

---

# WebObjects 5.4 Release Notes



2007-12-11



Apple Inc.  
© 2007 Apple Inc.  
All rights reserved.

No part of this publication may be reproduced, stored in a retrieval system, or transmitted, in any form or by any means, mechanical, electronic, photocopying, recording, or otherwise, without prior written permission of Apple Inc., with the following exceptions: Any person is hereby authorized to store documentation on a single computer for personal use only and to print copies of documentation for personal use provided that the documentation contains Apple's copyright notice.

The Apple logo is a trademark of Apple Inc.

Use of the "keyboard" Apple logo (Option-Shift-K) for commercial purposes without the prior written consent of Apple may constitute trademark infringement and unfair competition in violation of federal and state laws.

No licenses, express or implied, are granted with respect to any of the technology described in this document. Apple retains all intellectual property rights associated with the technology described in this document. This document is intended to assist application developers to develop applications only for Apple-labeled computers.

Every effort has been made to ensure that the information in this document is accurate. Apple is not responsible for typographical errors.

Apple Inc.  
1 Infinite Loop  
Cupertino, CA 95014  
408-996-1010

Apple, the Apple logo, Cocoa, Leopard, Mac, Mac OS, Tiger, WebObjects, and Xcode are trademarks of Apple Inc., registered in the United States and other countries.

Java and all Java-based trademarks are trademarks or registered trademarks of Sun Microsystems, Inc. in the U.S. and other countries.

Simultaneously published in the United States and Canada.

**Even though Apple has reviewed this document, APPLE MAKES NO WARRANTY OR REPRESENTATION, EITHER EXPRESS OR IMPLIED, WITH RESPECT TO THIS DOCUMENT, ITS QUALITY, ACCURACY, MERCHANTABILITY, OR FITNESS FOR A PARTICULAR PURPOSE. AS A RESULT, THIS DOCUMENT IS**

**PROVIDED "AS IS," AND YOU, THE READER, ARE ASSUMING THE ENTIRE RISK AS TO ITS QUALITY AND ACCURACY.**

**IN NO EVENT WILL APPLE BE LIABLE FOR DIRECT, INDIRECT, SPECIAL, INCIDENTAL, OR CONSEQUENTIAL DAMAGES RESULTING FROM ANY DEFECT OR INACCURACY IN THIS DOCUMENT, even if advised of the possibility of such damages.**

**THE WARRANTY AND REMEDIES SET FORTH ABOVE ARE EXCLUSIVE AND IN LIEU OF ALL OTHERS, ORAL OR WRITTEN, EXPRESS OR IMPLIED. No Apple dealer, agent, or employee is authorized to make any modification, extension, or addition to this warranty.**

**Some states do not allow the exclusion or limitation of implied warranties or liability for incidental or consequential damages, so the above limitation or exclusion may not apply to you. This warranty gives you specific legal rights, and you may also have other rights which vary from state to state.**

# Contents

**Introduction**      **Introduction to WebObjects 5.4 Release Notes** 5

---

Who Should Read This Document? 6

Organization of This Document 6

See Also 7

**Chapter 1**      **Known and Resolved Issues** 9

---

EOF 9

WebObjects (new bugs) 12

WOExamples 13

WOF 14

WOFoundation 19

**Document Revision History** 23

---



# Introduction to WebObjects 5.4 Release Notes

---

WebObjects 5.4 for Mac OS X v10.5 is an application server with tools, technologies, and capabilities to create Internet and intranet applications. It has an object-oriented architecture that promotes quick development of reusable web components. WebObjects is extremely scalable and supports high transaction volumes. These release notes describe the improvements and changes made to both the developer and deployment versions of WebObjects 5.4.

## WebObjects 5.4 for Mac OS X v10.5

With this release of WebObjects are the following improvements, changes, additions, and deprecated tools and technologies.

