

RInside Version 0.2.16

Generated by Doxygen 1.8.13

Contents

1 Namespace Index	1
1.1 Namespace List	1
2 Hierarchical Index	3
2.1 Class Hierarchy	3
3 Class Index	5
3.1 Class List	5
4 File Index	7
4.1 File List	7
5 Namespace Documentation	9
5.1 <code>binary_stream_helpers</code> Namespace Reference	9
5.1.1 TypeDef Documentation	10
5.1.1.1 <code>deserialize_member_t</code>	10
5.1.1.2 <code>serialize_member_t</code>	10
5.1.1.3 <code>void_t</code>	10
5.1.2 Function Documentation	10
5.1.2.1 <code>stream_read() [1/3]</code>	11
5.1.2.2 <code>stream_read() [2/3]</code>	11
5.1.2.3 <code>stream_read() [3/3]</code>	11
5.1.2.4 <code>stream_write() [1/3]</code>	12

5.1.2.5 stream_write() [2/3]	12
5.1.2.6 stream_write() [3/3]	12
5.2 callback_helper Namespace Reference	13
5.2.1 Function Documentation	13
5.2.1.1 call() [1/4]	13
5.2.1.2 call() [2/4]	14
5.2.1.3 call() [3/4]	14
5.2.1.4 call() [4/4]	15
5.2.1.5 read_from_stream_with_typeid()	15
5.3 Rcpp Namespace Reference	15
5.3.1 Typedef Documentation	16
5.3.1.1 InternalFunctionForRInsideServer	16
5.3.2 Function Documentation	16
5.3.2.1 as() [1/2]	16
5.3.2.2 as() [2/2]	16
5.3.2.3 RCPP_API_CLASS()	17
5.3.2.4 wrap() [1/2]	17
5.3.2.5 wrap() [2/2]	18
5.4 serialization Namespace Reference	18
5.5 typeid_helpers Namespace Reference	18
5.5.1 Typedef Documentation	19
5.5.1.1 void_t	19

6 Class Documentation	21
6.1 Bar Class Reference	21
6.1.1 Detailed Description	22
6.1.2 Constructor & Destructor Documentation	22
6.1.2.1 Bar()	22
6.1.2.2 ~Bar()	22
6.1.3 Member Function Documentation	22
6.1.3.1 deserialize()	23
6.1.3.2 serialize()	23
6.1.4 Member Data Documentation	23
6.1.4.1 foo	24
6.1.4.2 name	24
6.1.4.3 TYPEID	24
6.2 BinaryStream Class Reference	24
6.2.1 Detailed Description	25
6.2.2 Constructor & Destructor Documentation	25
6.2.2.1 BinaryStream() [1/3]	25
6.2.2.2 ~BinaryStream()	26
6.2.2.3 BinaryStream() [2/3]	26
6.2.2.4 BinaryStream() [3/3]	26
6.2.3 Member Function Documentation	26
6.2.3.1 close()	26
6.2.3.2 connectToUnixSocket()	27
6.2.3.3 operator=(()) [1/2]	27
6.2.3.4 operator=(()) [2/2]	27
6.2.3.5 read() [1/3]	28
6.2.3.6 read() [2/3]	28
6.2.3.7 read() [3/3]	29

6.2.3.8	write() [1/3]	29
6.2.3.9	write() [2/3]	29
6.2.3.10	write() [3/3]	29
6.2.4	Member Data Documentation	30
6.2.4.1	is_eof	30
6.2.4.2	read_fd	30
6.2.4.3	write_fd	30
6.3	CppClassForRInsideServer Class Reference	31
6.3.1	Detailed Description	32
6.3.2	Constructor & Destructor Documentation	32
6.3.2.1	CppClassForRInsideServer()	32
6.3.2.2	~CppClassForRInsideServer()	32
6.3.3	Member Function Documentation	32
6.3.3.1	operator()	33
6.3.4	Member Data Documentation	33
6.3.4.1	callback_id	33
6.3.4.2	server	33
6.3.4.3	types	34
6.4	DensityApp Class Reference	34
6.4.1	Detailed Description	35
6.4.2	Member Enumeration Documentation	36
6.4.2.1	Kernel [1/2]	36
6.4.2.2	Kernel [2/2]	37
6.4.3	Constructor & Destructor Documentation	37
6.4.3.1	DensityApp() [1/2]	37
6.4.3.2	DensityApp() [2/2]	38
6.4.4	Member Function Documentation	38
6.4.4.1	plot() [1/2]	38

6.4.4.2	plot() [2/2]	39
6.4.4.3	reportButton() [1/2]	39
6.4.4.4	reportButton() [2/2]	39
6.4.4.5	reportEdit() [1/2]	39
6.4.4.6	reportEdit() [2/2]	40
6.4.4.7	reportSpinner() [1/2]	40
6.4.4.8	reportSpinner() [2/2]	40
6.4.5	Member Data Documentation	40
6.4.5.1	bw_	40
6.4.5.2	cmd_	41
6.4.5.3	codeEdit_	41
6.4.5.4	greeting_	41
6.4.5.5	group_	41
6.4.5.6	img_	41
6.4.5.7	imgfile_	42
6.4.5.8	kernel_	42
6.4.5.9	R_	42
6.4.5.10	spin_	42
6.4.5.11	tempfile_	42
6.4.5.12	Yvec_	43
6.5	Foo Class Reference	43
6.5.1	Detailed Description	43
6.5.2	Constructor & Destructor Documentation	44
6.5.2.1	Foo() [1/2]	44
6.5.2.2	~Foo() [1/2]	44
6.5.2.3	Foo() [2/2]	44
6.5.2.4	~Foo() [2/2]	44
6.5.3	Member Function Documentation	44

6.5.3.1	deserialize()	45
6.5.3.2	serialize()	45
6.5.4	Member Data Documentation	45
6.5.4.1	a [1/2]	46
6.5.4.2	a [2/2]	46
6.5.4.3	b [1/2]	46
6.5.4.4	b [2/2]	46
6.5.4.5	name	46
6.5.4.6	TYPEID	47
6.6	binary_stream_helpers::has_serialization_members< T > Struct Template Reference	47
6.6.1	Detailed Description	48
6.7	binary_stream_helpers::has_serialization_members_cv< T, typename > Struct Template Reference	48
6.7.1	Detailed Description	49
6.8	binary_stream_helpers::has_serialization_members_cv< T, void_t< serialize_member_t< T >, deserialize_member_t< T > >> Struct Template Reference	50
6.8.1	Detailed Description	50
6.9	has_typeid< T, typename > Struct Template Reference	51
6.9.1	Detailed Description	51
6.10	has_typeid< T, typeid_helpers::void_t< decltype(typeid_helpers::id< typename std::decay< T >::type, void >::value) >> Struct Template Reference	52
6.10.1	Detailed Description	52
6.11	typeid_helpers::has_typeid_member< T, typename > Struct Template Reference	53
6.11.1	Detailed Description	54
6.12	typeid_helpers::has_typeid_member< T, void_t< decltype(T::TYPEID) >> Struct Template Reference	54
6.12.1	Detailed Description	55
6.13	typeid_helpers::id< T, V > Struct Template Reference	55
6.13.1	Detailed Description	55
6.14	typeid_helpers::id< double, void > Struct Template Reference	55
6.14.1	Detailed Description	55

6.14.2 Member Data Documentation	56
6.14.2.1 value	56
6.15 typeid_helpers::id< float, void > Struct Template Reference	56
6.15.1 Detailed Description	56
6.15.2 Member Data Documentation	56
6.15.2.1 value	56
6.16 typeid_helpers::id< int16_t, void > Struct Template Reference	57
6.16.1 Detailed Description	57
6.16.2 Member Data Documentation	57
6.16.2.1 value	57
6.17 typeid_helpers::id< int32_t, void > Struct Template Reference	57
6.17.1 Detailed Description	58
6.17.2 Member Data Documentation	58
6.17.2.1 value	58
6.18 typeid_helpers::id< int64_t, void > Struct Template Reference	58
6.18.1 Detailed Description	58
6.18.2 Member Data Documentation	58
6.18.2.1 value	59
6.19 typeid_helpers::id< int8_t, void > Struct Template Reference	59
6.19.1 Detailed Description	59
6.19.2 Member Data Documentation	59
6.19.2.1 value	59
6.20 typeid_helpers::id< std::string, void > Struct Template Reference	60
6.20.1 Detailed Description	60
6.20.2 Member Data Documentation	60
6.20.2.1 value	60
6.21 typeid_helpers::id< std::vector< double >, void > Struct Template Reference	60
6.21.1 Detailed Description	61

6.21.2 Member Data Documentation	61
6.21.2.1 value	61
6.22 typeid_helpers::id< std::vector< float >, void > Struct Template Reference	61
6.22.1 Detailed Description	61
6.22.2 Member Data Documentation	61
6.22.2.1 value	62
6.23 typeid_helpers::id< std::vector< int16_t >, void > Struct Template Reference	62
6.23.1 Detailed Description	62
6.23.2 Member Data Documentation	62
6.23.2.1 value	62
6.24 typeid_helpers::id< std::vector< int32_t >, void > Struct Template Reference	63
6.24.1 Detailed Description	63
6.24.2 Member Data Documentation	63
6.24.2.1 value	63
6.25 typeid_helpers::id< std::vector< int64_t >, void > Struct Template Reference	63
6.25.1 Detailed Description	64
6.25.2 Member Data Documentation	64
6.25.2.1 value	64
6.26 typeid_helpers::id< std::vector< int8_t >, void > Struct Template Reference	64
6.26.1 Detailed Description	64
6.26.2 Member Data Documentation	64
6.26.2.1 value	65
6.27 typeid_helpers::id< std::vector< std::string >, void > Struct Template Reference	65
6.27.1 Detailed Description	65
6.27.2 Member Data Documentation	65
6.27.2.1 value	65
6.28 typeid_helpers::id< std::vector< uint16_t >, void > Struct Template Reference	66
6.28.1 Detailed Description	66

6.28.2 Member Data Documentation	66
6.28.2.1 value	66
6.29 typeid_helpers::id< std::vector< uint32_t >, void > Struct Template Reference	66
6.29.1 Detailed Description	67
6.29.2 Member Data Documentation	67
6.29.2.1 value	67
6.30 typeid_helpers::id< std::vector< uint64_t >, void > Struct Template Reference	67
6.30.1 Detailed Description	67
6.30.2 Member Data Documentation	67
6.30.2.1 value	68
6.31 typeid_helpers::id< std::vector< uint8_t >, void > Struct Template Reference	68
6.31.1 Detailed Description	68
6.31.2 Member Data Documentation	68
6.31.2.1 value	68
6.32 typeid_helpers::id< T, typename std::enable_if< has_typeid_member< T >::value >::type > Struct Template Reference	69
6.32.1 Detailed Description	69
6.32.2 Member Data Documentation	69
6.32.2.1 value	69
6.33 typeid_helpers::id< uint16_t, void > Struct Template Reference	69
6.33.1 Detailed Description	70
6.33.2 Member Data Documentation	70
6.33.2.1 value	70
6.34 typeid_helpers::id< uint32_t, void > Struct Template Reference	70
6.34.1 Detailed Description	70
6.34.2 Member Data Documentation	70
6.34.2.1 value	71
6.35 typeid_helpers::id< uint64_t, void > Struct Template Reference	71

6.35.1 Detailed Description	71
6.35.2 Member Data Documentation	71
6.35.2.1 value	71
6.36 typeid_helpers::id< uint8_t, void > Struct Template Reference	72
6.36.1 Detailed Description	72
6.36.2 Member Data Documentation	72
6.36.2.1 value	72
6.37 typeid_helpers::id< void, void > Struct Template Reference	72
6.37.1 Detailed Description	73
6.37.2 Member Data Documentation	73
6.37.2.1 value	73
6.38 MemBuf Class Reference	73
6.38.1 Detailed Description	73
6.38.2 Constructor & Destructor Documentation	74
6.38.2.1 MemBuf()	74
6.38.2.2 ~MemBuf()	74
6.38.3 Member Function Documentation	74
6.38.3.1 add()	74
6.38.3.2 getBufPtr()	75
6.38.3.3 resize()	75
6.38.3.4 rewind()	75
6.38.4 Member Data Documentation	75
6.38.4.1 buffer	75
6.39 callback_helper::parameter_error_exception Class Reference	76
6.39.1 Detailed Description	76
6.39.2 Constructor & Destructor Documentation	77
6.39.2.1 parameter_error_exception()	77
6.40 Planet Struct Reference	77

6.40.1	Detailed Description	77
6.40.2	Member Data Documentation	77
6.40.2.1	m	77
6.40.2.2	vx	78
6.40.2.3	vy	78
6.40.2.4	x	78
6.40.2.5	y	78
6.41	RInside::Proxy Class Reference	78
6.41.1	Detailed Description	79
6.41.2	Constructor & Destructor Documentation	79
6.41.2.1	Proxy()	79
6.41.3	Member Function Documentation	79
6.41.3.1	operator T()	79
6.41.4	Member Data Documentation	79
6.41.4.1	x	80
6.42	QtDensity Class Reference	80
6.42.1	Detailed Description	81
6.42.2	Constructor & Destructor Documentation	81
6.42.2.1	QtDensity()	81
6.42.3	Member Function Documentation	82
6.42.3.1	filterFile()	82
6.42.3.2	getBandwidth	82
6.42.3.3	getKernel	83
6.42.3.4	getRandomDataCmd	83
6.42.3.5	plot()	83
6.42.3.6	runRandomDataCmd	84
6.42.3.7	setupDisplay()	84
6.42.4	Member Data Documentation	84

6.42.4.1	m_bw	85
6.42.4.2	m_cmd	85
6.42.4.3	m_kernel	85
6.42.4.4	m_R	85
6.42.4.5	m_svg	85
6.42.4.6	m_svgfile	86
6.42.4.7	m_tempfile	86
6.43	Resource Class Reference	86
6.43.1	Detailed Description	87
6.43.2	Constructor & Destructor Documentation	87
6.43.2.1	Resource()	87
6.43.3	Member Function Documentation	87
6.43.3.1	getValue()	87
6.43.3.2	use()	88
6.43.4	Member Data Documentation	88
6.43.4.1	guard	88
6.43.4.2	i	88
6.43.4.3	RR	89
6.44	RInside Class Reference	89
6.44.1	Detailed Description	90
6.44.2	Constructor & Destructor Documentation	90
6.44.2.1	RInside() [1/2]	91
6.44.2.2	RInside() [2/2]	91
6.44.2.3	~RInside()	92
6.44.3	Member Function Documentation	92
6.44.3.1	assign()	92
6.44.3.2	autoloads()	93
6.44.3.3	init_rand()	93

6.44.3.4	init_tempdir()	93
6.44.3.5	initialize()	94
6.44.3.6	instance()	94
6.44.3.7	instancePtr()	95
6.44.3.8	operator[]()	95
6.44.3.9	parseEval() [1/2]	95
6.44.3.10	parseEval() [2/2]	96
6.44.3.11	parseEvalNT()	96
6.44.3.12	parseEvalQ()	97
6.44.3.13	parseEvalQNT()	97
6.44.3.14	repl()	98
6.44.3.15	setVerbose()	98
6.44.4	Member Data Documentation	99
6.44.4.1	global_env_m	99
6.44.4.2	instance_m	99
6.44.4.3	interactive_m	99
6.44.4.4	mb_m	99
6.44.4.5	verbose_m	100
6.45	RInsideCallbacks Class Reference	100
6.45.1	Detailed Description	101
6.45.2	Member Function Documentation	101
6.45.2.1	Busy()	101
6.45.2.2	CleanerrConsole()	102
6.45.2.3	FlushConsole()	102
6.45.2.4	getConsoleOutput()	102
6.45.2.5	has_Busy()	102
6.45.2.6	has_CleanerrConsole()	102
6.45.2.7	has_FlushConsole()	103

6.45.2.8 has_ReadConsole()	103
6.45.2.9 has_ResetConsole()	103
6.45.2.10 has_ShowMessage()	103
6.45.2.11 has_Suicide()	103
6.45.2.12 has_WriteConsole()	103
6.45.2.13 ReadConsole()	104
6.45.2.14 ResetConsole()	104
6.45.2.15 resetConsoleOutput()	104
6.45.2.16 ShowMessage()	104
6.45.2.17 Suicide()	104
6.45.2.18 WriteConsole()	105
6.45.3 Member Data Documentation	105
6.45.3.1 output_buffer	105
6.46 RInsideClient Class Reference	105
6.46.1 Detailed Description	106
6.46.2 Constructor & Destructor Documentation	106
6.46.2.1 RInsideClient()	107
6.46.2.2 ~RInsideClient()	107
6.46.3 Member Function Documentation	107
6.46.3.1 getConsoleOutput()	108
6.46.3.2 getPlot()	108
6.46.3.3 getValue()	109
6.46.3.4 initPlot()	109
6.46.3.5 parseEval()	110
6.46.3.6 parseEvalQ()	110
6.46.3.7 readReply()	111
6.46.3.8 runScript()	111
6.46.3.9 setCallback()	112

6.46.3.10 setValue()	112
6.46.3.11 unrecoverable_error()	113
6.46.3.12 writeCommand()	113
6.46.4 Member Data Documentation	114
6.46.4.1 callbacks	114
6.46.4.2 can_send_command	114
6.46.4.3 had_unrecoverable_error	114
6.46.4.4 next_callback_id	114
6.46.4.5 stream	115
6.47 RInsideServer Class Reference	115
6.47.1 Detailed Description	116
6.47.2 Constructor & Destructor Documentation	116
6.47.2.1 RInsideServer()	116
6.47.2.2 ~RInsideServer()	117
6.47.3 Member Function Documentation	117
6.47.3.1 allowSendReply()	117
6.47.3.2 registerDefaultTypes()	117
6.47.3.3 registerType()	117
6.47.3.4 run()	118
6.47.3.5 sendReply()	118
6.47.3.6 SEXP_from_stream()	119
6.47.3.7 SEXP_to_stream()	119
6.47.4 Friends And Related Function Documentation	120
6.47.4.1 CppFunctionForRInsideServer	120
6.47.5 Member Data Documentation	120
6.47.5.1 can_send_reply	120
6.47.5.2 R	120
6.47.5.3 Rcallbacks	120

6.47.5.4	registry_sexp_from_stream	121
6.47.5.5	registry_sexp_to_stream	121
6.47.5.6	stream	121
6.48	callback_helper::send_pack< Params > Struct Template Reference	121
6.48.1	Detailed Description	121
6.49	callback_helper::send_pack< First, Remaining... > Struct Template Reference	122
6.49.1	Detailed Description	122
6.49.2	Member Function Documentation	122
6.49.2.1	send()	122
6.50	callback_helper::send_pack<> Struct Template Reference	123
6.50.1	Detailed Description	123
6.50.2	Member Function Documentation	123
6.50.2.1	send()	123
6.51	serialization::serializer< T > Struct Template Reference	123
6.51.1	Detailed Description	123
6.52	serialization::serializer< std::string > Struct Template Reference	124
6.52.1	Detailed Description	124
6.52.2	Member Function Documentation	124
6.52.2.1	deserialize()	124
6.52.2.2	serialize()	125
6.53	serialization::serializer< std::vector< T > > Struct Template Reference	125
6.53.1	Detailed Description	125
6.53.2	Member Function Documentation	126
6.53.2.1	deserialize()	126
6.53.2.2	serialize()	126
6.54	Solver Class Reference	127
6.54.1	Detailed Description	127
6.54.2	Member Typedef Documentation	127

6.54.2.1	Planets	127
6.54.3	Constructor & Destructor Documentation	128
6.54.3.1	Solver()	128
6.54.4	Member Function Documentation	128
6.54.4.1	Iterate()	128
6.54.4.2	Iteration()	128
6.54.5	Friends And Related Function Documentation	128
6.54.5.1	Wrapper	128
6.54.6	Member Data Documentation	129
6.54.6.1	dt	129
6.54.6.2	G	129
6.54.6.3	tab	129
6.55	BinaryStream::stream_exception Class Reference	130
6.55.1	Detailed Description	130
6.56	callback_helper::type_mismatch_exception Class Reference	131
6.56.1	Detailed Description	131
6.57	typeid_helpers::void_t_struct<... > Struct Template Reference	132
6.57.1	Detailed Description	132
6.57.2	Member Typedef Documentation	132
6.57.2.1	type	132
6.58	binary_stream_helpers::void_t_struct<... > Struct Template Reference	132
6.58.1	Detailed Description	133
6.58.2	Member Typedef Documentation	133
6.58.2.1	type	133
6.59	Wrapper Class Reference	133
6.59.1	Detailed Description	134
6.59.2	Constructor & Destructor Documentation	134
6.59.2.1	Wrapper()	134
6.59.3	Member Function Documentation	134
6.59.3.1	dt()	134
6.59.3.2	G()	135
6.59.3.3	getData()	135
6.59.3.4	setData()	135
6.59.4	Member Data Documentation	135
6.59.4.1	s	135

7 File Documentation	137
7.1 inst/examples/armadillo/rinside_arma0.cpp File Reference	137
7.1.1 Function Documentation	137
7.1.1.1 main()	138
7.2 inst/examples/armadillo/rinside_arma1.cpp File Reference	138
7.2.1 Function Documentation	138
7.2.1.1 main()	139
7.3 inst/examples/c_interface/hello.c File Reference	139
7.3.1 Function Documentation	140
7.3.1.1 main()	140
7.4 inst/examples/c_interface/passdata.c File Reference	140
7.4.1 Function Documentation	141
7.4.1.1 main()	141
7.5 inst/examples/eigen/rinside_eigen0.cpp File Reference	141
7.5.1 Function Documentation	142
7.5.1.1 main()	142
7.6 inst/examples/eigen/rinside_eigen1.cpp File Reference	142
7.6.1 Function Documentation	143
7.6.1.1 main()	143
7.7 inst/examples/mpi/rinside_mpi_sample0.cpp File Reference	143
7.7.1 Function Documentation	144
7.7.1.1 main()	144
7.8 inst/examples/mpi/rinside_mpi_sample1.cpp File Reference	144
7.8.1 Function Documentation	145
7.8.1.1 main()	145
7.9 inst/examples/mpi/rinside_mpi_sample2.cpp File Reference	145
7.9.1 Function Documentation	146
7.9.1.1 main()	146

7.10 inst/examples/mpi/rinside_mpi_sample3.cpp File Reference	146
7.10.1 Function Documentation	147
7.10.1.1 main()	147
7.11 inst/examples/mpi/rinside_mpi_sample4.cpp File Reference	147
7.11.1 Macro Definition Documentation	148
7.11.1.1 DIETAG	148
7.11.1.2 WORKTAG	148
7.11.2 Function Documentation	148
7.11.2.1 do_work()	149
7.11.2.2 get_next_work_item()	149
7.11.2.3 initialize()	150
7.11.2.4 main()	150
7.11.2.5 master()	151
7.11.2.6 slave()	151
7.11.3 Variable Documentation	152
7.11.3.1 itr	152
7.12 inst/examples/qt/main.cpp File Reference	152
7.12.1 Function Documentation	152
7.12.1.1 main()	152
7.13 inst/examples/qt/qtdensity.cpp File Reference	153
7.14 inst/examples/qt/qtdensity.h File Reference	153
7.15 inst/examples/sandboxed_server/client/callback_helper.h File Reference	154
7.16 inst/examples/sandboxed_server/client/rinsideclient.cpp File Reference	155
7.17 inst/examples/sandboxed_server/client/rinsideclient.h File Reference	155
7.18 inst/examples/sandboxed_server/common/binarystream.cpp File Reference	156
7.19 inst/examples/sandboxed_server/common/binarystream.h File Reference	157
7.20 inst/examples/sandboxed_server/common/constants.h File Reference	159
7.20.1 Macro Definition Documentation	160

7.20.1.1	ris_socket_address	160
7.20.2	Variable Documentation	160
7.20.2.1	RIS_CMD_EXIT	160
7.20.2.2	RIS_CMD_GETCONSOLE	160
7.20.2.3	RIS_CMD_GETPLOT	161
7.20.2.4	RIS_CMD_GETVALUE	161
7.20.2.5	RIS_CMD_INITPLOT	161
7.20.2.6	RIS_CMD_RUN	161
7.20.2.7	RIS_CMD_SETCALLBACK	161
7.20.2.8	RIS_CMD_SETVALUE	162
7.20.2.9	RIS_MAGIC_NUMBER	162
7.20.2.10	RIS_REPLY_CALLBACK	162
7.20.2.11	RIS_REPLY_ERROR	162
7.20.2.12	RIS_REPLY_OK	162
7.20.2.13	RIS_REPLY_VALUE	163
7.21	inst/examples/sandboxed_server/common/typeid.h File Reference	163
7.21.1	Function Documentation	165
7.21.1.1	TYPEID()	165
7.22	inst/examples/sandboxed_server/datatypes/bar.cpp File Reference	165
7.23	inst/examples/sandboxed_server/datatypes/bar.h File Reference	165
7.24	inst/examples/sandboxed_server/datatypes/bar_rcpp_wrapper_declarations.h File Reference	167
7.25	inst/examples/sandboxed_server/datatypes/bar_rcpp_wrapper_definitions.h File Reference	168
7.26	inst/examples/sandboxed_server/datatypes/foo.cpp File Reference	168
7.27	inst/examples/sandboxed_server/datatypes/foo.h File Reference	169
7.28	inst/examples/sandboxed_server/datatypes/foo_rcpp_wrapper_declarations.h File Reference	170
7.29	inst/examples/sandboxed_server/datatypes/foo_rcpp_wrapper_definitions.h File Reference	171
7.30	inst/examples/sandboxed_server/example_client.cpp File Reference	172
7.30.1	Function Documentation	172

7.30.1.1	main()	172
7.30.1.2	test_callbacks()	173
7.30.1.3	test_console_output()	174
7.30.1.4	test_multiple()	174
7.30.1.5	test_plot()	175
7.30.1.6	test_setting_getting()	175
7.31	inst/examples/sandboxed_server/example_server.cpp File Reference	176
7.31.1	Macro Definition Documentation	177
7.31.1.1	LOG	177
7.31.2	Function Documentation	177
7.31.2.1	cmpTimespec()	177
7.31.2.2	main()	178
7.31.2.3	signal_handler()	178
7.31.3	Variable Documentation	178
7.31.3.1	TIMEOUT_SECONDS	179
7.32	inst/examples/sandboxed_server/server/internalfunction_clone.h File Reference	179
7.33	inst/examples/sandboxed_server/server/rinside_callbacks.h File Reference	180
7.34	inst/examples/sandboxed_server/server/rinsideserver.cpp File Reference	180
7.34.1	Macro Definition Documentation	181
7.34.1.1	CMD_CATCH	181
7.34.1.2	CMD_TRY	181
7.34.1.3	LOG	181
7.34.2	Function Documentation	182
7.34.2.1	read_file_as_string()	182
7.34.2.2	replace_all()	182
7.35	inst/examples/sandboxed_server/server/rinsideserver.h File Reference	182
7.36	inst/examples/standard/local/rinside_axionator.cpp File Reference	183
7.36.1	Function Documentation	183

7.36.1.1 hello()	184
7.36.1.2 main()	184
7.37 inst/examples/standard/local/rinside_issue178.cpp File Reference	184
7.37.1 Function Documentation	185
7.37.1.1 main()	185
7.38 inst/examples/standard/local/rinside_slava.cpp File Reference	185
7.38.1 Function Documentation	186
7.38.1.1 main()	186
7.38.2 Variable Documentation	186
7.38.2.1 Rinst	186
7.39 inst/examples/standard/local/rinside_vertica.cpp File Reference	186
7.39.1 Function Documentation	187
7.39.1.1 main()	187
7.40 inst/examples/standard/rinside_callbacks0.cpp File Reference	187
7.40.1 Function Documentation	188
7.40.1.1 main()	188
7.41 inst/examples/standard/rinside_callbacks1.cpp File Reference	188
7.41.1 Function Documentation	189
7.41.1.1 main()	189
7.42 inst/examples/standard/rinside_interactive0.cpp File Reference	189
7.42.1 Function Documentation	190
7.42.1.1 Dollar()	190
7.42.1.2 DollarAssign()	190
7.42.1.3 main()	191
7.42.1.4 Names()	191
7.43 inst/examples/standard/rinside_module_sample0.cpp File Reference	192
7.43.1 Function Documentation	192
7.43.1.1 hello()	192

7.43.1.2	main()	192
7.44	inst/examples/standard/rinside_sample0.cpp File Reference	193
7.44.1	Function Documentation	193
7.44.1.1	main()	193
7.45	inst/examples/standard/rinside_sample1.cpp File Reference	194
7.45.1	Function Documentation	194
7.45.1.1	createMatrix()	194
7.45.1.2	main()	195
7.46	inst/examples/standard/rinside_sample10.cpp File Reference	195
7.46.1	Function Documentation	195
7.46.1.1	main()	196
7.46.1.2	show()	196
7.47	inst/examples/standard/rinside_sample11.cpp File Reference	196
7.47.1	Function Documentation	197
7.47.1.1	main()	197
7.48	inst/examples/standard/rinside_sample12.cpp File Reference	197
7.48.1	Function Documentation	198
7.48.1.1	main()	198
7.49	inst/examples/standard/rinside_sample13.cpp File Reference	198
7.49.1	Function Documentation	199
7.49.1.1	main()	199
7.50	inst/examples/standard/rinside_sample14.cpp File Reference	199
7.50.1	Function Documentation	200
7.50.1.1	main()	200
7.51	inst/examples/standard/rinside_sample15.cpp File Reference	200
7.51.1	Function Documentation	201
7.51.1.1	main()	201
7.52	inst/examples/standard/rinside_sample16.cpp File Reference	201

7.52.1 Function Documentation	202
7.52.1.1 main()	202
7.52.1.2 swapFoo()	203
7.53 inst/examples/standard/rinside_sample17.cpp File Reference	203
7.53.1 Function Documentation	203
7.53.1.1 main()	204
7.54 inst/examples/standard/rinside_sample2.cpp File Reference	204
7.54.1 Function Documentation	205
7.54.1.1 main()	205
7.55 inst/examples/standard/rinside_sample3.cpp File Reference	205
7.55.1 Function Documentation	206
7.55.1.1 main()	206
7.56 inst/examples/standard/rinside_sample4.cpp File Reference	206
7.56.1 Function Documentation	207
7.56.1.1 main()	207
7.57 inst/examples/standard/rinside_sample5.cpp File Reference	207
7.57.1 Function Documentation	208
7.57.1.1 main()	208
7.58 inst/examples/standard/rinside_sample6.cpp File Reference	208
7.58.1 Function Documentation	209
7.58.1.1 main()	209
7.59 inst/examples/standard/rinside_sample7.cpp File Reference	209
7.59.1 Function Documentation	210
7.59.1.1 main()	210
7.60 inst/examples/standard/rinside_sample8.cpp File Reference	210
7.60.1 Function Documentation	211
7.60.1.1 main()	211
7.61 inst/examples/standard/rinside_sample9.cpp File Reference	211

7.61.1 Function Documentation	212
7.61.1.1 hello()	212
7.61.1.2 main()	212
7.62 inst/examples/standard/rinside_test0.cpp File Reference	213
7.62.1 Function Documentation	213
7.62.1.1 main()	213
7.63 inst/examples/standard/rinside_test1.cpp File Reference	214
7.63.1 Function Documentation	214
7.63.1.1 main()	214
7.64 inst/examples/standard/rinside_test2.cpp File Reference	215
7.64.1 Function Documentation	215
7.64.1.1 main()	215
7.65 inst/examples/threads/boostEx.cpp File Reference	216
7.65.1 Function Documentation	216
7.65.1.1 main()	216
7.65.1.2 thread_func()	217
7.65.2 Variable Documentation	217
7.65.2.1 R_CStackLimit	217
7.66 inst/examples/wt/wtdensity.cpp File Reference	218
7.66.1 Function Documentation	218
7.66.1.1 createApplication()	219
7.66.1.2 main()	219
7.67 inst/examples/wt/wtdensityPlain.cpp File Reference	220
7.67.1 Function Documentation	220
7.67.1.1 createApplication()	221
7.67.1.2 main()	221
7.68 inst/include/Callbacks.h File Reference	222
7.69 inst/include/MemBuf.h File Reference	222

7.70 inst/include/RInside.h File Reference	222
7.71 inst/include/RInside_C.h File Reference	223
7.71.1 Function Documentation	224
7.71.1.1 evalInR()	224
7.71.1.2 evalQuietlyInR()	224
7.71.1.3 passToR()	225
7.71.1.4 setupRinC()	225
7.71.1.5 teardownRinC()	225
7.72 inst/include/RInsideCommon.h File Reference	226
7.72.1 Macro Definition Documentation	226
7.72.1.1 CSTACK_DEFNS	226
7.72.1.2 HAVE_UINTPTR_T	227
7.72.1.3 logTxt	227
7.72.2 Function Documentation	227
7.72.2.1 logTxtFunction()	227
7.73 inst/include/RInsideConfig.h File Reference	227
7.74 src/compiler.cpp File Reference	228
7.74.1 Function Documentation	228
7.74.1.1 showCompiler()	228
7.75 src/MemBuf.cpp File Reference	228
7.75.1 Variable Documentation	229
7.75.1.1 programName	229
7.75.1.2 verbose	229
7.76 src/RcppExports.cpp File Reference	230
7.76.1 Function Documentation	230
7.76.1.1 _RInside_showCompiler()	230
7.76.1.2 R_init_RInside()	231
7.76.1.3 showCompiler()	231

7.76.2 Variable Documentation	231
7.76.2.1 CallEntries	231
7.77 src/RInside.cpp File Reference	232
7.77.1 Macro Definition Documentation	232
7.77.1.1 R_INTERFACE_PTRS	232
7.77.2 Variable Documentation	232
7.77.2.1 programName	233
7.78 src/RInside_C.cpp File Reference	233
7.78.1 Function Documentation	233
7.78.1.1 evalInR()	234
7.78.1.2 evalQuietlyInR()	234
7.78.1.3 passToR()	235
7.78.1.4 setupRinC()	235
7.78.1.5 teardownRinC()	235
7.78.2 Variable Documentation	235
7.78.2.1 rr	236
7.79 src/setenv/setenv.c File Reference	236
7.79.1 Function Documentation	236
7.79.1.1 setenv()	236
7.80 src/tools/RInsideAutoloads.r File Reference	237
7.81 src/tools/RInsideEnvVars.r File Reference	237
7.82 src/tools/unix2dos.r File Reference	237

Chapter 1

Namespace Index

1.1 Namespace List

Here is a list of all namespaces with brief descriptions:

binary_stream_helpers	.....	9
callback_helper	.....	13
Rcpp	.....	15
serialization	.....	18
typeid_helpers	.....	18

Chapter 2

Hierarchical Index

2.1 Class Hierarchy

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

Bar	21
BinaryStream	24
Callbacks	
RInsideCallbacks	100
CppFunctionBase	
CppMethodForRInsideServer	31
exception	
BinaryStream::stream_exception	130
callback_helper::type_mismatch_exception	131
false_type	
binary_stream_helpers::has_serialization_members_cv< T, typename >	48
binary_stream_helpers::has_serialization_members_cv< std::decay< T >::type >	48
binary_stream_helpers::has_serialization_members< T >	47
has_typeid< T, typename >	51
typeid_helpers::has_typeid_member< T, typename >	53
Foo	43
typeid_helpers::id< T, V >	55
typeid_helpers::id< double, void >	55
typeid_helpers::id< float, void >	56
typeid_helpers::id< int16_t, void >	57
typeid_helpers::id< int32_t, void >	57
typeid_helpers::id< int64_t, void >	58
typeid_helpers::id< int8_t, void >	59
typeid_helpers::id< std::string, void >	60
typeid_helpers::id< std::vector< double >, void >	60
typeid_helpers::id< std::vector< float >, void >	61
typeid_helpers::id< std::vector< int16_t >, void >	62
typeid_helpers::id< std::vector< int32_t >, void >	63
typeid_helpers::id< std::vector< int64_t >, void >	63
typeid_helpers::id< std::vector< int8_t >, void >	64
typeid_helpers::id< std::vector< std::string >, void >	65

typeid_helpers::id< std::vector< uint16_t >, void >	66
typeid_helpers::id< std::vector< uint32_t >, void >	66
typeid_helpers::id< std::vector< uint64_t >, void >	67
typeid_helpers::id< std::vector< uint8_t >, void >	68
typeid_helpers::id< T, typename std::enable_if< has_typeid_member< T >::value >::type >	69
typeid_helpers::id< uint16_t, void >	69
typeid_helpers::id< uint32_t, void >	70
typeid_helpers::id< uint64_t, void >	71
typeid_helpers::id< uint8_t, void >	72
typeid_helpers::id< void, void >	72
integral_constant	
binary_stream_helpers::has_serialization_members_cv< T, void_t< serialize_member_t< T >, deserialize_member_t< T > >>	50
MemBuf	73
Planet	77
RInside::Proxy	78
QMainWindow	
QtDensity	80
Resource	86
RInside	89
RInsideClient	105
RInsideServer	115
runtime_error	
callback_helper::parameter_error_exception	76
callback_helper::send_pack< Params >	121
callback_helper::send_pack< First, Remaining... >	122
callback_helper::send_pack<>	123
serialization::serializer< T >	123
serialization::serializer< std::string >	124
serialization::serializer< std::vector< T > >	125
Solver	127
true_type	
has_typeid< T, typeid_helpers::void_t< decltype(typeid_helpers::id< typename std::decay< T >::type, void >::value) > >	52
typeid_helpers::has_typeid_member< T, void_t< decltype(T::TYPEID) > >	54
typeid_helpers::void_t_struct<... >	132
binary_stream_helpers::void_t_struct<... >	132
WApplication	
DensityApp	34
DensityApp	34
Wrapper	133

Chapter 3

Class Index

3.1 Class List

Here are the classes, structs, unions and interfaces with brief descriptions:

Bar	21
BinaryStream	24
CppFunctionForRInsideServer	31
DensityApp	34
Foo	43
binary_stream_helpers::has_serialization_members< T >	47
binary_stream_helpers::has_serialization_members_cv< T, typename >	48
binary_stream_helpers::has_serialization_members_cv< T, void_t< serialize_member_t< T >, deserialize← _member_t< T > >>	50
has_typeid< T, typename >	51
has_typeid< T, typeid_helpers::void_t< decltype(typeid_helpers::id< typename std::decay< T >::type, void >::value)> >	52
typeid_helpers::has_typeid_member< T, typename >	53
typeid_helpers::has_typeid_member< T, void_t< decltype(T::TYPEID)> >	54
typeid_helpers::id< T, V >	55
typeid_helpers::id< double, void >	55
typeid_helpers::id< float, void >	56
typeid_helpers::id< int16_t, void >	57
typeid_helpers::id< int32_t, void >	57
typeid_helpers::id< int64_t, void >	58
typeid_helpers::id< int8_t, void >	59
typeid_helpers::id< std::string, void >	60
typeid_helpers::id< std::vector< double >, void >	60
typeid_helpers::id< std::vector< float >, void >	61
typeid_helpers::id< std::vector< int16_t >, void >	62
typeid_helpers::id< std::vector< int32_t >, void >	63
typeid_helpers::id< std::vector< int64_t >, void >	63
typeid_helpers::id< std::vector< int8_t >, void >	64
typeid_helpers::id< std::vector< std::string >, void >	65
typeid_helpers::id< std::vector< uint16_t >, void >	66
typeid_helpers::id< std::vector< uint32_t >, void >	66

typeid_helpers::id< std::vector< uint64_t >, void >	67
typeid_helpers::id< std::vector< uint8_t >, void >	68
typeid_helpers::id< T, typename std::enable_if< has_typeid_member< T >::value >::type >	69
typeid_helpers::id< uint16_t, void >	69
typeid_helpers::id< uint32_t, void >	70
typeid_helpers::id< uint64_t, void >	71
typeid_helpers::id< uint8_t, void >	72
typeid_helpers::id< void, void >	72
MemBuf	73
callback_helper::parameter_error_exception	76
Planet	77
RInside::Proxy	78
QtDensity	80
Resource	86
RInside	89
RInsideCallbacks	100
RInsideClient	105
RInsideServer	115
callback_helper::send_pack< Params >	121
callback_helper::send_pack< First, Remaining... >	122
callback_helper::send_pack<>	123
serialization::serializer< T >	123
serialization::serializer< std::string >	124
serialization::serializer< std::vector< T > >	125
Solver	127
BinaryStream::stream_exception	130
callback_helper::type_mismatch_exception	131
typeid_helpers::void_t_struct<... >	132
binary_stream_helpers::void_t_struct<... >	132
Wrapper	133

