

KARLSRUHE INSTITUTE OF TECHNOLOGY

SOFTWARE ENGINEERING PRACTICE

WINTER TERM 2015/2016

rootJS

Node.js bindings for ROOT 6

Jonas Schwabe

Theo Beffart

Sachin Rajgopal

Christoph Wolff

Christoph Haas

Maximilian Früh

supervised by
Dr. Marek SZUBA

Contents

1	CallbackHandler	2
1.1	ctorCallback	2
1.2	staticCtorCallback	3
1.3	memberGetterCallback	4
1.4	memberSetterCallback	5
1.5	memberFunctionCallback	6
1.6	staticGetterCallback	7
1.7	staticSetterCallback	8
1.8	staticFunctionCallback	9
2	NodeHandler	10
2.1	getExports	10
3	NodeApplication	11
3.1	NodeApplication	11
4	TemplateFactory	12
4.1	createTemplate	12
5	Proxy	13
5.1	Proxy	13
5.2	setAddress	14
5.3	getAddress	15
5.4	getType	16
5.5	getScope	17
5.6	isGlobal	18
5.7	isTemplate	19
5.8	isConst	20
5.9	isStatic	21
6	ProxyFunctionFactory	22
6.1	createProxyFunction	22
6.2	fromArgs	23
7	ProxyFunction	24
7.1	getCallFunc	24
7.2	getMethodsFromName	25
7.3	ProxyFunction	26
7.4	getType	27
7.5	validateArgs	28
7.6	call	29
8	ProxyObjectFactory	30
8.1	createProxyObject	30
9	ProxyObject	31
9.1	ProxyObject	31
9.2	getType	32
9.3	set	33
9.4	get	34
9.5	setProxy	35
9.6	getProxy	36
9.7	isPrimitive	37

1. CallbackHandler

describe class CallbackHandler here

1.1. ctorCallback

<i>Name</i>	<code>CallbackHandler::ctorCallback(args: FunctionCallbackInfo<Value>)</code>
<i>Visibility</i>	<code>public</code>
<i>Parameters</i>	<code>args: FunctionCallbackInfo<Value></code>
<i>Return value</i>	<code>none</code>
<i>behavior</i>	describe beahviour

1.2. staticCtorCallback

<i>Name</i>	<code>CallbackHandler::staticCtorCallback(args: FunctionCallbackInfo<Value>)</code>
<i>Visibility</i>	<code>public</code>
<i>Parameters</i>	<code>args: FunctionCallbackInfo<Value></code>
<i>Return value</i>	<code>none</code>
<i>behavior</i>	describe beahviour

1.3. memberGetterCallback

<i>Name</i>	<code>CallbackHandler::memberGetterCallback(property: Local<String>, info: PropertyCallbackInfo<Value>)</code>
<i>Visibility</i>	<code>public</code>
<i>Parameters</i>	<code>property: Local<String>, info: PropertyCallbackInfo<Value></code>
<i>Return value</i>	<code>none</code>
<i>behavior</i>	describe beahviour

1.4. memberSetterCallback

<i>Name</i>	<code>CallbackHandler::memberSetterCallback(property: Local<String>, value: Local<Value>, info: PropertyCallbackInfo<Value>)</code>
<i>Visibility</i>	<code>public</code>
<i>Parameters</i>	<code>property: Local<String>, value: Local<Value>, info: PropertyCallbackInfo<Value></code>
<i>Return value</i>	<code>none</code>
<i>behavior</i>	describe beahviour

1.5. memberFunctionCallback

<i>Name</i>	<code>CallbackHandler::memberFunctionCallback(args: FunctionCallbackInfo<Value>)</code>
<i>Visibility</i>	<code>public</code>
<i>Parameters</i>	<code>args: FunctionCallbackInfo<Value></code>
<i>Return value</i>	<code>none</code>
<i>behavior</i>	describe beahviour

1.6. staticGetterCallback

<i>Name</i>	<code>CallbackHandler::staticGetterCallback(property: Local<String>, info: PropertyCallbackInfo<Value>)</code>
<i>Visibility</i>	<code>public</code>
<i>Parameters</i>	<code>property: Local<String>, info: PropertyCallbackInfo<Value></code>
<i>Return value</i>	<code>none</code>
<i>behavior</i>	describe beahviour

1.7. staticSetterCallback

<i>Name</i>	<code>CallbackHandler::staticSetterCallback(property: Local<String>, value: Local<Value>, info: PropertyCallbackInfo<Value>)</code>
<i>Visibility</i>	<code>public</code>
<i>Parameters</i>	<code>property: Local<String>, value: Local<Value>, info: PropertyCallbackInfo<Value></code>
<i>Return value</i>	<code>none</code>
<i>behavior</i>	describe beahviour