### WebObjects Runtime Improvements

- Combined Component Template Parser that reduces .wo components to single .html files
- Generation of XHTML compliant pages
- AJAX request handler for enhanced page caching
- Added support for secure URL generation
- JMX monitoring support
- Entity index management in the model
- Improved the synchronization with the database
- Added support for index generation
- Support for enum in attribute conversion
- Improved support for vendor specific prototypes (EOJDBCOraclePrototype, EOJDBCFrontBasePrototype, etc.)
- Derby support (Embedded database)
- Support for Generics
- WebServices update (Axis 1.4)
- Full support for Apple XML plist (Read and Write)
- Ant build support

### Open Specifications

- EOModels
- WO Components (classic and single file)

## INTRODUCTION

### Introduction to WebObjects 5.4 Release Notes

#### Sample code

- JavaMonitor
- EOF utilities

#### WebObjects Deployment

- WebObjects Apache 2.2 module 32/64 bit
- Apache 1.3 deployment compatibility
- Leopard migration assistant from Apache 1.3 to Apache 2.2

#### JDK support

- JDK 1.5 minimum requirement

#### Build System

- Jam build systems still in place for legacy Xcode projects
- Ant build system support

#### Deprecations

- Jam based project creation templates
- Java Client Nib based applications
- Direct to JavaClient based applications
- EOCocoaClient based applications
- OpenBase no longer example database
- Tools (EOModeler, WebObjects Builder, Rule editor)

## Who Should Read This Document?

Any developer who wants to develop and deploy WebObjects applications should read this document as various issues and fixes found in this release may affect your application. Anyone interested in new WebObjects development should also read this document for the most current information on new features and outstanding issues with WebObjects 5.4.

## Organization of This Document

This document contains the following chapter:

- [“Known and Resolved Issues”](#) (page 9) highlights a selection of high-visibility bugs that have been addressed in this release. This chapter is broken down by the category where the bug occurs and provides a brief description of what the issue was and how it was resolved.

## INTRODUCTION

### Introduction to WebObjects 5.4 Release Notes

This document also contains a revision history.

## See Also

The Following WebObjects documents may be helpful:

- *WebObjects Overview*
- *WebObjects Deployment Guide Using JavaMonitor*
- *WebObjects 5.4 Reference*
- *WebObjects File Format Reference*
- *WebObjects Application Properties Reference*

## INTRODUCTION

### Introduction to WebObjects 5.4 Release Notes

# Known and Resolved Issues

---

This chapter lists high-visibility bugs that have been addressed in this release. It is not a complete listing of all of the bugs addressed. If you still have issues with any of these bugs, please file a new bug at <http://bugreport.apple.com/> under the WebObjects (new bugs) component, version X. Refer to the bug number indicated below in your new bug if you believe it is the same issue.

## EOF

### Radar #3166073

---

EOEditingContext throws exception when serializing with a substitution editing context

**Description:**

EOEditingContext throws exception when serializing with a substitution editing context. Exception: java.lang.NullPointerException java.lang.NullPointerException at com.webobjects.eocontrol.EOEditingContext.\_updateUnprocessedOwnDestinations(EOEditingContext.java:1579) at com.webobjects.eocontrol.EOEditingContext.readObject(EOEditingContext.java:5277) at java.lang.reflect.Method.invoke(Native Method) at java.io.ObjectInputStream.invokeObjectReader(ObjectInputStream.java:2209) at java.io.ObjectInputStream.inputObject(ObjectInputStream.java:1406) at java.io.ObjectInputStream.readObject(ObjectInputStream.java:381) at java.io.ObjectInputStream.readObject(ObjectInputStream.java:231)

**Workaround:**

This issue has been resolved.

### Radar #3185918

---

EOAttribute.encodeIntoPropertyList return an incorrect result

**Description:**

EOFactoryMethodArgumentIsNSString is not encoded properly for EOAttributes and therefore does not decode properly.

**Workaround:**

This issue has been resolved.

### Radar #3736313

---

When prefetching multiple keypaths it is possible to have the snapshots of some forgotten

**Description:**

When prefetching a toMany.toOne all of the toMany objects have deferred faults for all of their toOne relationships. This means that right after the prefetch they will all be forgotten because a reference is not being maintained to them.

