue
 - rtXmlEnc, [47](#)
- rtXmlEncDoubleValue
 - rtXmlEnc, [48](#)
- rtXmlEncEmptyElement
 - rtXmlEnc, [48](#)
- rtXmlEncEndDocument
 - rtXmlEnc, [49](#)
- rtXmlEncEndElement
 - rtXmlEnc, [49](#)
- rtXmlEncEndSoapElems
 - rtXmlEnc, [49](#)
- rtXmlEncEndSoapEnv
 - rtXmlEnc, [50](#)
- rtXmlEncFloat
 - rtXmlEnc, [50](#)
- rtXmlEncFloatAttr
 - rtXmlEnc, [50](#)
- rtXmlEncGDay
 - rtXmlEnc, [51](#)
- rtXmlEncGDayValue
 - rtXmlEnc, [51](#)
- rtXmlEncGMonth
 - rtXmlEnc, [51](#)
- rtXmlEncGMonthDay
 - rtXmlEnc, [52](#)

rtXmlEncGMonthDayValue	rtXmlEncStringValue2
rtXmlEnc, 52	rtXmlEnc, 62
rtXmlEncGMonthValue	rtXmlEncTermStartElement
rtXmlEnc, 52	rtXmlEnc, 62
rtXmlEncGYear	rtXmlEncTime
rtXmlEnc, 53	rtXmlEnc, 63
rtXmlEncGYearMonth	rtXmlEncTimeValue
rtXmlEnc, 53	rtXmlEnc, 63
rtXmlEncGYearMonthValue	rtXmlEncUInt
rtXmlEnc, 53	rtXmlEnc, 63
rtXmlEncGYearValue	rtXmlEncUInt64
rtXmlEnc, 54	rtXmlEnc, 64
rtXmlEncHexBinary	rtXmlEncUInt64Attr
rtXmlEnc, 54	rtXmlEnc, 64
rtXmlEncHexBinaryAttr	rtXmlEncUInt64Value
rtXmlEnc, 54	rtXmlEnc, 65
rtXmlEncHexStrValue	rtXmlEncUIntAttr
rtXmlEnc, 55	rtXmlEnc, 65
rtXmlEncIndent	rtXmlEncUIntValue
rtXmlEnc, 55	rtXmlEnc, 65
rtXmlEncInt	rtXmlEncUnicodeStr
rtXmlEnc, 55	rtXmlEnc, 66
rtXmlEncInt64	rtXmlEncUTF8Attr
rtXmlEnc, 56	rtXmlEnc, 66
rtXmlEncInt64Attr	rtXmlEncUTF8Attr2
rtXmlEnc, 56	rtXmlEnc, 66
rtXmlEncInt64Value	rtXmlEncUTF8Str
rtXmlEnc, 57	rtXmlEnc, 67
rtXmlEncIntAttr	rtXmlEncXSIAttrs
rtXmlEnc, 57	rtXmlEnc, 67
rtXmlEncIntPattern	rtXmlEncXSINilAttr
rtXmlEnc, 57	rtXmlEnc, 68
rtXmlEncIntValue	rtXmlEncXSITypeAttr
rtXmlEnc, 58	rtXmlEnc, 68
rtXmlEncNamedBits	rtXmlErrCodes.h, 176
rtXmlEnc, 58	rtXmlFinalizeMemBuf
rtXmlEncNSAttrs	rtXmlEnc, 38
rtXmlEnc, 59	rtXmlFreeInputSource
rtXmlEncReal10	rtXmlEnc, 68
rtXmlEnc, 59	rtXmlGetEncBufLen
rtXmlEncSoapArrayTypeAttr	rtXmlEnc, 38
rtXmlEnc, 59	rtXmlGetEncBufPtr
rtXmlEncStartElement	rtXmlEnc, 38
rtXmlEnc, 60	rtXmlGetIndent
rtXmlEncStartSoapElems	rtXmlEnc, 68
rtXmlEnc, 61	rtXmlGetIndentChar
rtXmlEncStartSoapEnv	rtXmlEnc, 69
rtXmlEnc, 61	rtXmlGetWriteBOM
rtXmlEncString	rtXmlEnc, 69
rtXmlEnc, 61	rtXmlInitContext
rtXmlEncStringValue	osrtxml.h, 163
rtXmlEnc, 62	rtXmlInitContextUsingKey
	osrtxml.h, 163
	rtXmlInitCtxtAppInfo