1.8. staticFunctionCallback

<i>Name</i>	<code>CallbackHandler::staticFunctionCallback(args: FunctionCallbackInfo<Value>)</code>
<i>Visibility</i>	<code>public</code>
<i>Parameters</i>	<code>args: FunctionCallbackInfo<Value></code>
<i>Return value</i>	<code>none</code>
<i>behavior</i>	describe beahviour

2. NodeHandler

describe class NodeHandler here

2.1. getExports

<i>Name</i>	NodeHandler::getExports()
<i>Visibility</i>	public
<i>Parameters</i>	none
<i>Return value</i>	Local<Object> describe return value
<i>behavior</i>	describe beahviour

3. NodeApplication

describe class NodeApplication here

3.1. NodeApplication

<i>Name</i>	NodeApplication::NodeApplication(acn: char*, argc: int*, argv: char**)
<i>Visibility</i>	public
<i>Parameters</i>	acn: char*, argc: int*, argv: char**
<i>Return value</i>	« constructor » describe return value
<i>behavior</i>	describe beahviour

4. TemplateFactory

describe class TemplateFactory here

4.1. createTemplate

<i>Name</i>	TemplateFactory::createTemplate(clazz: TClassRef)
<i>Visibility</i>	public
<i>Parameters</i>	clazz: TClassRef
<i>Return value</i>	Local<FunctionTemplate> describe return value
<i>behavior</i>	describe beahviour

5. Proxy

describe class Proxy here

5.1. Proxy

<i>Name</i>	Proxy::Proxy(address: void*, type: TObject, scope: TClassRef)
<i>Visibility</i>	protected
<i>Parameters</i>	address: void*, type: TObject, scope: TClassRef
<i>Return value</i>	« constructor » describe return value
<i>behavior</i>	describe beahviour

5.2. setAddress

<i>Name</i>	<code>Proxy::setAddress(address: void*)</code>
<i>Visibility</i>	<code>public</code>
<i>Parameters</i>	<code>address: void*</code>
<i>Return value</i>	none
<i>behavior</i>	describe beahviour

5.3. getAddress

<i>Name</i>	<code>Proxy::getAddress()</code>
<i>Visibility</i>	<code>public</code>
<i>Parameters</i>	<code>none</code>
<i>Return value</i>	void* describe return value
<i>behavior</i>	describe beahviour

5.4. getType

<i>Name</i>	<code>Proxy::getType()</code>
<i>Visibility</i>	public
<i>Parameters</i>	none
<i>Return value</i>	TObject describe return value
<i>behavior</i>	describe beahviour

5.5. getScope

<i>Name</i>	<code>Proxy::getScope()</code>
<i>Visibility</i>	public
<i>Parameters</i>	none
<i>Return value</i>	TClassRef describe return value
<i>behavior</i>	describe beahviour

5.6. isGlobal

<i>Name</i>	<code>Proxy::isGlobal()</code>
<i>Visibility</i>	public
<i>Parameters</i>	<i>none</i>
<i>Return value</i>	bool describe return value
<i>behavior</i>	describe beahviour

5.7. isTemplate

<i>Name</i>	<code>Proxy::isTemplate()</code>
<i>Visibility</i>	public
<i>Parameters</i>	none
<i>Return value</i>	bool describe return value
<i>behavior</i>	describe beahviour

5.8. isConst

<i>Name</i>	<code>Proxy::isConst()</code>
<i>Visibility</i>	<code>public</code>
<i>Parameters</i>	<code>none</code>
<i>Return value</i>	<code>bool</code> describe return value
<i>behavior</i>	describe beahviour

5.9. isStatic

<i>Name</i>	<code>Proxy::isStatic()</code>
<i>Visibility</i>	public
<i>Parameters</i>	none
<i>Return value</i>	bool describe return value
<i>behavior</i>	describe beahviour

6. ProxyFunctionFactory

describe class ProxyFunctionFactory here

6.1. createProxyFunction

<i>Name</i>	ProxyFunctionFactory::createProxyFunction(function: TFunction, scope: TClassRef)
<i>Visibility</i>	public
<i>Parameters</i>	<i>function: TFunction, scope: TClassRef</i>
<i>Return value</i>	ProxyFunciton describe return value
<i>behavior</i>	describe beahviour

6.2. fromArgs

<i>Name</i>	<code>ProxyFunctionFactory::fromArgs(name: string, scope: TClassRef, args: FunctionCallbackInfo)</code>
<i>Visibility</i>	public
<i>Parameters</i>	<i>name: string, scope: TClassRef, args: FunctionCallbackInfo</i>
<i>Return value</i>	ProxyFunction describe return value
<i>behavior</i>	describe beahviour