**Workaround:**

This issue has been resolved.

**Radar #4307025**

---

`_EOCheapCopyMutableArray.iterator()` in doesn't fault array

**Description:**

`_EOCheapCopyMutableArray.iterator()` was not calling `willRead()` correctly and not faulting the array.

**Workaround:**

This issue has been resolved.

**Radar #4315827**

---

`EOEditingContext reset()` can throw `ArrayIndexOutOfBoundsException`

**Description:**

`EOEditingContext reset()` can throw `ArrayIndexOutOfBoundsException`

`java.lang.ArrayIndexOutOfBoundsException: at  
com.webobjects.foundation._NSCollectionEnumerator.nextElement(_NSCollectionEnumerator.java:34) at  
com.webobjects.eocontrol.EOEditingContext.reset(EOEditingContext.java:983) at  
com.apple.store.foundation.ASEOUTilities.releaseConcurrentEditingContext(ASEOUTilities.java:689) at  
ReviewHandler.getReviewsHandler(ReviewHandler.java:352) at  
sun.reflect.GeneratedMethodAccessor133.invoke(Unknown Source) at  
sun.reflect.DelegatingMethodAccessorImpl.invoke(DelegatingMethodAccessorImpl.java:25) at  
java.lang.reflect.Method.invoke(Method.java:324) at  
com.apple.store.service.server.DispatchRequestHandler.handleRequestForMethodName(DispatchRequestHandler.java:258)  
at com.apple.store.service.server.DispatchRequestHandler.handleRequest(DispatchRequestHandler.java:160)  
at  
com.apple.store.service.server.transport.directAction.DirectActionServiceRequestHandler.handleRequest(DirectActionServiceRequestHandler.java:102)  
at com.webobjects.appserver.WOApplication.dispatchRequest(WOApplication.java:1306) at  
com.apple.store.webobjects.ASWOApplication.dispatchRequest(ASWOApplication.java:247) at  
com.webobjects.appserver._private.WOWorkerThread.runOnce(WOWorkerThread.java:173) at  
com.webobjects.appserver._private.WOWorkerThread.run(WOWorkerThread.java:254) at  
java.lang.Thread.run(Thread.java:552)`

**Workaround:**

This issue has been resolved.

**Radar #4332411**

---

Empty "object" and "key" attributes in `NSValidation.ValidationException` instance

**Description:**

Empty "object" and "key" parameters when NSValidation.ValidationException are thrown from EOAccess.

**Workaround:**

This issue has been resolved.

---

**Radar #4558771**

Prefetching across a flattened many-to-many is  $O(n^2)$

**Description:**

EODatabaseContext was resolving many-to-many relationships very inefficiently.

**Workaround:**

This issue has been resolved.

---

**Radar #4746723**

ResultSet already closed exception when using jboss-4.0.4.GA

**Description:**

JDBCChannel was improperly closing it's ResultSet and causing problems in some J2EE containers.

**Workaround:**

This issue has been resolved.

---

**Radar #4912079**

Exception when executing stored procedure with Oracle 10g drivers

**Description:**

The Oracle JDBC drivers are throwing an exception upon setting one of the parameters to null.

**Workaround:**

This issue has been resolved.

---

**Radar #5036944**

Add a EODatabase class delegate to allow easy subclassing

**Description:**

Through the class delegate, EODatabase can be subclassed or overridden. See the WebObjects 5.4 API reference for more information.

**Workaround:**

This issue has been resolved.

**Radar #5071025**

---

NullPointerException with EOAttribute missing "external type"

**Description:**

NullPointerException with EOAttribute missing "external type."

**Workaround:**

This issue is resolved.

**Radar #5084084**

---

Enhance EOF prototyping support

**Description:**

Enhance EOModel prototyping support to make it recognize the Database Management System used just like it does with the plugin support.

**Workaround:**

This has been fixed in WebObjects 5.4.