- osrtxml.h, 163
- rtXmlMatchBase64Str
 - osrtxml.h, 164
- rtXmlMatchDate
 - osrtxml.h, 164
- rtXmlMatchDateTime
 - osrtxml.h, 164
- rtXmlMatchGDay
 - osrtxml.h, 164
- rtXmlMatchGMonth
 - osrtxml.h, 165
- rtXmlMatchGMonthDay
 - osrtxml.h, 165
- rtXmlMatchGYear
 - osrtxml.h, 165
- rtXmlMatchGYearMonth
 - osrtxml.h, 165
- rtXmlMatchHexStr
 - osrtxml.h, 166
- rtXmlMatchTime
 - osrtxml.h, 166
- rtXmlMemFreeAnyAttrs
 - osrtxml.h, 166
- rtXmlNewQName
 - osrtxml.h, 166
- rtXmlParseElementName
 - rtXmlDec, 30
- rtXmlParseElemQName
 - rtXmlDec, 30
- rtXmlpCountListItems
 - rtXmlpDec, 77
- rtXmlpCreateReader
 - rtXmlpDec, 77
- rtXmlpDec
 - rtXmlEncAttrC14N, 77
 - rtXmlpCountListItems, 77
 - rtXmlpCreateReader, 77
 - rtXmlpDecAny, 78
 - rtXmlpDecAnyAttrStr, 78
 - rtXmlpDecAnyElem, 78
 - rtXmlpDecBase64Str, 79
 - rtXmlpDecBigInt, 79
 - rtXmlpDecBitString, 80
 - rtXmlpDecBool, 80
 - rtXmlpDecDate, 80
 - rtXmlpDecDateTime, 81
 - rtXmlpDecDecimal, 81
 - rtXmlpDecDouble, 82
 - rtXmlpDecDoubleExt, 82
 - rtXmlpDecDynBase64Str, 82
 - rtXmlpDecDynBitString, 83
 - rtXmlpDecDynHexStr, 83
 - rtXmlpDecDynUnicodeStr, 83
 - rtXmlpDecDynUTF8Str, 84
 - rtXmlpDecGDay, 84
 - rtXmlpDecGMonth, 85
 - rtXmlpDecGMonthDay, 85
 - rtXmlpDecGYear, 85
 - rtXmlpDecGYearMonth, 86
 - rtXmlpDecHexStr, 86
 - rtXmlpDecInt, 86
 - rtXmlpDecInt16, 87
 - rtXmlpDecInt64, 87
 - rtXmlpDecInt8, 87
 - rtXmlpDecNamedBits, 88
 - rtXmlpDecStrList, 88
 - rtXmlpDecTime, 89
 - rtXmlpDecUInt, 89
 - rtXmlpDecUInt16, 89
 - rtXmlpDecUInt64, 90
 - rtXmlpDecUInt8, 90
 - rtXmlpDecUTF8Str, 90
 - rtXmlpDecXmlStr, 91
 - rtXmlpDecXmlStrList, 91
 - rtXmlpDecXSIAAttr, 91
 - rtXmlpDecXSIAAttrs, 92
 - rtXmlpDecXSISchemaAttr, 92
 - rtXmlpForceDecodeAsGroup, 93
 - rtXmlpGetAttributeCount, 93
 - rtXmlpGetAttributeID, 93
 - rtXmlpGetCurrentLevel, 93
 - rtXmlpGetNextAllElemID, 94
 - rtXmlpGetNextAllElemID16, 94
 - rtXmlpGetNextElem, 95
 - rtXmlpGetNextElemID, 95
 - rtXmlpGetNextSeqElemID, 95
 - rtXmlpGetReader, 96
 - rtXmlpGetXmInsAttrs, 96
 - rtXmlpGetXSISchemaAttr, 96
 - rtXmlpGetXSISchemaIndex, 97
 - rtXmlpHasAttributes, 97
 - rtXmlpHideAttributes, 97
 - rtXmlpIsDecodeAsGroup, 98
 - rtXmlpIsEmptyElement, 98
 - rtXmlpIsLastEventDone, 98
 - rtXmlpIsUTF8Encoding, 98
 - rtXmlpListHasItem, 99
 - rtXmlpLookupXSISchemaIndex, 99
 - rtXmlpMarkLastEventActive, 99
 - rtXmlpMarkPos, 100
 - rtXmlpMatchEndTag, 100
 - rtXmlpMatchStartTag, 100
 - rtXmlpNeedDecodeAttributes, 101
 - rtXmlpReadBytes, 101
 - rtXmlpResetMarkedPos, 101
 - rtXmlpRewindToMarkedPos, 101
 - rtXmlpSelectAttribute, 102
 - rtXmlpSetListMode, 102