Chapter 4

File Index

4.1 File List

Here is a list of all files with brief descriptions:

inst/examples/armadillo/rinside_arma0.cpp	137
inst/examples/armadillo/rinside_arma1.cpp	138
inst/examples/c_interface/hello.c	139
inst/examples/c_interface/passdata.c	140
inst/examples/eigen/rinside_eigen0.cpp	141
inst/examples/eigen/rinside_eigen1.cpp	142
inst/examples/mpi/rinside_mpi_sample0.cpp	143
inst/examples/mpi/rinside_mpi_sample1.cpp	144
inst/examples/mpi/rinside_mpi_sample2.cpp	145
inst/examples/mpi/rinside_mpi_sample3.cpp	146
inst/examples/mpi/rinside_mpi_sample4.cpp	147
inst/examples/qt/main.cpp	152
inst/examples/qt/qtdensity.cpp	153
inst/examples/qt/qtdensity.h	153
inst/examples/sandboxed_server/example_client.cpp	172
inst/examples/sandboxed_server/example_server.cpp	176
inst/examples/sandboxed_server/client/callback_helper.h	154
inst/examples/sandboxed_server/client/rinsideclient.cpp	155
inst/examples/sandboxed_server/client/rinsideclient.h	155
inst/examples/sandboxed_server/common/binarystream.cpp	156
inst/examples/sandboxed_server/common/binarystream.h	157
inst/examples/sandboxed_server/common/constants.h	159
inst/examples/sandboxed_server/common/typeid.h	163
inst/examples/sandboxed_server/datatypes/bar.cpp	165
inst/examples/sandboxed_server/datatypes/bar.h	165
inst/examples/sandboxed_server/datatypes/bar_rcpp_wrapper_declarations.h	167
inst/examples/sandboxed_server/datatypes/bar_rcpp_wrapper_definitions.h	168
inst/examples/sandboxed_server/datatypes/foo.cpp	168
inst/examples/sandboxed_server/datatypes/foo.h	169
inst/examples/sandboxed_server/datatypes/foo_rcpp_wrapper_declarations.h	170
inst/examples/sandboxed_server/datatypes/foo_rcpp_wrapper_definitions.h	171

inst/examples/sandboxed_server/server/internalfunction_clone.h	179
inst/examples/sandboxed_server/server/rinside_callbacks.h	180
inst/examples/sandboxed_server/server/rinsideserver.cpp	180
inst/examples/sandboxed_server/server/rinsideserver.h	182
inst/examples/standard/rinside_callbacks0.cpp	187
inst/examples/standard/rinside_callbacks1.cpp	188
inst/examples/standard/rinside_interactive0.cpp	189
inst/examples/standard/rinside_module_sample0.cpp	192
inst/examples/standard/rinside_sample0.cpp	193
inst/examples/standard/rinside_sample1.cpp	194
inst/examples/standard/rinside_sample10.cpp	195
inst/examples/standard/rinside_sample11.cpp	196
inst/examples/standard/rinside_sample12.cpp	197
inst/examples/standard/rinside_sample13.cpp	198
inst/examples/standard/rinside_sample14.cpp	199
inst/examples/standard/rinside_sample15.cpp	200
inst/examples/standard/rinside_sample16.cpp	201
inst/examples/standard/rinside_sample17.cpp	203
inst/examples/standard/rinside_sample2.cpp	204
inst/examples/standard/rinside_sample3.cpp	205
inst/examples/standard/rinside_sample4.cpp	206
inst/examples/standard/rinside_sample5.cpp	207
inst/examples/standard/rinside_sample6.cpp	208
inst/examples/standard/rinside_sample7.cpp	209
inst/examples/standard/rinside_sample8.cpp	210
inst/examples/standard/rinside_sample9.cpp	211
inst/examples/standard/rinside_test0.cpp	213
inst/examples/standard/rinside_test1.cpp	214
inst/examples/standard/rinside_test2.cpp	215
inst/examples/standard/local/rinside_axionator.cpp	183
inst/examples/standard/local/rinside_issue178.cpp	184
inst/examples/standard/local/rinside_slava.cpp	185
inst/examples/standard/local/rinside_vertica.cpp	186
inst/examples/threads/boostEx.cpp	216
inst/examples/wt/wtdensity.cpp	218
inst/examples/wt/wtdensityPlain.cpp	220
inst/include/Callbacks.h	222
inst/include/MemBuf.h	222
inst/include/RInside.h	222
inst/include/RInside_C.h	223
inst/include/RInsideCommon.h	226
inst/include/RInsideConfig.h	227
src/compiler.cpp	228
src/MemBuf.cpp	228
src/RcppExports.cpp	230
src/RInside.cpp	232
src/RInside_C.cpp	233
src/setenv/setenv.c	236
src/tools/RInsideAutoloads.r	237
src/tools/RInsideEnvVars.r	237
src/tools/unix2dos.r	237

Chapter 5

Namespace Documentation

5.1 binary_stream_helpers Namespace Reference

Classes

- struct `has_serialization_members`
- struct `has_serialization_members_cv`
- struct `has_serialization_members_cv< T, void_t< serialize_member_t< T >, deserialize_member_t< T > >`
- struct `void_t_struct`

Typedefs

- template<typename... C>
using `void_t` = typename `void_t_struct< C... >`::type
- template<typename T>
using `serialize_member_t` = decltype(std::declval< T & >().serialize(std::declval< `BinaryStream` & >()))
- template<typename T>
using `deserialize_member_t` = decltype(T::deserialize(std::declval< `BinaryStream` & >()))

Functions

- template<typename T>
std::enable_if< std::is_arithmetic< T >::value >::type `stream_write` (`BinaryStream` &stream, T &t)
- template<typename T>
std::enable_if< `has_typeid`< T >::value &&std::is_class< T >::value &&`has_serialization_members`< T >::value
>::type `stream_write` (`BinaryStream` &stream, T &t)
- template<typename T>
std::enable_if< `has_typeid`< T >::value &&std::is_class< T >::value &&!`has_serialization_members`< T >::value
>::type `stream_write` (`BinaryStream` &stream, T &t)
- template<typename T>
std::enable_if< std::is_arithmetic< T >::value, T >::type `stream_read` (`BinaryStream` &stream)
- template<typename T>
std::enable_if< `has_typeid`< T >::value &&std::is_class< T >::value &&`has_serialization_members`< T >::value,
T >::type `stream_read` (`BinaryStream` &stream)
- template<typename T>
std::enable_if< `has_typeid`< T >::value &&std::is_class< T >::value &&!`has_serialization_members`< T >::value,
T >::type `stream_read` (`BinaryStream` &stream)

5.1.1 Typedef Documentation

5.1.1.1 deserialize_member_t

```
template<typename T >
using binary\_stream\_helpers::deserialize\_member\_t = typedef decltype\( T::deserialize\( std::declval<BinaryStream&>\(\) \) \)
```

Definition at line 116 of file [binarystream.h](#).

5.1.1.2 serialize_member_t

```
template<typename T >
using binary\_stream\_helpers::serialize\_member\_t = typedef decltype\( std::declval<T&>\(\).serialize\(
    std::declval<BinaryStream&>\(\) \) \)
```

Definition at line 113 of file [binarystream.h](#).

5.1.1.3 void_t

```
template<typename... C>
using binary\_stream\_helpers::void\_t = typedef typename void\\_t\\_struct<C...>::type
```

Definition at line 107 of file [binarystream.h](#).

5.1.2 Function Documentation

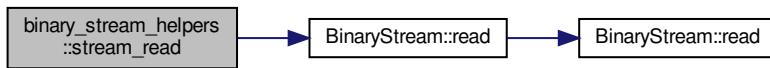
5.1.2.1 stream_read() [1/3]

```
template<typename T >
std::enable_if< std::is_arithmetic<T>::value, T >::type binary_stream_helpers::stream_read (
    BinaryStream & stream )
```

Definition at line 155 of file `binarystream.h`.

References `BinaryStream::read()`.

Here is the call graph for this function:



5.1.2.2 stream_read() [2/3]

```
template<typename T >
std::enable_if< has_typeid<T>::value && std::is_class<T>::value && has_serialization_members<T>::value, T >::type binary_stream_helpers::stream_read (
    BinaryStream & stream )
```

Definition at line 163 of file `binarystream.h`.

5.1.2.3 stream_read() [3/3]

```
template<typename T >
std::enable_if< has_typeid<T>::value && std::is_class<T>::value && !has_serialization_members<T>::value, T >::type binary_stream_helpers::stream_read (
    BinaryStream & stream )
```

Definition at line 169 of file `binarystream.h`.

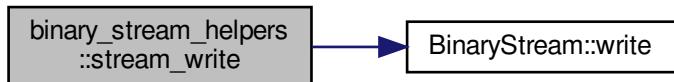
5.1.2.4 stream_write() [1/3]

```
template<typename T >
std::enable_if< std::is_arithmetic<T>::value >::type binary_stream_helpers::stream_write (
    BinaryStream & stream,
    T & t )
```

Definition at line 133 of file `binarystream.h`.

References `BinaryStream::write()`.

Here is the call graph for this function:



5.1.2.5 stream_write() [2/3]

```
template<typename T >
std::enable_if< has_typeid<T>::value && std::is_class<T>::value && has_serialization_members<T>::value >::type binary_stream_helpers::stream_write (
    BinaryStream & stream,
    T & t )
```

Definition at line 139 of file `binarystream.h`.

5.1.2.6 stream_write() [3/3]

```
template<typename T >
std::enable_if< has_typeid<T>::value && std::is_class<T>::value && !has_serialization_members<T>::value >::type binary_stream_helpers::stream_write (
    BinaryStream & stream,
    T & t )
```

Definition at line 145 of file `binarystream.h`.

5.2 callback_helper Namespace Reference

Classes

- class [parameter_error_exception](#)
- struct [send_pack](#)
- struct [send_pack< First, Remaining... >](#)
- struct [send_pack<>](#)
- class [type_mismatch_exception](#)

Functions

- template<typename T >
T [read_from_stream_with_typeid](#) ([BinaryStream](#) &stream)
- template<typename RESULT_TYPE >
void [call](#) (const std::function< RESULT_TYPE()> &fun, [BinaryStream](#) &stream)
- template<typename RESULT_TYPE , typename U0 >
void [call](#) (const std::function< RESULT_TYPE(U0)> &fun, [BinaryStream](#) &stream)
- template<typename RESULT_TYPE , typename U0 , typename U1 >
void [call](#) (const std::function< RESULT_TYPE(U0, U1)> &fun, [BinaryStream](#) &stream)
- template<typename RESULT_TYPE , typename U0 , typename U1 , typename U2 >
void [call](#) (const std::function< RESULT_TYPE(U0, U1, U2)> &fun, [BinaryStream](#) &stream)

5.2.1 Function Documentation

5.2.1.1 [call\(\)](#) [1/4]

```
template<typename RESULT_TYPE >
void callback_helper::call (
    const std::function< RESULT_TYPE ()> & fun,
    BinaryStream & stream )
```

Definition at line 57 of file [callback_helper.h](#).

References [BinaryStream::write\(\)](#).

Here is the call graph for this function:



5.2.1.2 call() [2/4]

```
template<typename RESULT_TYPE , typename U0 >
void callback_helper::call (
    const std::function< RESULT_TYPE(U0) > & fun,
    BinaryStream & stream )
```

Definition at line 64 of file `callback_helper.h`.

References `BinaryStream::write()`.

Here is the call graph for this function:



5.2.1.3 call() [3/4]

```
template<typename RESULT_TYPE , typename U0 , typename U1 >
void callback_helper::call (
    const std::function< RESULT_TYPE(U0, U1) > & fun,
    BinaryStream & stream )
```

Definition at line 73 of file `callback_helper.h`.

References `BinaryStream::write()`.

Here is the call graph for this function:



5.2.1.4 call() [4/4]

```
template<typename RESULT_TYPE , typename U0 , typename U1 , typename U2 >
void callback_helper::call (
    const std::function< RESULT_TYPE(U0, U1, U2)> & fun,
    BinaryStream & stream )
```

Definition at line 83 of file `callback_helper.h`.

References `BinaryStream::write()`.

Here is the call graph for this function:



5.2.1.5 read_from_stream_with_typeid()

```
template<typename T >
T callback_helper::read_from_stream_with_typeid (
    BinaryStream & stream )
```

Definition at line 38 of file `callback_helper.h`.

References `BinaryStream::read()`, `RIS_REPLY_ERROR`, and `RIS_REPLY_VALUE`.

Here is the call graph for this function:



5.3 Rcpp Namespace Reference

Typedefs

- `typedef InternalFunctionForRInsideServer_Impl< PreserveStorage > InternalFunctionForRInsideServer`

Functions

- template<>
 SEXP **wrap** (const Bar &bar)
- template<>
 Bar **as** (SEXP SEXP)
- template<>
 SEXP **wrap** (const Foo &foo)
- template<>
 Foo **as** (SEXP SEXP)
- **Rcpp_API_CLASS** (InternalFunctionForRInsideServer_Impl)

5.3.1 Typedef Documentation

5.3.1.1 InternalFunctionForRInsideServer

```
typedef InternalFunctionForRInsideServer_Impl<PreserveStorage> Rcpp::InternalFunctionForRInsideServer
```

Definition at line 78 of file internalfunction_clone.h.

5.3.2 Function Documentation

5.3.2.1 as() [1/2]

```
template<>
Foo Rcpp::as (
    SEXP SEXP )
```

Definition at line 19 of file foo_rcpp_wrapper_definitions.h.

5.3.2.2 as() [2/2]

```
template<>
Bar Rcpp::as (
    SEXP SEXP )
```

Definition at line 19 of file bar_rcpp_wrapper_definitions.h.

Referenced by main().

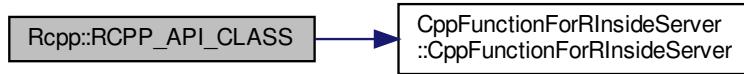
5.3.2.3 RCPP_API_CLASS()

```
Rcpp::RCPP_API_CLASS (
    InternalFunctionForRInsideServer_Impl )
```

Definition at line 60 of file internalfunction_clone.h.

References CppFunctionForRInsideServer::callback_id, CppFunctionForRInsideServer::CppMethodForRInsideServer(), CppFunctionForRInsideServer::server, and CppFunctionForRInsideServer::types.

Here is the call graph for this function:



5.3.2.4 wrap() [1/2]

```
template<>
SEXp Rcpp::wrap (
    const Foo & foo )
```

Definition at line 10 of file foo_rcpp_wrapper_definitions.h.

References Foo::a, Foo::b, Foo::name, and wrap().

Here is the call graph for this function:



5.3.2.5 wrap() [2/2]

```
template<>
SEXP Rcpp::wrap (
    const Bar & bar )
```

Definition at line 11 of file bar_rcpp_wrapper_definitions.h.

References Bar::foo, and Bar::name.

Referenced by main(), and wrap().

5.4 serialization Namespace Reference

Classes

- struct [serializer](#)
- struct [serializer< std::string >](#)
- struct [serializer< std::vector< T > >](#)

5.5 typeid_helpers Namespace Reference

Classes

- struct [has_typeid_member](#)
- struct [has_typeid_member< T, void_t< decltype\(T::TYPEID\)> >](#)
- struct [id](#)
- struct [id< double, void >](#)
- struct [id< float, void >](#)
- struct [id< int16_t, void >](#)
- struct [id< int32_t, void >](#)
- struct [id< int64_t, void >](#)
- struct [id< int8_t, void >](#)
- struct [id< std::string, void >](#)
- struct [id< std::vector< double >, void >](#)
- struct [id< std::vector< float >, void >](#)
- struct [id< std::vector< int16_t >, void >](#)
- struct [id< std::vector< int32_t >, void >](#)
- struct [id< std::vector< int64_t >, void >](#)
- struct [id< std::vector< int8_t >, void >](#)
- struct [id< std::vector< std::string >, void >](#)
- struct [id< std::vector< uint16_t >, void >](#)
- struct [id< std::vector< uint32_t >, void >](#)
- struct [id< std::vector< uint64_t >, void >](#)
- struct [id< std::vector< uint8_t >, void >](#)
- struct [id< T, typename std::enable_if< has_typeid_member< T >::value >::type >](#)
- struct [id< uint16_t, void >](#)
- struct [id< uint32_t, void >](#)
- struct [id< uint64_t, void >](#)
- struct [id< uint8_t, void >](#)
- struct [id< void, void >](#)
- struct [void_t_struct](#)

Typedefs

- template<typename... C>
using [void_t](#) = typename [void_t_struct](#)< C... >::type

5.5.1 Typedef Documentation

5.5.1.1 void_t

```
template<typename... C>
using typeid\_helpers::void\_t = typedef typename void\_t\_struct<C...>::type
```

Definition at line 28 of file typeid.h.

Chapter 6

Class Documentation

6.1 Bar Class Reference

```
#include <bar.h>
```

Collaboration diagram for Bar:



Public Member Functions

- `Bar` (const std::string &`name`, const `Foo` &`foo`)
- `~Bar` ()
- void `serialize` (`BinaryStream` &`stream`) const

Static Public Member Functions

- static `Bar` `deserialize` (`BinaryStream` &`stream`)

Public Attributes

- std::string `name`
- `Foo foo`

Static Public Attributes

- static const int32_t `TYPEID` = 2

6.1.1 Detailed Description

Definition at line 19 of file bar.h.

6.1.2 Constructor & Destructor Documentation

6.1.2.1 Bar()

```
Bar::Bar (
    const std::string & name,
    const Foo & foo )
```

Definition at line 3 of file bar.cpp.

Referenced by `deserialize()`.

6.1.2.2 ~Bar()

```
Bar::~Bar ( )
```

Definition at line 6 of file bar.cpp.

6.1.3 Member Function Documentation

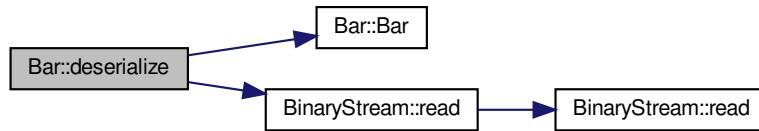
6.1.3.1 deserialize()

```
Bar Bar::deserialize (
    BinaryStream & stream ) [static]
```

Definition at line 15 of file bar.cpp.

References Bar(), foo, name, and BinaryStream::read().

Here is the call graph for this function:



6.1.3.2 serialize()

```
void Bar::serialize (
    BinaryStream & stream ) const
```

Definition at line 10 of file bar.cpp.

References foo, name, and BinaryStream::write().

Here is the call graph for this function:



6.1.4 Member Data Documentation

6.1.4.1 foo

```
Foo Bar::foo
```

Definition at line 25 of file bar.h.

Referenced by deserialize(), serialize(), and Rcpp::wrap().

6.1.4.2 name

```
std::string Bar::name
```

Definition at line 24 of file bar.h.

Referenced by deserialize(), serialize(), and Rcpp::wrap().

6.1.4.3 TYPEID

```
const int32_t Bar::TYPEID = 2 [static]
```

Definition at line 28 of file bar.h.

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

- inst/examples/sandboxed_server/datatypes/[bar.h](#)
- inst/examples/sandboxed_server/datatypes/[bar.cpp](#)

6.2 BinaryStream Class Reference

```
#include <binarystream.h>
```

Classes

- class [stream_exception](#)

Public Member Functions

- `BinaryStream (int read_fd, int write_fd)`
- `~BinaryStream ()`
- `void close ()`
- `BinaryStream (const BinaryStream &)=delete`
- `BinaryStream & operator= (const BinaryStream &)=delete`
- `BinaryStream (BinaryStream &&)`
- `BinaryStream & operator= (BinaryStream &&)`
- `void write (const char *buffer, size_t len)`
- template<typename T >
 `void write (const T &t)`
- template<typename T >
 `void write (T &t)`
- `size_t read (char *buffer, size_t len)`
- template<typename T >
 `std::enable_if< std::is_arithmetic< T >::value, size_t >::type read (T *t)`
- template<typename T >
 `T read ()`

Static Public Member Functions

- static `BinaryStream connectToUnixSocket (const char *)`

Private Attributes

- `bool is_eof`
- `int read_fd`
- `int write_fd`

6.2.1 Detailed Description

Definition at line 45 of file `binarystream.h`.

6.2.2 Constructor & Destructor Documentation

6.2.2.1 `BinaryStream()` [1/3]

```
BinaryStream::BinaryStream (
    int read_fd,
    int write_fd )
```

Definition at line 18 of file `binarystream.cpp`.

Referenced by `connectToUnixSocket()`.

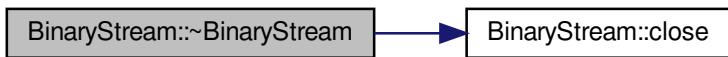
6.2.2.2 ~BinaryStream()

```
BinaryStream::~BinaryStream ( )
```

Definition at line 21 of file `binarystream.cpp`.

References `close()`.

Here is the call graph for this function:



6.2.2.3 BinaryStream() [2/3]

```
BinaryStream::BinaryStream (   
    const BinaryStream & ) [delete]
```

6.2.2.4 BinaryStream() [3/3]

```
BinaryStream::BinaryStream (   
    BinaryStream && other )
```

Definition at line 39 of file `binarystream.cpp`.

6.2.3 Member Function Documentation

6.2.3.1 close()

```
void BinaryStream::close ( )
```

Definition at line 25 of file `binarystream.cpp`.

References `is_eof`, `read_fd`, and `write_fd`.

Referenced by `connectToUnixSocket()`, and `~BinaryStream()`.

6.2.3.2 connectToUnixSocket()

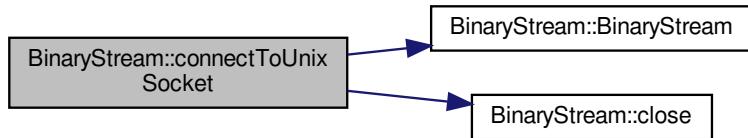
```
BinaryStream BinaryStream::connectToUnixSocket (
    const char * server_path ) [static]
```

Definition at line 53 of file `binarystream.cpp`.

References `BinaryStream()`, and `close()`.

Referenced by `test_callbacks()`, `test_console_output()`, `test_multiple()`, `test_plot()`, and `test_setting_getting()`.

Here is the call graph for this function:



6.2.3.3 operator=() [1/2]

```
BinaryStream& BinaryStream::operator= (
    const BinaryStream & ) [delete]
```

6.2.3.4 operator=() [2/2]

```
BinaryStream & BinaryStream::operator= (
    BinaryStream && other )
```

Definition at line 45 of file `binarystream.cpp`.

References `is_eof`, `read_fd`, and `write_fd`.

6.2.3.5 `read()` [1/3]

```
size_t BinaryStream::read (
    char * buffer,
    size_t len )
```

Definition at line 84 of file `binarystream.cpp`.

References `is_eof`, `read()`, and `read_fd`.

Referenced by `Foo::deserialize()`, `Bar::deserialize()`, `serialization::serializer< std::string >::deserialize()`, `serialization::serializer< std::vector< T > >::deserialize()`, `RInsideClient::getConsoleOutput()`, `RInsideClient::getPlot()`, `RInsideClient::getValue()`, `RInsideClient::parseEval()`, `callback_helper::read_from_stream_with_typeid()`, `RInsideClient::readReply()`, `RInsideServer::registerType()`, `RInsideServer::run()`, `RInsideClient::runScript()`, `RInsideServer::sexp_from_stream()`, and `binary_stream_helpers::stream_read()`.

Here is the call graph for this function:



6.2.3.6 `read()` [2/3]

```
template<typename T >
std::enable_if< std::is_arithmetic<T>::value, size_t>::type BinaryStream::read (
    T * t ) [inline]
```

Definition at line 64 of file `binarystream.h`.

References `read()`.

Referenced by `read()`.

Here is the call graph for this function:



6.2.3.7 `read()` [3/3]

```
template<typename T >
T BinaryStream::read ( )
```

Definition at line 182 of file `binarystream.h`.

Referenced by `read()`.

6.2.3.8 `write()` [1/3]

```
void BinaryStream::write (
    const char * buffer,
    size_t len )
```

Definition at line 72 of file `binarystream.cpp`.

References `write_fd`.

Referenced by `callback_helper::call()`, `RInsideClient::getValue()`, `RInsideClient::initPlot()`, `CppMethodForRInsideServer::operator()()`, `RInsideServer::registerType()`, `RInsideClient::RInsideClient()`, `RInsideServer::run()`, `RInsideClient::runScript()`, `callback_helper::send_pack< First, Remaining... >::send()`, `RInsideServer::sendReply()`, `Foo::serialize()`, `Bar::serialize()`, `serialization::serializer< std::string >::serialize()`, `serialization::serializer< std::vector< T > >::serialize()`, `RInsideClient::setCallback()`, `RInsideClient::setValue()`, `binary_stream_helpers::stream_write()`, `RInsideClient::writeCommand()`, and `RInsideClient::~RInsideClient()`.

6.2.3.9 `write()` [2/3]

```
template<typename T >
void BinaryStream::write (
    const T & t )
```

Definition at line 175 of file `binarystream.h`.

6.2.3.10 `write()` [3/3]

```
template<typename T >
void BinaryStream::write (
    T & t )
```

Definition at line 178 of file `binarystream.h`.

6.2.4 Member Data Documentation

6.2.4.1 is_eof

```
bool BinaryStream::is_eof [private]
```

Definition at line 72 of file `binarystream.h`.

Referenced by `close()`, `operator=()`, and `read()`.

6.2.4.2 read_fd

```
int BinaryStream::read_fd [private]
```

Definition at line 73 of file `binarystream.h`.

Referenced by `close()`, `operator=()`, and `read()`.

6.2.4.3 write_fd

```
int BinaryStream::write_fd [private]
```

Definition at line 73 of file `binarystream.h`.

Referenced by `close()`, `operator=()`, and `write()`.

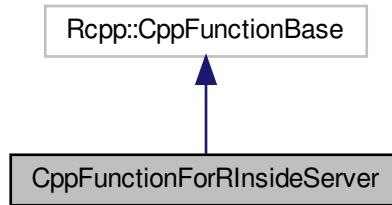
The documentation for this class was generated from the following files:

- `inst/examples/sandboxed_server/common/binarystream.h`
- `inst/examples/sandboxed_server/common/binarystream.cpp`

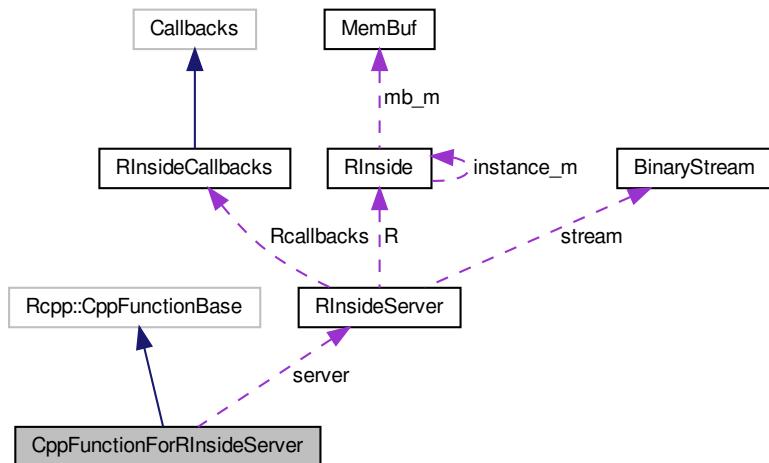
6.3 CppFunctionForRInsideServer Class Reference

```
#include <internalfunction_clone.h>
```

Inheritance diagram for CppFunctionForRInsideServer:



Collaboration diagram for CppFunctionForRInsideServer:



Public Member Functions

- [CppClassForRInsideServer \(RInsideServer &server, uint32_t callback_id, const std::vector< int32_t > &types\)](#)
- virtual [~CppClassForRInsideServer \(\)](#)
- [SEXP operator\(\) \(SEXP *args\)](#)

Private Attributes

- `RInsideServer & server`
- `uint32_t callback_id`
- `const std::vector< int32_t > types`

6.3.1 Detailed Description

Definition at line 13 of file internalfunction_clone.h.

6.3.2 Constructor & Destructor Documentation

6.3.2.1 CppFunctionForRInsideServer()

```
CppClassForRInsideServer::CppClassForRInsideServer (
    RInsideServer & server,
    uint32_t callback_id,
    const std::vector< int32_t > & types ) [inline]
```

Definition at line 15 of file internalfunction_clone.h.

Referenced by `Rcpp::RCPP_API_CLASS()`.

6.3.2.2 ~CppClassForRInsideServer()

```
virtual CppFunctionForRInsideServer::~CppClassForRInsideServer () [inline], [virtual]
```

Definition at line 17 of file internalfunction_clone.h.

6.3.3 Member Function Documentation

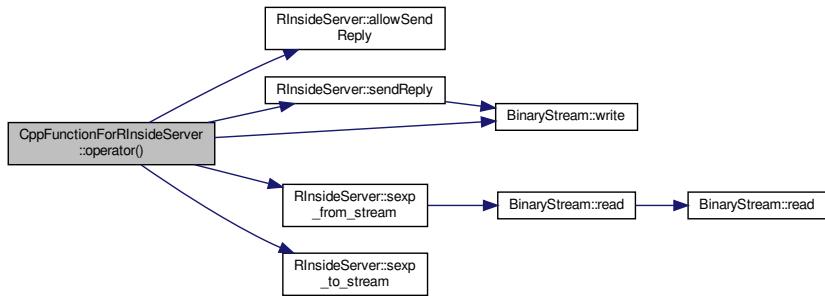
6.3.3.1 operator()()

```
SEXP CppFunctionForRInsideServer::operator() (
    SEXP * args ) [inline]
```

Definition at line 19 of file internalfunction_clone.h.

References RInsideServer::allowSendReply(), callback_id, LOG, RIS_REPLY_CALLBACK, RInsideServer::sendReply(), server, RInsideServer::sexp_from_stream(), RInsideServer::sexp_to_stream(), RInsideServer::stream, types, and BinaryStream::write().

Here is the call graph for this function:



6.3.4 Member Data Documentation

6.3.4.1 callback_id

```
uint32_t CppFunctionForRInsideServer::callback_id [private]
```

Definition at line 49 of file internalfunction_clone.h.

Referenced by operator()(), and Rcpp::RCPP_API_CLASS().

6.3.4.2 server

```
RInsideServer& CppFunctionForRInsideServer::server [private]
```

Definition at line 48 of file internalfunction_clone.h.

Referenced by operator()(), and Rcpp::RCPP_API_CLASS().

6.3.4.3 types

```
const std::vector<int32_t> CppFunctionForRInsideServer::types [private]
```

Definition at line 50 of file `internalfunction_clone.h`.

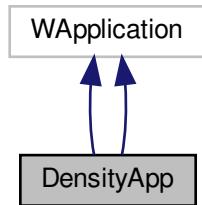
Referenced by `operator()()`, and `Rcpp::RCPP_API_CLASS()`.

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

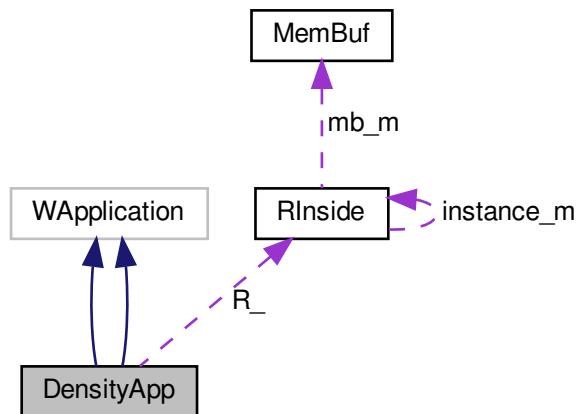
- `inst/examples/sandboxed_server/server/internalfunction_clone.h`

6.4 DensityApp Class Reference

Inheritance diagram for `DensityApp`:



Collaboration diagram for `DensityApp`:



Public Member Functions

- `DensityApp (const WEnvironment &env, RInside &R)`
- `DensityApp (const WEnvironment &env, RInside &R)`

Private Types

- enum `Kernel` {
 `Gaussian` = 0, `Epanechnikov` = 1, `Rectangular` = 2, `Triangular` = 3,
 `Cosine` = 4, `Gaussian` = 0, `Epanechnikov` = 1, `Rectangular` = 2,
 `Triangular` = 3, `Cosine` = 4 }
- enum `Kernel` {
 `Gaussian` = 0, `Epanechnikov` = 1, `Rectangular` = 2, `Triangular` = 3,
 `Cosine` = 4, `Gaussian` = 0, `Epanechnikov` = 1, `Rectangular` = 2,
 `Triangular` = 3, `Cosine` = 4 }

Private Member Functions

- `void reportButton ()`
- `void reportEdit ()`
- `void reportSpinner ()`
- `void plot ()`
- `void reportButton ()`
- `void reportEdit ()`
- `void reportSpinner ()`
- `void plot ()`

Private Attributes

- `WLineEdit * codeEdit_`
- `WButtonGroup * group_`
- `WSpinBox * spin_`
- `WImage * img_`
- `WFFileResource * imgfile_`
- `WText * greeting_`
- `RInside & R_`
- `std::string tempfile_`
- `int bw_`
- `int kernel_`
- `std::string cmd_`
- `Rcpp::NumericVector Yvec_`

6.4.1 Detailed Description

Definition at line 33 of file wtdensity.cpp.

6.4.2 Member Enumeration Documentation

6.4.2.1 Kernel [1/2]

```
enum DensityApp::Kernel [private]
```

Enumerator

Gaussian
Epanechnikov
Rectangular
Triangular
Cosine
Gaussian
Epanechnikov
Rectangular
Triangular
Cosine

Definition at line 50 of file wtdensity.cpp.

6.4.2.2 Kernel [2/2]

```
enum DensityApp::Kernel [private]
```

Enumerator

Gaussian
Epanechnikov
Rectangular
Triangular
Cosine
Gaussian
Epanechnikov
Rectangular
Triangular
Cosine

Definition at line 50 of file wtdensityPlain.cpp.

6.4.3 Constructor & Destructor Documentation**6.4.3.1 DensityApp() [1/2]**

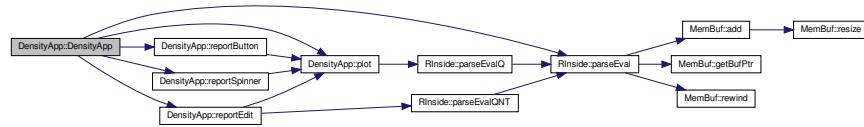
```
DensityApp::DensityApp (
    const WEnvironment & env,
    RIInside & R )
```

Definition at line 63 of file wtdensity.cpp.

References `bw_`, `cmd_`, `codeEdit_`, `Cosine`, `Epanechnikov`, `Gaussian`, `greeting_`, `group_`, `img_`, `imgfile_`, `kernel_`, `RInside::parseEval()`, `plot()`, `R_`, `Rectangular`, `reportButton()`, `reportEdit()`, `reportSpinner()`, `spin_`, `tempfile_`, and `Triangular`.

Referenced by `createApplication()`.

Here is the call graph for this function:



6.4.3.2 DensityApp() [2/2]

```
DensityApp::DensityApp (
    const WEnvironment & env,
    RInside & R )
```

6.4.4 Member Function Documentation

6.4.4.1 plot() [1/2]

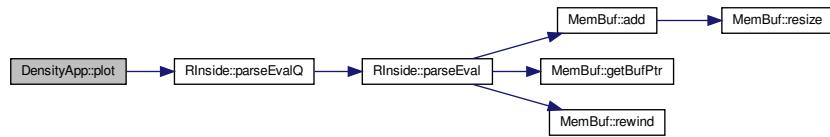
```
void DensityApp::plot (
    void ) [private]
```

Definition at line 169 of file wtdensity.cpp.

References `bw_`, `greeting_`, `imgfile_`, `kernel_`, `RInside::parseEvalQ()`, `R_`, `tempfile_`, and `Yvec_`.

Referenced by `DensityApp()`, `reportButton()`, `reportEdit()`, and `reportSpinner()`.

Here is the call graph for this function:



6.4.4.2 plot() [2/2]

```
void DensityApp::plot ( ) [private]
```

6.4.4.3 reportButton() [1/2]

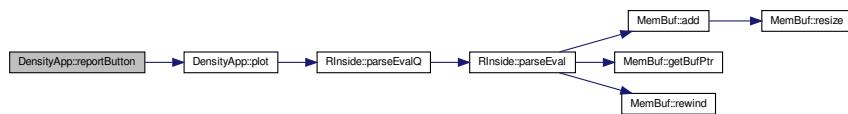
```
void DensityApp::reportButton ( ) [private]
```

Definition at line 151 of file wtdensity.cpp.

References group_, kernel_, and plot().

Referenced by DensityApp().

Here is the call graph for this function:



6.4.4.4 reportButton() [2/2]

```
void DensityApp::reportButton ( ) [private]
```

6.4.4.5 reportEdit() [1/2]

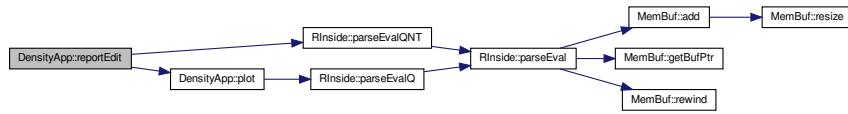
```
void DensityApp::reportEdit ( ) [private]
```

Definition at line 156 of file wtdensity.cpp.

References cmd_, codeEdit_, RIinside::parseEvalQNT(), plot(), R_, and Yvec_.

Referenced by DensityApp().

Here is the call graph for this function:



6.4.4.6 reportEdit() [2/2]

```
void DensityApp::reportEdit ( )  [private]
```

6.4.4.7 reportSpinner() [1/2]

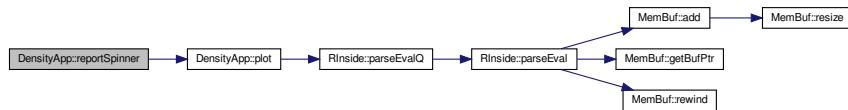
```
void DensityApp::reportSpinner ( )  [private]
```

Definition at line 164 of file wtdensity.cpp.

References bw_, plot(), and spin_.

Referenced by DensityApp().

Here is the call graph for this function:



6.4.4.8 reportSpinner() [2/2]

```
void DensityApp::reportSpinner ( )  [private]
```

6.4.5 Member Data Documentation

6.4.5.1 bw_

```
int DensityApp::bw_  [private]
```

Definition at line 55 of file wtdensity.cpp.

Referenced by DensityApp(), plot(), and reportSpinner().

6.4.5.2 cmd_

```
std::string DensityApp::cmd_ [private]
```

Definition at line 56 of file wtdensity.cpp.

Referenced by DensityApp(), and reportEdit().

6.4.5.3 codeEdit_

```
WLineEdit * DensityApp::codeEdit_ [private]
```

Definition at line 38 of file wtdensity.cpp.

Referenced by DensityApp(), and reportEdit().

6.4.5.4 greeting_

```
WText * DensityApp::greeting_ [private]
```

Definition at line 43 of file wtdensity.cpp.

Referenced by DensityApp(), and plot().

6.4.5.5 group_

```
WButtonGroup * DensityApp::group_ [private]
```

Definition at line 39 of file wtdensity.cpp.

Referenced by DensityApp(), and reportButton().

6.4.5.6 img_

```
WIImage * DensityApp::img_ [private]
```

Definition at line 41 of file wtdensity.cpp.

Referenced by DensityApp().

6.4.5.7 imgfile_

```
WFileResource * DensityApp::imgfile_ [private]
```

Definition at line 42 of file wtdensity.cpp.

Referenced by DensityApp(), and plot().

6.4.5.8 kernel_

```
int DensityApp::kernel_ [private]
```

Definition at line 55 of file wtdensity.cpp.

Referenced by DensityApp(), plot(), and reportButton().

6.4.5.9 R_

```
RInside & DensityApp::R_ [private]
```

Definition at line 53 of file wtdensity.cpp.

Referenced by DensityApp(), plot(), and reportEdit().

6.4.5.10 spin_

```
WSpinBox * DensityApp::spin_ [private]
```

Definition at line 40 of file wtdensity.cpp.

Referenced by DensityApp(), and reportSpinner().

6.4.5.11 tempfile_

```
std::string DensityApp::tempfile_ [private]
```

Definition at line 54 of file wtdensity.cpp.

Referenced by DensityApp(), and plot().

6.4.5.12 Yvec_

```
Rcpp::NumericVector DensityApp::Yvec_ [private]
```

Definition at line 57 of file wtdensity.cpp.

Referenced by plot(), and reportEdit().