7. ProxyFunction

describe class ProxyFunction here

7.1. getCallFunc

<i>Name</i>	ProxyFunction::getCallFunc(method: TFunction*)
<i>Visibility</i>	public
<i>Parameters</i>	method: TFunction*
<i>Return value</i>	CallFunc* describe return value
<i>behavior</i>	describe beahviour

7.2. getMethodsFromName

<i>Name</i>	<code>ProxyFunction::getMethodsFromName(scope: TClassRef, name: string)</code>
<i>Visibility</i>	public
<i>Parameters</i>	<i>scope: TClassRef, name: string</i>
<i>Return value</i>	vector<TFunction*> describe return value
<i>behavior</i>	describe beahviour

7.3. ProxyFunction

<i>Name</i>	ProxyFunction::ProxyFunction(address: void*, function: TFunction, scope: TClassRef)
<i>Visibility</i>	public
<i>Parameters</i>	address: void*, function: TFunction, scope: TClassRef
<i>Return value</i>	« constructor » describe return value
<i>behavior</i>	describe beahviour

7.4. getType

<i>Name</i>	<code>ProxyFunction::getType()</code>
<i>Visibility</i>	public
<i>Parameters</i>	<i>none</i>
<i>Return value</i>	TFunction describe return value
<i>behavior</i>	describe beahviour

7.5. validateArgs

<i>Name</i>	<code>ProxyFunction::validateArgs(args: FunctionCallbackInfo)</code>
<i>Visibility</i>	public
<i>Parameters</i>	<i>args: FunctionCallbackInfo</i>
<i>Return value</i>	ProxyObject[] describe return value
<i>behavior</i>	describe beahviour

7.6. call

<i>Name</i>	<code>ProxyFunction::call(args: ProxyObject[])</code>
<i>Visibility</i>	public
<i>Parameters</i>	<i>args: ProxyObject[]</i>
<i>Return value</i>	ProxyObject describe return value
<i>behavior</i>	describe beahviour

8. ProxyObjectFactory

describe class ProxyObjectFactory here

8.1. createProxyObject

<i>Name</i>	ProxyObjectFactory::createProxyObject(type: TDataMember, scope: TClassRef, holder: ProxyObject)
<i>Visibility</i>	public
<i>Parameters</i>	<i>type: TDataMember, scope: TClassRef, holder: ProxyObject</i>
<i>Return value</i>	ProxyObject describe return value
<i>behavior</i>	describe beahviour

9. ProxyObject

describe class ProxyObject here

9.1. ProxyObject

<i>Name</i>	ProxyObject::ProxyObject(type: TDataMember, scope: TClassRef)
<i>Visibility</i>	public
<i>Parameters</i>	type: TDataMember, scope: TClassRef
<i>Return value</i>	« constructor » describe return value
<i>behavior</i>	describe beahviour

9.2. getType

<i>Name</i>	<code>ProxyObject::getType()</code>
<i>Visibility</i>	public
<i>Parameters</i>	<i>none</i>
<i>Return value</i>	TDataMember describe return value
<i>behavior</i>	describe beahviour

9.3. set

<i>Name</i>	<code>ProxyObject::set(value: ProxyObject)</code>
<i>Visibility</i>	public
<i>Parameters</i>	<i>value: ProxyObject</i>
<i>Return value</i>	none
<i>behavior</i>	describe beahviour

9.4. get

<i>Name</i>	<code>ProxyObject::get()</code>
<i>Visibility</i>	public
<i>Parameters</i>	<i>none</i>
<i>Return value</i>	Local <Value> describe return value
<i>behavior</i>	describe beahviour

9.5. setProxy

<i>Name</i>	<code>ProxyObject::setProxy(proxy: Local<Object>)</code>
<i>Visibility</i>	public
<i>Parameters</i>	<i>proxy</i> : <i>Local<Object></i>
<i>Return value</i>	none
<i>behavior</i>	describe beahviour

9.6. getProxy

<i>Name</i>	<code>ProxyObject::getProxy()</code>
<i>Visibility</i>	public
<i>Parameters</i>	<i>none</i>
<i>Return value</i>	Local < Object > describe return value
<i>behavior</i>	describe beahviour

9.7. isPrimitive

<i>Name</i>	<code>ProxyObject::isPrimitive()</code>
<i>Visibility</i>	public
<i>Parameters</i>	<i>none</i>
<i>Return value</i>	bool describe return value
<i>behavior</i>	describe beahviour