**Radar #5084089**

---

Setting EOAttribute's prototype also clear properties undefined in prototype

**Description:**

When setting or changing prototype of a com.webobjects.eoaccess.EOAttribute class instance using the setPrototype(EOAttribute) method, all prototype properties are copied, and unset properties in the prototype are reset. This problem occurs in EOModeler as well.

**Workaround:**

This has been fixed in WebObjects 5.4.

## WebObjects (new bugs)

**Radar #5450176**

---

Custom subclasses of WORequest do not load when they were loading fine in WO 5.3.x

**Description:**

This is not a regression but a change in the API. The new API is: public WORequest createRequest(String aMethod, String aURL, String anHTTPVersion, Map<String, ? extends List<String>> someHeaders, NSData aContent, Map<String, Object> someInfo). The old API does not get called.

**Workaround:**

Change the application code.

### **Radar #5462874**

---

The line referencing WebObjects adaptor is removed from default Leopard client apache configuration file.

**Description:**

The line in Tiger version of default Apache configuration (/etc/httpd/httpd.conf) that used to be uncommented to enable WO adaptor is not moved to the default Leopard client Apache configuration (/etc/apache2/httpd.conf).

**Workaround:**

Insert the following line: Include /System/Library/WebObjects/Adaptors/Apache2.2/apache.conf and comment out last two lines inside the <Directory> directive. <Directory /> Options FollowSymLinks AllowOverride None Order deny,allow Deny from all </Directory>

### **Radar #5509247**

---

The JBoss Application Server is removed in Mac OS X Server v10.5

**Description:**

The JBoss Application Server is no longer part of the Mac OS X Server v10.5 software distribution.

**Workaround:**

Before you can restore your JBoss applications, you must install JBoss on your server. WebObjects 5.4 on Mac OS X v10.5 can be used to create WAR bundle that are compatible for deployment on JBoss.

## WOExamples

### **Radar #5258077**

---

Loading example database with installDatabases.sh may not cause some problems with UTF 8 data.

**Description:**

The script that loads WO example database does not specify database encoding which may cause some problems with UTF 8 characters.

**Workaround:**

add -Dderby.ui.codeset=UTF8 in line 55.

### **Radar #5305505**

---

Eclipse Plugin Bookmarks for 3.2 contains outdated URL for WOLips

**Description:**

We provided Eclipse plugin bookmarks that developers can import to set up Eclipse for WO development transition from XCode. These URLs in the bookmarks are not up to date.

**Resolution:**

Note to add that /Developer/Examples/JavaWebObjects/Eclipse/Eclipse3.2\_bookmarks.xml, Eclipse3.3\_bookmarks.xml may contain URLs that have been changed more recently.

## WOF

### **Radar #2972048**

---

Use UTF-8 as default URL and content encoding

**Description:**

Use UTF-8 as default URL and content encoding instead of ISO\_Latin.

**Workaround:**

This issue has been resolved.

### **Radar #3236984**

---

WOHTMLDynamicElement is not threadsafe

**Description:**

WOHTMLDynamicElement is not threadsafe.

**Workaround:**

This issue has been resolved.

### **Radar #3325342**

---

WO Dynamic Elements should handle java.util.Collection classes

**Description:**

WO Dynamic Elements should handle java.util.Collection classes.

**Workaround:**

This issue has been resolved.

### **Radar #3502565**

---

Deadlock if Session.sleep() Throws

**Description:**

Deadlock if Session.sleep() Throws.

**Workaround:**

This issue has been resolved.

### **Radar #3566460**

---

Race condition in stateless component action handling

**Description:**

Race condition in stateless component action handling.

**Workaround:**

This issue has been resolved.

### **Radar #4186886**

---

Direct action handler doesn't check in sessions on some errors

**Description:**

Problem is that if the `handleActionRequestError()` method returns a response, and the session was checked out, it will fail to be checked back in. This doesn't occur in the case where that returns null (the default implementation).

**Workaround:**

This issue has been resolved.