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

- inst/examples/wt/wtdensity.cpp
- inst/examples/wt/wtdensityPlain.cpp

6.5 Foo Class Reference

```
#include <foo.h>
```

Public Member Functions

- [Foo \(const std::string &name, int32_t a, int32_t b\)](#)
- [~Foo \(\)](#)
- void [serialize \(BinaryStream &stream\) const](#)
- [Foo \(int a, int b\)](#)
- [~Foo \(\)](#)

Static Public Member Functions

- static [Foo deserialize \(BinaryStream &stream\)](#)

Public Attributes

- std::string [name](#)
- int32_t [a](#)
- int32_t [b](#)
- int [a](#)
- int [b](#)

Static Public Attributes

- static const int32_t [TYPEID](#) = 1

6.5.1 Detailed Description

Definition at line 17 of file foo.h.

6.5.2 Constructor & Destructor Documentation

6.5.2.1 Foo() [1/2]

```
Foo::Foo (
    const std::string & name,
    int32_t a,
    int32_t b )
```

Definition at line 4 of file foo.cpp.

Referenced by deserialize(), and main().

6.5.2.2 ~Foo() [1/2]

```
Foo::~Foo ( )
```

Definition at line 8 of file foo.cpp.

Referenced by main().

6.5.2.3 Foo() [2/2]

```
Foo::Foo (
    int a,
    int b ) [inline]
```

Definition at line 15 of file rinside_sample16.cpp.

6.5.2.4 ~Foo() [2/2]

```
Foo::~Foo ( ) [inline]
```

Definition at line 17 of file rinside_sample16.cpp.

6.5.3 Member Function Documentation

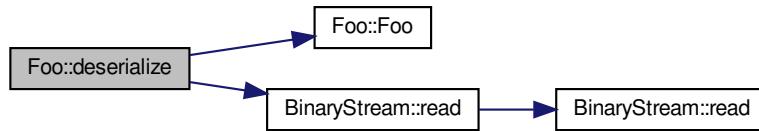
6.5.3.1 deserialize()

```
Foo Foo::deserialize (
    BinaryStream & stream ) [static]
```

Definition at line 19 of file foo.cpp.

References a, b, Foo(), name, and BinaryStream::read().

Here is the call graph for this function:



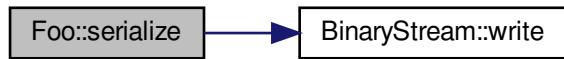
6.5.3.2 serialize()

```
void Foo::serialize (
    BinaryStream & stream ) const
```

Definition at line 12 of file foo.cpp.

References a, b, name, and BinaryStream::write().

Here is the call graph for this function:



6.5.4 Member Data Documentation

6.5.4.1 a [1/2]

```
int Foo::a
```

Definition at line 22 of file rinside_sample16.cpp.

6.5.4.2 a [2/2]

```
int32_t Foo::a
```

Definition at line 23 of file foo.h.

Referenced by deserialize(), main(), serialize(), swapFoo(), test_setting_getting(), and Rcpp::wrap().

6.5.4.3 b [1/2]

```
int Foo::b
```

Definition at line 22 of file rinside_sample16.cpp.

6.5.4.4 b [2/2]

```
int32_t Foo::b
```

Definition at line 23 of file foo.h.

Referenced by deserialize(), main(), serialize(), swapFoo(), test_setting_getting(), and Rcpp::wrap().

6.5.4.5 name

```
std::string Foo::name
```

Definition at line 22 of file foo.h.

Referenced by deserialize(), serialize(), test_setting_getting(), and Rcpp::wrap().

6.5.4.6 TYPEID

```
const int32_t Foo::TYPEID = 1 [static]
```

Definition at line 26 of file `foo.h`.

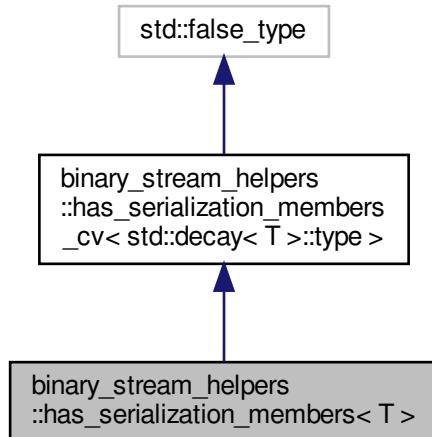
The documentation for this class was generated from the following files:

- `inst/examples/sandboxed_server/datatypes/foo.h`
- `inst/examples/standard/rinside_sample16.cpp`
- `inst/examples/sandboxed_server/datatypes/foo.cpp`

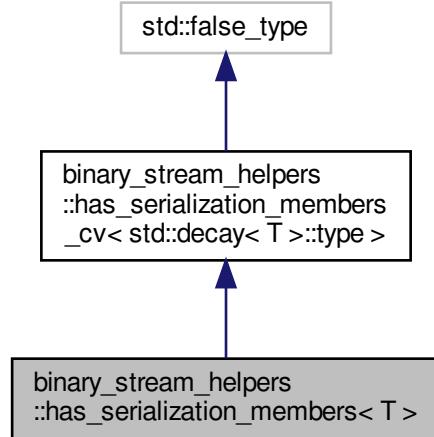
6.6 `binary_stream_helpers::has_serialization_members< T >` Struct Template Reference

```
#include <binarystream.h>
```

Inheritance diagram for `binary_stream_helpers::has_serialization_members< T >`:



Collaboration diagram for `binary_stream_helpers::has_serialization_members< T >`:



6.6.1 Detailed Description

```
template<typename T>
struct binary_stream_helpers::has_serialization_members< T >
```

Definition at line 126 of file `binarystream.h`.

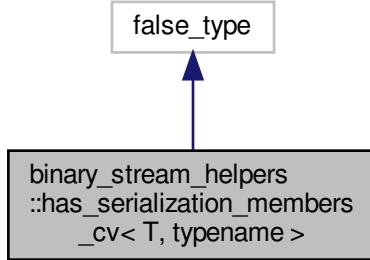
The documentation for this struct was generated from the following file:

- `inst/examples/sandboxed_server/common/binarystream.h`

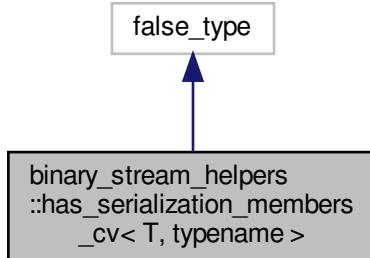
6.7 `binary_stream_helpers::has_serialization_members_cv< T, typename >` Struct Template Reference

```
#include <binarystream.h>
```

Inheritance diagram for `binary_stream_helpers::has_serialization_members_cv< T, typename >`:



Collaboration diagram for `binary_stream_helpers::has_serialization_members_cv< T, typename >`:



6.7.1 Detailed Description

```
template<typename T, typename = void>
struct binary_stream_helpers::has_serialization_members_cv< T, typename >
```

Definition at line 119 of file `binarystream.h`.

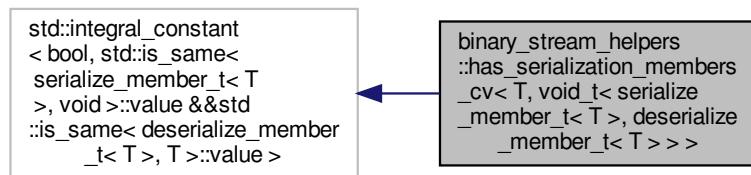
The documentation for this struct was generated from the following file:

- `inst/examples/sandboxed_server/common/binarystream.h`

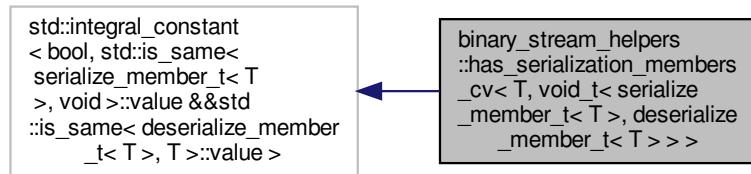
6.8 `binary_stream_helpers::has_serialization_members_cv< T, void_t< serialize_member_t< T >, deserialize_member_t< T > >>` Struct Template Reference

```
#include <binarystream.h>
```

Inheritance diagram for `binary_stream_helpers::has_serialization_members_cv< T, void_t< serialize_member_t< T >, deserialize_member_t< T > >>`:



Collaboration diagram for `binary_stream_helpers::has_serialization_members_cv< T, void_t< serialize_member_t< T >, deserialize_member_t< T > >>`:



6.8.1 Detailed Description

```
template<typename T>
struct binary_stream_helpers::has_serialization_members_cv< T, void_t< serialize_member_t< T >, deserialize_member_t< T > >>
```

Definition at line 122 of file `binarystream.h`.

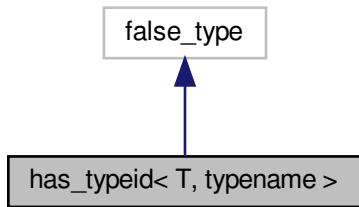
The documentation for this struct was generated from the following file:

- `inst/examples/sandboxed_server/common/binarystream.h`

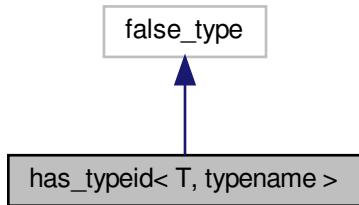
6.9 has_typeid< T, typename > Struct Template Reference

```
#include <typeid.h>
```

Inheritance diagram for has_typeid< T, typename >:



Collaboration diagram for has_typeid< T, typename >:



6.9.1 Detailed Description

```
template<typename T, typename = void>
struct has_typeid< T, typename >
```

Definition at line 180 of file typeid.h.

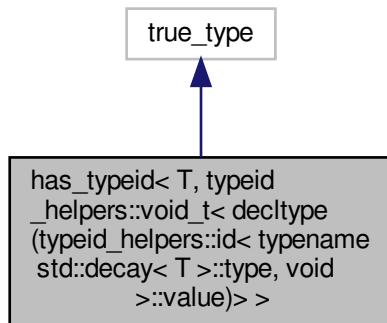
The documentation for this struct was generated from the following file:

- inst/examples/sandboxed_server/common/[typeid.h](#)

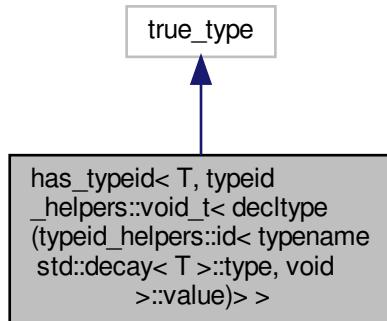
6.10 has_typeid< T, typeid_helpers::void_t< decltype(typeid_helpers::id< typename std::decay< T >::type, void >::value)> > Struct Template Reference

```
#include <typeid.h>
```

Inheritance diagram for has_typeid< T, typeid_helpers::void_t< decltype(typeid_helpers::id< typename std::decay< T >::type, void >::value)> >:



Collaboration diagram for has_typeid< T, typeid_helpers::void_t< decltype(typeid_helpers::id< typename std::decay< T >::type, void >::value)> >:



6.10.1 Detailed Description

```
template<typename T>
struct has_typeid< T, typeid_helpers::void_t< decltype(typeid_helpers::id< typename std::decay< T >::type, void >::value) >>
```

Definition at line 183 of file typeid.h.

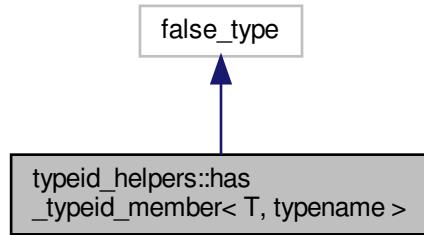
The documentation for this struct was generated from the following file:

- inst/examples/sandboxed_server/common/typeid.h

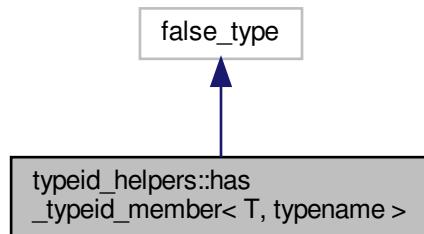
6.11 typeid_helpers::has_typeid_member< T, typename > Struct Template Reference

```
#include <typeid.h>
```

Inheritance diagram for typeid_helpers::has_typeid_member< T, typename >:



Collaboration diagram for typeid_helpers::has_typeid_member< T, typename >:



6.11.1 Detailed Description

```
template<typename T, typename = void>
struct typeid_helpers::has_typeid_member< T, typename >
```

Definition at line 33 of file typeid.h.

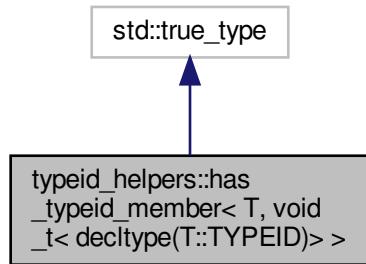
The documentation for this struct was generated from the following file:

- inst/examples/sandboxed_server/common/typeid.h

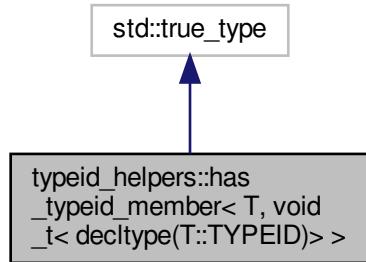
6.12 typeid_helpers::has_typeid_member< T, void_t< decltype(T::TYPEID)> > Struct Template Reference

```
#include <typeid.h>
```

Inheritance diagram for typeid_helpers::has_typeid_member< T, void_t< decltype(T::TYPEID)> >:



Collaboration diagram for typeid_helpers::has_typeid_member< T, void_t< decltype(T::TYPEID)> >:



6.12.1 Detailed Description

```
template<typename T>
struct typeid_helpers::has_typeid_member< T, void_t< decltype(T::TYPEID) > >
```

Definition at line 36 of file typeid.h.

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

- [inst/examples/sandboxed_server/common/typeid.h](#)

6.13 typeid_helpers::id< T, V > Struct Template Reference

```
#include <typeid.h>
```

6.13.1 Detailed Description

```
template<typename T, typename V = void>
struct typeid_helpers::id< T, V >
```

Definition at line 47 of file typeid.h.

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

- [inst/examples/sandboxed_server/common/typeid.h](#)

6.14 typeid_helpers::id< double, void > Struct Template Reference

```
#include <typeid.h>
```

Static Public Attributes

- static const int32_t [value](#) = -10

6.14.1 Detailed Description

```
template<>
struct typeid_helpers::id< double, void >
```

Definition at line 106 of file typeid.h.

6.14.2 Member Data Documentation

6.14.2.1 value

```
const int32_t typeid_helpers::id< double, void >::value = -10 [static]
```

Definition at line 107 of file typeid.h.

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

- [inst/examples/sandboxed_server/common/typeid.h](#)

6.15 typeid_helpers::id< float, void > Struct Template Reference

```
#include <typeid.h>
```

Static Public Attributes

- static const int32_t [value](#) = -9

6.15.1 Detailed Description

```
template<>
struct typeid_helpers::id< float, void >
```

Definition at line 101 of file typeid.h.

6.15.2 Member Data Documentation

6.15.2.1 value

```
const int32_t typeid_helpers::id< float, void >::value = -9 [static]
```

Definition at line 102 of file typeid.h.

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

- [inst/examples/sandboxed_server/common/typeid.h](#)

6.16 typeid_helpers::id< int16_t, void > Struct Template Reference

```
#include <typeid.h>
```

Static Public Attributes

- static const int32_t **value** = -3

6.16.1 Detailed Description

```
template<>
struct typeid_helpers::id< int16_t, void >
```

Definition at line 71 of file typeid.h.

6.16.2 Member Data Documentation

6.16.2.1 value

```
const int32_t typeid_helpers::id< int16_t, void >::value = -3 [static]
```

Definition at line 72 of file typeid.h.

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

- inst/examples/sandboxed_server/common/[typeid.h](#)

6.17 typeid_helpers::id< int32_t, void > Struct Template Reference

```
#include <typeid.h>
```

Static Public Attributes

- static const int32_t **value** = -5

6.17.1 Detailed Description

```
template<>
struct typeid_helpers::id< int32_t, void >
```

Definition at line 81 of file typeid.h.

6.17.2 Member Data Documentation

6.17.2.1 value

```
const int32_t typeid_helpers::id< int32_t, void >::value = -5 [static]
```

Definition at line 82 of file typeid.h.

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

- [inst/examples/sandboxed_server/common/typeid.h](#)

6.18 typeid_helpers::id< int64_t, void > Struct Template Reference

```
#include <typeid.h>
```

Static Public Attributes

- static const int32_t [value](#) = -7

6.18.1 Detailed Description

```
template<>
struct typeid_helpers::id< int64_t, void >
```

Definition at line 91 of file typeid.h.

6.18.2 Member Data Documentation

6.18.2.1 value

```
const int32_t typeid_helpers::id< int64_t, void >::value = -7 [static]
```

Definition at line 92 of file typeid.h.

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

- [inst/examples/sandboxed_server/common/typeid.h](#)

6.19 typeid_helpers::id< int8_t, void > Struct Template Reference

```
#include <typeid.h>
```

Static Public Attributes

- static const int32_t [value](#) = -1

6.19.1 Detailed Description

```
template<>
struct typeid_helpers::id< int8_t, void >
```

Definition at line 61 of file typeid.h.

6.19.2 Member Data Documentation

6.19.2.1 value

```
const int32_t typeid_helpers::id< int8_t, void >::value = -1 [static]
```

Definition at line 62 of file typeid.h.

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

- [inst/examples/sandboxed_server/common/typeid.h](#)

6.20 typeid_helpers::id< std::string, void > Struct Template Reference

```
#include <typeid.h>
```

Static Public Attributes

- static const int32_t **value** = -11

6.20.1 Detailed Description

```
template<>
struct typeid_helpers::id< std::string, void >
```

Definition at line 111 of file typeid.h.

6.20.2 Member Data Documentation

6.20.2.1 value

```
const int32_t typeid_helpers::id< std::string, void >::value = -11 [static]
```

Definition at line 112 of file typeid.h.

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

- inst/examples/sandboxed_server/common/[typeid.h](#)

6.21 typeid_helpers::id< std::vector< double >, void > Struct Template Reference

```
#include <typeid.h>
```

Static Public Attributes

- static const int32_t **value** = -30

6.21.1 Detailed Description

```
template<>
struct typeid_helpers::id< std::vector< double >, void >
```

Definition at line 163 of file typeid.h.

6.21.2 Member Data Documentation

6.21.2.1 value

```
const int32_t typeid_helpers::id< std::vector< double >, void >::value = -30 [static]
```

Definition at line 164 of file typeid.h.

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

- inst/examples/sandboxed_server/common/[typeid.h](#)

6.22 typeid_helpers::id< std::vector< float >, void > Struct Template Reference

```
#include <typeid.h>
```

Static Public Attributes

- static const int32_t [value](#) = -29

6.22.1 Detailed Description

```
template<>
struct typeid_helpers::id< std::vector< float >, void >
```

Definition at line 158 of file typeid.h.

6.22.2 Member Data Documentation

6.22.2.1 value

```
const int32_t typeid_helpers::id< std::vector< float >, void >::value = -29 [static]
```

Definition at line 159 of file typeid.h.

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

- [inst/examples/sandboxed_server/common/typeid.h](#)

6.23 typeid_helpers::id< std::vector< int16_t >, void > Struct Template Reference

```
#include <typeid.h>
```

Static Public Attributes

- static const int32_t [value](#) = -23

6.23.1 Detailed Description

```
template<>
struct typeid_helpers::id< std::vector< int16_t >, void >
```

Definition at line 128 of file typeid.h.

6.23.2 Member Data Documentation

6.23.2.1 value

```
const int32_t typeid_helpers::id< std::vector< int16_t >, void >::value = -23 [static]
```

Definition at line 129 of file typeid.h.

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

- [inst/examples/sandboxed_server/common/typeid.h](#)

6.24 typeid_helpers::id< std::vector< int32_t >, void > Struct Template Reference

```
#include <typeid.h>
```

Static Public Attributes

- static const int32_t **value** = -25

6.24.1 Detailed Description

```
template<>
struct typeid_helpers::id< std::vector< int32_t >, void >
```

Definition at line 138 of file typeid.h.

6.24.2 Member Data Documentation

6.24.2.1 value

```
const int32_t typeid_helpers::id< std::vector< int32_t >, void >::value = -25 [static]
```

Definition at line 139 of file typeid.h.

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

- inst/examples/sandboxed_server/common/[typeid.h](#)

6.25 typeid_helpers::id< std::vector< int64_t >, void > Struct Template Reference

```
#include <typeid.h>
```

Static Public Attributes

- static const int32_t **value** = -27

6.25.1 Detailed Description

```
template<>
struct typeid_helpers::id< std::vector< int64_t >, void >
```

Definition at line 148 of file typeid.h.

6.25.2 Member Data Documentation

6.25.2.1 value

```
const int32_t typeid_helpers::id< std::vector< int64_t >, void >::value = -27 [static]
```

Definition at line 149 of file typeid.h.

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

- inst/examples/sandboxed_server/common/[typeid.h](#)

6.26 typeid_helpers::id< std::vector< int8_t >, void > Struct Template Reference

```
#include <typeid.h>
```

Static Public Attributes

- static const int32_t [value](#) = -21

6.26.1 Detailed Description

```
template<>
struct typeid_helpers::id< std::vector< int8_t >, void >
```

Definition at line 118 of file typeid.h.

6.26.2 Member Data Documentation

6.26.2.1 value

```
const int32_t typeid_helpers::id< std::vector< int8_t >, void >::value = -21 [static]
```

Definition at line 119 of file typeid.h.

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

- [inst/examples/sandboxed_server/common/typeid.h](#)

6.27 typeid_helpers::id< std::vector< std::string >, void > Struct Template Reference

```
#include <typeid.h>
```

Static Public Attributes

- static const int32_t [value](#) = -31

6.27.1 Detailed Description

```
template<>
struct typeid_helpers::id< std::vector< std::string >, void >
```

Definition at line 168 of file typeid.h.

6.27.2 Member Data Documentation

6.27.2.1 value

```
const int32_t typeid_helpers::id< std::vector< std::string >, void >::value = -31 [static]
```

Definition at line 169 of file typeid.h.

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

- [inst/examples/sandboxed_server/common/typeid.h](#)

6.28 typeid_helpers::id< std::vector< uint16_t >, void > Struct Template Reference

```
#include <typeid.h>
```

Static Public Attributes

- static const int32_t **value** = -24

6.28.1 Detailed Description

```
template<>
struct typeid_helpers::id< std::vector< uint16_t >, void >
```

Definition at line 133 of file typeid.h.

6.28.2 Member Data Documentation

6.28.2.1 value

```
const int32_t typeid_helpers::id< std::vector< uint16_t >, void >::value = -24 [static]
```

Definition at line 134 of file typeid.h.

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

- inst/examples/sandboxed_server/common/[typeid.h](#)

6.29 typeid_helpers::id< std::vector< uint32_t >, void > Struct Template Reference

```
#include <typeid.h>
```

Static Public Attributes

- static const int32_t **value** = -26

6.29.1 Detailed Description

```
template<>
struct typeid_helpers::id< std::vector< uint32_t >, void >
```

Definition at line 143 of file typeid.h.

6.29.2 Member Data Documentation

6.29.2.1 value

```
const int32_t typeid_helpers::id< std::vector< uint32_t >, void >::value = -26 [static]
```

Definition at line 144 of file typeid.h.

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

- inst/examples/sandboxed_server/common/[typeid.h](#)

6.30 typeid_helpers::id< std::vector< uint64_t >, void > Struct Template Reference

```
#include <typeid.h>
```

Static Public Attributes

- static const int32_t [value](#) = -28

6.30.1 Detailed Description

```
template<>
struct typeid_helpers::id< std::vector< uint64_t >, void >
```

Definition at line 153 of file typeid.h.

6.30.2 Member Data Documentation

6.30.2.1 value

```
const int32_t typeid_helpers::id< std::vector< uint64_t >, void >::value = -28 [static]
```

Definition at line 154 of file typeid.h.

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

- [inst/examples/sandboxed_server/common/typeid.h](#)

6.31 typeid_helpers::id< std::vector< uint8_t >, void > Struct Template Reference

```
#include <typeid.h>
```

Static Public Attributes

- static const int32_t [value](#) = -22

6.31.1 Detailed Description

```
template<>
struct typeid_helpers::id< std::vector< uint8_t >, void >
```

Definition at line 123 of file typeid.h.

6.31.2 Member Data Documentation

6.31.2.1 value

```
const int32_t typeid_helpers::id< std::vector< uint8_t >, void >::value = -22 [static]
```

Definition at line 124 of file typeid.h.

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

- [inst/examples/sandboxed_server/common/typeid.h](#)

6.32 typeid_helpers::id< T, typename std::enable_if< has_typeid_member< T >::value >::type > Struct Template Reference

```
#include <typeid.h>
```

Static Public Attributes

- static const int32_t [value](#) = [T::TYPEID](#)

6.32.1 Detailed Description

```
template<typename T>
struct typeid_helpers::id< T, typename std::enable_if< has_typeid_member< T >::value >::type >
```

Definition at line 51 of file typeid.h.

6.32.2 Member Data Documentation

6.32.2.1 value

```
template<typename T >
const int32_t typeid\_helpers::id< T, typename std::enable_if< has\_typeid\_member< T >::value >::value >::value = T::TYPEID [static]
```

Definition at line 52 of file typeid.h.

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

- [inst/examples/sandboxed_server/common/typeid.h](#)

6.33 typeid_helpers::id< uint16_t, void > Struct Template Reference

```
#include <typeid.h>
```

Static Public Attributes

- static const int32_t [value](#) = -4

6.33.1 Detailed Description

```
template<>
struct typeid_helpers::id< uint16_t, void >
```

Definition at line 76 of file typeid.h.

6.33.2 Member Data Documentation

6.33.2.1 value

```
const int32_t typeid_helpers::id< uint16_t, void >::value = -4 [static]
```

Definition at line 77 of file typeid.h.

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

- inst/examples/sandboxed_server/common/[typeid.h](#)

6.34 typeid_helpers::id< uint32_t, void > Struct Template Reference

```
#include <typeid.h>
```

Static Public Attributes

- static const int32_t [value](#) = -6

6.34.1 Detailed Description

```
template<>
struct typeid_helpers::id< uint32_t, void >
```

Definition at line 86 of file typeid.h.

6.34.2 Member Data Documentation

6.34.2.1 value

```
const int32_t typeid_helpers::id< uint32_t, void >::value = -6 [static]
```

Definition at line 87 of file typeid.h.

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

- [inst/examples/sandboxed_server/common/typeid.h](#)

6.35 typeid_helpers::id< uint64_t, void > Struct Template Reference

```
#include <typeid.h>
```

Static Public Attributes

- static const int32_t [value](#) = -8

6.35.1 Detailed Description

```
template<>
struct typeid_helpers::id< uint64_t, void >
```

Definition at line 96 of file typeid.h.

6.35.2 Member Data Documentation

6.35.2.1 value

```
const int32_t typeid_helpers::id< uint64_t, void >::value = -8 [static]
```

Definition at line 97 of file typeid.h.

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

- [inst/examples/sandboxed_server/common/typeid.h](#)

6.36 typeid_helpers::id< uint8_t, void > Struct Template Reference

```
#include <typeid.h>
```

Static Public Attributes

- static const int32_t [value](#) = -2

6.36.1 Detailed Description

```
template<>
struct typeid_helpers::id< uint8_t, void >
```

Definition at line 66 of file typeid.h.

6.36.2 Member Data Documentation

6.36.2.1 value

```
const int32_t typeid\_helpers::id< uint8_t, void >::value = -2 [static]
```

Definition at line 67 of file typeid.h.

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

- [inst/examples/sandboxed_server/common/typeid.h](#)

6.37 typeid_helpers::id< void, void > Struct Template Reference

```
#include <typeid.h>
```

Static Public Attributes

- static const int32_t [value](#) = 0

6.37.1 Detailed Description

```
template<>
struct typeid_helpers::id< void, void >
```

Definition at line 56 of file typeid.h.

6.37.2 Member Data Documentation

6.37.2.1 value

```
const int32_t typeid_helpers::id< void, void >::value = 0 [static]
```

Definition at line 57 of file typeid.h.

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

- [inst/examples/sandboxed_server/common/typeid.h](#)

6.38 MemBuf Class Reference

```
#include <MemBuf.h>
```

Public Member Functions

- [MemBuf](#) (int sizebytes=1024)
- [~MemBuf](#) ()
- void [resize](#) ()
- void [rewind](#) ()
- void [add](#) (const std::string &)
- const char * [getBufPtr](#) ()

Private Attributes

- std::string [buffer](#)

6.38.1 Detailed Description

Definition at line 23 of file MemBuf.h.

6.38.2 Constructor & Destructor Documentation

6.38.2.1 MemBuf()

```
MemBuf::MemBuf (   
    int sizebytes = 1024 )
```

Definition at line 34 of file MemBuf.cpp.

References buffer.

6.38.2.2 ~MemBuf()

```
MemBuf::~MemBuf ( )
```

Definition at line 32 of file MemBuf.cpp.

6.38.3 Member Function Documentation

6.38.3.1 add()

```
void MemBuf::add (   
    const std::string & buf )
```

Definition at line 46 of file MemBuf.cpp.

References buffer, and resize().

Referenced by RInside::parseEval().

Here is the call graph for this function:



6.38.3.2 getBufPtr()

```
const char* MemBuf::getBufPtr ( ) [inline]
```

Definition at line 33 of file MemBuf.h.

Referenced by RInside::parseEval().

6.38.3.3 resize()

```
void MemBuf::resize ( )
```

Definition at line 38 of file MemBuf.cpp.

References buffer.

Referenced by add().

6.38.3.4 rewind()

```
void MemBuf::rewind ( )
```

Definition at line 42 of file MemBuf.cpp.

References buffer.

Referenced by RInside::parseEval().

6.38.4 Member Data Documentation

6.38.4.1 buffer

```
std::string MemBuf::buffer [private]
```

Definition at line 25 of file MemBuf.h.

Referenced by add(), MemBuf(), resize(), and rewind().

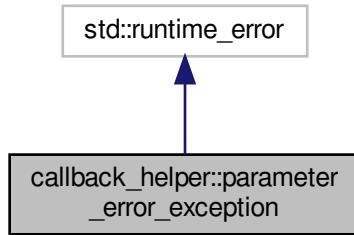
The documentation for this class was generated from the following files:

- inst/include/[MemBuf.h](#)
- src/[MemBuf.cpp](#)

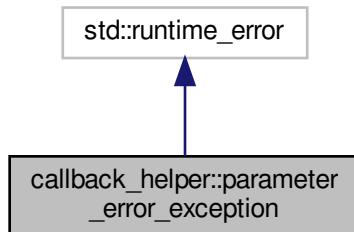
6.39 callback_helper::parameter_error_exception Class Reference

```
#include <callback_helper.h>
```

Inheritance diagram for callback_helper::parameter_error_exception:



Collaboration diagram for callback_helper::parameter_error_exception:



Public Member Functions

- [parameter_error_exception](#) (const std::string &error)

6.39.1 Detailed Description

Definition at line 31 of file `callback_helper.h`.

6.39.2 Constructor & Destructor Documentation

6.39.2.1 parameter_error_exception()

```
callback_helper::parameter_error_exception::parameter_error_exception (
    const std::string & error ) [inline], [explicit]
```

Definition at line 33 of file callback_helper.h.

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

- [inst/examples/sandboxed_server/client/callback_helper.h](#)

6.40 Planet Struct Reference

Public Attributes

- double [x](#)
- double [y](#)
- double [m](#)
- double [vx](#)
- double [vy](#)

6.40.1 Detailed Description

Definition at line 16 of file rinside_interactive0.cpp.

6.40.2 Member Data Documentation

6.40.2.1 m

```
double Planet::m
```

Definition at line 18 of file rinside_interactive0.cpp.

Referenced by [Wrapper::getData\(\)](#), and [Wrapper::setData\(\)](#).

6.40.2.2 vx

```
double Planet::vx
```

Definition at line 19 of file rinside_interactive0.cpp.

Referenced by Wrapper::getData(), and Wrapper::setData().

6.40.2.3 vy

```
double Planet::vy
```

Definition at line 19 of file rinside_interactive0.cpp.

Referenced by Wrapper::getData(), and Wrapper::setData().

6.40.2.4 x

```
double Planet::x
```

Definition at line 17 of file rinside_interactive0.cpp.

Referenced by Wrapper::getData(), Solver::Iteration(), and Wrapper::setData().

6.40.2.5 y

```
double Planet::y
```

Definition at line 17 of file rinside_interactive0.cpp.

Referenced by Wrapper::getData(), Solver::Iteration(), and Wrapper::setData().

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

- inst/examples/standard/rinside_interactive0.cpp

6.41 RInside::Proxy Class Reference

```
#include <RInside.h>
```

Public Member Functions

- [Proxy \(SEXP xx\)](#)
- template<typename T >
[operator T \(\)](#)

Private Attributes

- [Rcpp::RObject x](#)

6.41.1 Detailed Description

Definition at line 59 of file RInside.h.

6.41.2 Constructor & Destructor Documentation

6.41.2.1 Proxy()

```
RInside::Proxy::Proxy (
    SEXP xx ) [inline]
```

Definition at line 61 of file RInside.h.

6.41.3 Member Function Documentation

6.41.3.1 operator T()

```
template<typename T >
RInside::Proxy::operator T ( ) [inline]
```

Definition at line 64 of file RInside.h.

References x.

6.41.4 Member Data Documentation

6.41.4.1 x

```
Rcpp::RObject RInside::Proxy::x [private]
```

Definition at line 68 of file RInside.h.

Referenced by operator T().

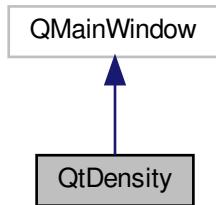
The documentation for this class was generated from the following file:

- inst/include/RInside.h

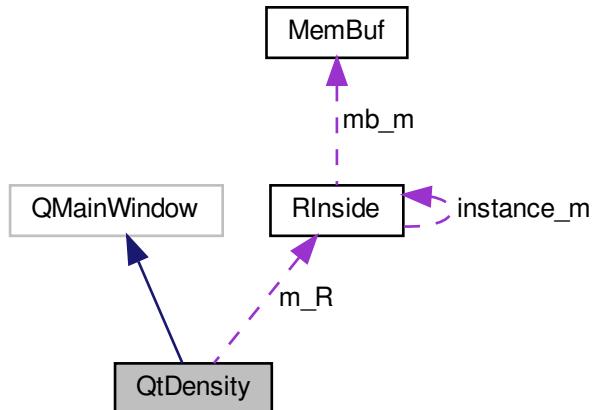
6.42 QtDensity Class Reference

```
#include <qtdensity.h>
```

Inheritance diagram for QtDensity:



Collaboration diagram for QtDensity:



Public Member Functions

- `QtDensity (RInside &R)`

Private Slots

- `void getBandwidth (int bw)`
- `void getKernel (int kernel)`
- `void getRandomDataCmd (QString txt)`
- `void runRandomDataCmd (void)`

Private Member Functions

- `void setupDisplay (void)`
- `void plot (void)`
- `void filterFile (void)`

Private Attributes

- `QSvgWidget * m_svg`
- `RInside & m_R`
- `QString m_tempfile`
- `QString m_svgfile`
- `int m_bw`
- `int m_kernel`
- `QString m_cmd`

6.42.1 Detailed Description

Definition at line 28 of file qtdensity.h.

6.42.2 Constructor & Destructor Documentation

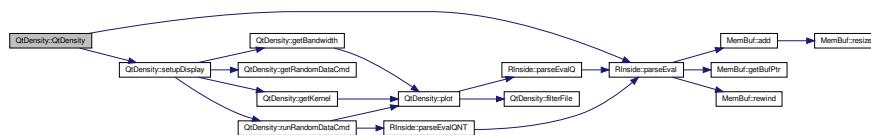
6.42.2.1 QtDensity()

```
QtDensity::QtDensity (
    RInside & R )
```

Definition at line 10 of file qtdensity.cpp.

References `m_bw`, `m_cmd`, `m_kernel`, `m_R`, `m_svgfile`, `m_tempfile`, `RInside::parseEval()`, and `setupDisplay()`.

Here is the call graph for this function:



6.42.3 Member Function Documentation

6.42.3.1 filterFile()

```
void QtDensity::filterFile (
    void ) [private]
```

Definition at line 131 of file qtdensity.cpp.

References m_svgfile, and m_tempfile.

Referenced by plot().

6.42.3.2 getBandwidth

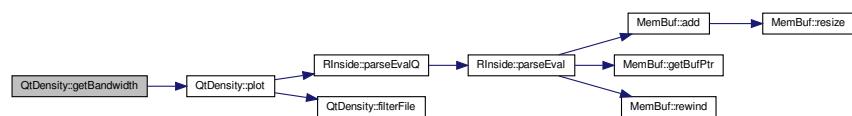
```
void QtDensity::getBandwidth (
    int bw ) [private], [slot]
```

Definition at line 107 of file qtdensity.cpp.

References m_bw, and plot().

Referenced by setupDisplay().

Here is the call graph for this function:



6.42.3.3 getKernel

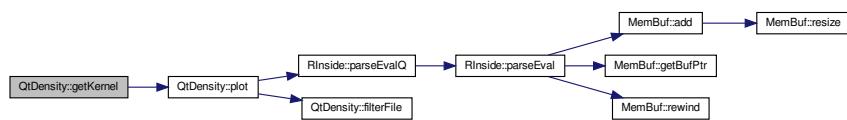
```
void QtDensity::getKernel (
    int kernel ) [private], [slot]
```

Definition at line 114 of file qtdensity.cpp.

References m_kernel, and plot().

Referenced by setupDisplay().

Here is the call graph for this function:



6.42.3.4 getRandomDataCmd

```
void QtDensity::getRandomDataCmd (
    QString txt ) [private], [slot]
```

Definition at line 121 of file qtdensity.cpp.

References m_cmd.

Referenced by setupDisplay().

6.42.3.5 plot()

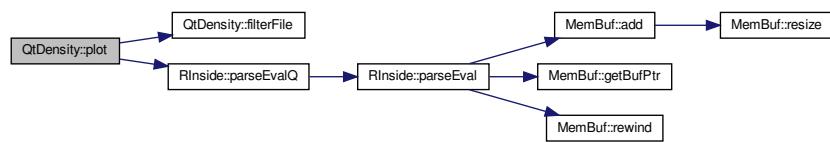
```
void QtDensity::plot (
    void ) [private]
```

Definition at line 94 of file qtdensity.cpp.

References filterFile(), m_bw, m_kernel, m_R, m_svg, m_svgfile, and RInside::parseEvalQ().

Referenced by getBandwidth(), getKernel(), and runRandomDataCmd().

Here is the call graph for this function:



6.42.3.6 runRandomDataCmd

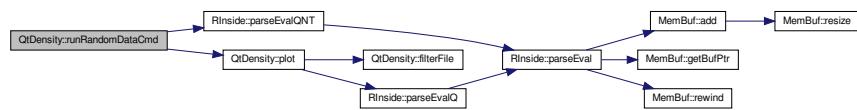
```
void QtDensity::runRandomDataCmd (
    void ) [private], [slot]
```

Definition at line 125 of file qtdensity.cpp.

References m_cmd, m_R, RInside::parseEvalQNT(), and plot().

Referenced by setupDisplay().

Here is the call graph for this function:



6.42.3.7 setupDisplay()

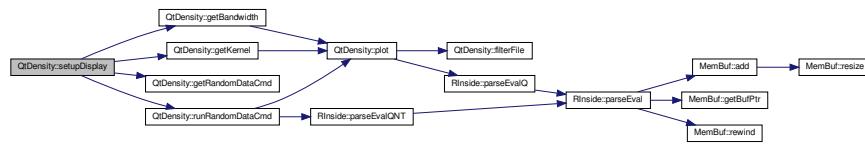
```
void QtDensity::setupDisplay (
    void ) [private]
```

Definition at line 21 of file qtdensity.cpp.

References getBandwidth(), getKernel(), getRandomDataCmd(), m_bw, m_cmd, m_svg, and runRandomDataCmd().

Referenced by QtDensity().

Here is the call graph for this function:



6.42.4 Member Data Documentation

6.42.4.1 m_bw

```
int QtDensity::m_bw [private]
```

Definition at line 50 of file qtdensity.h.

Referenced by getBandwidth(), plot(), QtDensity(), and setupDisplay().

6.42.4.2 m_cmd

```
QString QtDensity::m_cmd [private]
```

Definition at line 51 of file qtdensity.h.

Referenced by getRandomDataCmd(), QtDensity(), runRandomDataCmd(), and setupDisplay().

6.42.4.3 m_kernel

```
int QtDensity::m_kernel [private]
```

Definition at line 50 of file qtdensity.h.

Referenced by getKernel(), plot(), and QtDensity().

6.42.4.4 m_R

```
RInside& QtDensity::m_R [private]
```

Definition at line 47 of file qtdensity.h.

Referenced by plot(), QtDensity(), and runRandomDataCmd().