rtXmlpSetMixedContentMode, 102
 rtXmlpSetNamespaceTable, 102
 rtXmlpSetWhiteSpaceMode, 103
 rtXmlpDecAny
 rtXmlpDec, 78
 rtXmlpDecAnyAttrStr
 rtXmlpDec, 78
 rtXmlpDecAnyElem
 rtXmlpDec, 78
 rtXmlpDecBase64Str
 rtXmlpDec, 79
 rtXmlpDecBigInt
 rtXmlpDec, 79
 rtXmlpDecBitString
 rtXmlpDec, 80
 rtXmlpDecBool
 rtXmlpDec, 80
 rtXmlpDecDate
 rtXmlpDec, 80
 rtXmlpDecDateTime
 rtXmlpDec, 81
 rtXmlpDecDecimal
 rtXmlpDec, 81
 rtXmlpDecDouble
 rtXmlpDec, 82
 rtXmlpDecDoubleExt
 rtXmlpDec, 82
 rtXmlpDecDynBase64Str
 rtXmlpDec, 82
 rtXmlpDecDynBitString
 rtXmlpDec, 83
 rtXmlpDecDynHexStr
 rtXmlpDec, 83
 rtXmlpDecDynUnicodeStr
 rtXmlpDec, 83
 rtXmlpDecDynUTF8Str
 rtXmlpDec, 84
 rtXmlpDecGDay
 rtXmlpDec, 84
 rtXmlpDecGMonth
 rtXmlpDec, 85
 rtXmlpDecGMonthDay
 rtXmlpDec, 85
 rtXmlpDecGYear
 rtXmlpDec, 85
 rtXmlpDecGYearMonth
 rtXmlpDec, 86
 rtXmlpDecHexStr
 rtXmlpDec, 86
 rtXmlpDecInt
 rtXmlpDec, 86
 rtXmlpDecInt16
 rtXmlpDec, 87
 rtXmlpDecInt64
 rtXmlpDec, 87
 rtXmlpDecInt8
 rtXmlpDec, 87
 rtXmlpDecListOfASN1DynBitStr
 asn1xml, 14
 rtXmlpDecNamedBits
 rtXmlpDec, 88
 rtXmlpDecStrList
 rtXmlpDec, 88
 rtXmlpDecTime
 rtXmlpDec, 89
 rtXmlpDecUInt
 rtXmlpDec, 89
 rtXmlpDecUInt16
 rtXmlpDec, 89
 rtXmlpDecUInt64
 rtXmlpDec, 90
 rtXmlpDecUInt8
 rtXmlpDec, 90
 rtXmlpDecUTF8Str
 rtXmlpDec, 90
 rtXmlpDecXmlStr
 rtXmlpDec, 91
 rtXmlpDecXmlStrList
 rtXmlpDec, 91
 rtXmlpDecXSIAAttr
 rtXmlpDec, 91
 rtXmlpDecXSIAAttrs
 rtXmlpDec, 92
 rtXmlpDecXSITypeAttr
 rtXmlpDec, 92
 rtXmlpForceDecodeAsGroup
 rtXmlpDec, 93
 rtXmlpGetAttributeCount
 rtXmlpDec, 93
 rtXmlpGetAttributeID
 rtXmlpDec, 93
 rtXmlpGetCurrentLevel
 rtXmlpDec, 93
 rtXmlpGetNextAllElemID
 rtXmlpDec, 94
 rtXmlpGetNextAllElemID16
 rtXmlpDec, 94
 rtXmlpGetNextElem
 rtXmlpDec, 95
 rtXmlpGetNextElemID
 rtXmlpDec, 95
 rtXmlpGetNextSeqElemID
 rtXmlpDec, 95
 rtXmlpGetReader
 rtXmlpDec, 96
 rtXmlpGetXmInsAttrs
 rtXmlpDec, 96
 rtXmlpGetXSITypeAttr