### **Radar #4387899**

---

WOURLenCoder improperly uses encoded ampersand to join form values

**Description:**

WOURLenCoder improperly uses encoded ampersand to join form values.

**Workaround:**

This issue has been resolved.

### **Radar #4390726**

---

Application's `terminate()` method not called when deployed as Servlet

**Description:**

Application's `terminate()` method not called when deployed as Servlet.

**Workaround:**

This issue has been resolved.

### **Radar #4585163**

---

Files with special name are not correctly parsed by WOFileUpload

**Description:**

Files with using special characters, such as double quotes, sometimes are not correctly parsed by WOFileUpload.

**Workaround:**

This issue has been resolved.

**Radar #4806504**

---

Direct Connect HTTP Server Does Not Serve 3GPP MIME Types, ICS, JSON and CSV

**Description:**

Direct Connect HTTP Server Does Not Serve 3GPP MIME Types, ICS, JSON and CSV.

**Workaround:**

This issue has been resolved.

**Radar #4895782**

---

WOHyperlink doesn't entity escape '&' in the query string for direct action URLs

**Description:**

WOHyperlink doesn't entity escape '&' in the query string for direct action URLs.

**Workaround:**

This issue has been resolved.

**Radar #4905602**

---

WOMessage's userInfo should be mutable

**Description:**

WOMessage's userInfo should be mutable.

**Workaround:**

This issue has been resolved.

**Radar #4905610**

---

WOContext should have a userInfo

**Description:**

WOContext should have a userInfo.

**Workaround:**

This issue has been resolved.

**Radar #4907787**

---

WOMessage array list does not work

**Description:**

WOMessage array list does not work.

**Workaround:**

This issue has been resolved.

---

**Radar #4920535**

WOHyperlink should support escapeHTML binding

**Description:**

WOHyperlink should support escapeHTML binding.

**Workaround:**

This issue has been resolved.

---

**Radar #4950883**

Form encoding error when passing additional bindings in an action

**Description:**

Form encoding error when passing additional bindings in an action.

**Workaround:**

This issue has been resolved.

---

**Radar #4966906**

Improve error message in WComponent.handleTakeValueForUnboundKey

**Description:**

Error message in WComponent.handleTakeValueForUnboundKey should print out component name.

**Workaround:**

This issue has been resolved.

---

**Radar #4977246**

WOXMLDecoder is not thread-safe

**Description:**

WOXMLDecoder is not thread-safe.

**Workaround:**

This issue has been resolved.

### **Radar #5077806**

---

Component URL does not generate secure URL

**Description:**

Component URL does not generate secure URL.

**Workaround:**

This issue has been resolved.

### **Radar #5112161**

---

WebObjects apps should report version number it's running against

**Description:**

WebObjects apps log the version of WO it is running against and there is also access through API.

**Workaround:**

This issue has been resolved.

### **Radar #5121520**

---

WOGenericElement and WOGenericContainer eat class/id/style/title bindings

**Description:**

With the changes to WOHTMLDynamicElement to more generally support CSS bindings, WOGenericElement/WOGenericContainer got broken. The CSS bindings are output from the `_appendClassAndIdToResponse()` method, which is called from `appendAttributesToResponse()`. That method is overridden in WOGenericElement, and does not call through to `_appendClassAndIdToResponse()`.

**Workaround:**

This has been fixed in WebObjects 5.4.

### **Radar #5129818**

---

NSKeyValueCoding.Null objects should be evaluated as false boolean value in Associations

**Description:**

Associations returning NSKeyValueCoding.Null were evaluated to true, they are now correctly evaluated as false.

**Workaround:**

This issue has been resolved.