6.42.4.5 m_svg

```
QSvgWidget* QtDensity::m_svg [private]
```

Definition at line 46 of file qtdensity.h.

Referenced by plot(), and setupDisplay().

6.42.4.6 m_svgfile

```
QString QtDensity::m_svgfile [private]
```

Definition at line 49 of file qtdensity.h.

Referenced by filterFile(), plot(), and QtDensity().

6.42.4.7 m_tempfile

```
QString QtDensity::m_tempfile [private]
```

Definition at line 48 of file qtdensity.h.

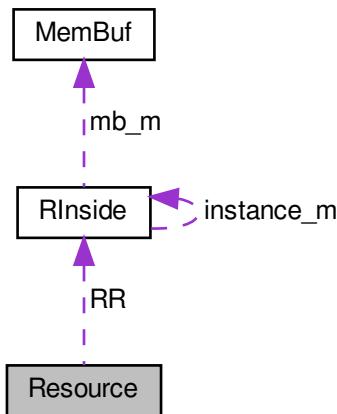
Referenced by filterFile(), and QtDensity().

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

- inst/examples/qt/qtdensity.h
- inst/examples/qt/qtdensity.cpp

6.43 Resource Class Reference

Collaboration diagram for Resource:



Public Member Functions

- `Resource ()`
- `void use ()`
- `int getValue ()`

Private Attributes

- `int i`
- `RInside & RR`
- `boost::mutex guard`

6.43.1 Detailed Description

Definition at line 8 of file boostEx.cpp.

6.43.2 Constructor & Destructor Documentation

6.43.2.1 `Resource()`

```
Resource::Resource ( ) [inline]
```

Definition at line 10 of file boostEx.cpp.

6.43.3 Member Function Documentation

6.43.3.1 `getValue()`

```
int Resource::getValue ( ) [inline]
```

Definition at line 17 of file boostEx.cpp.

References i.

Referenced by `main()`.

6.43.3.2 use()

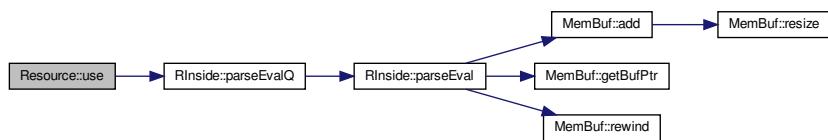
```
void Resource::use ( ) [inline]
```

Definition at line 12 of file boostEx.cpp.

References guard, i, RInside::parseEvalQ(), and RR.

Referenced by thread_func().

Here is the call graph for this function:



6.43.4 Member Data Documentation

6.43.4.1 guard

```
boost::mutex Resource::guard [private]
```

Definition at line 22 of file boostEx.cpp.

Referenced by use().

6.43.4.2 i

```
int Resource::i [private]
```

Definition at line 20 of file boostEx.cpp.

Referenced by getValue(), and use().

6.43.4.3 RR

`RInside& Resource::RR [private]`

Definition at line 21 of file boostEx.cpp.

Referenced by `use()`.

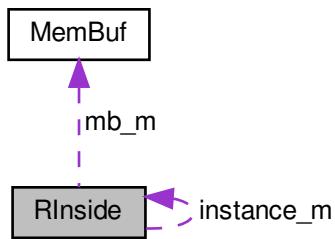
The documentation for this class was generated from the following file:

- `inst/examples/threads/boostEx.cpp`

6.44 RInside Class Reference

#include <RInside.h>

Collaboration diagram for `RInside`:



Classes

- class `Proxy`

Public Member Functions

- int `parseEval` (const std::string &line, SEXP &ans)
- void `parseEvalQ` (const std::string &line)
- void `parseEvalQNT` (const std::string &line)
- `Proxy parseEval` (const std::string &line)
- `Proxy parseEvalINT` (const std::string &line)
- template<typename T >
void `assign` (const T &object, const std::string &nam)
- `RInside ()`
- `RInside` (const int argc, const char *const argv[], const bool loadRcpp=true, const bool `verbose`=false, const bool interactive=false)
- `~RInside ()`
- void `setVerbose` (const bool `verbose`)
- Rcpp::Environment::Binding `operator[]` (const std::string &name)
- void `repl ()`

Static Public Member Functions

- static `RInside & instance ()`
- static `RInside * instancePtr ()`

Private Member Functions

- void `init_tempdir (void)`
- void `init_rand (void)`
- void `autoloads (void)`
- void `initialize (const int argc, const char *const argv[], const bool loadRcpp, const bool verbose, const bool interactive)`

Private Attributes

- `MemBuf mb_m`
- `Rcpp::Environment * global_env_m`
- `bool verbose_m`
- `bool interactive_m`

Static Private Attributes

- static `RInside * instance_m = 0`

6.44.1 Detailed Description

Definition at line 29 of file RInside.h.

6.44.2 Constructor & Destructor Documentation

6.44.2.1 RInside() [1/2]

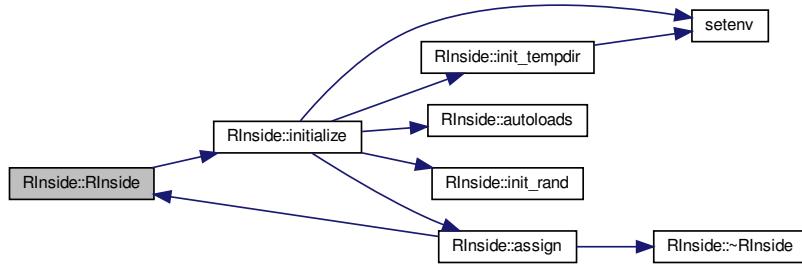
```
RInside::RInside ( )
```

Definition at line 56 of file RInside.cpp.

References initialize().

Referenced by assign().

Here is the call graph for this function:



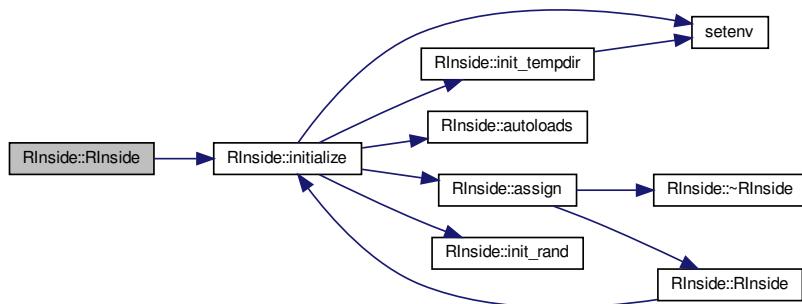
6.44.2.2 RInside() [2/2]

```
RInside::RInside (
    const int argc,
    const char *const argv[],
    const bool loadRcpp = true,
    const bool verbose = false,
    const bool interactive = false )
```

Definition at line 98 of file RInside.cpp.

References initialize().

Here is the call graph for this function:



6.44.2.3 ~RInside()

```
RInside::~RInside ( )
```

Definition at line 43 of file RInside.cpp.

References global_env_m, and instance_m.

Referenced by assign().

6.44.3 Member Function Documentation

6.44.3.1 assign()

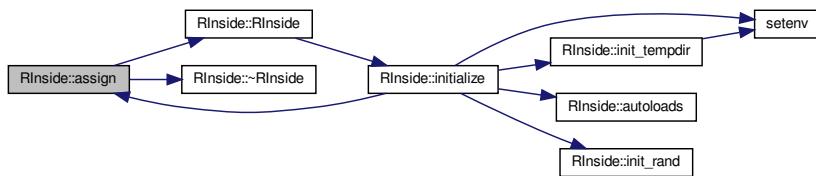
```
template<typename T >
void RInside::assign (
    const T & object,
    const std::string & nam ) [inline]
```

Definition at line 78 of file RInside.h.

References RInside(), verbose, and ~RInside().

Referenced by initialize(), main(), and passToR().

Here is the call graph for this function:



6.44.3.2 autoloads()

```
void RInside::autoloads (
    void ) [private]
```

Definition at line 239 of file RInside.cpp.

References global_env_m.

Referenced by initialize().

6.44.3.3 init_rand()

```
void RInside::init_rand (
    void ) [private]
```

Definition at line 230 of file RInside.cpp.

Referenced by initialize().

6.44.3.4 init_tempdir()

```
void RInside::init_tempdir (
    void ) [private]
```

Definition at line 212 of file RInside.cpp.

References setenv().

Referenced by initialize().

Here is the call graph for this function:



6.44.3.5 initialize()

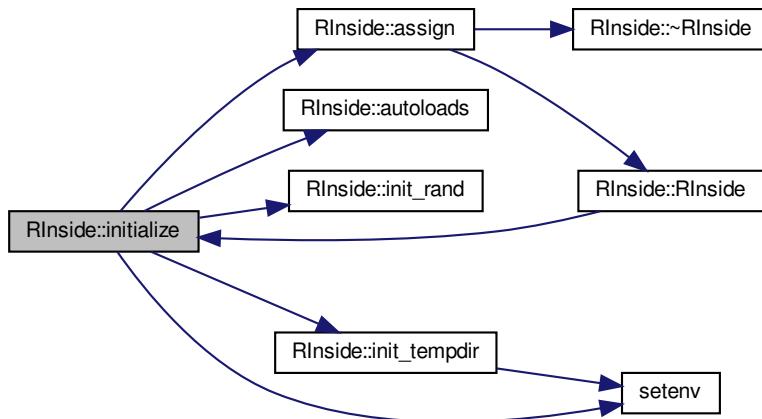
```
void RInside::initialize (
    const int argc,
    const char *const argv[],
    const bool loadRcpp,
    const bool verbose,
    const bool interactive ) [private]
```

Definition at line 108 of file RInside.cpp.

References assign(), autoloads(), global_env_m, init_rand(), init_tempdir(), instance_m, interactive_m, programName, R_CStackLimit, setenv(), verbose, and verbose_m.

Referenced by RInside().

Here is the call graph for this function:



6.44.3.6 instance()

```
RInside & RInside::instance () [static]
```

Definition at line 416 of file RInside.cpp.

References instance_m.

Referenced by createApplication(), repl(), and setVerbose().

6.44.3.7 instancePtr()

```
RInside * RInside::instancePtr ( ) [static]
```

Definition at line 420 of file RInside.cpp.

References instance_m.

Referenced by setVerbose().

6.44.3.8 operator[]()

```
Rcpp::Environment::Binding RInside::operator[ ] (
    const std::string & name )
```

Definition at line 412 of file RInside.cpp.

References global_env_m.

Referenced by setVerbose().

6.44.3.9 parseEval() [1/2]

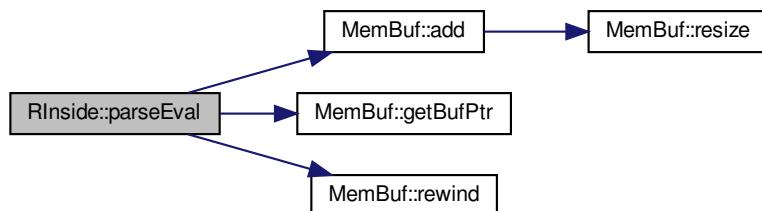
```
int RInside::parseEval (
    const std::string & line,
    SEXP & ans )
```

Definition at line 326 of file RInside.cpp.

References MemBuf::add(), MemBuf::getBufPtr(), global_env_m, mb_m, programName, MemBuf::rewind(), and verbose_m.

Referenced by DensityApp::DensityApp(), do_work(), evalInR(), main(), parseEval(), parseEvalNT(), parseEvalQ(), parseEvalQNT(), QtDensity::QtDensity(), and RInsideServer::run().

Here is the call graph for this function:



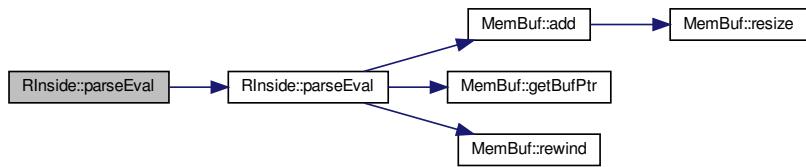
6.44.3.10 parseEval() [2/2]

```
RInside::Proxy RInside::parseEval (
    const std::string & line )
```

Definition at line 397 of file RInside.cpp.

References parseEval().

Here is the call graph for this function:



6.44.3.11 parseEvalNT()

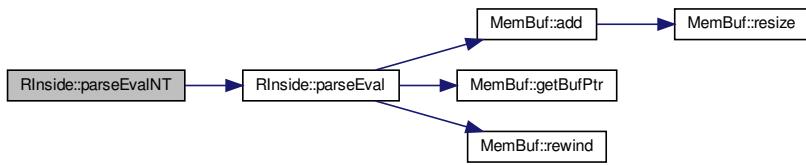
```
RInside::Proxy RInside::parseEvalNT (
    const std::string & line )
```

Definition at line 406 of file RInside.cpp.

References parseEval().

Referenced by main().

Here is the call graph for this function:



6.44.3.12 parseEvalQ()

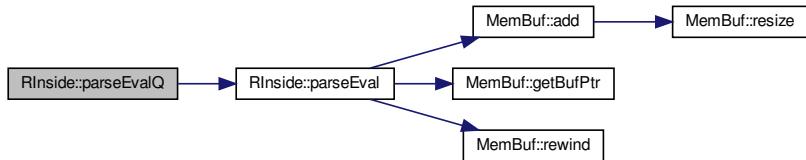
```
void RInside::parseEvalQ (
    const std::string & line )
```

Definition at line 384 of file RInside.cpp.

References parseEval().

Referenced by evalQuietlyInR(), initialize(), main(), QtDensity::plot(), DensityApp::plot(), RInsideServer::run(), and Resource::use().

Here is the call graph for this function:



6.44.3.13 parseEvalQNT()

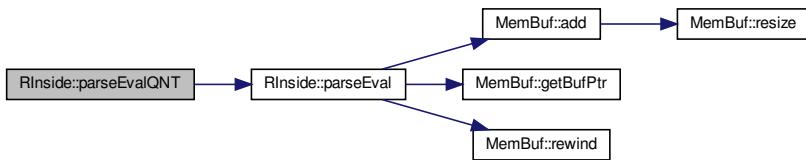
```
void RInside::parseEvalQNT (
    const std::string & line )
```

Definition at line 392 of file RInside.cpp.

References parseEval().

Referenced by main(), DensityApp::reportEdit(), and QtDensity::runRandomDataCmd().

Here is the call graph for this function:



6.44.3.14 repl()

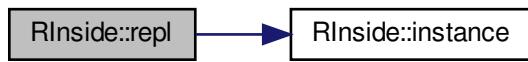
```
void RInside::repl ( )
```

Definition at line 424 of file RInside.cpp.

References instance().

Referenced by main(), and setVerbose().

Here is the call graph for this function:



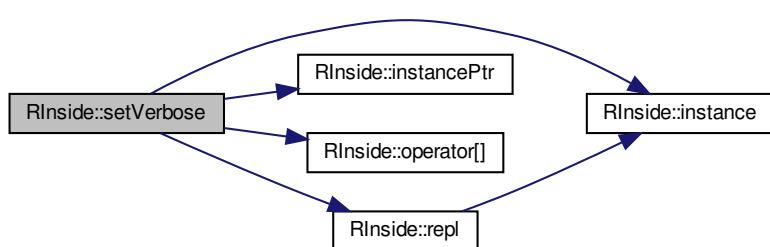
6.44.3.15 setVerbose()

```
void RInside::setVerbose (
    const bool verbose ) [inline]
```

Definition at line 88 of file RInside.h.

References instance(), instancePtr(), operator[](), repl(), and verbose.

Here is the call graph for this function:



6.44.4 Member Data Documentation

6.44.4.1 global_env_m

```
Rcpp::Environment* RInside::global_env_m [private]
```

Definition at line 32 of file RInside.h.

Referenced by autoloads(), initialize(), operator[](), parseEval(), and ~RInside().

6.44.4.2 instance_m

```
RInside * RInside::instance_m = 0 [static], [private]
```

Definition at line 44 of file RInside.h.

Referenced by initialize(), instance(), instancePtr(), and ~RInside().

6.44.4.3 interactive_m

```
bool RInside::interactive_m [private]
```

Definition at line 35 of file RInside.h.

Referenced by initialize().

6.44.4.4 mb_m

```
MemBuf RInside::mb_m [private]
```

Definition at line 31 of file RInside.h.

Referenced by parseEval().

6.44.4.5 verbose_m

```
bool RInside::verbose_m [private]
```

Definition at line 34 of file RInside.h.

Referenced by initialize(), and parseEval().

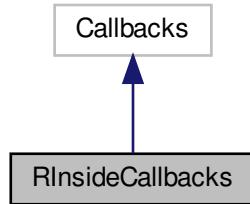
The documentation for this class was generated from the following files:

- inst/include/RInside.h
- src/RInside.cpp

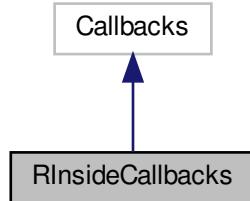
6.45 RInsideCallbacks Class Reference

```
#include <rinside_callbacks.h>
```

Inheritance diagram for RInsideCallbacks:



Collaboration diagram for RInsideCallbacks:



Public Member Functions

- virtual std::string [ReadConsole](#) (const char *prompt, bool addtohistory)
- virtual void [WriteConsole](#) (const std::string &line, int type)
- virtual void [FlushConsole](#) ()
- virtual void [ResetConsole](#) ()
- virtual void [CleanerrConsole](#) ()
- virtual void [Busy](#) (bool)
- virtual void [ShowMessage](#) (const char *message)
- virtual void [Suicide](#) (const char *message)
- virtual bool [has_ReadConsole](#) ()
- virtual bool [has_WriteConsole](#) ()
- virtual bool [has_FlushConsole](#) ()
- virtual bool [has_ResetConsole](#) ()
- virtual bool [has_CleanerrConsole](#) ()
- virtual bool [has_Busy](#) ()
- virtual bool [has_ShowMessage](#) ()
- virtual bool [has_Suicide](#) ()
- void [resetConsoleOutput](#) ()
- std::string [getConsoleOutput](#) ()

Private Attributes

- std::ostringstream [output_buffer](#)

6.45.1 Detailed Description

Definition at line 1 of file rinside_callbacks.h.

6.45.2 Member Function Documentation

6.45.2.1 Busy()

```
virtual void RInsideCallbacks::Busy (
    bool ) [inline], [virtual]
```

Definition at line 22 of file rinside_callbacks.h.

6.45.2.2 CleanerrConsole()

```
virtual void RInsideCallbacks::CleanerrConsole ( ) [inline], [virtual]
```

Definition at line 19 of file rinside_callbacks.h.

6.45.2.3 FlushConsole()

```
virtual void RInsideCallbacks::FlushConsole ( ) [inline], [virtual]
```

Definition at line 13 of file rinside_callbacks.h.

6.45.2.4 getConsoleOutput()

```
std::string RInsideCallbacks::getConsoleOutput ( ) [inline]
```

Definition at line 49 of file rinside_callbacks.h.

References output_buffer.

Referenced by main(), and RInsideServer::run().

6.45.2.5 has_Busy()

```
virtual bool RInsideCallbacks::has_Busy ( ) [inline], [virtual]
```

Definition at line 40 of file rinside_callbacks.h.

6.45.2.6 has_CleanerrConsole()

```
virtual bool RInsideCallbacks::has_CleanerrConsole ( ) [inline], [virtual]
```

Definition at line 39 of file rinside_callbacks.h.

6.45.2.7 has_FlushConsole()

```
virtual bool RInsideCallbacks::has_FlushConsole () [inline], [virtual]
```

Definition at line 37 of file rinside_callbacks.h.

6.45.2.8 has_ReadConsole()

```
virtual bool RInsideCallbacks::has_ReadConsole () [inline], [virtual]
```

Definition at line 35 of file rinside_callbacks.h.

6.45.2.9 has_ResetConsole()

```
virtual bool RInsideCallbacks::has_ResetConsole () [inline], [virtual]
```

Definition at line 38 of file rinside_callbacks.h.

6.45.2.10 has_ShowMessage()

```
virtual bool RInsideCallbacks::has_ShowMessage () [inline], [virtual]
```

Definition at line 41 of file rinside_callbacks.h.

6.45.2.11 has_Suicide()

```
virtual bool RInsideCallbacks::has_Suicide () [inline], [virtual]
```

Definition at line 42 of file rinside_callbacks.h.

6.45.2.12 has_WriteConsole()

```
virtual bool RInsideCallbacks::has_WriteConsole () [inline], [virtual]
```

Definition at line 36 of file rinside_callbacks.h.

6.45.2.13 ReadConsole()

```
virtual std::string RInsideCallbacks::ReadConsole (
    const char * prompt,
    bool addtohistory ) [inline], [virtual]
```

Definition at line 4 of file rinside_callbacks.h.

6.45.2.14 ResetConsole()

```
virtual void RInsideCallbacks::ResetConsole ( ) [inline], [virtual]
```

Definition at line 16 of file rinside_callbacks.h.

6.45.2.15 resetConsoleOutput()

```
void RInsideCallbacks::resetConsoleOutput ( ) [inline]
```

Definition at line 44 of file rinside_callbacks.h.

References output_buffer.

Referenced by main(), and RInsideServer::run().

6.45.2.16 ShowMessage()

```
virtual void RInsideCallbacks::ShowMessage (
    const char * message ) [inline], [virtual]
```

Definition at line 25 of file rinside_callbacks.h.

6.45.2.17 Suicide()

```
virtual void RInsideCallbacks::Suicide (
    const char * message ) [inline], [virtual]
```

Definition at line 29 of file rinside_callbacks.h.

References LOG.

6.45.2.18 WriteConsole()

```
virtual void RInsideCallbacks::WriteConsole (
    const std::string & line,
    int type ) [inline], [virtual]
```

Definition at line 8 of file rinside_callbacks.h.

References output_buffer.

6.45.3 Member Data Documentation

6.45.3.1 output_buffer

```
std::ostringstream RInsideCallbacks::output_buffer [private]
```

Definition at line 53 of file rinside_callbacks.h.

Referenced by getConsoleOutput(), resetConsoleOutput(), and WriteConsole().

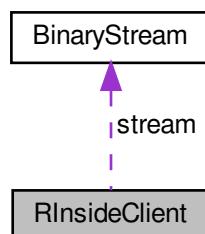
The documentation for this class was generated from the following file:

- inst/examples/sandboxed_server/server/rinside_callbacks.h

6.46 RInsideClient Class Reference

```
#include <rinsideclient.h>
```

Collaboration diagram for RInsideClient:



Public Member Functions

- `RInsideClient (BinaryStream &stream)`
- `~RInsideClient ()`
- `void parseEvalQ (const std::string &code)`
- `template<typename T >`
`T parseEval (const std::string &code)`
- `template<typename T >`
`void setValue (const std::string &name, const T &value)`
- `template<typename T >`
`T getValue (const std::string &name)`
- `template<typename R , typename... Params>`
`void setCallback (const std::string &name, std::function< R(Params...)> &callback)`
- `std::string getConsoleOutput ()`
- `void initPlot (uint32_t width=800, uint32_t height=600)`
- `std::string getPlot ()`

Private Member Functions

- `void runScript (const std::string code, int32_t result_typeid)`
- `void writeCommand (char command)`
- `char readReply (bool accept_ok=true, bool accept_value=false)`
- `void unrecoverable_error (const std::string &error)`

Private Attributes

- `BinaryStream stream`
- `uint32_t next_callback_id`
- `std::map< uint32_t, std::function< void(void)> > callbacks`
- `bool had_unrecoverable_error`
- `bool can_send_command`

6.46.1 Detailed Description

Definition at line 19 of file rinsideclient.h.

6.46.2 Constructor & Destructor Documentation

6.46.2.1 RInsideClient()

```
RInsideClient::RInsideClient (
    BinaryStream & stream )
```

Definition at line 12 of file rinsideclient.cpp.

References can_send_command, RIS_MAGIC_NUMBER, stream, and BinaryStream::write().

Here is the call graph for this function:



6.46.2.2 ~RInsideClient()

```
RInsideClient::~RInsideClient ( )
```

Definition at line 17 of file rinsideclient.cpp.

References can_send_command, had_unrecoverable_error, RIS_CMD_EXIT, stream, and BinaryStream::write().

Here is the call graph for this function:



6.46.3 Member Function Documentation

6.46.3.1 getConsoleOutput()

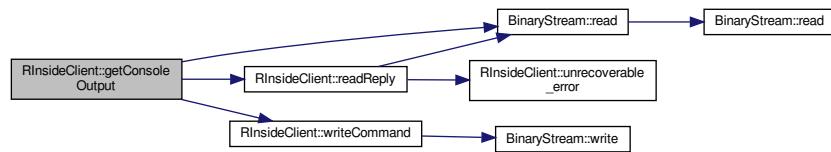
```
std::string RInsideClient::getConsoleOutput( )
```

Definition at line 70 of file rinsideclient.cpp.

References can_send_command, BinaryStream::read(), readReply(), RIS_CMD_GETCONSOLE, stream, and writeCommand().

Referenced by setCallback(), and test_console_output().

Here is the call graph for this function:



6.46.3.2 getPlot()

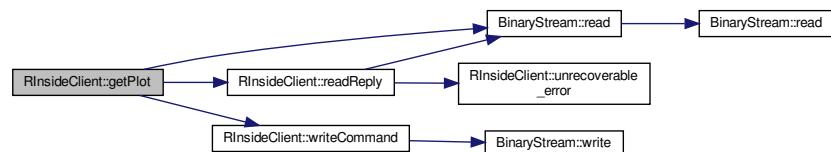
```
std::string RInsideClient::getPlot( )
```

Definition at line 87 of file rinsideclient.cpp.

References can_send_command, BinaryStream::read(), readReply(), RIS_CMD_GETPLOT, stream, and writeCommand().

Referenced by setCallback(), and test_plot().

Here is the call graph for this function:



6.46.3.3 getValue()

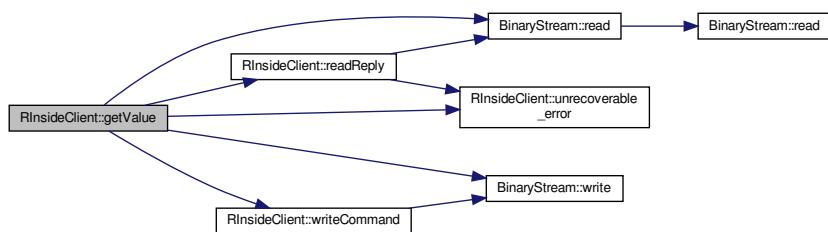
```
template<typename T >
T RInsideClient::getValue (
    const std::string & name ) [inline]
```

Definition at line 49 of file rinsideclient.h.

References can_send_command, BinaryStream::read(), readReply(), RIS_CMD_GETVALUE, unrecoverable_error(), BinaryStream::write(), and writeCommand().

Referenced by test_multiple(), and test_setting_getting().

Here is the call graph for this function:



6.46.3.4 initPlot()

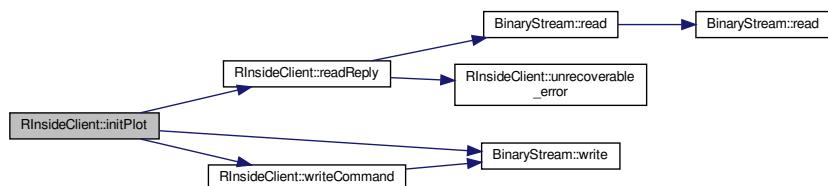
```
void RInsideClient::initPlot (
    uint32_t width = 800,
    uint32_t height = 600 )
```

Definition at line 79 of file rinsideclient.cpp.

References can_send_command, readReply(), RIS_CMD_INITPLOT, stream, BinaryStream::write(), and writeCommand().

Referenced by setCallback(), and test_plot().

Here is the call graph for this function:



6.46.3.5 parseEval()

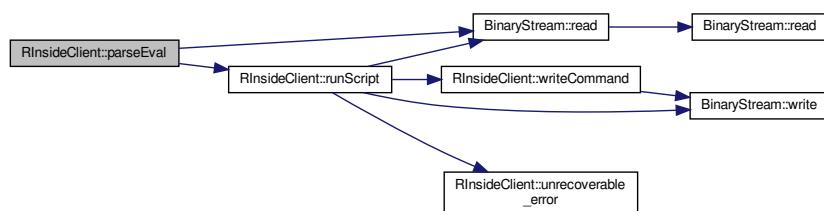
```
template<typename T >
T RInsideClient::parseEval (
    const std::string & code ) [inline]
```

Definition at line 30 of file rinsideclient.h.

References can_send_command, BinaryStream::read(), and runScript().

Referenced by test_callbacks(), and test_setting_getting().

Here is the call graph for this function:



6.46.3.6 parseEvalQ()

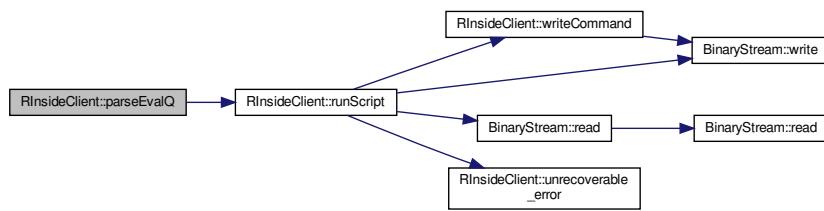
```
void RInsideClient::parseEvalQ (
    const std::string & code ) [inline]
```

Definition at line 25 of file rinsideclient.h.

References can_send_command, and runScript().

Referenced by test_console_output(), and test_plot().

Here is the call graph for this function:



6.46.3.7 readReply()

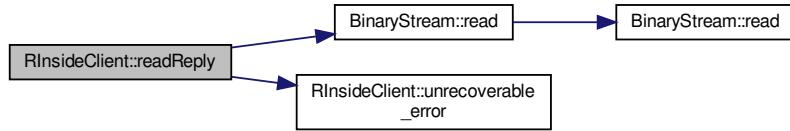
```
char RInsideClient::readReply (
    bool accept_ok = true,
    bool accept_value = false ) [private]
```

Definition at line 105 of file rinsideclient.cpp.

References can_send_command, BinaryStream::read(), RIS_REPLY_ERROR, RIS_REPLY_OK, RIS_REPLY_VALUE, stream, and unrecoverable_error().

Referenced by getConsoleOutput(), getPlot(), getValue(), initPlot(), setCallback(), and setValue().

Here is the call graph for this function:



6.46.3.8 runScript()

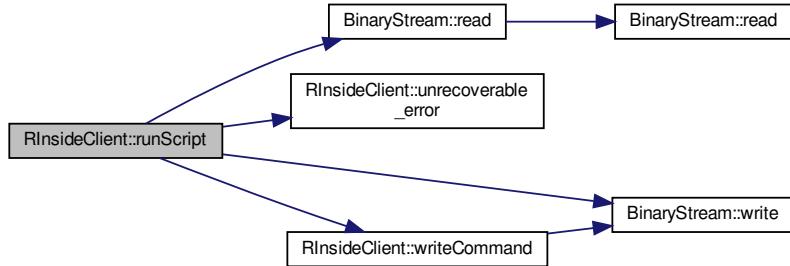
```
void RInsideClient::runScript (
    const std::string code,
    int32_t result_typeid ) [private]
```

Definition at line 29 of file rinsideclient.cpp.

References callbacks, can_send_command, had_unrecoverable_error, BinaryStream::read(), RIS_CMD_RUN, RIS_REPLY_CALLBACK, RIS_REPLY_OK, RIS_REPLY_VALUE, stream, unrecoverable_error(), BinaryStream::write(), and writeCommand().

Referenced by parseEval(), parseEvalQ(), and setCallback().

Here is the call graph for this function:



6.46.3.9 setCallback()

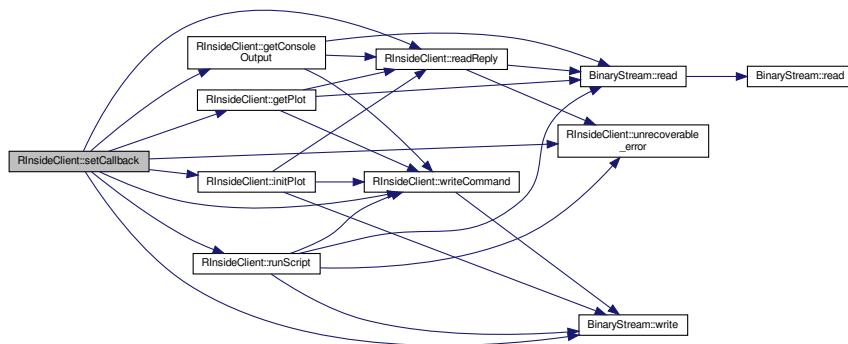
```
template<typename R , typename... Params>
void RInsideClient::setCallback (
    const std::string & name,
    std::function< R(Params...) > & callback ) [inline]
```

Definition at line 65 of file rinsideclient.h.

References callbacks, can_send_command, getConsoleOutput(), getPlot(), initPlot(), next_callback_id, readReply(), RIS_CMD_SETCALLBACK, runScript(), unrecoverable_error(), BinaryStream::write(), and writeCommand().

Referenced by test_callbacks().

Here is the call graph for this function:



6.46.3.10 setValue()

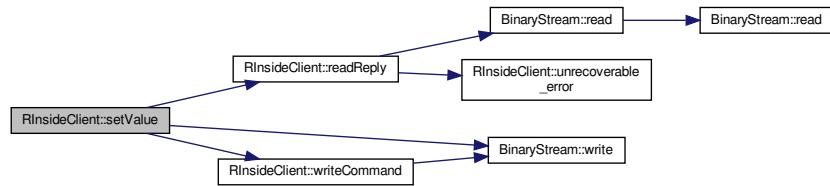
```
template<typename T >
void RInsideClient::setValue (
    const std::string & name,
    const T & value ) [inline]
```

Definition at line 38 of file rinsideclient.h.

References can_send_command, readReply(), RIS_CMD_SETVALUE, BinaryStream::write(), and writeCommand().

Referenced by test_multiple(), and test_setting_getting().

Here is the call graph for this function:



6.46.3.11 `unrecoverable_error()`

```
void RIInsideClient::unrecoverable_error (
    const std::string & error ) [private]
```

Definition at line 120 of file rinsideclient.cpp.

References `had_unrecoverable_error`.

Referenced by `getValue()`, `readReply()`, `runScript()`, and `setCallback()`.

6.46.3.12 `writeCommand()`

```
void RIInsideClient::writeCommand (
    char command ) [private]
```

Definition at line 95 of file rinsideclient.cpp.

References `can_send_command`, `had_unrecoverable_error`, `stream`, and `BinaryStream::write()`.

Referenced by `getConsoleOutput()`, `getPlot()`, `getValue()`, `initPlot()`, `runScript()`, `setCallback()`, and `setValue()`.

Here is the call graph for this function:



6.46.4 Member Data Documentation

6.46.4.1 callbacks

```
std::map<uint32_t, std::function<void(void)> > RInsideClient::callbacks [private]
```

Definition at line 98 of file rinsideclient.h.

Referenced by runScript(), and setCallback().

6.46.4.2 can_send_command

```
bool RInsideClient::can_send_command [private]
```

Definition at line 100 of file rinsideclient.h.

Referenced by getConsoleOutput(), getPlot(), getValue(), initPlot(), parseEval(), parseEvalQ(), readReply(), RInsideClient(), runScript(), setCallback(), setValue(), writeCommand(), and ~RInsideClient().

6.46.4.3 had_unrecoverable_error

```
bool RInsideClient::had_unrecoverable_error [private]
```

Definition at line 99 of file rinsideclient.h.

Referenced by runScript(), unrecoverable_error(), writeCommand(), and ~RInsideClient().

6.46.4.4 next_callback_id

```
uint32_t RInsideClient::next_callback_id [private]
```

Definition at line 97 of file rinsideclient.h.

Referenced by setCallback().

6.46.4.5 stream

```
BinaryStream RInsideClient::stream [private]
```

Definition at line 96 of file rinsideclient.h.

Referenced by getConsoleOutput(), getPlot(), initPlot(), readReply(), RInsideClient(), runScript(), writeCommand(), and ~RInsideClient().

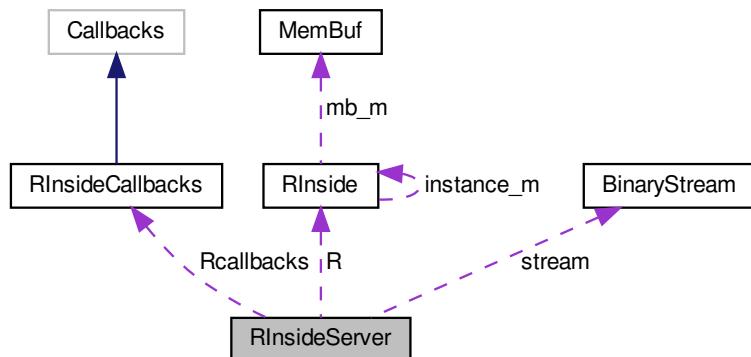
The documentation for this class was generated from the following files:

- inst/examples/sandboxed_server/client/rinsideclient.h
- inst/examples/sandboxed_server/client/rinsideclient.cpp

6.47 RInsideServer Class Reference

```
#include <rinsideserver.h>
```

Collaboration diagram for RInsideServer:



Public Member Functions

- `RInsideServer (BinaryStream &stream, RInside &R, RInsideCallbacks &Rcallbacks)`
- `~RInsideServer ()`
- `void run ()`

Static Public Member Functions

- `static void registerDefaultTypes ()`
- `template<typename T > static void registerType ()`

Private Member Functions

- SEXP `sexp_from_stream ()`
- void `sexp_to_stream (SEXP, int32_t type, bool include_reply=false)`
- void `sendReply (char reply)`
- void `allowSendReply ()`

Private Attributes

- `BinaryStream stream`
- `RInside & R`
- `RInsideCallbacks & Rcallbacks`
- bool `can_send_reply`

Static Private Attributes

- static std::map< int32_t, std::function< SEXP(BinaryStream &) >> `registry_sexp_from_stream`
- static std::map< int32_t, std::function< void(RInsideServer &, SEXP, bool) >> `registry_sexp_to_stream`

Friends

- class `CppFunctionForRInsideServer`

6.47.1 Detailed Description

Definition at line 19 of file rinsideserver.h.

6.47.2 Constructor & Destructor Documentation

6.47.2.1 RInsideServer()

```
RInsideServer::RInsideServer (
    BinaryStream & stream,
    RInside & R,
    RInsideCallbacks & Rcallbacks )
```

Definition at line 45 of file rinsideserver.cpp.

6.47.2.2 ~RIInsideServer()

```
RIInsideServer::~RIInsideServer ( )
```

Definition at line 49 of file rinsideserver.cpp.

6.47.3 Member Function Documentation

6.47.3.1 allowSendReply()

```
void RIInsideServer::allowSendReply ( ) [inline], [private]
```

Definition at line 36 of file rinsideserver.h.

Referenced by CppFunctionForRIInsideServer::operator()(), and run().

6.47.3.2 registerDefaultTypes()

```
void RIInsideServer::registerDefaultTypes ( ) [static]
```

Definition at line 202 of file rinsideserver.cpp.

Referenced by main().

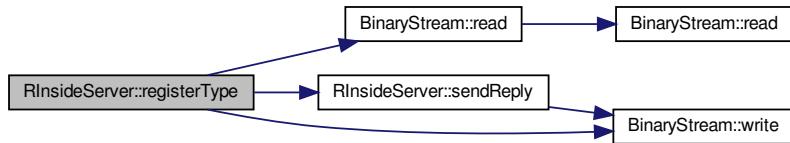
6.47.3.3 registerType()

```
template<typename T >
static void RIInsideServer::registerType ( ) [inline], [static]
```

Definition at line 44 of file rinsideserver.h.

References BinaryStream::read(), RIS_REPLY_VALUE, sendReply(), stream, and BinaryStream::write().

Here is the call graph for this function:



6.47.3.4 run()

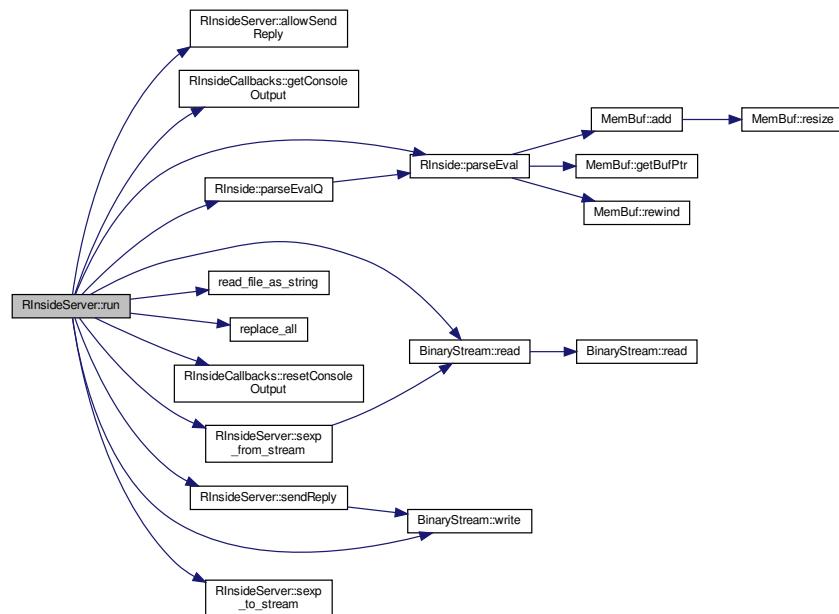
```
void RInsideServer::run ( )
```

Definition at line 63 of file rinsideserver.cpp.

