# WebJavaPlugIn Protocol Reference

**Networking, Internet, & Web: Web Client**

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# WebJavaPlugIn Protocol Reference

(informal protocol)

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| | |
|---|---|
| **Framework** | /System/Library/Frameworks/WebKit.framework |
| **Availability** | Available in Mac OS X v10.3.9 and later. |
| **Companion guide** | WebKit Objective-C Programming Guide |
| **Declared in** | WebJavaPlugIn.h |

## Overview

The `WebJavaPlugIn` protocol provides methods to facilitate JNI access to the Java virtual machine via the plug-in.

## Tasks

### Getting and Setting Java Applets

`- webPlugInCallJava:isStatic:returnType:method:arguments:callingURL:exceptionDescription:` (page 5)

Sends a message directly to a Java object in a plug-in.

`- webPlugInGetApplet` (page 6)

Returns a `jobject` that represents a Java applet in a `WebPlugInContainer`.

## Instance Methods

### webPlugInCallJava:isStatic:returnType:method:arguments:callingURL:exceptionDescription:

Sends a message directly to a Java object in a plug-in.

```
- (jvalue)webPlugInCallJava:(jobject)object isStatic:(BOOL)isStatic returnType:(WebJNIReturnType)returnType method:(jmethodID)method arguments:(jvalue *)args callingURL:(NSURL *)url exceptionDescription:(NSString **)exceptionString
```


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**Parameters**

*object*
The Java instance receiving the message.

*isStatic*
If YES, *method* is expected to be a class method.

*returnType*
The return type of the Java method.

*method*
The Java method being called.

*args*
The arguments for the method specified by method.

*url*
The URL for the page that contains the JavaScript that is interacting with Java.

*exceptionString*
A string for describing any exceptions thrown by Java. Pass nil if you do not want an exception description.

**Return Value**
The return value of the Java method.

**Discussion**
This method is preferred over using JNI to send messages to Java applets, and is required to guarantee the correct thread will receive the message. Always invoke this method from within the main thread.

**Availability**
Available in Mac OS X v10.3.9 and later.

**See Also**
- webPlugInGetApplet (page 6)

**Declared In**
WebJavaPlugIn.h

## webPlugInGetApplet

Returns a jobject that represents a Java applet in a WebPlugInContainer.

```
- (jobject)webPlugInGetApplet
```

**Return Value**
A jobject that represents the applet.

**Discussion**
Always invoke this method from within the main thread.

**Availability**
Available in Mac OS X v10.3.9 and later.

**See Also**
- webPlugInCallJava:isStatic:returnType:method:arguments:callingURL:exceptionDescription: (page 5)


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**Declared In**
`WebJavaPlugIn.h`

# Constants

## WebJNIReturnType

The return type of the Java method.

```
typedef enum {
    WebJNIReturnTypeInvalid = 0,
    WebJNIReturnTypeVoid,
    WebJNIReturnTypeObject,
    WebJNIReturnTypeBoolean,
    WebJNIReturnTypeByte,
    WebJNIReturnTypeChar,
    WebJNIReturnTypeShort,
    WebJNIReturnTypeInt,
    WebJNIReturnTypeLong,
    WebJNIReturnTypeFloat,
    WebJNIReturnTypeDouble
} WebJNIReturnType;
```

**Constants**

`WebJNIReturnTypeInvalid`
The return type is invalid.
Available in Mac OS X v10.3 and later.
Declared in `WebJavaPlugIn.h`.

`WebJNIReturnTypeVoid`
The return type is void.
Available in Mac OS X v10.3 and later.
Declared in `WebJavaPlugIn.h`.

`WebJNIReturnTypeObject`
The return type is an object.
Available in Mac OS X v10.3 and later.
Declared in `WebJavaPlugIn.h`.

`WebJNIReturnTypeBoolean`
The return type is a Boolean value.
Available in Mac OS X v10.3 and later.
Declared in `WebJavaPlugIn.h`.

`WebJNIReturnTypeByte`
The return type is a `byte` value.
Available in Mac OS X v10.3 and later.
Declared in `WebJavaPlugIn.h`.


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`WebJNIReturnTypeChar`
The return type is a `char` value.

Available in Mac OS X v10.3 and later.

Declared in `WebJavaPlugIn.h`.

`WebJNIReturnTypeShort`
The return type is a `short` value.

Available in Mac OS X v10.3 and later.

Declared in `WebJavaPlugIn.h`.

`WebJNIReturnTypeInt`
The return type is an `int` value.

Available in Mac OS X v10.3 and later.

Declared in `WebJavaPlugIn.h`.

`WebJNIReturnTypeLong`
The return type is a `long` value.

Available in Mac OS X v10.3 and later.

Declared in `WebJavaPlugIn.h`.

`WebJNIReturnTypeFloat`
The return type is a `float` value.

Available in Mac OS X v10.3 and later.

Declared in `WebJavaPlugIn.h`.

`WebJNIReturnTypeDouble`
The return type is a `double` value.

Available in Mac OS X v10.3 and later.

Declared in `WebJavaPlugIn.h`.


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# Document Revision History

This table describes the changes to *WebJavaPlugIn Protocol Reference*.

| Date | Notes |
| --- | --- |
| 2010-02-24 | Made minor changes throughout. |
| 2009-07-23 | Minor edits throughout. |
| 2009-04-08 | Added separate parameter and return-value descriptions. |
| 2006-05-23 | First publication of this content as a separate document. |



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Document Revision History



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