### **Radar #5168349**

---

Character escaping in the URI href attributes

**Description:**

WebObjects will respect the W3C specification as listed below:

<http://www.w3.org/TR/1998/REC-html40-19980424/appendix/notes.html#h-B.2.2> B.2.2 Ampersands in URI attribute values The URL that is constructed when a form is submitted may be used as an anchor-style link (e.g., the href attribute for the A element). Unfortunately, the use of the "&" character to separate form fields interacts with its use in SGML attribute values to delimit character entity references. For example, to use the URI "http://host/?x=1&y=2" as a linking URI, it must be written <A href="http://host/?x=1&#38;y=2"> or <A href="http://host/?x=1&amp;y=2">. We recommend that HTTP server implementors, and in particular, CGI implementors support the use of ";" in place of "&" to save authors the trouble of escaping "&" characters in this manner.

**Workaround:**

This issue has been resolved.

## WOFoundation

**Radar #4099547**

---

NSMultiReaderLock performance degradation on MP hardware

**Description:**

WO is now using the java concurrency stack for threading.

**Workaround:**

This issue has been resolved.

**Radar #4184981**

---

Documentation incorrect in NSCoder javadoc

**Description:**

Documentation incorrect in NSCoder javadoc.

**Workaround:**

This issue has been resolved.

**Radar #4840499**

---

NSArray.toArray(Object[]) is terribly broken

**Description:**

Object[] NSArray.toArray(Object[] objects) appends the passed in objects array to the internal object array. The contract for this method as defined by java.util.Collections is that if an Object array is passed in, the internal objects will be copied INTO that array.

**Workaround:**

This issue has been resolved.

### **Radar #4885778**

---

Fix mutable in NS\* collections: implement mutators

**Description:**

Fix mutable in NS\* collections: implement mutators.

**Workaround:**

This issue has been resolved.

### **Radar #4886013**

---

NSArray constructor should take Collection

**Description:**

NSArray constructor should take Collection.

**Workaround:**

This issue has been resolved.

### **Radar #4886462**

---

NSForwardException should use standard java exception chaining

**Description:**

NSForwardException should use standard java exception chaining.

**Workaround:**

This issue has been resolved.

### **Radar #4943795**

---

Build support for Generics in WOFoundation

**Description:**

Build support for Generics in WOFoundation.

**Workaround:**

This issue has been resolved.

### **Radar #5081299**

---

NSMutableArray.remove(obj) is an incorrect implementation

**Description:**

NSMutableArray.remove(obj) is an incorrect implementation.

**Workaround:**

This issue has been resolved.

**Radar #5085011**

---

NSMutableArray.subList(int, int) is not implemented

**Description:**

NSMutableArray.subList(int, int) is not implemented.

**Workaround:**

This issue has been resolved.

**Radar #5087629**

---

NSMutableSet.addAll(collect) incorrect implementation

**Description:**

NSMutableSet.addAll(collect) incorrect implementation.

**Workaround:**

This issue has been resolved.

**Radar #5129798**

---

Better type conversion from Double or Float to BigDecimal

**Description:**

Fixed the loss of conversion from Double or Float to DigDecimal. This will give greater correctness in the rounding of the conversion.

**Workaround:**

This issue has been resolved

**Radar #5252669**

---

Apple plist DTD is retrieved from network if using "Apple" instead of "Apple Computer"

**Description:**

WebObjects applications with Info.plist with DTD specifying "Apple" instead of "Apple Computer" will try to retrieve the DTD from web.

**Workaround:**

Connect the machine to network to retrieve the DTD from web or change the DTD in the plist. (use <!DOCTYPE plist PUBLIC "-//Apple Computer//DTD PLIST 1.0//EN" "http://www.apple.com/DTDs/PropertyList-1.0.dtd">)

## **Radar #5278732**

---

NSMutableArray - subList(...).clear() incorrect implementation

**Description:**

subList() returns a cloned version of the subList instead of a live view on the underlying array.

**Workaround:**

This issue has not been resolved.

# Document Revision History

---

This table describes the changes to *WebObjects 5.4 Release Notes*.

Date	Notes
2007-12-11	Updated for Mac OS X v10.5 and WebObjects 5.4.
2007-07-24	First version of WebObjects 5.4 Release Notes.

## REVISION HISTORY

### Document Revision History