References allowSendReply(), CMD_CATCH, CMD_TRY, RInsideCallbacks::getConsoleOutput(), LOG, RInside::parseEval(), RInside::parseEvalQ(), R_callbacks, BinaryStream::read(), read_file_as_string(), replace_all(), RInsideCallbacks::resetConsoleOutput(), RIS_CMD_EXIT, RIS_CMD_GETCONSOLE, RIS_CMD_GETPLOT, RIS_CMD_GETVALUE, RIS_CMD_INITPLOT, RIS_CMD_RUN, RIS_CMD_SETCALLBACK, RIS_CMD_SETVALUE, RIS_MAGIC_NUMBER, RIS_REPLY_OK, RIS_REPLY_VALUE, sendReply(), SEXP_from_stream(), SEXP_to_stream(), stream, and BinaryStream::write().

Referenced by main().

Here is the call graph for this function:



6.47.3.5 sendReply()

```
void RInsideServer::sendReply (
    char reply ) [inline], [private]
```

Definition at line 35 of file rinsideserver.h.

References `BinaryStream::write()`.

Referenced by CppFunctionForRInsideServer::operator()(), registerType(), and run().

Here is the call graph for this function:



6.47.3.6 SEXP SEXP_from_stream()

```
SEXP RInsideServer::sexp_from_stream ( ) [private]
```

Definition at line 182 of file rinsideserver.cpp.

References LOG, BinaryStream::read(), registry_sexp_from_stream, and stream.

Referenced by CppFunctionForRInsideServer::operator()(), and run().

Here is the call graph for this function:



6.47.3.7 SEXP SEXP_to_stream()

```
void RInsideServer::sexp_to_stream (
    SEXP SEXP,
    int32_t type,
    bool include_reply = false ) [private]
```

Definition at line 193 of file rinsideserver.cpp.

References LOG, and registry_sexp_to_stream.

Referenced by CppFunctionForRInsideServer::operator()(), and run().

6.47.4 Friends And Related Function Documentation

6.47.4.1 CppFunctionForRInsideServer

```
friend class CppFunctionForRInsideServer [friend]
```

Definition at line 68 of file rinsideserver.h.

6.47.5 Member Data Documentation

6.47.5.1 can_send_reply

```
bool RInsideServer::can_send_reply [private]
```

Definition at line 34 of file rinsideserver.h.

6.47.5.2 R

```
RInside& RInsideServer::R [private]
```

Definition at line 31 of file rinsideserver.h.

Referenced by run().

6.47.5.3 Rcallbacks

```
RInsideCallbacks& RInsideServer::Rcallbacks [private]
```

Definition at line 32 of file rinsideserver.h.

Referenced by run().

6.47.5.4 registry_sexp_from_stream

```
std::map< int32_t, std::function< SEXP (BinaryStream &) > > RInsideServer::registry_sexp_from_<→
stream [static], [private]
```

Definition at line 38 of file rinsideserver.h.

Referenced by `read_file_as_string()`, and `sexp_from_stream()`.

6.47.5.5 registry_sexp_to_stream

```
std::map< int32_t, std::function< void(RInsideServer &, SEXP, bool) > > RInsideServer::registry_<→
_sexp_to_stream [static], [private]
```

Definition at line 39 of file rinsideserver.h.

Referenced by `read_file_as_string()`, and `sexp_to_stream()`.

6.47.5.6 stream

```
BinaryStream RInsideServer::stream [private]
```

Definition at line 30 of file rinsideserver.h.

Referenced by `CppMethodForRInsideServer::operator()()`, `registerType()`, `run()`, and `sexp_from_stream()`.

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

- `inst/examples/sandboxed_server/server/rinsideserver.h`
- `inst/examples/sandboxed_server/server/rinsideserver.cpp`

6.48 callback_helper::send_pack< Params > Struct Template Reference

```
#include <callback_helper.h>
```

6.48.1 Detailed Description

```
template<typename... Params>
struct callback_helper::send_pack< Params >
```

Definition at line 9 of file `callback_helper.h`.

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

- `inst/examples/sandboxed_server/client/callback_helper.h`

6.49 `callback_helper::send_pack< First, Remaining... >` Struct Template Reference

```
#include <callback_helper.h>
```

Static Public Member Functions

- static void `send (BinaryStream &stream)`

6.49.1 Detailed Description

```
template<typename First, typename... Remaining>
struct callback_helper::send_pack< First, Remaining... >
```

Definition at line 12 of file `callback_helper.h`.

6.49.2 Member Function Documentation

6.49.2.1 `send()`

```
template<typename First , typename... Remaining>
static void callback_helper::send_pack< First, Remaining... >::send (
BinaryStream & stream ) [inline], [static]
```

Definition at line 13 of file `callback_helper.h`.

References `BinaryStream::write()`.

Here is the call graph for this function:



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

- `inst/examples/sandboxed_server/client/callback_helper.h`

6.50 callback_helper::send_pack<> Struct Template Reference

```
#include <callback_helper.h>
```

Static Public Member Functions

- static void [send \(BinaryStream &stream\)](#)

6.50.1 Detailed Description

```
template<>
struct callback_helper::send_pack<>
```

Definition at line 21 of file `callback_helper.h`.

6.50.2 Member Function Documentation

6.50.2.1 send()

```
static void callback_helper::send_pack<>::send (
    BinaryStream & stream ) [inline], [static]
```

Definition at line 22 of file `callback_helper.h`.

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

- [inst/examples/sandboxed_server/client/callback_helper.h](#)

6.51 serialization::serializer< T > Struct Template Reference

```
#include <binarystream.h>
```

6.51.1 Detailed Description

```
template<typename T>
struct serialization::serializer< T >
```

Definition at line 81 of file `binarystream.h`.

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

- [inst/examples/sandboxed_server/common/binarystream.h](#)

6.52 serialization::serializer< std::string > Struct Template Reference

```
#include <binarystream.h>
```

Static Public Member Functions

- static void [serialize \(BinaryStream &, const std::string &\)](#)
- static std::string [deserialize \(BinaryStream &\)](#)

6.52.1 Detailed Description

```
template<>
struct serialization::serializer< std::string >
```

Definition at line 84 of file `binarystream.h`.

6.52.2 Member Function Documentation

6.52.2.1 deserialize()

```
std::string serialization::serializer< std::string >::deserialize (
    BinaryStream & stream ) [static]
```

Definition at line 124 of file `binarystream.cpp`.

References `BinaryStream::read()`.

Here is the call graph for this function:



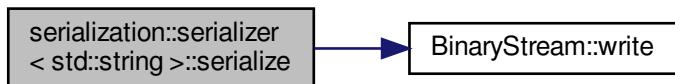
6.52.2.2 serialize()

```
void serialization::serializer< std::string >::serialize (
    BinaryStream & stream,
    const std::string & string ) [static]
```

Definition at line 116 of file `binarystream.cpp`.

References `BinaryStream::write()`.

Here is the call graph for this function:



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

- `inst/examples/sandboxed_server/common/binarystream.h`
- `inst/examples/sandboxed_server/common/binarystream.cpp`

6.53 serialization::serializer< std::vector< T > > Struct Template Reference

```
#include <binarystream.h>
```

Static Public Member Functions

- static void `serialize (BinaryStream &, const std::vector< T > &)`
- static `std::vector< T > deserialize (BinaryStream &)`

6.53.1 Detailed Description

```
template<typename T>
struct serialization::serializer< std::vector< T > >
```

Definition at line 90 of file `binarystream.h`.

6.53.2 Member Function Documentation

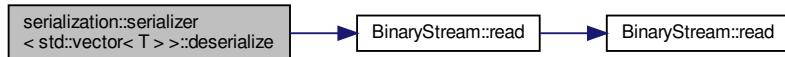
6.53.2.1 deserialize()

```
template<typename T >
std::vector< T > serialization::serializer< std::vector< T > >::deserialize (
    BinaryStream & stream ) [static]
```

Definition at line 150 of file `binarystream.cpp`.

References `BinaryStream::read()`.

Here is the call graph for this function:



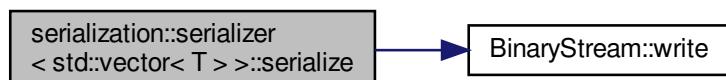
6.53.2.2 serialize()

```
template<typename T >
void serialization::serializer< std::vector< T > >::serialize (
    BinaryStream & stream,
    const std::vector< T > & vec ) [static]
```

Definition at line 141 of file `binarystream.cpp`.

References `BinaryStream::write()`.

Here is the call graph for this function:



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

- `inst/examples/sandboxed_server/common/binarystream.h`
- `inst/examples/sandboxed_server/common/binarystream.cpp`

6.54 Solver Class Reference

Public Member Functions

- [Solver \(int n\)](#)
- [void Iterate \(int n\)](#)

Private Types

- [typedef std::vector< Planet > Planets](#)

Private Member Functions

- [void Iteration \(\)](#)

Private Attributes

- [Planets tab](#)
- [double dt](#)
- [double G](#)

Friends

- [class Wrapper](#)

6.54.1 Detailed Description

Definition at line 23 of file rinside_interactive0.cpp.

6.54.2 Member Typedef Documentation

6.54.2.1 Planets

```
typedef std::vector<Planet> Solver::Planets [private]
```

Definition at line 24 of file rinside_interactive0.cpp.

6.54.3 Constructor & Destructor Documentation

6.54.3.1 Solver()

```
Solver::Solver (
    int n ) [inline]
```

Definition at line 49 of file rinside_interactive0.cpp.

6.54.4 Member Function Documentation

6.54.4.1 Iterate()

```
void Solver::Iterate (
    int n ) [inline]
```

Definition at line 58 of file rinside_interactive0.cpp.

Referenced by main().

6.54.4.2 Iteration()

```
void Solver::Iteration ( ) [inline], [private]
```

Definition at line 28 of file rinside_interactive0.cpp.

References Planet::x, and Planet::y.

6.54.5 Friends And Related Function Documentation

6.54.5.1 Wrapper

```
friend class Wrapper [friend]
```

Definition at line 61 of file rinside_interactive0.cpp.

6.54.6 Member Data Documentation

6.54.6.1 dt

```
double Solver::dt [private]
```

Definition at line 26 of file [rinside_interactive0.cpp](#).

Referenced by [Wrapper::dt\(\)](#).

6.54.6.2 G

```
double Solver::G [private]
```

Definition at line 27 of file [rinside_interactive0.cpp](#).

Referenced by [Wrapper::G\(\)](#).

6.54.6.3 tab

```
Planets Solver::tab [private]
```

Definition at line 25 of file [rinside_interactive0.cpp](#).

Referenced by [Wrapper::getData\(\)](#), and [Wrapper::setData\(\)](#).

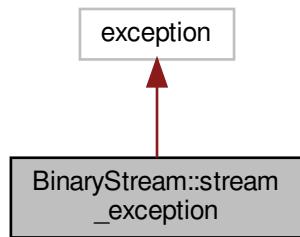
The documentation for this class was generated from the following file:

- [inst/examples/standard/rinside_interactive0.cpp](#)

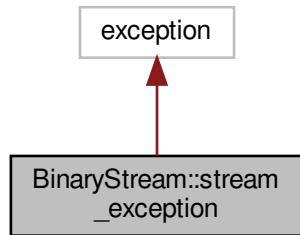
6.55 BinaryStream::stream_exception Class Reference

```
#include <binarystream.h>
```

Inheritance diagram for BinaryStream::stream_exception:



Collaboration diagram for BinaryStream::stream_exception:



6.55.1 Detailed Description

Definition at line 68 of file `binarystream.h`.

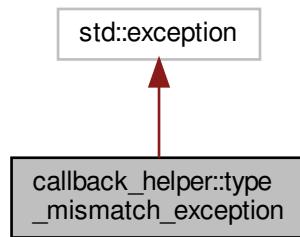
The documentation for this class was generated from the following file:

- `inst/examples/sandboxed_server/common/binarystream.h`

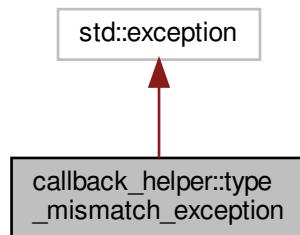
6.56 callback_helper::type_mismatch_exception Class Reference

```
#include <callback_helper.h>
```

Inheritance diagram for callback_helper::type_mismatch_exception:



Collaboration diagram for callback_helper::type_mismatch_exception:



6.56.1 Detailed Description

Definition at line 27 of file `callback_helper.h`.

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

- [inst/examples/sandboxed_server/client/callback_helper.h](#)

6.57 typeid_helpers::void_t_struct<... > Struct Template Reference

```
#include <typeid.h>
```

Public Types

- using `type` = void

6.57.1 Detailed Description

```
template<typename...>
struct typeid_helpers::void_t_struct<... >
```

Definition at line 26 of file typeid.h.

6.57.2 Member Typedef Documentation

6.57.2.1 type

```
template<typename... >
using typeid_helpers::void_t_struct<... >::type = void
```

Definition at line 26 of file typeid.h.

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

- inst/examples/sandboxed_server/common/[typeid.h](#)

6.58 binary_stream_helpers::void_t_struct<... > Struct Template Reference

```
#include <binarystream.h>
```

Public Types

- using `type` = void

6.58.1 Detailed Description

```
template<typename...>
struct binary_stream_helpers::void_t_struct<... >
```

Definition at line 105 of file `binarystream.h`.

6.58.2 Member Typedef Documentation

6.58.2.1 type

```
template<typename... >
using binary_stream_helpers::void_t_struct<... >::type = void
```

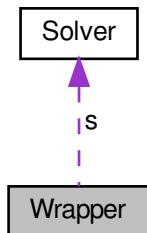
Definition at line 105 of file `binarystream.h`.

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

- `inst/examples/sandboxed_server/common/binarystream.h`

6.59 Wrapper Class Reference

Collaboration diagram for Wrapper:



Public Member Functions

- `Wrapper (Solver *s_)`
- `Rcpp::DataFrame getData ()`
- `void setData (Rcpp::DataFrame tab)`
- `double & G ()`
- `double & dt ()`

Private Attributes

- `Solver * s`

6.59.1 Detailed Description

Definition at line 65 of file rinside_interactive0.cpp.

6.59.2 Constructor & Destructor Documentation

6.59.2.1 Wrapper()

```
Wrapper::Wrapper (
    Solver * s_ ) [inline]
```

Definition at line 68 of file rinside_interactive0.cpp.

6.59.3 Member Function Documentation

6.59.3.1 dt()

```
double& Wrapper::dt ( ) [inline]
```

Definition at line 104 of file rinside_interactive0.cpp.

References `Solver::dt`.

6.59.3.2 G()

```
double& Wrapper::G ( ) [inline]
```

Definition at line 101 of file rinside_interactive0.cpp.

References Solver::G.

6.59.3.3 getData()

```
Rcpp::DataFrame Wrapper::getData ( ) [inline]
```

Definition at line 69 of file rinside_interactive0.cpp.

References Planet::m, Solver::tab, Planet::vx, Planet::vy, Planet::x, and Planet::y.

6.59.3.4 setData()

```
void Wrapper::setData (
    Rcpp::DataFrame tab ) [inline]
```

Definition at line 84 of file rinside_interactive0.cpp.

References Planet::m, Solver::tab, Planet::vx, Planet::vy, Planet::x, and Planet::y.

6.59.4 Member Data Documentation

6.59.4.1 s

```
Solver* Wrapper::s [private]
```

Definition at line 66 of file rinside_interactive0.cpp.

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

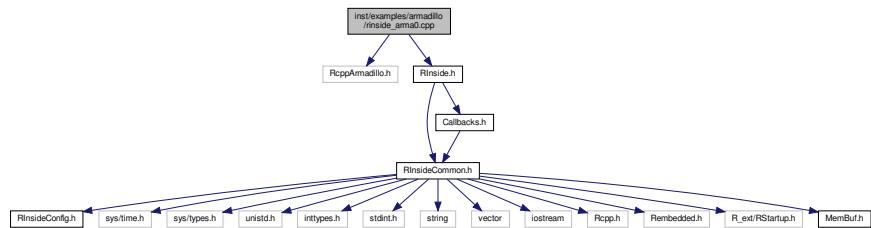
- inst/examples/standard/rinside_interactive0.cpp

Chapter 7

File Documentation

7.1 inst/examples/armadillo/rinside_arma0.cpp File Reference

```
#include <RcppArmadillo.h>
#include <RInside.h>
Include dependency graph for rinside_arma0.cpp:
```



Functions

- int `main` (int argc, char *argv[])

7.1.1 Function Documentation

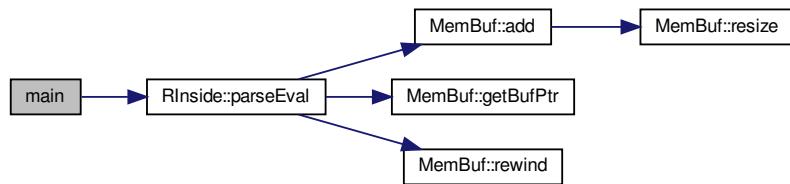
7.1.1.1 main()

```
int main (
    int argc,
    char * argv[] )
```

Definition at line 10 of file rinside_arma0.cpp.

References RInside::parseEval().

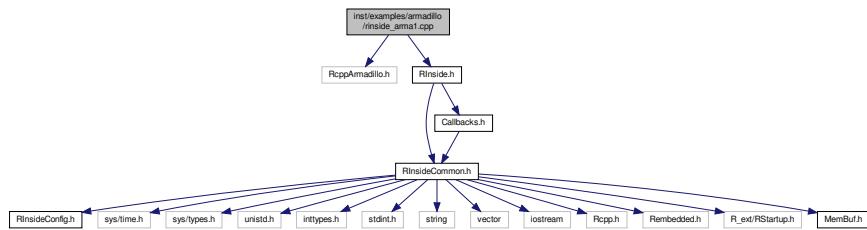
Here is the call graph for this function:



7.2 inst/examples/armadillo/rinside_arma1.cpp File Reference

```
#include <RcppArmadillo.h>
#include <RInside.h>
```

Include dependency graph for rinside_arma1.cpp:



Functions

- int [main](#) (int argc, char *argv[])

7.2.1 Function Documentation

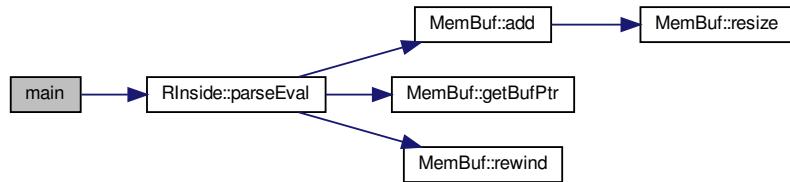
7.2.1.1 main()

```
int main (
    int argc,
    char * argv[ ] )
```

Definition at line 10 of file rinside_arma1.cpp.

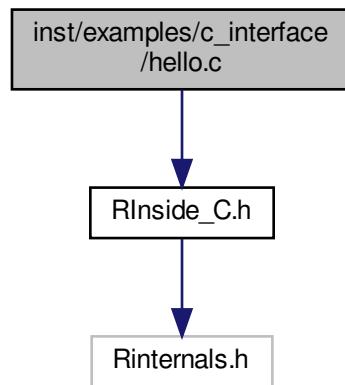
References RInside::parseEval().

Here is the call graph for this function:



7.3 inst/examples/c_interface/hello.c File Reference

```
#include <RInside_C.h>
Include dependency graph for hello.c:
```



Functions

- int [main \(\)](#)

7.3.1 Function Documentation

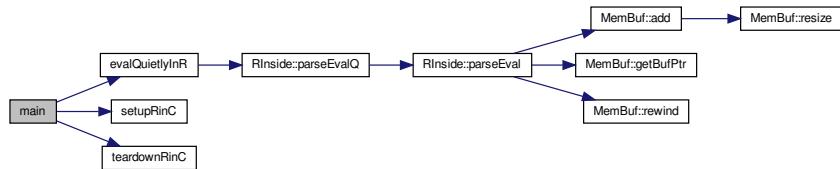
7.3.1.1 main()

```
int main (
    void )
```

Definition at line 3 of file hello.c.

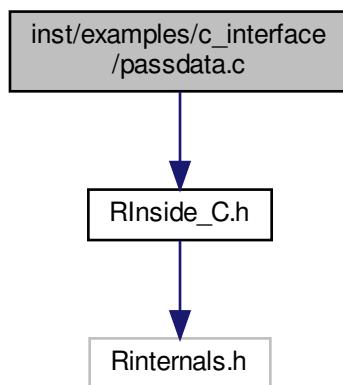
References evalQuietlyInR(), setupRinC(), and teardownRinC().

Here is the call graph for this function:



7.4 inst/examples/c_interface/passdata.c File Reference

```
#include <RInside_C.h>
Include dependency graph for passdata.c:
```



Functions

- int `main ()`

7.4.1 Function Documentation

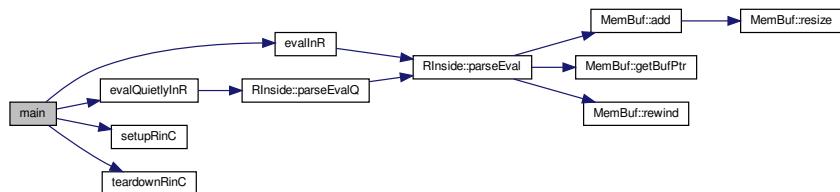
7.4.1.1 `main()`

```
int main (
    void )
```

Definition at line 3 of file `passdata.c`.

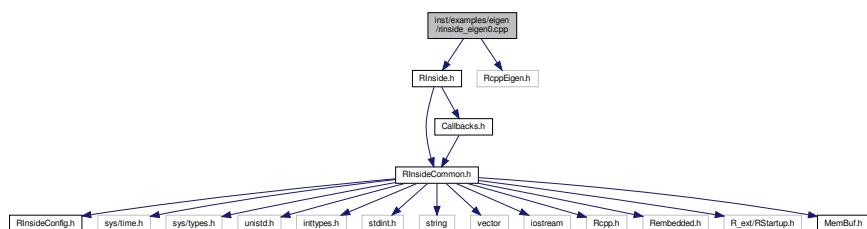
References `evalInR()`, `evalQuietlyInR()`, `setupRinC()`, and `teardownRinC()`.

Here is the call graph for this function:



7.5 inst/examples/eigen/rinside_eigen0.cpp File Reference

```
#include <RInside.h>
#include <RcppEigen.h>
Include dependency graph for rinside_eigen0.cpp:
```



Functions

- int **main** (int argc, char *argv[])

7.5.1 Function Documentation

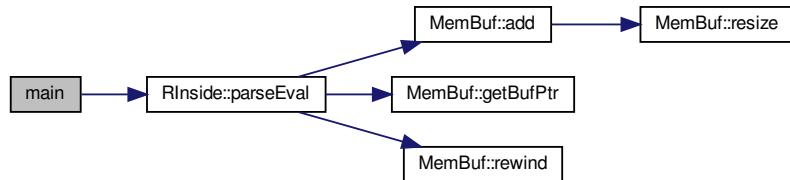
7.5.1.1 main()

```
int main (
    int argc,
    char * argv[] )
```

Definition at line 10 of file rinside_eigen0.cpp.

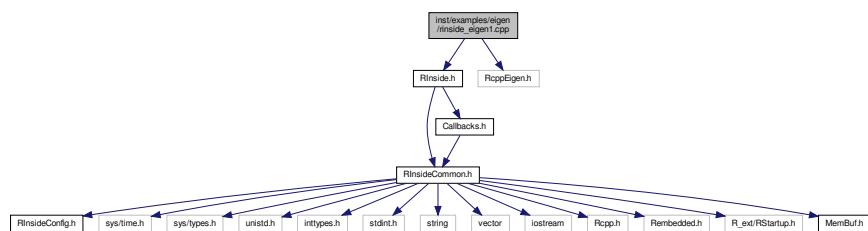
References RInside::parseEval().

Here is the call graph for this function:



7.6 inst/examples/eigen/rinside_eigen1.cpp File Reference

```
#include <RInside.h>
#include <RcppEigen.h>
Include dependency graph for rinside_eigen1.cpp:
```



Functions

- int **main** (int argc, char *argv[])

7.6.1 Function Documentation

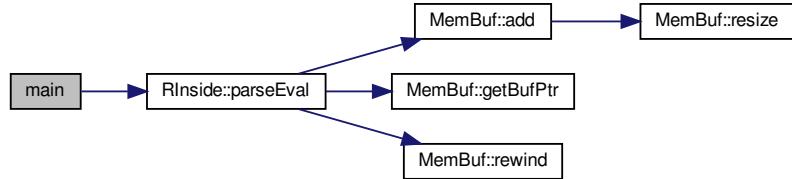
7.6.1.1 main()

```
int main (
    int argc,
    char * argv[] )
```

Definition at line 10 of file rinside_eigen1.cpp.

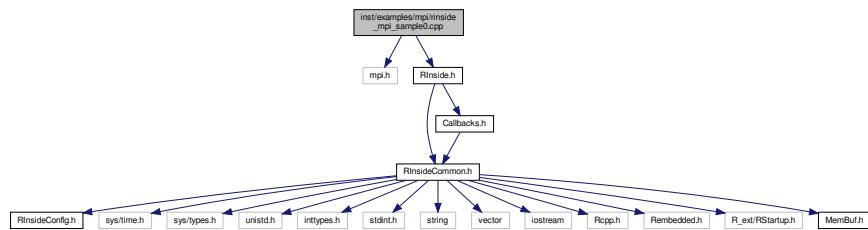
References RInside::parseEval().

Here is the call graph for this function:



7.7 inst/examples/mpi/rinside_mpi_sample0.cpp File Reference

```
#include <mpi.h>
#include <RInside.h>
Include dependency graph for rinside_mpi_sample0.cpp:
```



Functions

- int `main` (int argc, char *argv[])

7.7.1 Function Documentation

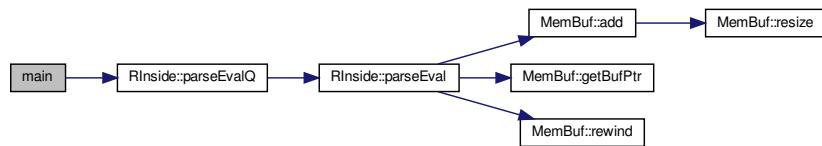
7.7.1.1 main()

```
int main (
    int argc,
    char * argv[] )
```

Definition at line 14 of file rinside_mpi_sample0.cpp.

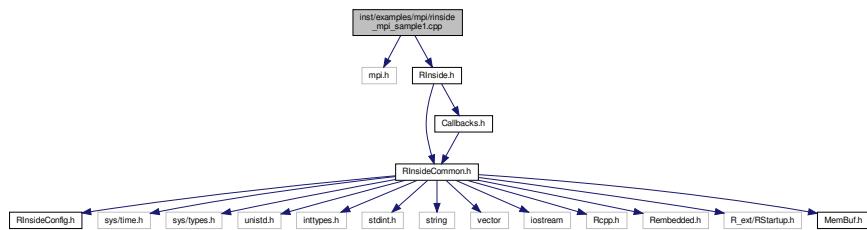
References `RInside::parseEvalQ()`.

Here is the call graph for this function:



7.8 inst/examples/mpi/rinside_mpi_sample1.cpp File Reference

```
#include <mpi.h>
#include <RInside.h>
Include dependency graph for rinside_mpi_sample1.cpp:
```



Functions

- int `main` (int argc, char *argv[])

7.8.1 Function Documentation

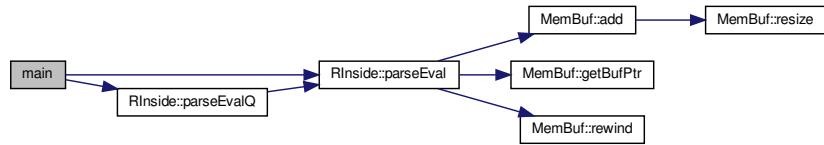
7.8.1.1 main()

```
int main (
    int argc,
    char * argv[] )
```

Definition at line 14 of file rinside_mpi_sample1.cpp.

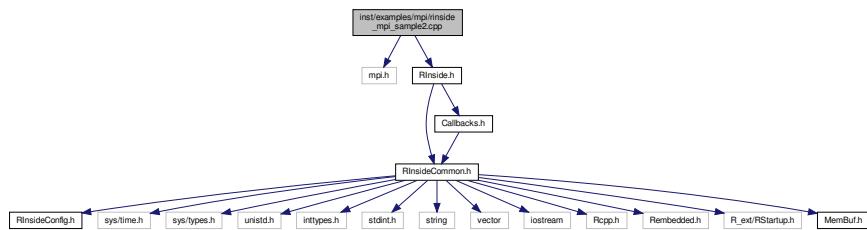
References `RInside::parseEval()`, and `RInside::parseEvalQ()`.

Here is the call graph for this function:



7.9 inst/examples/mpi/rinside_mpi_sample2.cpp File Reference

```
#include <mpi.h>
#include <RInside.h>
Include dependency graph for rinside_mpi_sample2.cpp:
```



Functions

- int `main` (int argc, char *argv[])

7.9.1 Function Documentation

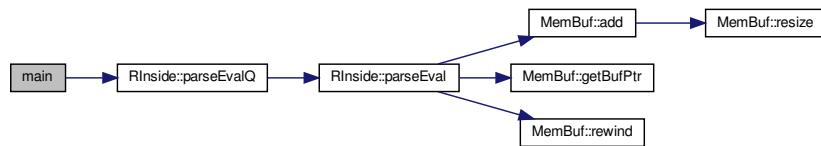
7.9.1.1 main()

```
int main (
    int argc,
    char * argv[] )
```

Definition at line 14 of file rinside_mpi_sample2.cpp.

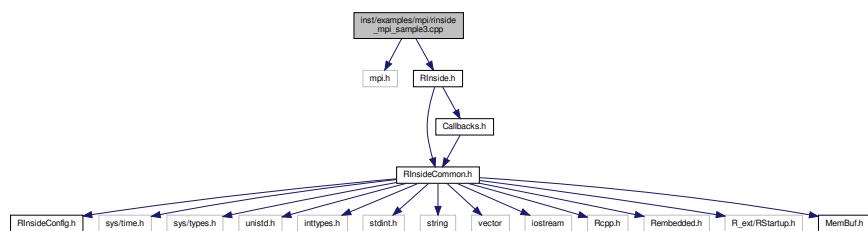
References `RInside::parseEvalQ()`.

Here is the call graph for this function:



7.10 inst/examples/mpi/rinside_mpi_sample3.cpp File Reference

```
#include <mpi.h>
#include <RInside.h>
Include dependency graph for rinside_mpi_sample3.cpp:
```



Functions

- int **main** (int argc, char *argv[])

7.10.1 Function Documentation

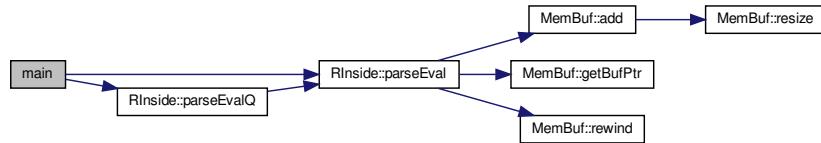
7.10.1.1 main()

```
int main (
    int argc,
    char * argv[] )
```

Definition at line 14 of file rinside_mpi_sample3.cpp.

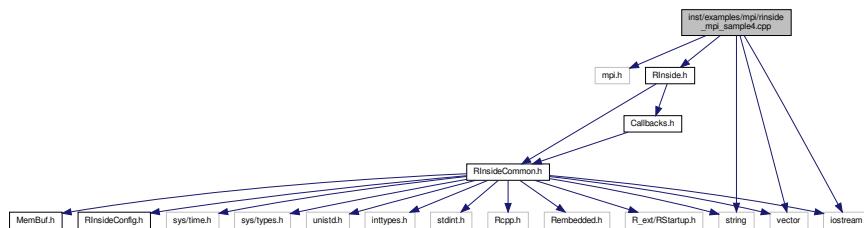
References RInside::parseEval(), and RInside::parseEvalQ().

Here is the call graph for this function:



7.11 inst/examples/mpi/rinside_mpi_sample4.cpp File Reference

```
#include <mpi.h>
#include <RInside.h>
#include <string>
#include <vector>
#include <iostream>
Include dependency graph for rinside_mpi_sample4.cpp:
```



Macros

- `#define WORKTAG 1`
- `#define DIETAG 2`

Functions

- `static void master (void)`
- `static void slave (RInside &R)`
- `static int get_next_work_item (int &work, const int size_work, std::vector< int > &data)`
- `static void do_work (int work, int &result, RInside &R)`
- `static void initialize (RInside &R)`
- `int main (int argc, char **argv)`

Variables

- `int itr = 0`

7.11.1 Macro Definition Documentation

7.11.1.1 DIETAG

```
#define DIETAG 2
```

Definition at line 20 of file rinside_mpi_sample4.cpp.

Referenced by `master()`, and `slave()`.

7.11.1.2 WORKTAG

```
#define WORKTAG 1
```

Definition at line 19 of file rinside_mpi_sample4.cpp.

Referenced by `master()`.

7.11.2 Function Documentation

7.11.2.1 do_work()

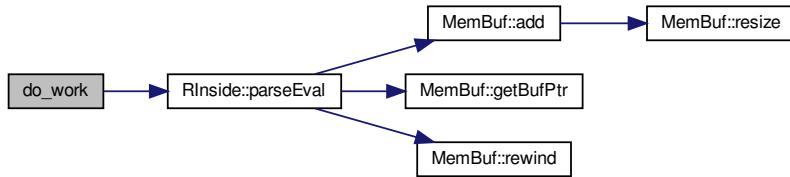
```
static void do_work (
    int work,
    int & result,
    RInside & R ) [static]
```

Definition at line 133 of file rinside_mpi_sample4.cpp.

References RInside::parseEval().

Referenced by slave().

Here is the call graph for this function:



7.11.2.2 get_next_work_item()

```
static int get_next_work_item (
    int & work,
    const int size_work,
    std::vector< int > & data ) [static]
```

Definition at line 120 of file rinside_mpi_sample4.cpp.

References itr.

Referenced by master().

7.11.2.3 initialize()

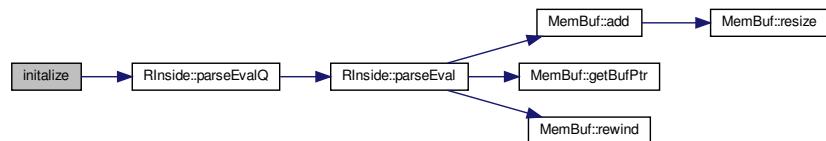
```
static void initialize (
    RInside & R ) [static]
```

Definition at line 49 of file rinside_mpi_sample4.cpp.

References RInside::parseEvalQ().

Referenced by main().

Here is the call graph for this function:



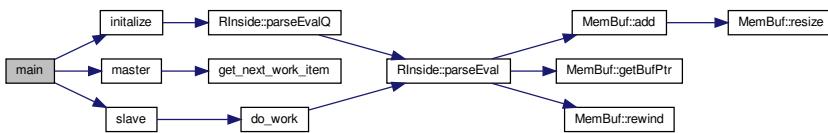
7.11.2.4 main()

```
int main (
    int argc,
    char ** argv )
```

Definition at line 31 of file rinside_mpi_sample4.cpp.

References initialize(), master(), and slave().

Here is the call graph for this function:



7.11.2.5 master()

```
static void master (
    void ) [static]
```

Definition at line 55 of file rinside_mpi_sample4.cpp.

References DIETAG, get_next_work_item(), and WORKTAG.

Referenced by main().

Here is the call graph for this function:



7.11.2.6 slave()

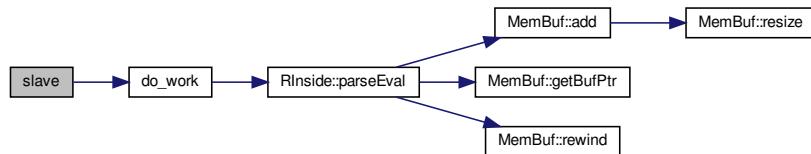
```
static void slave (
    RInside & R ) [static]
```

Definition at line 99 of file rinside_mpi_sample4.cpp.

References DIETAG, and do_work().

Referenced by main().

Here is the call graph for this function:



7.11.3 Variable Documentation

7.11.3.1 itr

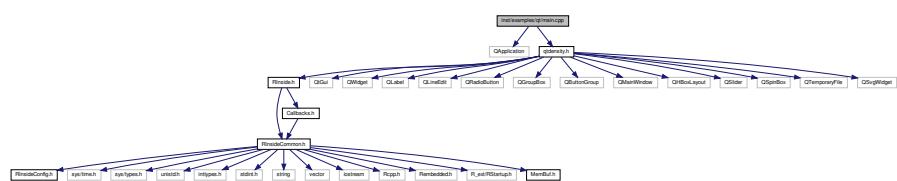
```
int itr = 0
```

Definition at line 29 of file rinside_mpi_sample4.cpp.

Referenced by get_next_work_item().

7.12 inst/examples/qt/main.cpp File Reference

```
#include <QApplication>
#include "qtdensity.h"
Include dependency graph for main.cpp:
```



Functions

- int `main` (int argc, char *argv[])

7.12.1 Function Documentation

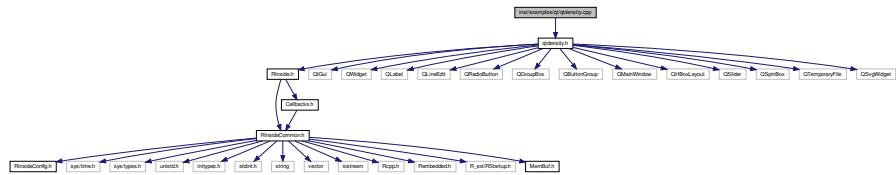
7.12.1.1 main()

```
int main (
    int argc,
    char * argv[ ] )
```

Definition at line 12 of file main.cpp.