- rtXmlpDec, [96](#)
- rtXmlpGetXSITypeIndex
 - rtXmlpDec, [97](#)
- rtXmlpHasAttributes
 - rtXmlpDec, [97](#)
- rtXmlpHideAttributes
 - rtXmlpDec, [97](#)
- rtXmlpIsDecodeAsGroup
 - rtXmlpDec, [98](#)
- rtXmlpIsEmptyElement
 - rtXmlpDec, [98](#)
- rtXmlpIsLastEventDone
 - rtXmlpDec, [98](#)
- rtXmlpIsUTF8Encoding
 - rtXmlpDec, [98](#)
- rtXmlpListHasItem
 - rtXmlpDec, [99](#)
- rtXmlpLookupXSITypeIndex
 - rtXmlpDec, [99](#)
- rtXmlpMarkLastEventActive
 - rtXmlpDec, [99](#)
- rtXmlpMarkPos
 - rtXmlpDec, [100](#)
- rtXmlpMatchEndTag
 - rtXmlpDec, [100](#)
- rtXmlpMatchStartTag
 - rtXmlpDec, [100](#)
- rtXmlpNeedDecodeAttributes
 - rtXmlpDec, [101](#)
- rtXmlpReadBytes
 - rtXmlpDec, [101](#)
- rtXmlPrepareContext
 - osrtxml.h, [167](#)
- rtXmlpResetMarkedPos
 - rtXmlpDec, [101](#)
- rtXmlpRewindToMarkedPos
 - rtXmlpDec, [101](#)
- rtXmlPrintNSAttrs
 - rtXmlEnc, [69](#)
- rtXmlpSelectAttribute
 - rtXmlpDec, [102](#)
- rtXmlpSetListMode
 - rtXmlpDec, [102](#)
- rtXmlpSetMixedContentMode
 - rtXmlpDec, [102](#)
- rtXmlpSetNamespaceTable
 - rtXmlpDec, [102](#)
- rtXmlpSetWhiteSpaceMode
 - rtXmlpDec, [103](#)
- rtXmlSetEncBufPtr
 - rtXmlEnc, [69](#)
- rtXmlSetEncC14N
 - osrtxml.h, [167](#)
- rtXmlSetEncDocHdr
 - osrtxml.h, [167](#)
- rtXmlSetEncodingStr
 - osrtxml.h, [167](#)
- rtXmlSetEncXSINamespace
 - osrtxml.h, [168](#)
- rtXmlSetEncXSINilAttr
 - osrtxml.h, [168](#)
- rtXmlSetFormatting
 - osrtxml.h, [168](#)
- rtXmlSetIndent
 - osrtxml.h, [169](#)
- rtXmlSetIndentChar
 - osrtxml.h, [169](#)
- rtXmlSetNamespacesSet
 - osrtxml.h, [169](#)
- rtXmlSetNoNSSchemaLocation
 - osrtxml.h, [169](#)
- rtXmlSetNSPrefixLinks
 - osrtxml.h, [170](#)
- rtXmlSetSchemaLocation
 - osrtxml.h, [170](#)
- rtXmlSetSoapVersion
 - osrtxml.h, [170](#)
- rtXmlSetWriteBOM
 - osrtxml.h, [170](#)
- rtXmlSetXSITypeAttr
 - osrtxml.h, [171](#)
- rtXmlUtil
 - rtXmlWriteToFile, [71](#)
- rtXmlWriteToFile
 - rtXmlUtil, [71](#)
- setAppInfo
 - OSXMLMessageBuffer, [131](#)
- setFormatting
 - OSXMLMessageBuffer, [132](#)
- setFragment
 - OSXMLEncodeBuffer, [119](#)
- setIndent
 - OSXMLMessageBuffer, [132](#)
- setIndentChar
 - OSXMLMessageBuffer, [132](#)
- setMaxErrors
 - OSXMLDecodeBuffer, [115](#)
- setNamespace
 - OSXMLMessageBuffer, [132](#)
- setWriteBOM
 - OSXMLMessageBuffer, [133](#)
- startDocument
 - OSXMLEncodeStream, [124](#)
- startElement
 - OSXMLEncodeStream, [124](#)
- termStartElement

OSXMLEncodeStream, [125](#)

write

OSXMLEncodeBuffer, [119](#)

XML decode functions., [15](#)

XML encode functions., [31](#)

XML pull-parser decode functions., [72](#)

XML run-time error status codes., [104](#)

XML utility functions., [71](#)

XML_E_BASE

xmlErrCodes, [105](#)

XML_E_ELEMMISRQ

xmlErrCodes, [105](#)

XML_E_ELEMSISRQ

xmlErrCodes, [106](#)

XML_E_FLDABSENT

xmlErrCodes, [106](#)

XML_E_NOMATCH

xmlErrCodes, [106](#)

XML_E_NSURINOTFOU

xmlErrCodes, [106](#)

XML_E_TAGMISMATCH

xmlErrCodes, [106](#)

XML_OK_EOB

xmlErrCodes, [106](#)

XML_OK_FRAG

xmlErrCodes, [106](#)

xmlErrCodes

XML_E_BASE, [105](#)

XML_E_ELEMMISRQ, [105](#)

XML_E_ELEMSISRQ, [106](#)

XML_E_FLDABSENT, [106](#)

XML_E_NOMATCH, [106](#)

XML_E_NSURINOTFOU, [106](#)

XML_E_TAGMISMATCH, [106](#)

XML_OK_EOB, [106](#)

XML_OK_FRAG, [106](#)