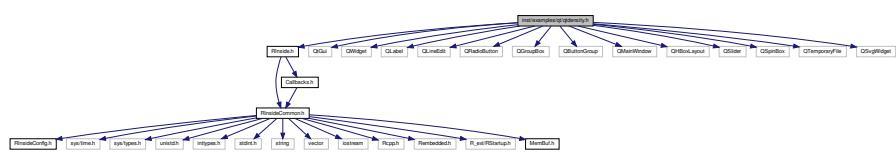
7.13 inst/examples/qt/qtdensity.cpp File Reference

```
#include "qtdensity.h"
Include dependency graph for qtdensity.cpp:
```

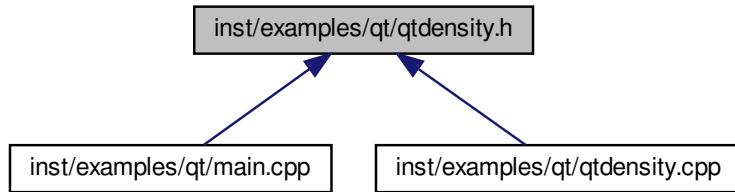


7.14 inst/examples/qt/qtdensity.h File Reference

```
#include <RInside.h>
#include <QtGui>
#include <QWidget>
#include <QLabel>
#include <QLineEdit>
#include <QRadioButton>
#include <QGroupBox>
#include <QButtonGroup>
#include <QMainWindow>
#include <QHBoxLayout>
#include <QSlider>
#include <QSpinBox>
#include <QTemporaryFile>
#include <QSvgWidget>
Include dependency graph for qtdensity.h:
```



This graph shows which files directly or indirectly include this file:

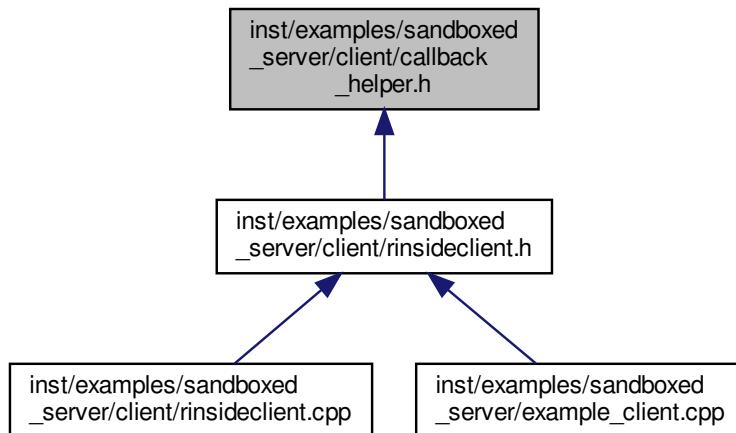


Classes

- class [QtDensity](#)

7.15 inst/examples/sandboxed_server/client/callback_helper.h File Reference

This graph shows which files directly or indirectly include this file:



Classes

- struct [callback_helper::send_pack< Params >](#)
- struct [callback_helper::send_pack< First, Remaining... >](#)
- struct [callback_helper::send_pack<>](#)
- class [callback_helper::type_mismatch_exception](#)
- class [callback_helper::parameter_error_exception](#)

Namespaces

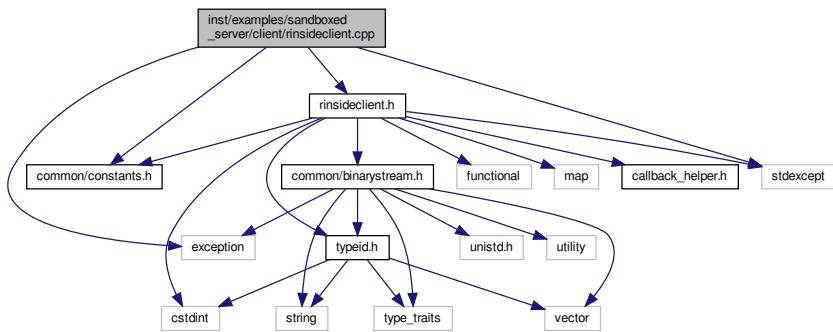
- `callback_helper`

Functions

- template<typename T >
`T callback_helper::read_from_stream_with_typeid (BinaryStream &stream)`
- template<typename RESULT_TYPE >
`void callback_helper::call (const std::function< RESULT_TYPE() > &fun, BinaryStream &stream)`
- template<typename RESULT_TYPE , typename U0 >
`void callback_helper::call (const std::function< RESULT_TYPE(U0) > &fun, BinaryStream &stream)`
- template<typename RESULT_TYPE , typename U0 , typename U1 >
`void callback_helper::call (const std::function< RESULT_TYPE(U0, U1) > &fun, BinaryStream &stream)`
- template<typename RESULT_TYPE , typename U0 , typename U1 , typename U2 >
`void callback_helper::call (const std::function< RESULT_TYPE(U0, U1, U2) > &fun, BinaryStream &stream)`

7.16 inst/examples/sandboxed_server/client/rinsideclient.cpp File Reference

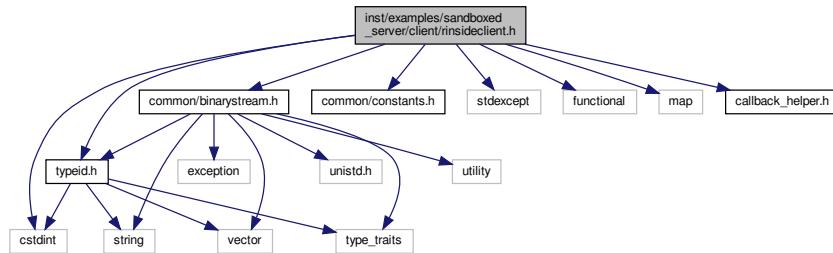
```
#include "rinsideclient.h"
#include "common/constants.h"
#include <exception>
#include <stdexcept>
Include dependency graph for rinsideclient.cpp:
```



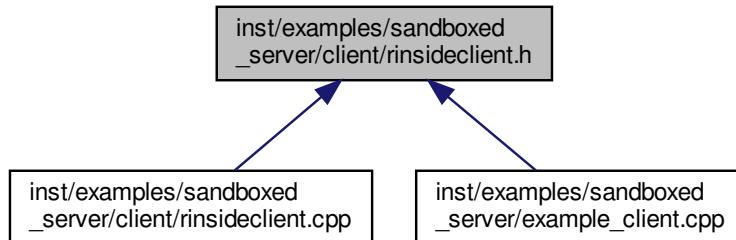
7.17 inst/examples/sandboxed_server/client/rinsideclient.h File Reference

```
#include "common/binarystream.h"
#include "common/constants.h"
#include "common/typeid.h"
#include <stdexcept>
#include <cstdarg>
```

```
#include <functional>
#include <map>
#include "callback_helper.h"
Include dependency graph for rinsideclient.h:
```



This graph shows which files directly or indirectly include this file:



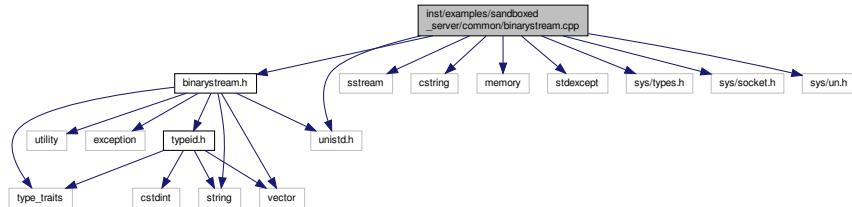
Classes

- class [RInsideClient](#)

7.18 inst/examples/sandboxed_server/common/binarystream.cpp File Reference

```
#include "binarystream.h"
#include <sstream>
#include <cstring>
#include <memory>
#include <stdexcept>
#include <unistd.h>
#include <sys/types.h>
```

```
#include <sys/socket.h>
#include <sys/un.h>
Include dependency graph for binarystream.cpp:
```

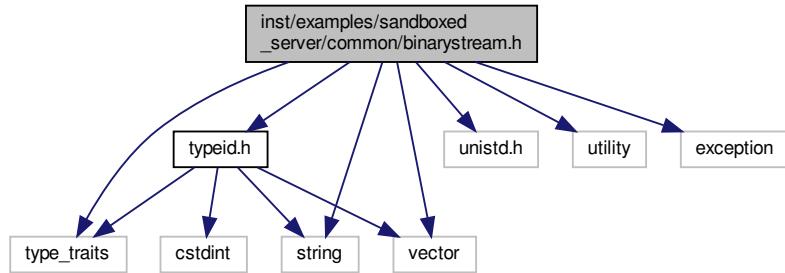


Namespaces

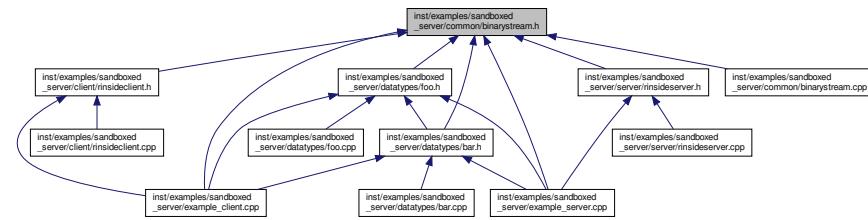
- [serialization](#)

7.19 inst/examples/sandboxed_server/common/binarystream.h File Reference

```
#include "typeid.h"
#include <unistd.h>
#include <string>
#include <vector>
#include <type_traits>
#include <utility>
#include <exception>
Include dependency graph for binarystream.h:
```



This graph shows which files directly or indirectly include this file:



Classes

- class [BinaryStream](#)
- class [BinaryStream::stream_exception](#)
- struct [serialization::serializer< T >](#)
- struct [serialization::serializer< std::string >](#)
- struct [serialization::serializer< std::vector< T > >](#)
- struct [binary_stream_helpers::void_t_struct<... >](#)
- struct [binary_stream_helpers::has_serialization_members_cv< T, typename >](#)
- struct [binary_stream_helpers::has_serialization_members_cv< T, void_t< serialize_member_t< T >, deserialize_member_t< T > >>](#)
- struct [binary_stream_helpers::has_serialization_members< T >](#)

Namespaces

- [serialization](#)
- [binary_stream_helpers](#)

Typedefs

- template<typename... C>


```
using binary_stream_helpers::void_t = typename void_t_struct< C... >::type
```
- template<typename T>


```
using binary_stream_helpers::serialize_member_t = decltype(std::declval< T & >().serialize(std::declval< BinaryStream & >()))
```
- template<typename T>

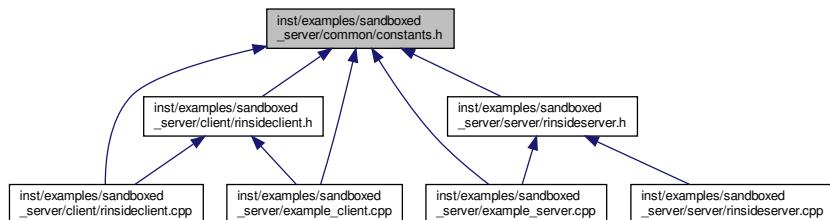

```
using binary_stream_helpers::deserialize_member_t = decltype(T::deserialize(std::declval< BinaryStream & >()))
```

Functions

- template<typename T >
std::enable_if< std::is_arithmetic< T >::value >::type [binary_stream_helpers::stream_write](#) (BinaryStream &stream, T &t)
- template<typename T >
std::enable_if< [has_typeid](#)< T >::value &&std::is_class< T >::value &&has_serialization_members< T >::value >::type [binary_stream_helpers::stream_write](#) (BinaryStream &stream, T &t)
- template<typename T >
std::enable_if< [has_typeid](#)< T >::value &&std::is_class< T >::value &&!has_serialization_members< T >::value >::type [binary_stream_helpers::stream_write](#) (BinaryStream &stream, T &t)
- template<typename T >
std::enable_if< std::is_arithmetic< T >::value, T >::type [binary_stream_helpers::stream_read](#) (BinaryStream &stream)
- template<typename T >
std::enable_if< [has_typeid](#)< T >::value &&std::is_class< T >::value &&has_serialization_members< T >::value, T >::type [binary_stream_helpers::stream_read](#) (BinaryStream &stream)
- template<typename T >
std::enable_if< [has_typeid](#)< T >::value &&std::is_class< T >::value &&!has_serialization_members< T >::value, T >::type [binary_stream_helpers::stream_read](#) (BinaryStream &stream)

7.20 inst/examples/sandboxed_server/common/constants.h File Reference

This graph shows which files directly or indirectly include this file:



Macros

- `#define ris_socket_address "example_server.sock"`

Variables

- `const uint32_t RIS_MAGIC_NUMBER = 0xF00BA5`
- `const char RIS_CMD_SETVALUE = 1`
- `const char RIS_CMD_GETVALUE = 2`
- `const char RIS_CMD_SETCALLBACK = 3`
- `const char RIS_CMD_RUN = 4`

- const char `RIS_CMD_GETCONSOLE` = 5
- const char `RIS_CMD_INITPLOT` = 6
- const char `RIS_CMD_GETPLOT` = 7
- const char `RIS_CMD_EXIT` = 8
- const char `RIS_REPLY_OK` = 101
- const char `RIS_REPLY_CALLBACK` = 102
- const char `RIS_REPLY_VALUE` = 103
- const char `RIS_REPLY_ERROR` = 104

7.20.1 Macro Definition Documentation

7.20.1.1 `ris_socket_address`

```
#define ris_socket_address "example_server.sock"
```

Definition at line 8 of file constants.h.

Referenced by main(), test_callbacks(), test_console_output(), test_multiple(), test_plot(), and test_setting_getting().

7.20.2 Variable Documentation

7.20.2.1 `RIS_CMD_EXIT`

```
const char RIS_CMD_EXIT = 8
```

Definition at line 18 of file constants.h.

Referenced by RInsideServer::run(), and RInsideClient::~RInsideClient().

7.20.2.2 `RIS_CMD_GETCONSOLE`

```
const char RIS_CMD_GETCONSOLE = 5
```

Definition at line 15 of file constants.h.

Referenced by RInsideClient::getConsoleOutput(), and RInsideServer::run().

7.20.2.3 RIS_CMD_GETPLOT

```
const char RIS_CMD_GETPLOT = 7
```

Definition at line 17 of file constants.h.

Referenced by RInsideClient::getPlot(), and RInsideServer::run().

7.20.2.4 RIS_CMD_GETVALUE

```
const char RIS_CMD_GETVALUE = 2
```

Definition at line 12 of file constants.h.

Referenced by RInsideClient::getValue(), and RInsideServer::run().

7.20.2.5 RIS_CMD_INITPLOT

```
const char RIS_CMD_INITPLOT = 6
```

Definition at line 16 of file constants.h.

Referenced by RInsideClient::initPlot(), and RInsideServer::run().

7.20.2.6 RIS_CMD_RUN

```
const char RIS_CMD_RUN = 4
```

Definition at line 14 of file constants.h.

Referenced by RInsideServer::run(), and RInsideClient::runScript().

7.20.2.7 RIS_CMD_SETCALLBACK

```
const char RIS_CMD_SETCALLBACK = 3
```

Definition at line 13 of file constants.h.

Referenced by RInsideServer::run(), and RInsideClient::setCallback().

7.20.2.8 RIS_CMD_SETVALUE

```
const char RIS_CMD_SETVALUE = 1
```

Definition at line 11 of file constants.h.

Referenced by RInsideServer::run(), and RInsideClient::setValue().

7.20.2.9 RIS_MAGIC_NUMBER

```
const uint32_t RIS_MAGIC_NUMBER = 0xF00BA5
```

Definition at line 10 of file constants.h.

Referenced by RInsideClient::RInsideClient(), and RInsideServer::run().

7.20.2.10 RIS_REPLY_CALLBACK

```
const char RIS_REPLY_CALLBACK = 102
```

Definition at line 22 of file constants.h.

Referenced by CppFunctionForRInsideServer::operator()(), and RInsideClient::runScript().

7.20.2.11 RIS_REPLY_ERROR

```
const char RIS_REPLY_ERROR = 104
```

Definition at line 24 of file constants.h.

Referenced by callback_helper::read_from_stream_with_typeid(), and RInsideClient::readReply().

7.20.2.12 RIS_REPLY_OK

```
const char RIS_REPLY_OK = 101
```

Definition at line 21 of file constants.h.

Referenced by RInsideClient::readReply(), RInsideServer::run(), and RInsideClient::runScript().

7.20.2.13 RIS_REPLY_VALUE

```
const char RIS_REPLY_VALUE = 103
```

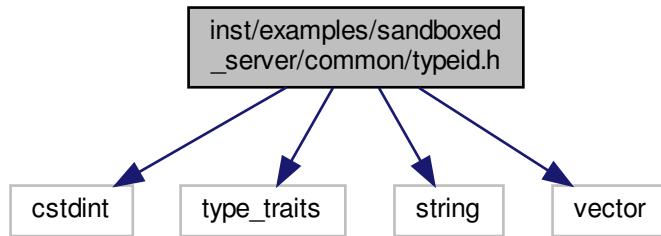
Definition at line 23 of file constants.h.

Referenced by callback_helper::read_from_stream_with_typeid(), RInsideClient::readReply(), RInsideServer::registerType(), RInsideServer::run(), and RInsideClient::runScript().

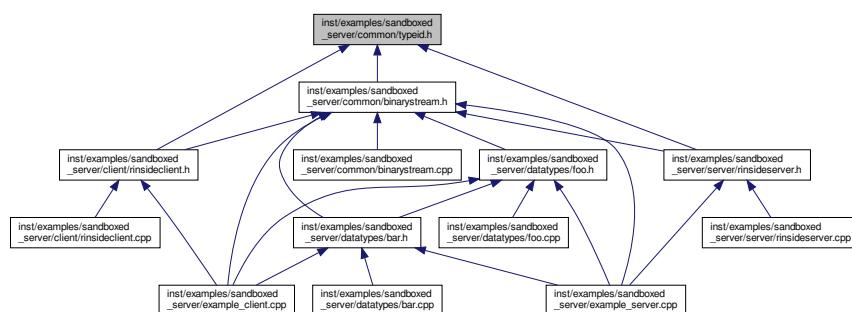
7.21 inst/examples/sandboxed_server/common/typeid.h File Reference

```
#include <cstdint>
#include <type_traits>
#include <string>
#include <vector>
```

Include dependency graph for typeid.h:



This graph shows which files directly or indirectly include this file:



Classes

- struct `typeid_helpers::void_t_struct<... >`
- struct `typeid_helpers::has_typeid_member< T, typename >`
- struct `typeid_helpers::has_typeid_member< T, void_t< decltype(T::TYPEID)> >`
- struct `typeid_helpers::id< T, V >`
- struct `typeid_helpers::id< T, typename std::enable_if< has_typeid_member< T >::value >::type >`
- struct `typeid_helpers::id< void, void >`
- struct `typeid_helpers::id< int8_t, void >`
- struct `typeid_helpers::id< uint8_t, void >`
- struct `typeid_helpers::id< int16_t, void >`
- struct `typeid_helpers::id< uint16_t, void >`
- struct `typeid_helpers::id< int32_t, void >`
- struct `typeid_helpers::id< uint32_t, void >`
- struct `typeid_helpers::id< int64_t, void >`
- struct `typeid_helpers::id< uint64_t, void >`
- struct `typeid_helpers::id< float, void >`
- struct `typeid_helpers::id< double, void >`
- struct `typeid_helpers::id< std::string, void >`
- struct `typeid_helpers::id< std::vector< int8_t >, void >`
- struct `typeid_helpers::id< std::vector< uint8_t >, void >`
- struct `typeid_helpers::id< std::vector< int16_t >, void >`
- struct `typeid_helpers::id< std::vector< uint16_t >, void >`
- struct `typeid_helpers::id< std::vector< int32_t >, void >`
- struct `typeid_helpers::id< std::vector< uint32_t >, void >`
- struct `typeid_helpers::id< std::vector< int64_t >, void >`
- struct `typeid_helpers::id< std::vector< uint64_t >, void >`
- struct `typeid_helpers::id< std::vector< float >, void >`
- struct `typeid_helpers::id< std::vector< double >, void >`
- struct `typeid_helpers::id< std::vector< std::string >, void >`
- struct `has_typeid< T, typename >`
- struct `has_typeid< T, typeid_helpers::void_t< decltype(typeid_helpers::id< typename std::decay< T >::type, void >::value)> >`

Namespaces

- `typeid_helpers`

TypeDefs

- template<typename... C>
using `typeid_helpers::void_t = typename void_t_struct< C... >::type`

Functions

- template<typename T >
`constexpr int32_t TYPEID ()`

7.21.1 Function Documentation

7.21.1.1 TYPEID()

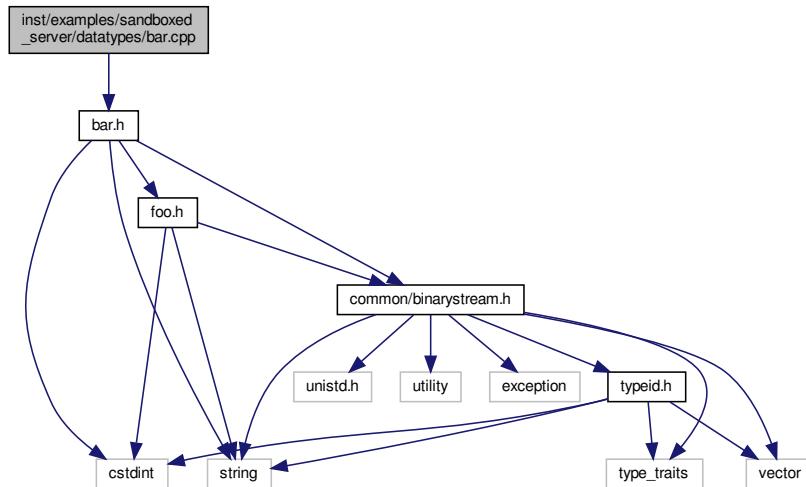
```
template<typename T >
constexpr int32_t TYPEID ( )
```

Definition at line 174 of file typeid.h.

7.22 inst/examples/sandboxed_server/datatypes/bar.cpp File Reference

```
#include "bar.h"
```

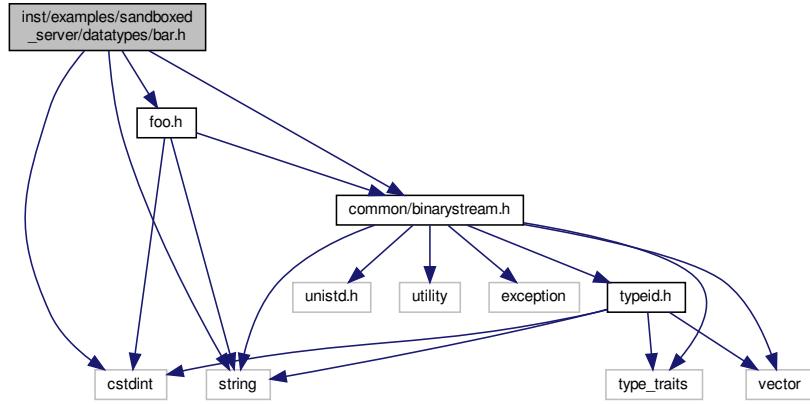
Include dependency graph for bar.cpp:



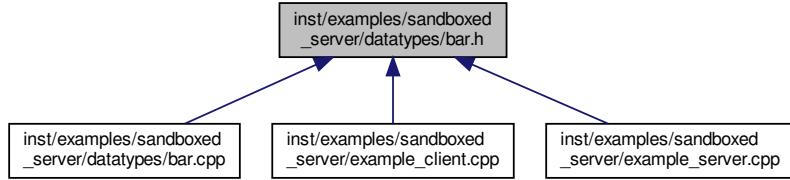
7.23 inst/examples/sandboxed_server/datatypes/bar.h File Reference

```
#include "common/binarystream.h"
#include <string>
#include <cstdint>
```

```
#include "foo.h"
Include dependency graph for bar.h:
```



This graph shows which files directly or indirectly include this file:

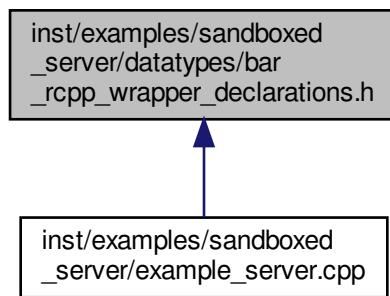


Classes

- class [Bar](#)

7.24 inst/examples/sandboxed_server/datatypes/bar_rcpp_wrapper_declarations.h File Reference

This graph shows which files directly or indirectly include this file:



Namespaces

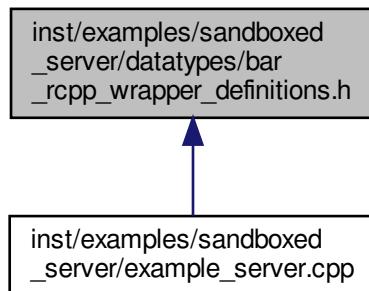
- Rcpp

Functions

- template<>
SEXP Rcpp::wrap (const Bar &bar)
- template<>
Bar Rcpp::as (SEXP SEXP)

7.25 inst/examples/sandboxed_server/datatypes/bar_rcpp_wrapper_definitions.h File Reference

This graph shows which files directly or indirectly include this file:



Namespaces

- [Rcpp](#)

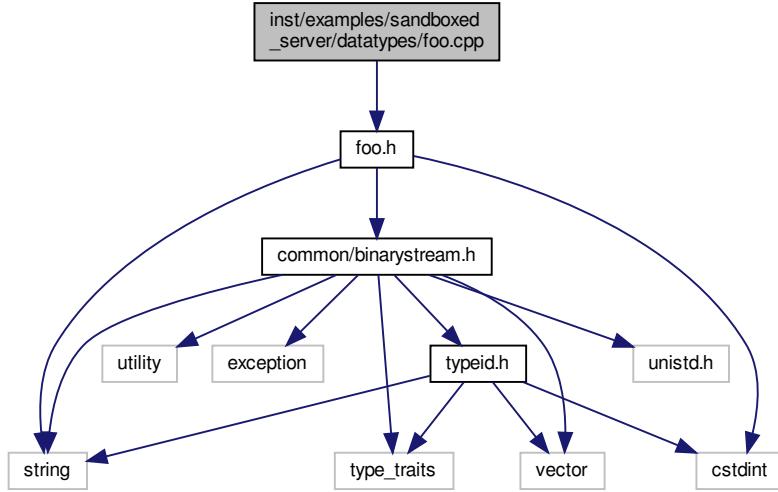
Functions

- template<>
SEXP [Rcpp::wrap](#) (const [Bar](#) &bar)
- template<>
[Bar](#) [Rcpp::as](#) (SEXP SEXP)

7.26 inst/examples/sandboxed_server/datatypes/foo.cpp File Reference

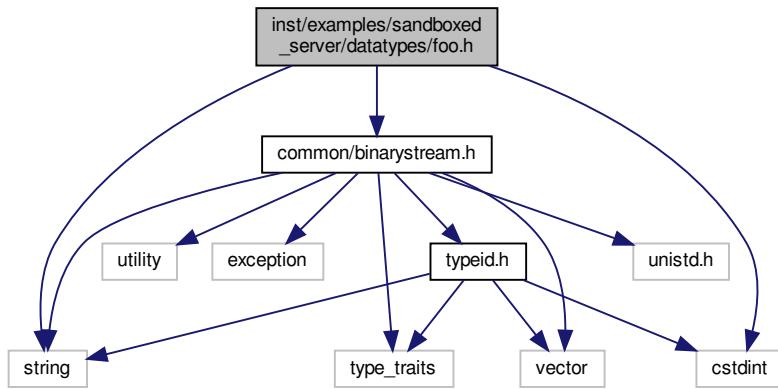
```
#include "foo.h"
```

Include dependency graph for foo.cpp:

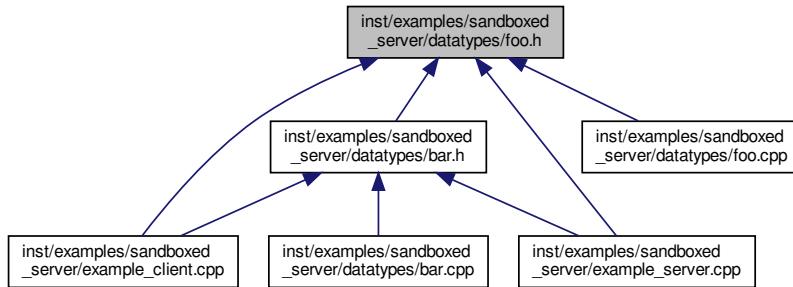


7.27 inst/examples/sandboxed_server/datatypes/foo.h File Reference

```
#include "common/binarystream.h"
#include <string>
#include <cstdint>
Include dependency graph for foo.h:
```



This graph shows which files directly or indirectly include this file:

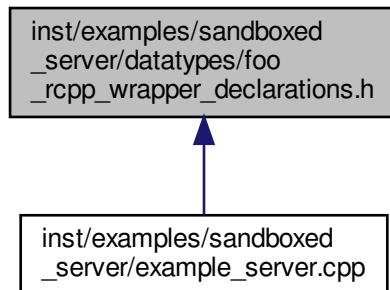


Classes

- class [Foo](#)

7.28 `inst/examples/sandboxed_server/datatypes/foo_rcpp_wrapper_declarations.h` File Reference

This graph shows which files directly or indirectly include this file:



Namespaces

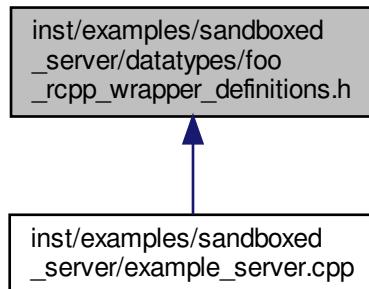
- [Rcpp](#)

Functions

- template<>
SEX^P Rcpp::wrap (const Foo &foo)
- template<>
Foo Rcpp::as (SEX^P SEXP sexp)

7.29 inst/examples/sandboxed_server/datatypes/foo_rcpp_wrapper_definitions.h File Reference

This graph shows which files directly or indirectly include this file:



Namespaces

- Rcpp

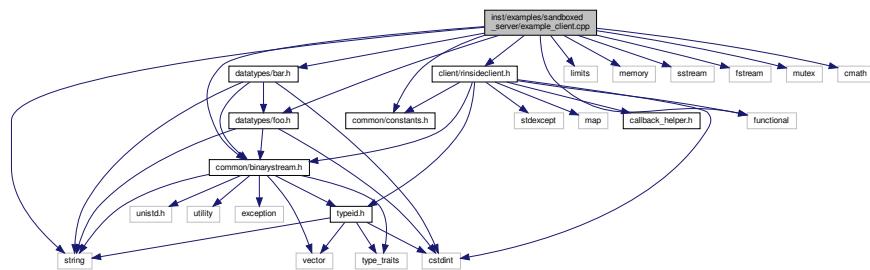
Functions

- template<>
SEX^P Rcpp::wrap (const Foo &foo)
- template<>
Foo Rcpp::as (SEX^P SEXP sexp)

7.30 inst/examples/sandboxed_server/example_client.cpp File Reference

```
#include "datatypes/foo.h"
#include "datatypes/bar.h"
#include "common/constants.h"
#include "common/binarystream.h"
#include "client/rinsideclient.h"
#include <limits>
#include <memory>
#include <sstream>
#include <fstream>
#include <string>
#include <mutex>
#include <functional>
#include <cmath>
```

Include dependency graph for example_client.cpp:



Functions

- static void [test_setting_getting \(\)](#)
- static void [test_callbacks \(\)](#)
- static void [test_console_output \(\)](#)
- static void [test_plot \(\)](#)
- static void [test_multiple \(\)](#)
- int [main \(void\)](#)

7.30.1 Function Documentation

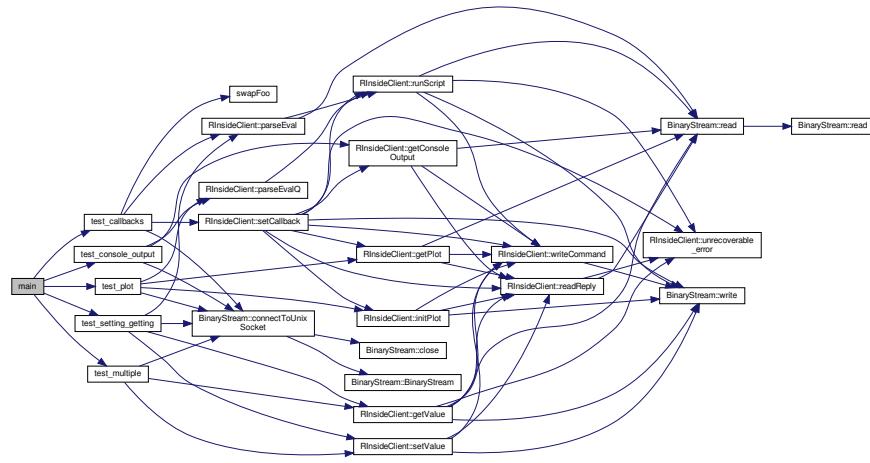
7.30.1.1 main()

```
int main (
    void )
```

Definition at line 200 of file [example_client.cpp](#).

References test_callbacks(), test_console_output(), test_multiple(), test_plot(), and test_setting_getting().

Here is the call graph for this function:



7.30.1.2 test_callbacks()

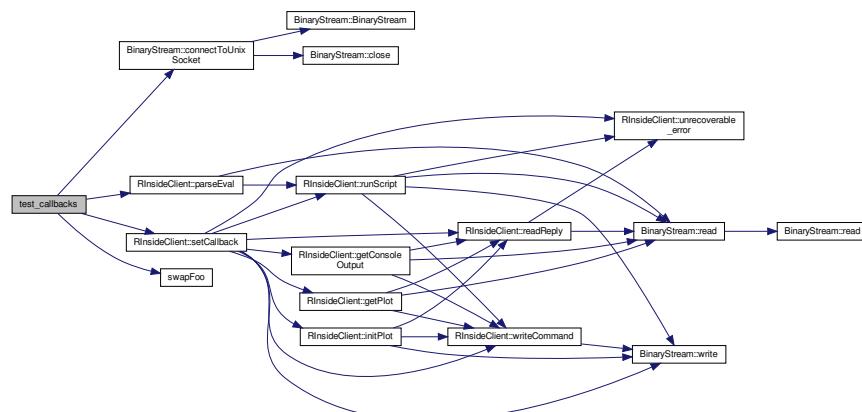
```
static void test_callbacks ( ) [static]
```

Definition at line 64 of file example_client.cpp.

References BinaryStream::connectToUnixSocket(), RInsideClient::parseEval(), ris_socket_address, RInsideClient::setCallback(), and swapFoo().

Referenced by main().

Here is the call graph for this function:



7.30.1.3 test_console_output()

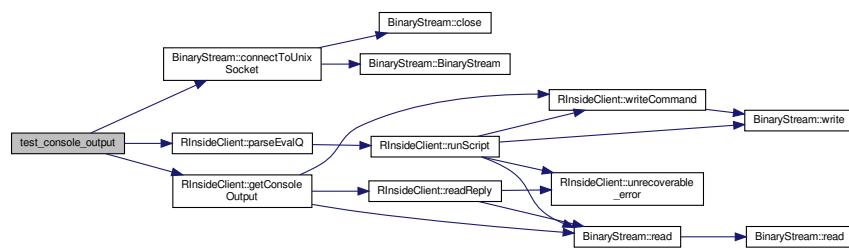
```
static void test_console_output ( ) [static]
```

Definition at line 141 of file example_client.cpp.

References `BinaryStream::connectToUnixSocket()`, `RInsideClient::getConsoleOutput()`, `RInsideClient::parseEvalQ()`, and `ris_socket_address`.

Referenced by `main()`.

Here is the call graph for this function:



7.30.1.4 test_multiple()

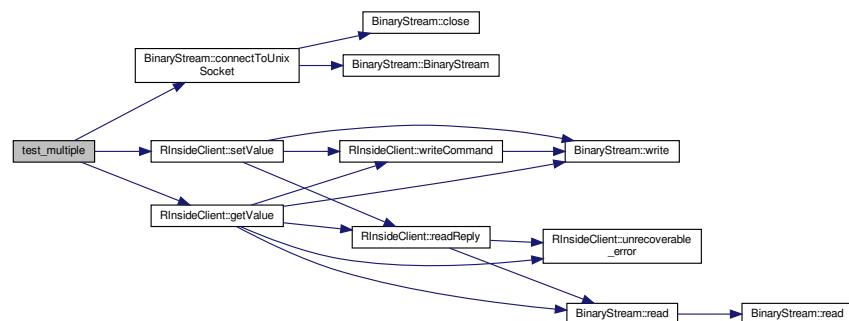
```
static void test_multiple ( ) [static]
```

Definition at line 179 of file example_client.cpp.

References `BinaryStream::connectToUnixSocket()`, `RInsideClient::getValue()`, `ris_socket_address`, and `RInsideClient::setValue()`.

Referenced by `main()`.

Here is the call graph for this function:



7.30.1.5 test_plot()

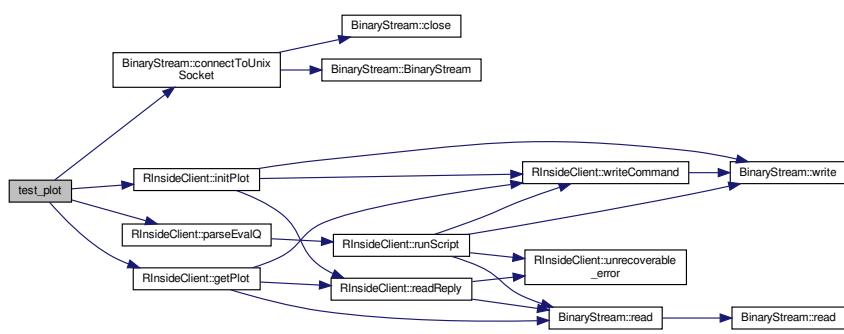
```
static void test_plot ( ) [static]
```

Definition at line 155 of file example_client.cpp.

References `BinaryStream::connectToUnixSocket()`, `RInsideClient::getPlot()`, `RInsideClient::initPlot()`, `RInsideClient::parseEvalQ()`, and `ris_socket_address`.

Referenced by `main()`.

Here is the call graph for this function:



7.30.1.6 test_setting_getting()

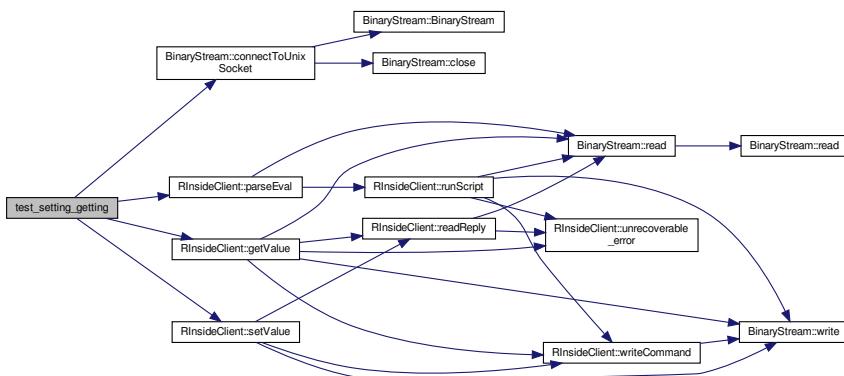
```
static void test_setting_getting ( ) [static]
```

Definition at line 29 of file example_client.cpp.

References `Foo::a`, `Foo::b`, `BinaryStream::connectToUnixSocket()`, `RInsideClient::getValue()`, `Foo::name`, `RInsideClient::parseEval()`, `ris_socket_address`, and `RInsideClient::setValue()`.

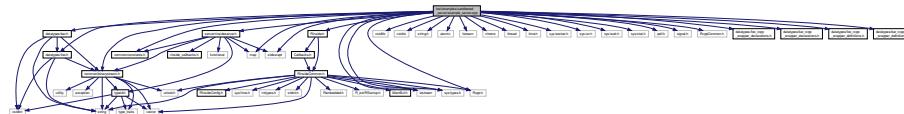
Referenced by `main()`.

Here is the call graph for this function:



7.31 inst/examples/sandboxed_server/example_server.cpp File Reference

```
#include "common/binarystream.h"
#include "common/constants.h"
#include "datatypes/foo.h"
#include "datatypes/bar.h"
#include <cstdlib>
#include <cstdio>
#include <string.h>
#include <map>
#include <atomic>
#include <iostream>
#include <fstream>
#include <stdexcept>
#include <chrono>
#include <thread>
#include <time.h>
#include <sys/types.h>
#include <sys/socket.h>
#include <sys/un.h>
#include <sys/wait.h>
#include <sys/stat.h>
#include <poll.h>
#include <signal.h>
#include <RcppCommon.h>
#include "datatypes/foo_rcpp_wrapper_declarations.h"
#include "datatypes/bar_rcpp_wrapper_declarations.h"
#include <Rcpp.h>
#include <RInside.h>
#include "datatypes/foo_rcpp_wrapper_definitions.h"
#include "datatypes/bar_rcpp_wrapper_definitions.h"
#include "server/rinsideserver.h"
Include dependency graph for example_server.cpp:
```



Macros

- #define LOG(...) {fprintf(stderr, "%d: ", getpid());fprintf(stderr, __VA_ARGS__);fprintf(stderr, "\n");}

Functions

- int [cmpTimespec](#) (const struct timespec &t1, const struct timespec &t2)
- void [signal_handler](#) (int signum)
- int [main](#) ()

Variables

- const int **TIMEOUT_SECONDS** = 600

7.31.1 Macro Definition Documentation

7.31.1.1 LOG

```
#define LOG(  
    ... ) {fprintf(stderr, "%d:  ", getpid());fprintf(stderr, __VA_ARGS__);fprintf(stderr,  
"\n");}
```

Definition at line 42 of file example_server.cpp.

Referenced by main(), CppFunctionForRInsideServer::operator()(), signal_handler(), and RInsideCallbacks::Suicide().

7.31.2 Function Documentation

7.31.2.1 cmpTimespec()

```
int cmpTimespec (   
    const struct timespec & t1,  
    const struct timespec & t2 )
```

Definition at line 78 of file example_server.cpp.

Referenced by main().

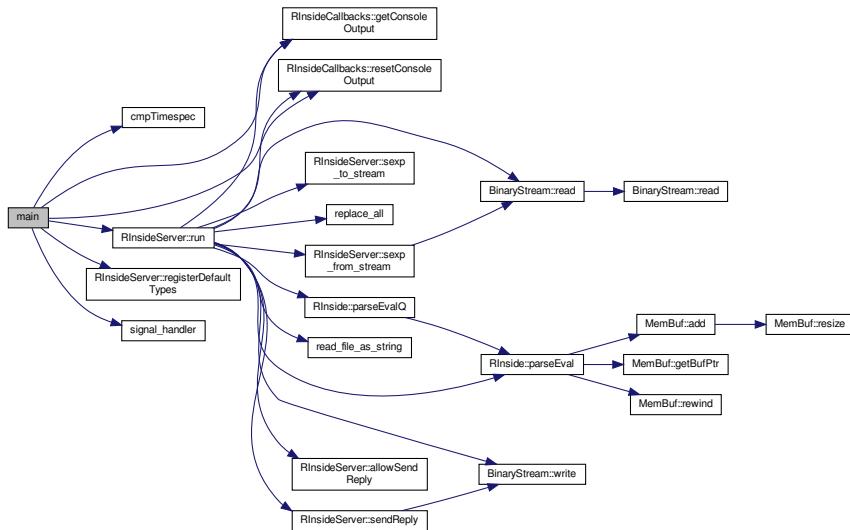
7.31.2.2 main()

```
int main (
    void )
```

Definition at line 97 of file example_server.cpp.

References cmpTimespec(), RInsideCallbacks::getConsoleOutput(), LOG, RInsideServer::registerDefaultTypes(), RInsideCallbacks::resetConsoleOutput(), ris_socket_address, RInsideServer::run(), signal_handler(), and TIMEOUT_SECONDS.

Here is the call graph for this function:



7.31.2.3 signal_handler()

```
void signal_handler (
    int signum )
```

Definition at line 91 of file example_server.cpp.

References LOG.

Referenced by main().

7.31.3 Variable Documentation

7.31.3.1 TIMEOUT_SECONDS

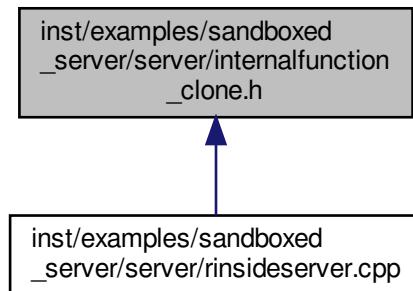
```
const int TIMEOUT_SECONDS = 600
```

Definition at line 52 of file example_server.cpp.

Referenced by main().

7.32 inst/examples/sandboxed_server/server/internalfunction_clone.h File Reference

This graph shows which files directly or indirectly include this file:



Classes

- class [CppFunctionForRInsideServer](#)

Namespaces

- [Rcpp](#)

TypeDefs

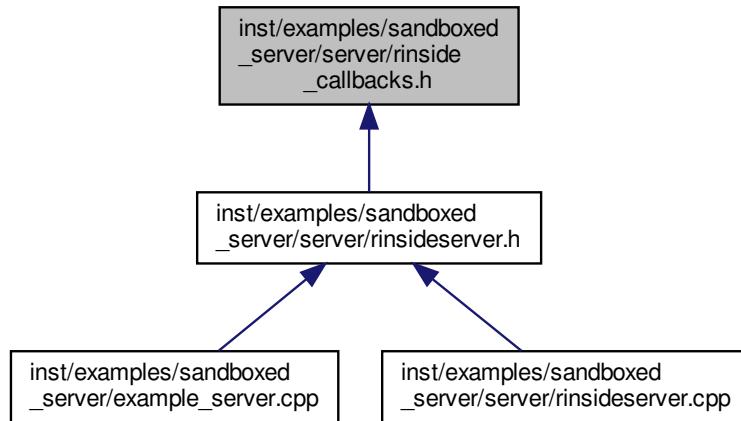
- typedef InternalFunctionForRInsideServer_Impl<PreserveStorage> [Rcpp::InternalFunctionForRInsideServer](#)

Functions

- [Rcpp::RCPP_API_CLASS](#) (InternalFunctionForRInsideServer_Impl)

7.33 inst/examples/sandboxed_server/server/rinside_callbacks.h File Reference

This graph shows which files directly or indirectly include this file:



Classes

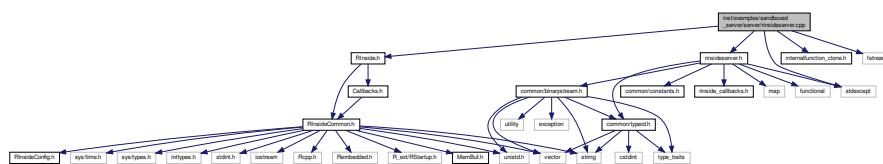
- class [RInsideCallbacks](#)

7.34 inst/examples/sandboxed_server/server/rinsideserver.cpp File Reference

```

#include <RInside.h>
#include "rinsideserver.h"
#include "internalfunction_clone.h"
#include <stdexcept>
#include <fstream>
  
```

Include dependency graph for rinsideserver.cpp:



Macros

- `#define LOG(...){fprintf(stderr, "%d: ", getpid());fprintf(stderr, __VA_ARGS__);fprintf(stderr, "\n");}`
- `#define CMD_TRY try {`
- `#define CMD_CATCH } catch (const BinaryStream::stream_exception) { throw; } catch (const std::exception &e) { std::string s = e.what(); LOG("Command failed: %s", s.c_str()); sendReply(RIS_REPLY_ERROR); stream.write(s); }`

Functions

- `static void replace_all (std::string &str, const std::string &search, const std::string &replace)`
- `static std::string read_file_as_string (const std::string &filename)`

7.34.1 Macro Definition Documentation

7.34.1.1 CMD_CATCH

```
#define CMD_CATCH } catch (const BinaryStream::stream_exception) { throw; } catch (const std::exception &e) { std::string s = e.what(); LOG("Command failed: %s", s.c_str()); sendReply(RIS_REPLY_ERROR); stream.write(s); }
```

Definition at line 59 of file rinsideserver.cpp.

Referenced by RInsideServer::run().

7.34.1.2 CMD_TRY

```
#define CMD_TRY try {
```

Definition at line 58 of file rinsideserver.cpp.

Referenced by RInsideServer::run().

7.34.1.3 LOG

```
#define LOG( ... ) {fprintf(stderr, "%d: ", getpid());fprintf(stderr, __VA_ARGS__);fprintf(stderr, "\n");}
```

Definition at line 5 of file rinsideserver.cpp.

Referenced by RInsideServer::run(), RInsideServer::sexp_from_stream(), and RInsideServer::sexp_to_stream().

7.34.2 Function Documentation

7.34.2.1 `read_file_as_string()`

```
static std::string read_file_as_string (
    const std::string & filename ) [static]
```

Definition at line 25 of file rinsideserver.cpp.

References RInsideServer::registry_sexp_from_stream, and RInsideServer::registry_sexp_to_stream.

Referenced by RInsideServer::run().

7.34.2.2 `replace_all()`

```
static void replace_all (
    std::string & str,
    const std::string & search,
    const std::string & replace ) [static]
```

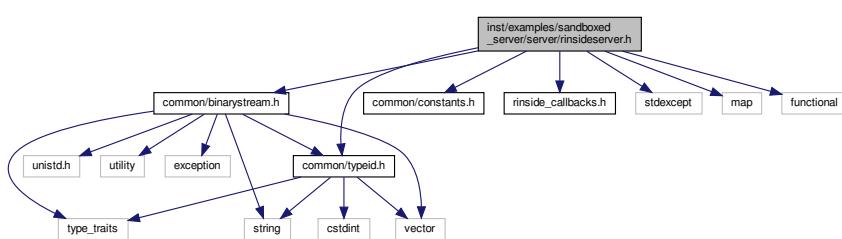
Definition at line 17 of file rinsideserver.cpp.

Referenced by RInsideServer::run().

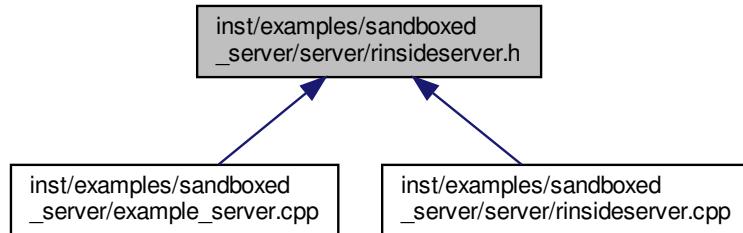
7.35 `inst/examples/sandboxed_server/server/rinsideserver.h` File Reference

```
#include "common/typeid.h"
#include "common/binarystream.h"
#include "common/constants.h"
#include "rinside_callbacks.h"
#include <stdexcept>
#include <map>
#include <functional>
```

Include dependency graph for rinsideserver.h:



This graph shows which files directly or indirectly include this file:

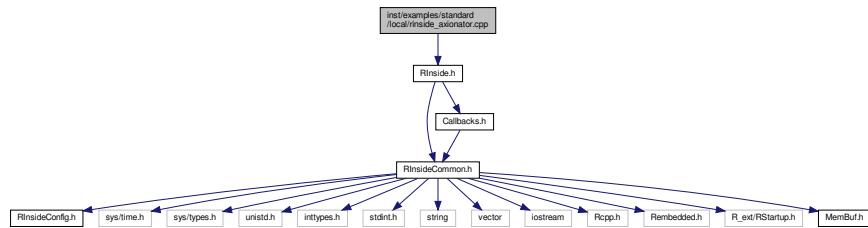


Classes

- class [RInsideServer](#)

7.36 inst/examples/standard/local/rinside_axionator.cpp File Reference

```
#include <RInside.h>
Include dependency graph for rinside_axionator.cpp:
```



Functions

- const char * [hello](#) (std::string who)
- int [main](#) (int argc, char *argv[])

7.36.1 Function Documentation

7.36.1.1 hello()

```
const char* hello (
    std::string who )
```

Definition at line 3 of file rinside_axionator.cpp.

Referenced by main().

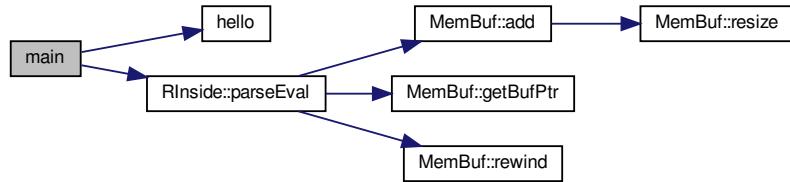
7.36.1.2 main()

```
int main (
    int argc,
    char * argv[] )
```

Definition at line 9 of file rinside_axionator.cpp.

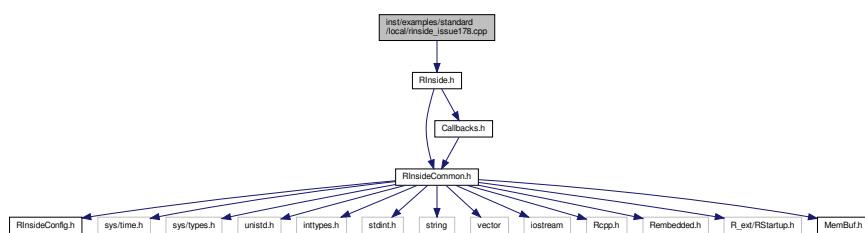
References hello(), and RInside::parseEval().

Here is the call graph for this function:



7.37 inst/examples/standard/local/rinside_issue178.cpp File Reference

```
#include <RInside.h>
Include dependency graph for rinside_issue178.cpp:
```



Functions

- int **main** (int argc, char *argv[])

7.37.1 Function Documentation

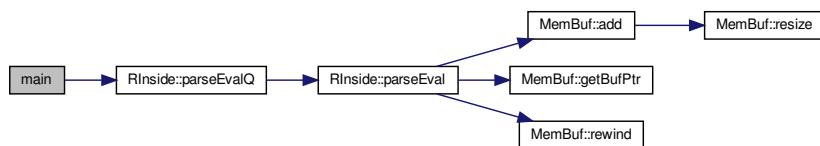
7.37.1.1 main()

```
int main (
    int argc,
    char * argv[ ] )
```

Definition at line 7 of file rinside_issue178.cpp.

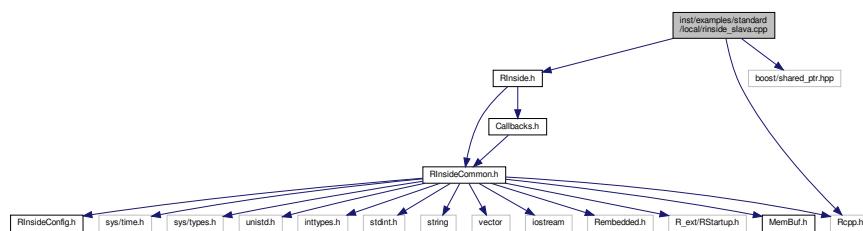
References RInside::parseEvalQ().

Here is the call graph for this function:



7.38 inst/examples/standard/local/rinside_slava.cpp File Reference

```
#include <RInside.h>
#include <Rcpp.h>
#include <boost/shared_ptr.hpp>
Include dependency graph for rinside_slava.cpp:
```



Functions

- int `main` (int argc, char *argv[])

Variables

- static boost::shared_ptr<`RInside`> `Rinst`

7.38.1 Function Documentation

7.38.1.1 `main()`

```
int main (
    int argc,
    char * argv[] )
```

Definition at line 9 of file `rinside_slava.cpp`.

References `Rinst`.

7.38.2 Variable Documentation

7.38.2.1 `Rinst`

```
boost::shared_ptr<RInside> Rinst [static]
```

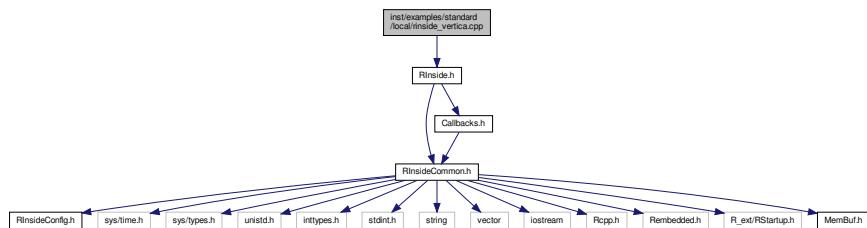
Definition at line 7 of file `rinside_slava.cpp`.

Referenced by `main()`.

7.39 inst/examples/standard/local/rinside_vertica.cpp File Reference

```
#include <RInside.h>
```

Include dependency graph for `rinside_vertica.cpp`:



Functions

- int [main](#) (int argc, char *argv[])

7.39.1 Function Documentation

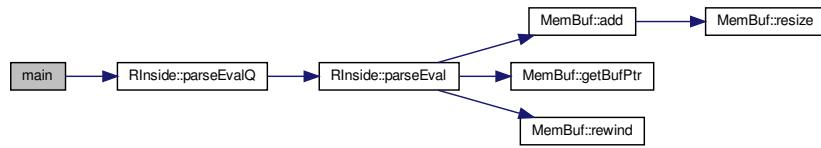
7.39.1.1 main()

```
int main (
    int argc,
    char * argv[] )
```

Definition at line 4 of file rinside_vertica.cpp.

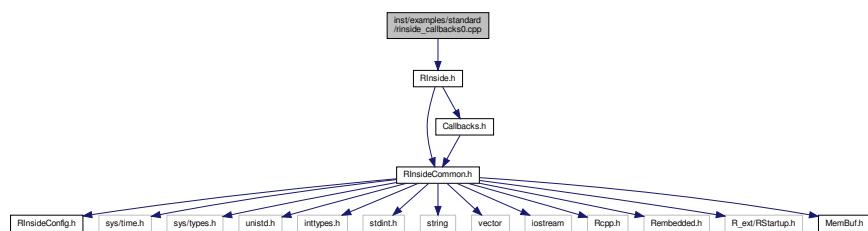
References [RInside::parseEvalQ\(\)](#).

Here is the call graph for this function:



7.40 inst/examples/standard/rinside_callbacks0.cpp File Reference

```
#include <RInside.h>
Include dependency graph for rinside_callbacks0.cpp:
```



Functions

- int `main` (int argc, char *argv[])

7.40.1 Function Documentation

7.40.1.1 main()

```
int main (
    int argc,
    char * argv[] )
```

Definition at line 12 of file rinside_callbacks0.cpp.

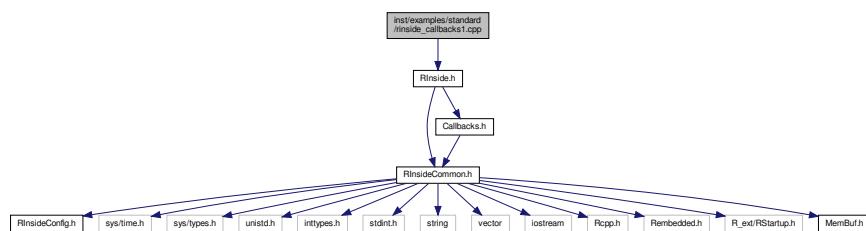
References `RInside::repl()`.

Here is the call graph for this function:



7.41 inst/examples/standard/rinside_callbacks1.cpp File Reference

```
#include <RInside.h>
Include dependency graph for rinside_callbacks1.cpp:
```



Functions

- int `main` (int argc, char *argv[])

7.41.1 Function Documentation

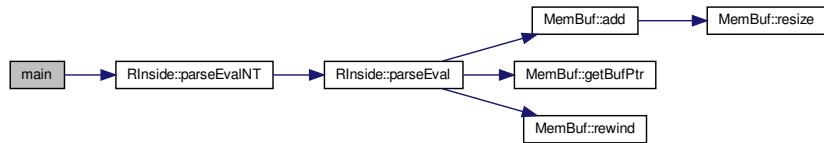
7.41.1.1 main()

```
int main (
    int argc,
    char * argv[] )
```

Definition at line 12 of file rinside_callbacks1.cpp.

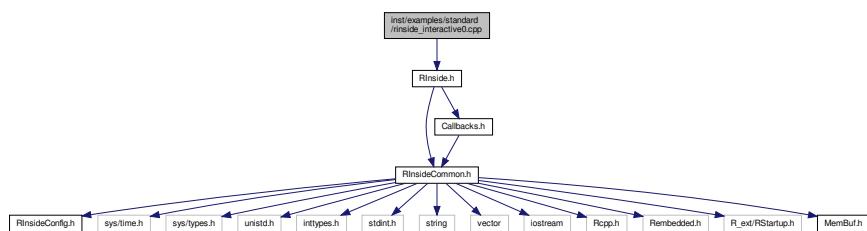
References `RInside::parseEvalINT()`.

Here is the call graph for this function:



7.42 inst/examples/standard/rinside_interactive0.cpp File Reference

```
#include <RInside.h>
Include dependency graph for rinside_interactive0.cpp:
```



Classes

- struct [Planet](#)
- class [Solver](#)
- class [Wrapper](#)

Functions

- SEXP [Dollar](#) (Rcpp::XPtr<[Wrapper](#)> obj, std::string name)
- Rcpp::XPtr<[Wrapper](#)> [DollarAssign](#) (Rcpp::XPtr<[Wrapper](#)> obj, std::string name, SEXP v)
- Rcpp::CharacterVector [Names](#) (Rcpp::XPtr<[Wrapper](#)> obj)
- int [main](#) (int argc, char *argv[])

7.42.1 Function Documentation

7.42.1.1 [Dollar\(\)](#)

```
SEXP Dollar (
    Rcpp::XPtr<Wrapper> obj,
    std::string name )
```

Definition at line 110 of file rinside_interactive0.cpp.

Referenced by [main\(\)](#).

7.42.1.2 [DollarAssign\(\)](#)

```
Rcpp::XPtr<Wrapper> DollarAssign (
    Rcpp::XPtr<Wrapper> obj,
    std::string name,
    SEXP v )
```

Definition at line 123 of file rinside_interactive0.cpp.

Referenced by [main\(\)](#).

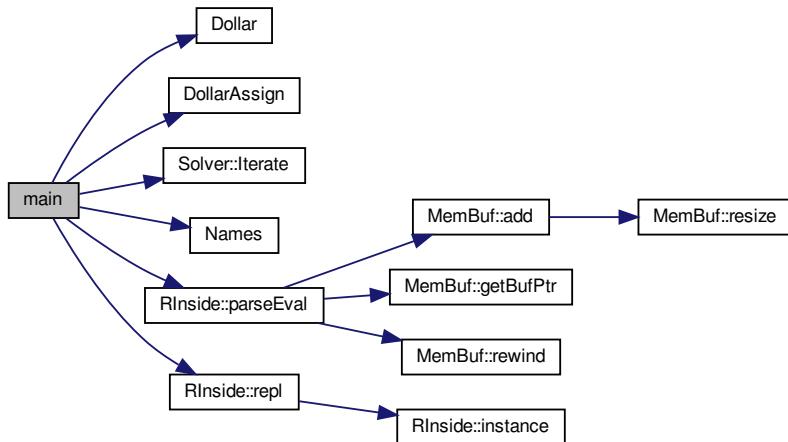
7.42.1.3 main()

```
int main (
    int argc,
    char * argv[] )
```

Definition at line 143 of file rinside_interactive0.cpp.

References Dollar(), DollarAssign(), Solver::Iterate(), Names(), RInside::parseEval(), and RInside::repl().

Here is the call graph for this function:



7.42.1.4 Names()

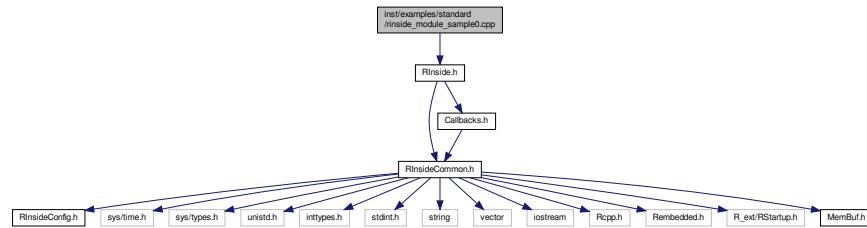
```
Rcpp::CharacterVector Names (
    Rcpp::XPtr< Wrapper > obj )
```

Definition at line 135 of file rinside_interactive0.cpp.

Referenced by main().

7.43 inst/examples/standard/rinside_module_sample0.cpp File Reference

```
#include <RInside.h>
Include dependency graph for rinside_module_sample0.cpp:
```



Functions

- const char * **hello** (std::string who)
- int **main** (int argc, char *argv[])

7.43.1 Function Documentation

7.43.1.1 hello()

```
const char* hello (
    std::string who )
```

Definition at line 10 of file rinside_module_sample0.cpp.

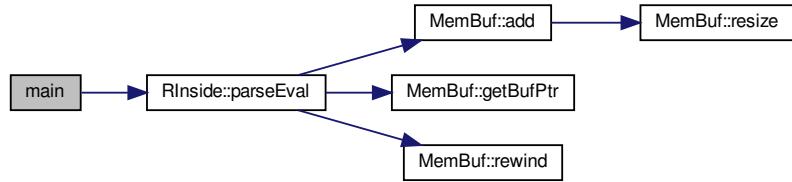
7.43.1.2 main()

```
int main (
    int argc,
    char * argv[ ] )
```

Definition at line 21 of file rinside_module_sample0.cpp.

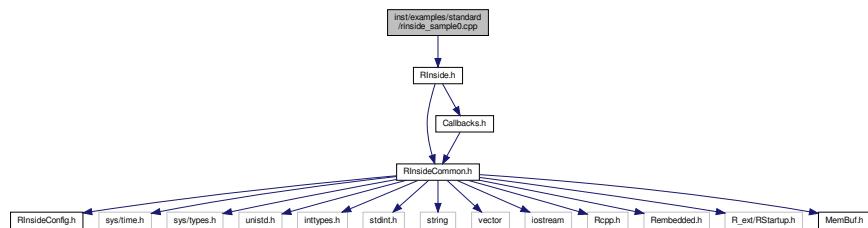
References RInside::parseEval().

Here is the call graph for this function:



7.44 inst/examples/standard/rinside_sample0.cpp File Reference

```
#include <RInside.h>
Include dependency graph for rinside_sample0.cpp:
```



Functions

- int [main \(int argc, char *argv\[\]\)](#)

7.44.1 Function Documentation

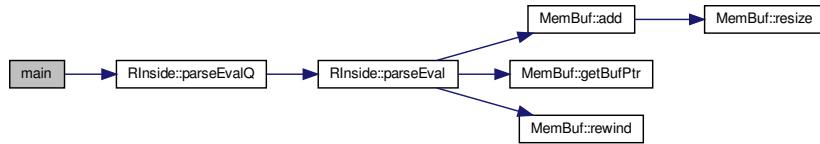
7.44.1.1 [main\(\)](#)

```
int main (
    int argc,
    char * argv[] )
```

Definition at line 12 of file rinside_sample0.cpp.

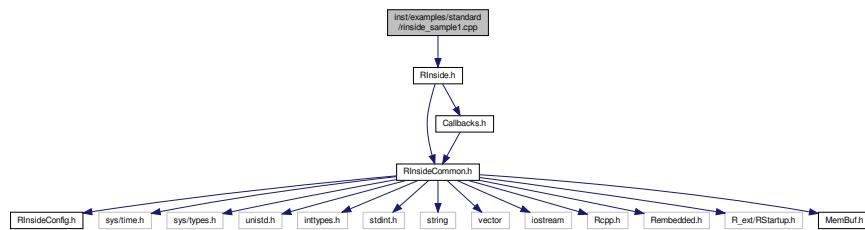
References `RInside::parseEvalQ()`.

Here is the call graph for this function:



7.45 inst/examples/standard/rinside_sample1.cpp File Reference

```
#include <RInside.h>
Include dependency graph for rinside_sample1.cpp:
```



Functions

- `Rcpp::NumericMatrix createMatrix (const int n)`
- `int main (int argc, char *argv[])`

7.45.1 Function Documentation

7.45.1.1 `createMatrix()`

```
Rcpp::NumericMatrix createMatrix (
    const int n )
```

Definition at line 12 of file `rinside_sample1.cpp`.

Referenced by `main()`.

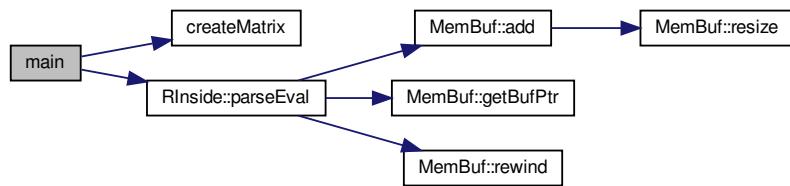
7.45.1.2 main()

```
int main (
    int argc,
    char * argv[ ] )
```

Definition at line 22 of file rinside_sample1.cpp.

References createMatrix(), and RInside::parseEval().

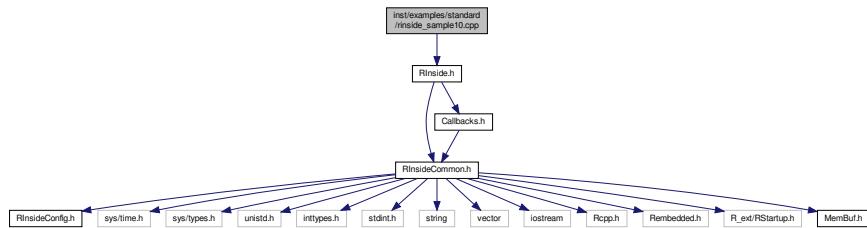
Here is the call graph for this function:



7.46 inst/examples/standard/rinside_sample10.cpp File Reference

#include <RInside.h>

Include dependency graph for rinside_sample10.cpp:



Functions

- void [show](#) (const Rcpp::List &L)
- int [main](#) (int argc, char *argv[])

7.46.1 Function Documentation

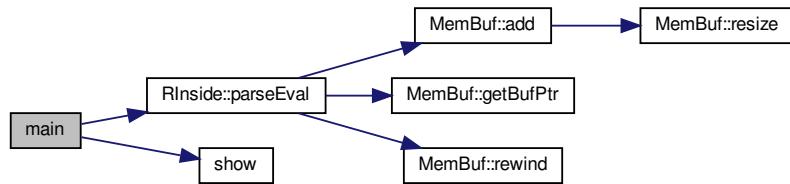
7.46.1.1 main()

```
int main (
    int argc,
    char * argv[] )
```

Definition at line 18 of file rinside_sample10.cpp.

References RInside::parseEval(), and show().

Here is the call graph for this function:



7.46.1.2 show()

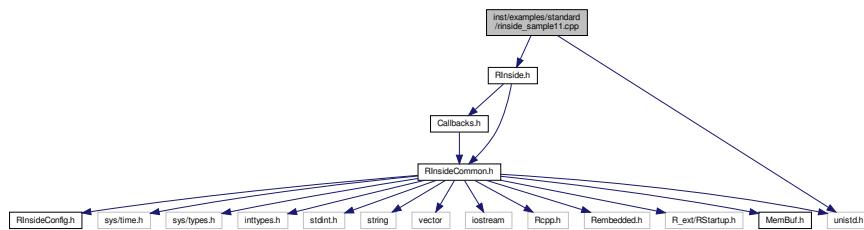
```
void show (
    const Rcpp::List & L )
```

Definition at line 8 of file rinside_sample10.cpp.

Referenced by main().

7.47 inst/examples/standard/rinside_sample11.cpp File Reference

```
#include <RInside.h>
#include <unistd.h>
Include dependency graph for rinside_sample11.cpp:
```



Functions

- int `main` (int argc, char *argv[])

7.47.1 Function Documentation

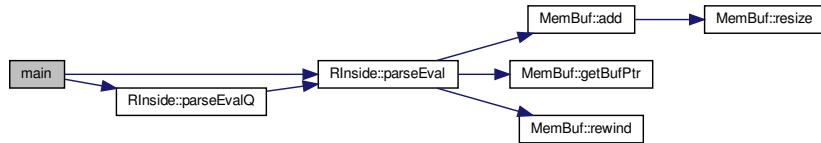
7.47.1.1 main()

```
int main (
    int argc,
    char * argv[] )
```

Definition at line 9 of file rinside_sample11.cpp.

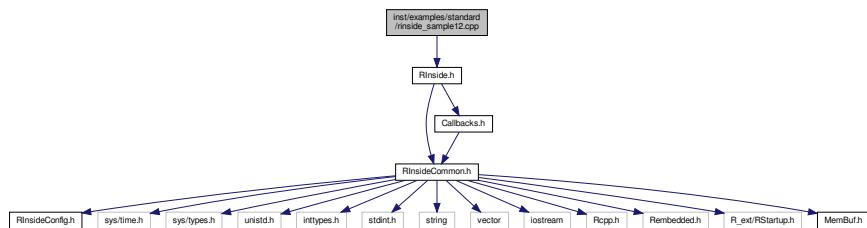
References `RInside::parseEval()`, and `RInside::parseEvalQ()`.

Here is the call graph for this function:



7.48 inst/examples/standard/rinside_sample12.cpp File Reference

```
#include <RInside.h>
Include dependency graph for rinside_sample12.cpp:
```



Functions

- int **main** (int argc, char *argv[])

7.48.1 Function Documentation

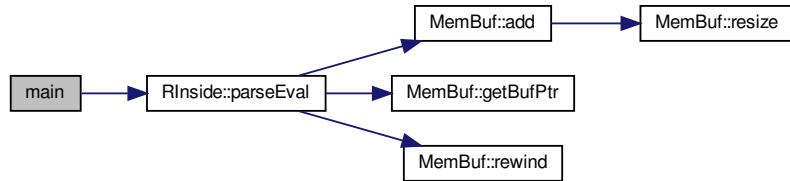
7.48.1.1 main()

```
int main (
    int argc,
    char * argv[] )
```

Definition at line 9 of file rinside_sample12.cpp.

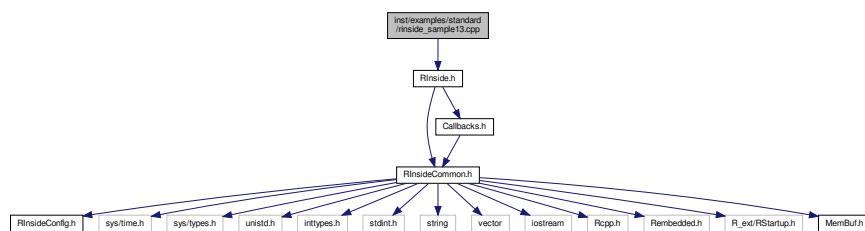
References RInside::parseEval().

Here is the call graph for this function:



7.49 inst/examples/standard/rinside_sample13.cpp File Reference

```
#include <RInside.h>
Include dependency graph for rinside_sample13.cpp:
```



Functions

- int `main` (int argc, char *argv[])

7.49.1 Function Documentation

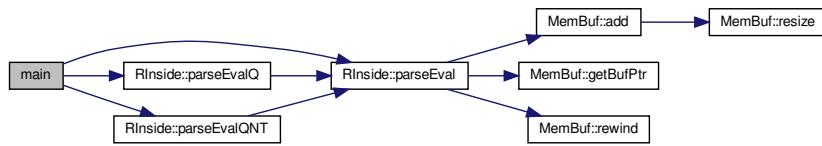
7.49.1.1 main()

```
int main (
    int argc,
    char * argv[ ] )
```

Definition at line 9 of file rinside_sample13.cpp.

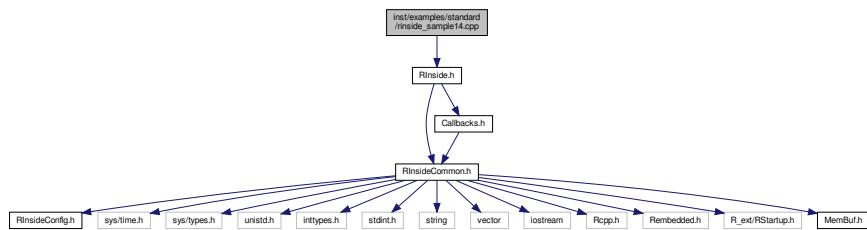
References `RInside::parseEval()`, `RInside::parseEvalQ()`, and `RInside::parseEvalQNT()`.

Here is the call graph for this function:



7.50 inst/examples/standard/rinside_sample14.cpp File Reference

```
#include <RInside.h>
Include dependency graph for rinside_sample14.cpp:
```



Functions

- int `main` (int argc, char *argv[])

7.50.1 Function Documentation

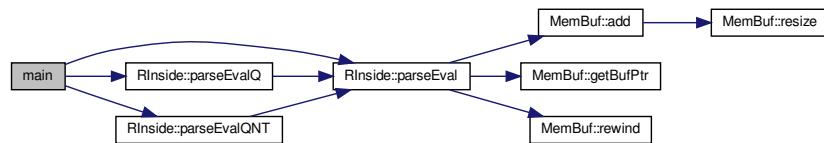
7.50.1.1 main()

```
int main (
    int argc,
    char * argv[] )
```

Definition at line 9 of file rinside_sample14.cpp.

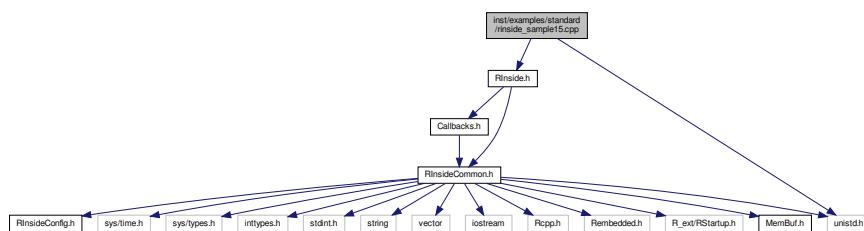
References `RInside::parseEval()`, `RInside::parseEvalQ()`, and `RInside::parseEvalQNT()`.

Here is the call graph for this function:



7.51 inst/examples/standard/rinside_sample15.cpp File Reference

```
#include <RInside.h>
#include <unistd.h>
Include dependency graph for rinside_sample15.cpp:
```



Functions

- int `main` (int argc, char *argv[])

7.51.1 Function Documentation

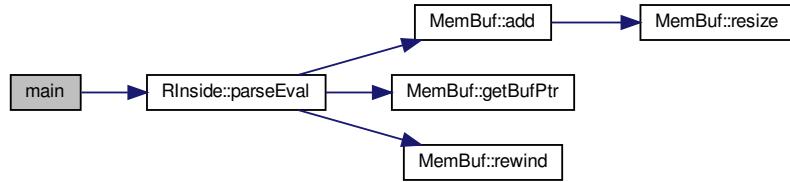
7.51.1.1 main()

```
int main (
    int argc,
    char * argv[] )
```

Definition at line 11 of file rinside_sample15.cpp.

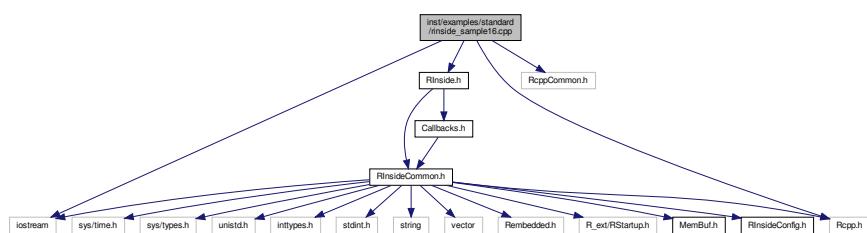
References `RInside::parseEval()`.

Here is the call graph for this function:



7.52 inst/examples/standard/rinside_sample16.cpp File Reference

```
#include <iostream>
#include <RcppCommon.h>
#include <Rcpp.h>
#include <RInside.h>
Include dependency graph for rinside_sample16.cpp:
```



Classes

- class [Foo](#)

Namespaces

- [Rcpp](#)

Functions

- template<>
`SEXP Rcpp::wrap (const Foo &foo)`
- template<>
`Foo Rcpp::as (SEXP SEXP)`
- `Foo swapFoo (Foo &input)`
- int `main (int argc, char *argv[])`

7.52.1 Function Documentation

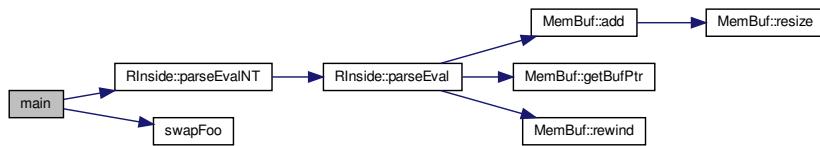
7.52.1.1 main()

```
int main (
    int argc,
    char * argv[ ] )
```

Definition at line 74 of file rinside_sample16.cpp.

References `Foo::a`, `Foo::b`, `RInside::parseEvalNT()`, and `swapFoo()`.

Here is the call graph for this function:



7.52.1.2 swapFoo()

```
Foo swapFoo (
    Foo & input )
```

Definition at line 69 of file rinside_sample16.cpp.

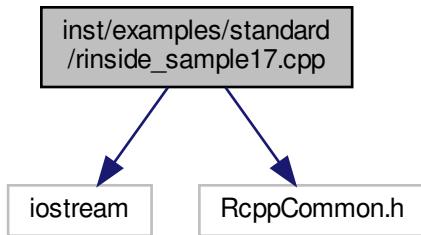
References Foo::a, and Foo::b.

Referenced by main(), and test_callbacks().

7.53 inst/examples/standard/rinside_sample17.cpp File Reference

```
#include <iostream>
#include <RcppCommon.h>
```

Include dependency graph for rinside_sample17.cpp:



Functions

- int `main` (int argc, char *argv[])

7.53.1 Function Documentation

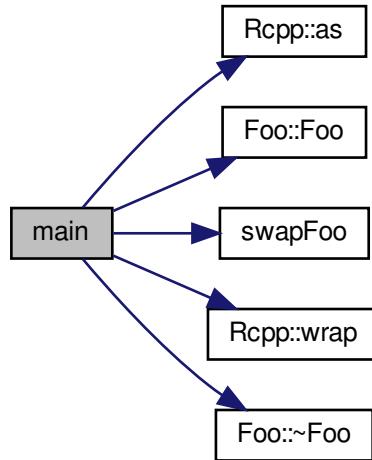
7.53.1.1 main()

```
int main (
    int argc,
    char * argv[ ] )
```

Definition at line 12 of file rinside_sample17.cpp.

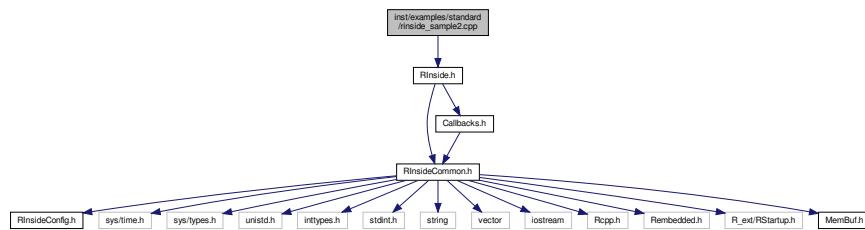
References Foo::a, Rcpp::as(), Foo::b, Foo::Foo(), swapFoo(), Rcpp::wrap(), and Foo::~Foo().

Here is the call graph for this function:



7.54 inst/examples/standard/rinside_sample2.cpp File Reference

```
#include <RInside.h>
Include dependency graph for rinside_sample2.cpp:
```



Functions

- int `main` (int argc, char *argv[])

7.54.1 Function Documentation

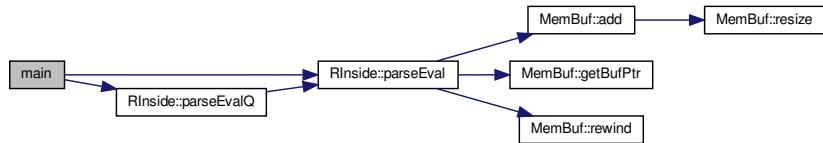
7.54.1.1 main()

```
int main (
    int argc,
    char * argv[] )
```

Definition at line 10 of file rinside_sample2.cpp.

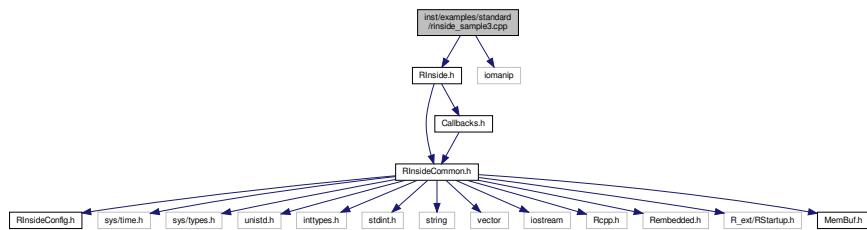
References `RInside::parseEval()`, and `RInside::parseEvalQ()`.

Here is the call graph for this function:



7.55 inst/examples/standard/rinside_sample3.cpp File Reference

```
#include <RInside.h>
#include <iomanip>
Include dependency graph for rinside_sample3.cpp:
```



Functions

- int `main` (int argc, char *argv[])

7.55.1 Function Documentation

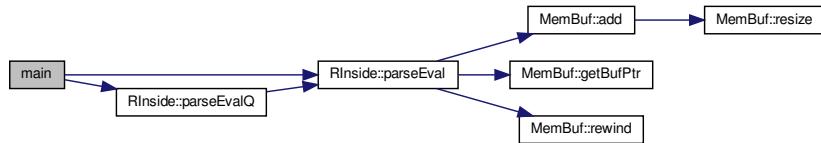
7.55.1.1 main()

```
int main (
    int argc,
    char * argv[] )
```

Definition at line 11 of file rinside_sample3.cpp.

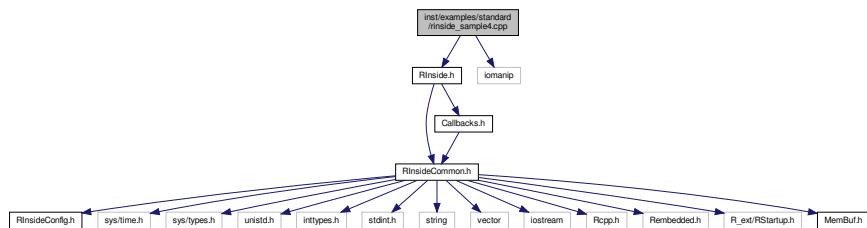
References `RInside::parseEval()`, and `RInside::parseEvalQ()`.

Here is the call graph for this function:



7.56 inst/examples/standard/rinside_sample4.cpp File Reference

```
#include <RInside.h>
#include <iomanip>
Include dependency graph for rinside_sample4.cpp:
```



Functions

- int `main` (int argc, char *argv[])

7.56.1 Function Documentation

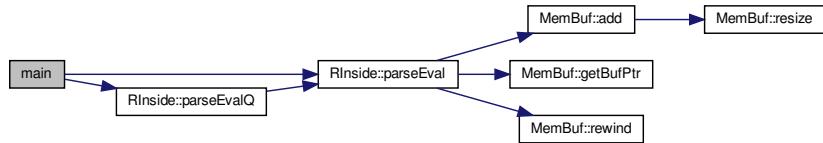
7.56.1.1 main()

```
int main (
    int argc,
    char * argv[] )
```

Definition at line 11 of file rinside_sample4.cpp.

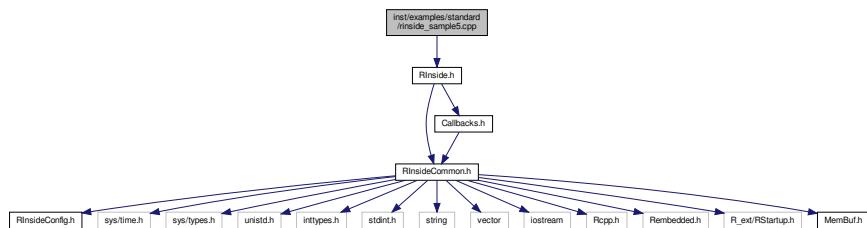
References `RInside::parseEval()`, and `RInside::parseEvalQ()`.

Here is the call graph for this function:



7.57 inst/examples/standard/rinside_sample5.cpp File Reference

```
#include <RInside.h>
Include dependency graph for rinside_sample5.cpp:
```



Functions

- int [main](#) (int argc, char *argv[])

7.57.1 Function Documentation

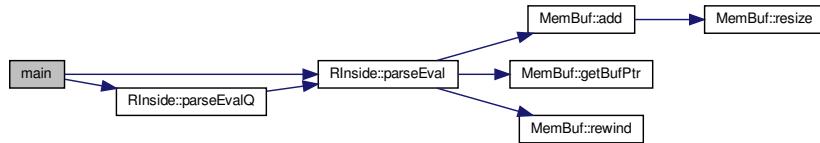
7.57.1.1 main()

```
int main (
    int argc,
    char * argv[] )
```

Definition at line 10 of file `rinside_sample5.cpp`.

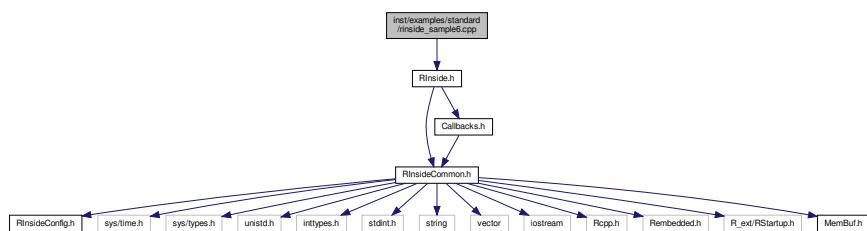
References `RInside::parseEval()`, and `RInside::parseEvalQ()`.

Here is the call graph for this function:



7.58 inst/examples/standard/rinside_sample6.cpp File Reference

```
#include <RInside.h>
Include dependency graph for rinside_sample6.cpp:
```



Functions

- int [main](#) (int argc, char *argv[])

7.58.1 Function Documentation

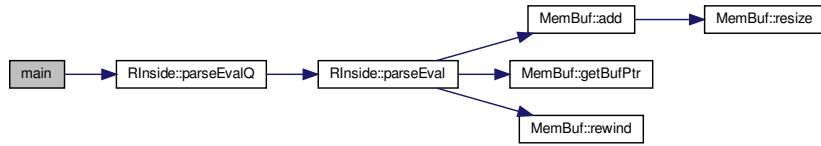
7.58.1.1 main()

```
int main (
    int argc,
    char * argv[] )
```

Definition at line 10 of file rinside_sample6.cpp.

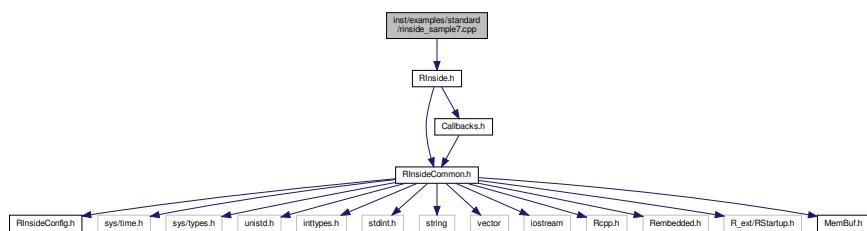
References [RInside::parseEvalQ\(\)](#).

Here is the call graph for this function:



7.59 inst/examples/standard/rinside_sample7.cpp File Reference

```
#include <RInside.h>
Include dependency graph for rinside_sample7.cpp:
```



Functions

- int **main** (int argc, char *argv[])

7.59.1 Function Documentation

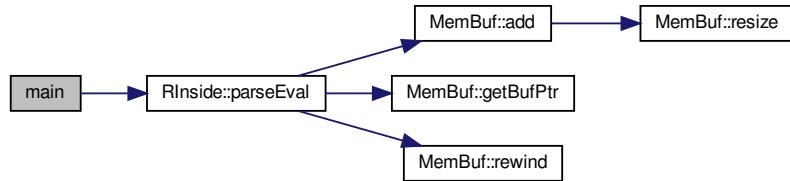
7.59.1.1 main()

```
int main (
    int argc,
    char * argv[] )
```

Definition at line 9 of file rinside_sample7.cpp.

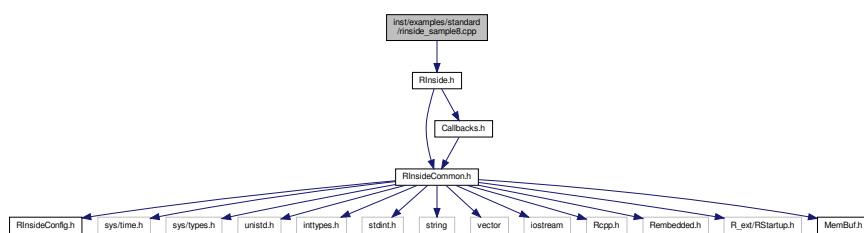
References RInside::parseEval().

Here is the call graph for this function:



7.60 inst/examples/standard/rinside_sample8.cpp File Reference

```
#include <RInside.h>
Include dependency graph for rinside_sample8.cpp:
```



Functions

- int [main](#) (int argc, char *argv[])

7.60.1 Function Documentation

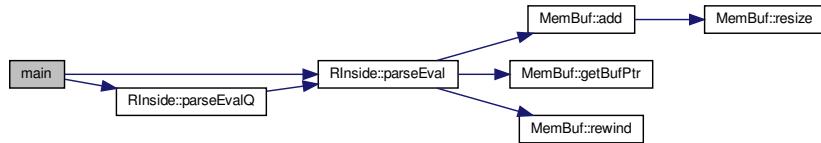
7.60.1.1 main()

```
int main (
    int argc,
    char * argv[] )
```

Definition at line 9 of file rinside_sample8.cpp.

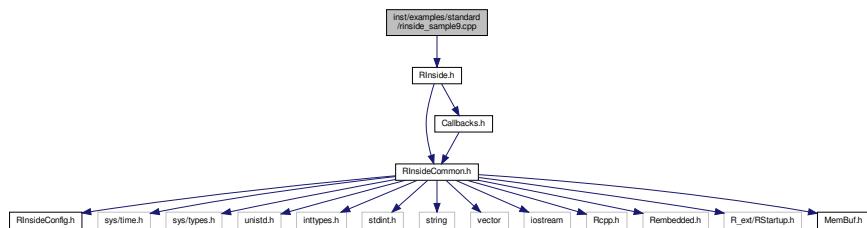
References [RInside::parseEval\(\)](#), and [RInside::parseEvalQ\(\)](#).

Here is the call graph for this function:



7.61 inst/examples/standard/rinside_sample9.cpp File Reference

```
#include <RInside.h>
Include dependency graph for rinside_sample9.cpp:
```



Functions

- std::string [hello](#) (std::string who)
- int [main](#) (int argc, char *argv[])

7.61.1 Function Documentation

7.61.1.1 [hello\(\)](#)

```
std::string hello (
    std::string who )
```

Definition at line 10 of file rinside_sample9.cpp.

Referenced by [main\(\)](#).

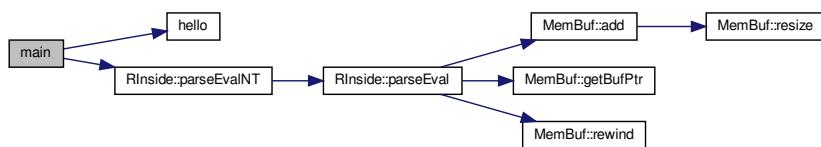
7.61.1.2 [main\(\)](#)

```
int main (
    int argc,
    char * argv[ ] )
```

Definition at line 16 of file rinside_sample9.cpp.

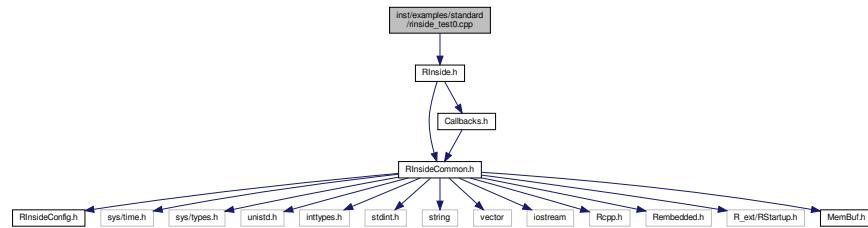
References [hello\(\)](#), and [RInside::parseEvalINT\(\)](#).

Here is the call graph for this function:



7.62 inst/examples/standard/rinside_test0.cpp File Reference

```
#include <RInside.h>
Include dependency graph for rinside_test0.cpp:
```



Functions

- int **main** (int argc, char *argv[])

7.62.1 Function Documentation

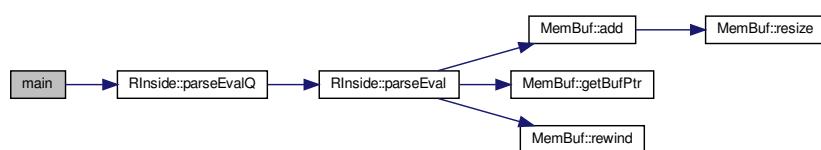
7.62.1.1 main()

```
int main (
    int argc,
    char * argv[ ] )
```

Definition at line 9 of file rinside_test0.cpp.

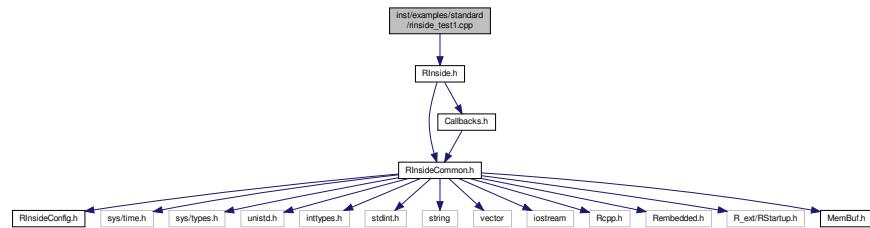
References RInside::parseEvalQ().

Here is the call graph for this function:



7.63 inst/examples/standard/rinside_test1.cpp File Reference

```
#include <RInside.h>
Include dependency graph for rinside_test1.cpp:
```



Functions

- int [main](#) (int argc, char *argv[])

7.63.1 Function Documentation

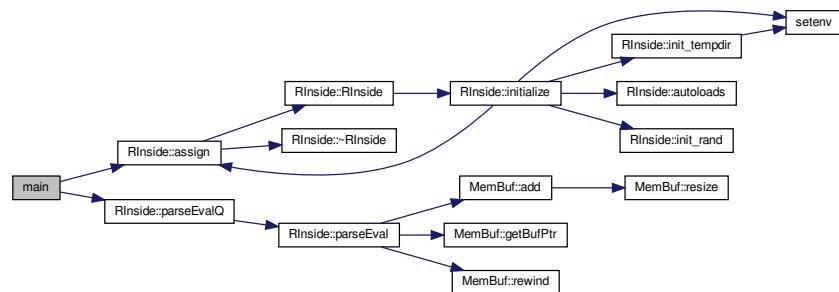
7.63.1.1 [main\(\)](#)

```
int main (
    int argc,
    char * argv[ ] )
```

Definition at line 9 of file rinside_test1.cpp.

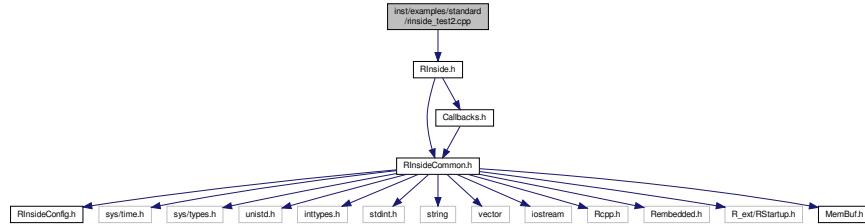
References [RInside::assign\(\)](#), and [RInside::parseEvalQ\(\)](#).

Here is the call graph for this function:



7.64 inst/examples/standard/rinside_test2.cpp File Reference

```
#include <RInside.h>
Include dependency graph for rinside_test2.cpp:
```



Functions

- int [main](#) (int argc, char *argv[])

7.64.1 Function Documentation

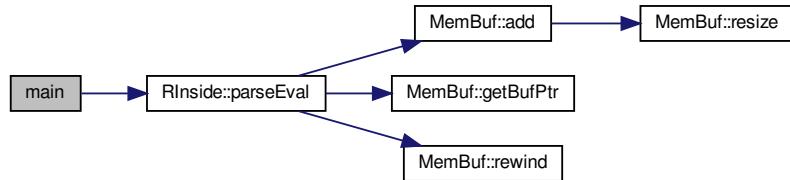
7.64.1.1 main()

```
int main (
    int argc,
    char * argv[ ] )
```

Definition at line 9 of file rinside_test2.cpp.

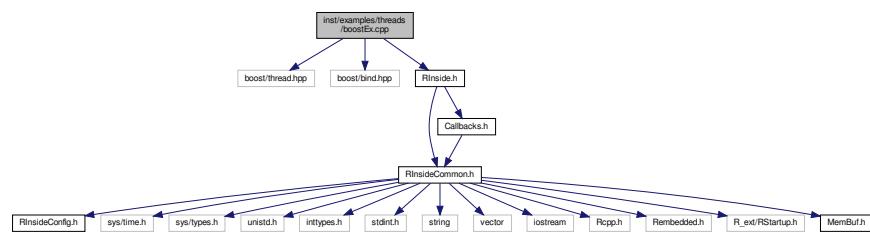
References [RInside::parseEval\(\)](#).

Here is the call graph for this function:



7.65 inst/examples/threads/boostEx.cpp File Reference

```
#include <boost/thread.hpp>
#include <boost/bind.hpp>
#include <RInside.h>
Include dependency graph for boostEx.cpp:
```



Classes

- class [Resource](#)

Functions

- void [thread_func \(Resource &resource\)](#)
- int [main \(int argc, char *argv\[\]\)](#)

Variables

- [uintptr_t R_CStackLimit](#)

7.65.1 Function Documentation

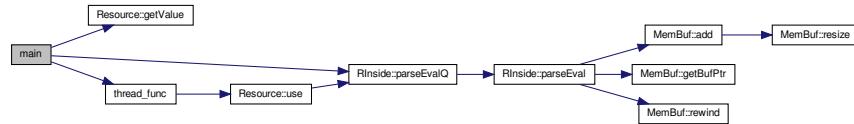
7.65.1.1 main()

```
int main (
    int argc,
    char * argv[ ] )
```

Definition at line 31 of file boostEx.cpp.

References [Resource::getValue\(\)](#), [RInside::parseEvalQ\(\)](#), and [thread_func\(\)](#).

Here is the call graph for this function:



7.65.1.2 thread_func()

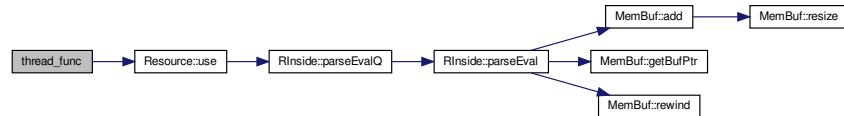
```
void thread_func (
    Resource & resource )
```

Definition at line 25 of file boostEx.cpp.

References R_CStackLimit, and Resource::use().

Referenced by main().

Here is the call graph for this function:



7.65.2 Variable Documentation

7.65.2.1 R_CStackLimit

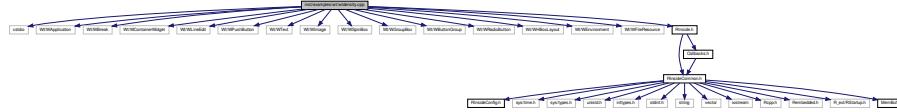
```
uintptr_t R_CStackLimit
```

Referenced by RInside::initialize(), and thread_func().

7.66 inst/examples/wt/wtdensity.cpp File Reference

```
#include <cstdio>
#include <Wt/WApplication>
#include <Wt/WBreak>
#include <Wt/WContainerWidget>
#include <Wt/WLineEdit>
#include <Wt/WPushButton>
#include <Wt/WText>
#include <Wt/WImage>
#include <Wt/WSpinBox>
#include <Wt/WGroupBox>
#include <Wt/WButtonGroup>
#include <Wt/WRadioButton>
#include <Wt/WHBoxLayout>
#include <Wt/WEnvironment>
#include <Wt/WFileResource>
#include <RInside.h>
```

Include dependency graph for wtdensity.cpp:



Classes

- class [DensityApp](#)

Functions

- `WApplication * createApplication (const WEnvironment &env)`
- `int main (int argc, char **argv)`

7.66.1 Function Documentation

7.66.1.1 createApplication()

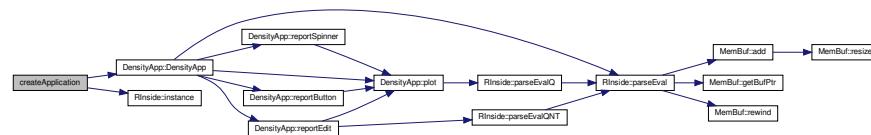
```
WApplication* createApplication (
    const WEnvironment & env )
```

Definition at line 184 of file wtdensity.cpp.

References DensityApp::DensityApp(), and RInside::instance().

Referenced by main().

Here is the call graph for this function:



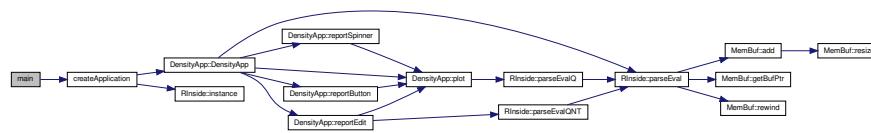
7.66.1.2 main()

```
int main (
    int argc,
    char ** argv )
```

Definition at line 194 of file wtdensity.cpp.

References createApplication().

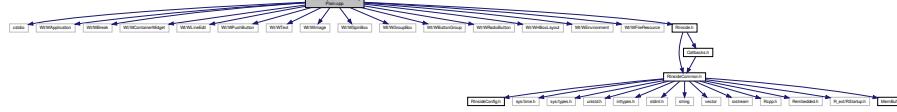
Here is the call graph for this function:



7.67 inst/examples/wt/wtdensityPlain.cpp File Reference

```
#include <cstdio>
#include <Wt/WApplication>
#include <Wt/WBreak>
#include <Wt/WContainerWidget>
#include <Wt/WLineEdit>
#include <Wt/WPushButton>
#include <Wt/WText>
#include <Wt/WImage>
#include <Wt/WSpinBox>
#include <Wt/WGroupBox>
#include <Wt/WButtonGroup>
#include <Wt/WRadioButton>
#include <Wt/WHBoxLayout>
#include <Wt/WEnvironment>
#include <Wt/WFileResource>
#include <RInside.h>
```

Include dependency graph for wtdensityPlain.cpp:



Classes

- class [DensityApp](#)

Functions

- `WApplication * createApplication (const WEnvironment &env)`
- `int main (int argc, char **argv)`

7.67.1 Function Documentation

7.67.1.1 createApplication()

```
WApplication* createApplication (
    const WEnvironment & env )
```

Definition at line 171 of file wtdensityPlain.cpp.

References RInside::instance().

Referenced by main().

Here is the call graph for this function:



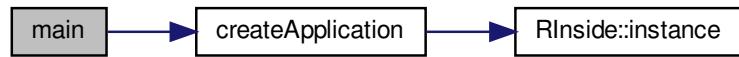
7.67.1.2 main()

```
int main (
    int argc,
    char ** argv )
```

Definition at line 181 of file wtdensityPlain.cpp.

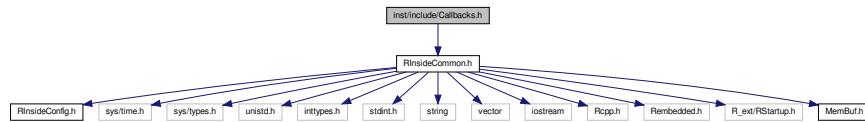
References createApplication().

Here is the call graph for this function:



7.68 inst/include/Callbacks.h File Reference

```
#include <RInsideCommon.h>
Include dependency graph for Callbacks.h:
```



This graph shows which files directly or indirectly include this file:

7.69 inst/include/MemBuf.h File Reference

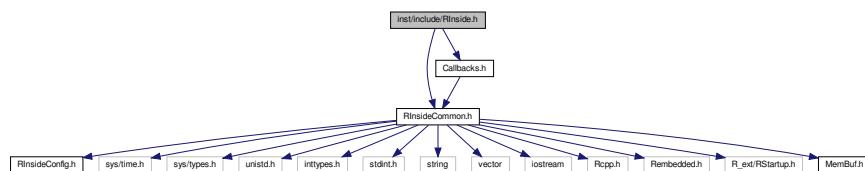
This graph shows which files directly or indirectly include this file:

Classes

- class [MemBuf](#)

7.70 inst/include/RInside.h File Reference

```
#include <RInsideCommon.h>
#include <Callbacks.h>
Include dependency graph for RInside.h:
```



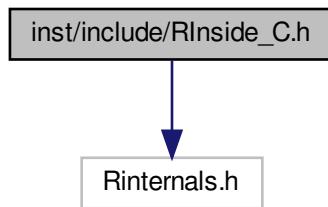
This graph shows which files directly or indirectly include this file:

Classes

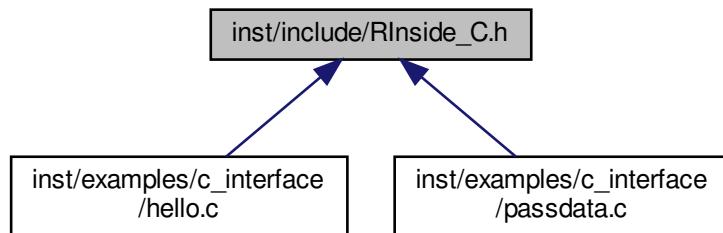
- class [RInside](#)
- class [RInside::Proxy](#)

7.71 inst/include/RInside_C.h File Reference

```
#include <Rinternals.h>
Include dependency graph for RInside_C.h:
```



This graph shows which files directly or indirectly include this file:



Functions

- void [setupRinC \(\)](#)
- void [passToR \(SEXP x, char *name\)](#)
- SEXP [evalInR \(char *cmd\)](#)
- void [evalQuietlyInR \(char *cmd\)](#)
- void [teardownRinC \(\)](#)

7.71.1 Function Documentation

7.71.1.1 evalInR()

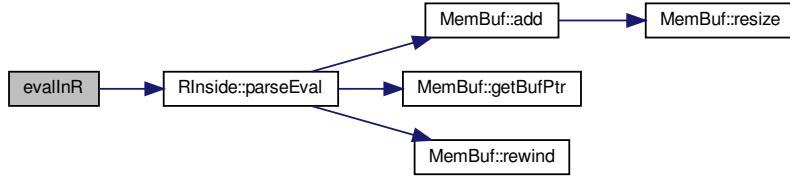
```
SEXP evalInR (
    char * cmd )
```

Definition at line 36 of file RInside_C.cpp.

References RInside::parseEval().

Referenced by main().

Here is the call graph for this function:



7.71.1.2 evalQuietlyInR()

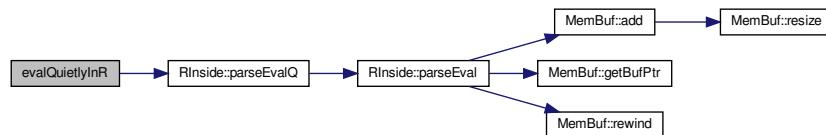
```
void evalQuietlyInR (
    char * cmd )
```

Definition at line 43 of file RInside_C.cpp.

References RInside::parseEvalQ().

Referenced by main().

Here is the call graph for this function:



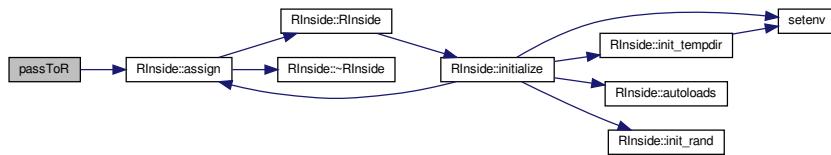
7.71.1.3 passToR()

```
void passToR (
    SEXP x,
    char * name )
```

Definition at line 31 of file RInside_C.cpp.

References RInside::assign().

Here is the call graph for this function:



7.71.1.4 setupRinC()

```
void setupRinC ( )
```

Definition at line 26 of file RInside_C.cpp.

Referenced by main().

7.71.1.5 teardownRinC()

```
void teardownRinC ( )
```

Definition at line 48 of file RInside_C.cpp.

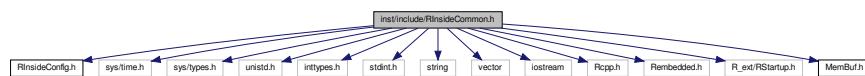
References rr.

Referenced by main().

7.72 inst/include/RInsideCommon.h File Reference

```
#include <RInsideConfig.h>
#include <sys/time.h>
#include <sys/types.h>
#include <unistd.h>
#include <inttypes.h>
#include <stdint.h>
#include <string>
#include <vector>
#include <iostream>
#include <Rcpp.h>
#include <Rembedded.h>
#include <R_ext/RStartup.h>
#include <MemBuf.h>
```

Include dependency graph for RInsideCommon.h:



This graph shows which files directly or indirectly include this file:



Macros

- #define `CSTACK_DEFNS`
- #define `HAVE_UINTPTR_T`
- #define `logTxt(x, b)`

Functions

- void `logTxtFunction` (const char *file, const int line, const char *expression, const bool `verbose`)

7.72.1 Macro Definition Documentation

7.72.1.1 `CSTACK_DEFNS`

```
#define CSTACK_DEFNS
```

Definition at line 49 of file RInsideCommon.h.

7.72.1.2 HAVE_UINTPTR_T

```
#define HAVE_UINTPTR_T
```

Definition at line 51 of file RInsideCommon.h.

7.72.1.3 logTxt

```
#define logTxt(  
    x,  
    b )
```

Definition at line 71 of file RInsideCommon.h.

7.72.2 Function Documentation

7.72.2.1 logTxtFunction()

```
void logTxtFunction (   
    const char * file,  
    const int line,  
    const char * expression,  
    const bool verbose ) [inline]
```

Definition at line 61 of file RInsideCommon.h.

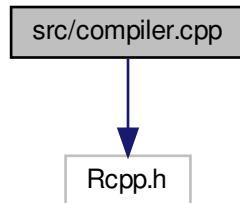
7.73 inst/include/RInsideConfig.h File Reference

This graph shows which files directly or indirectly include this file:



7.74 src/compiler.cpp File Reference

```
#include <Rcpp.h>
Include dependency graph for compiler.cpp:
```



Functions

- void [showCompiler \(\)](#)

7.74.1 Function Documentation

7.74.1.1 [showCompiler\(\)](#)

```
void showCompiler ( )
```

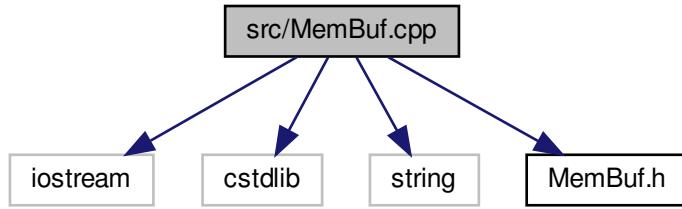
Definition at line 5 of file compiler.cpp.

Referenced by [_RInside_showCompiler\(\)](#).

7.75 src/MemBuf.cpp File Reference

```
#include <iostream>
#include <cstdlib>
#include <string>
```

```
#include <MemBuf.h>
Include dependency graph for MemBuf.cpp:
```



Variables

- bool [verbose](#)
- const char * [programName](#)

7.75.1 Variable Documentation

7.75.1.1 [programName](#)

```
const char* programName
```

Definition at line 32 of file RInside.cpp.

Referenced by [RInside::initialize\(\)](#), and [RInside::parseEval\(\)](#).

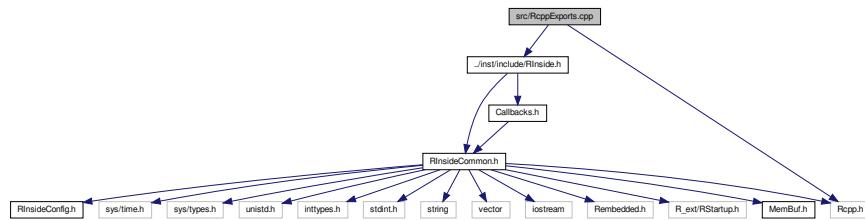
7.75.1.2 [verbose](#)

```
bool verbose
```

Referenced by [RInside::assign\(\)](#), [RInside::initialize\(\)](#), and [RInside::setVerbose\(\)](#).

7.76 src/RcppExports.cpp File Reference

```
#include "../inst/include/RInside.h"
#include <Rcpp.h>
Include dependency graph for RcppExports.cpp:
```



Functions

- void [showCompiler \(\)](#)
- RcppExport SEXP [_RInside_showCompiler \(\)](#)
- RcppExport void [R_init_RInside \(DllInfo *dll\)](#)

Variables

- static const R_CallMethodDef [CallEntries \[\]](#)

7.76.1 Function Documentation

7.76.1.1 [_RInside_showCompiler\(\)](#)

```
RcppExport SEXP _RInside_showCompiler ( )
```

Definition at line 11 of file RcppExports.cpp.

References [showCompiler\(\)](#).

Here is the call graph for this function:



7.76.1.2 R_init_RInside()

```
RcppExport void R_init_RInside (
    DllInfo * dll )
```

Definition at line 24 of file RcppExports.cpp.

References CallEntries.

7.76.1.3 showCompiler()

```
void showCompiler ( )
```

Definition at line 5 of file compiler.cpp.

Referenced by _RInside_showCompiler().

7.76.2 Variable Documentation

7.76.2.1 CallEntries

```
const R_CallMethodDef CallEntries[] [static]
```

Initial value:

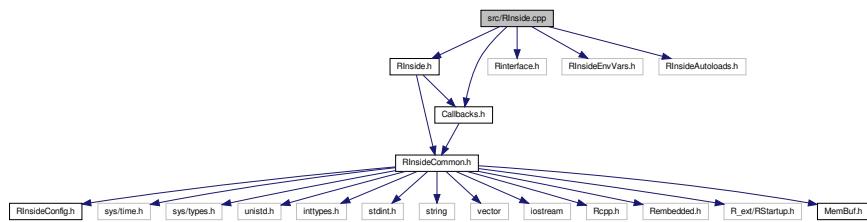
```
= {
    {"_RInside_showCompiler", (DL_FUNC) &_RInside_showCompiler, 0},
    {NULL, NULL, 0}
}
```

Definition at line 19 of file RcppExports.cpp.

Referenced by R_init_RInside().

7.77 src/RInside.cpp File Reference

```
#include <RInside.h>
#include <Callbacks.h>
#include <Rinterface.h>
#include "RInsideEnvVars.h"
#include "RInsideAutoloads.h"
Include dependency graph for RInside.cpp:
```



Macros

- `#define R_INTERFACE_PTRS`

Variables

- `const char * programName = "RInside"`

7.77.1 Macro Definition Documentation

7.77.1.1 R_INTERFACE_PTRS

```
#define R_INTERFACE_PTRS
```

Definition at line 26 of file RInside.cpp.

7.77.2 Variable Documentation

7.77.2.1 `programName`

```
const char* programName = "RInside"
```

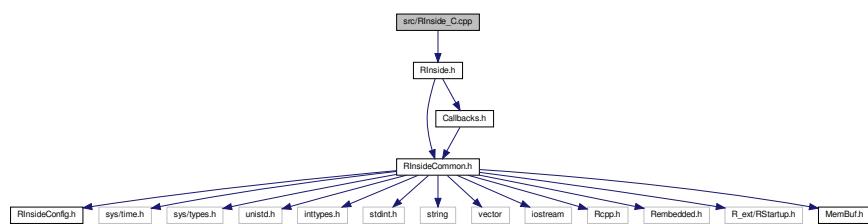
Definition at line 32 of file RInside.cpp.

Referenced by RInside::initialize(), and RInside::parseEval().

7.78 src/RInside_C.cpp File Reference

```
#include <RInside.h>
```

Include dependency graph for RInside_C.cpp:



Functions

- void [setupRinC \(\)](#)
- void [passToR \(SEXP x, char *name\)](#)
- SEXP [evalInR \(char *cmd\)](#)
- void [evalQuietlyInR \(char *cmd\)](#)
- void [teardownRinC \(\)](#)

Variables

- `RInside * rr = NULL`

7.78.1 Function Documentation

7.78.1.1 evalInR()

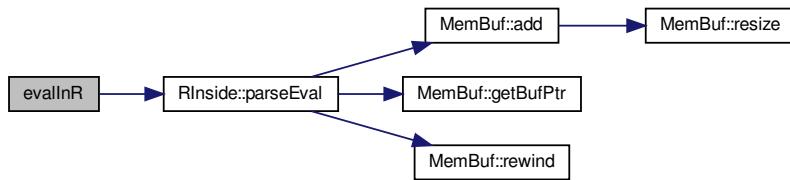
```
SEXP evalInR (
    char * cmd )
```

Definition at line 36 of file RInside_C.cpp.

References RInside::parseEval().

Referenced by main().

Here is the call graph for this function:



7.78.1.2 evalQuietlyInR()

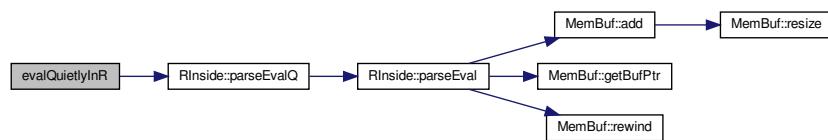
```
void evalQuietlyInR (
    char * cmd )
```

Definition at line 43 of file RInside_C.cpp.

References RInside::parseEvalQ().

Referenced by main().

Here is the call graph for this function:



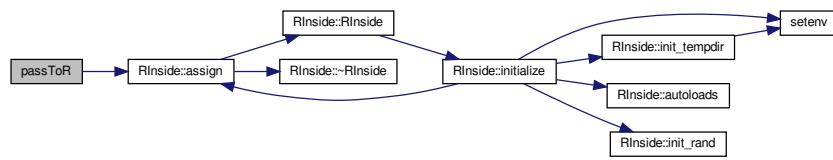
7.78.1.3 passToR()

```
void passToR (
    SEXP x,
    char * name )
```

Definition at line 31 of file RInside_C.cpp.

References RInside::assign().

Here is the call graph for this function:



7.78.1.4 setupRinC()

```
void setupRinC ( )
```

Definition at line 26 of file RInside_C.cpp.

Referenced by main().

7.78.1.5 teardownRinC()

```
void teardownRinC ( )
```

Definition at line 48 of file RInside_C.cpp.

References rr.

Referenced by main().

7.78.2 Variable Documentation

7.78.2.1 rr

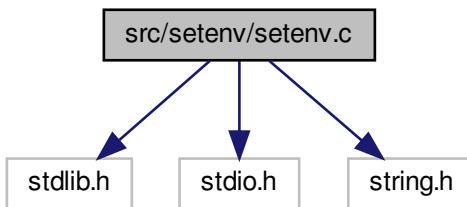
```
RInside* rr = NULL
```

Definition at line 23 of file RInside_C.cpp.

Referenced by teardownRinC().

7.79 src/setenv/setenv.c File Reference

```
#include <stdlib.h>
#include <stdio.h>
#include <string.h>
Include dependency graph for setenv.c:
```



Functions

- int **setenv** (const char *env_var, const char *env_val, int dummy)

7.79.1 Function Documentation

7.79.1.1 setenv()

```
int setenv (
    const char * env_var,
    const char * env_val,
    int dummy )
```

Definition at line 28 of file setenv.c.

Referenced by RInside::init_tempdir(), and RInside::initialize().

7.80 src/tools/RInsideAutoloads.r File Reference

7.81 src/tools/RInsideEnvVars.r File Reference

7.82 src/tools/unix2dos.r File Reference

