

# Oracle® Fusion Middleware

## Release Notes for Oracle Forms



12c (12.2.1.19.0)

F70509-06

March 2025

The Oracle logo, consisting of a solid red square with the word "ORACLE" in white, uppercase, sans-serif font centered within it.

ORACLE®

Oracle Fusion Middleware Release Notes for Oracle Forms, 12c (12.2.1.19.0)

F70509-06

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# Preface

Learn about the issues you may encounter when using Oracle Forms and how to work around them.

## Audience

This document is intended for users of Oracle Fusion Middleware Forms 12c (12.2.1.19).

## Documentation Accessibility

For information about Oracle's commitment to accessibility, visit the Oracle Accessibility Program website at <http://www.oracle.com/pls/topic/lookup?ctx=acc&id=docacc>.

### Access to Oracle Support

Oracle customers that have purchased support have access to electronic support through My Oracle Support. For information, visit <http://www.oracle.com/pls/topic/lookup?ctx=acc&id=info> or visit <http://www.oracle.com/pls/topic/lookup?ctx=acc&id=trs> if you are hearing impaired.

## Diversity and Inclusion

Oracle is fully committed to diversity and inclusion. Oracle respects and values having a diverse workforce that increases thought leadership and innovation. As part of our initiative to build a more inclusive culture that positively impacts our employees, customers, and partners, we are working to remove insensitive terms from our products and documentation. We are also mindful of the necessity to maintain compatibility with our customers' existing technologies and the need to ensure continuity of service as Oracle's offerings and industry standards evolve. Because of these technical constraints, our effort to remove insensitive terms is ongoing and will take time and external cooperation.

## Related Documents

You can refer the Oracle Fusion Middleware Library for additional information.

- For Oracle Forms 12c information, see Oracle Forms Documentation Library.
- Oracle Forms Developer Online Help, available from the Help menu in Oracle Forms Developer.
- For Oracle Forms white papers and other resources, see [Oracle.com](http://www.oracle.com).
- For upgrade information, see Fusion Middleware Upgrade Documentation.
- For release-related information, see Fusion Middleware Release Notes.

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## Conventions

The following text conventions are used in this document:

Convention	Meaning
<b>boldface</b>	Boldface type indicates graphical user interface elements associated with an action, or terms defined in text or the glossary.
<i>italic</i>	Italic type indicates book titles, emphasis, or placeholder variables for which you supply particular values.
monospace	Monospace type indicates commands within a paragraph, URLs, code in examples, text that appears on the screen, or text that you enter.

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# 1

## Introduction

This chapter provides an introduction to Release Notes for Oracle Forms.

The following sections are included:

- [Latest Release Information](#)
- [Purpose of this Document](#)
- [System Requirements and Specifications](#)
- [Certification Information](#)
- [Product Documentation](#)
- [Oracle Support](#)
- [Licensing Information](#)
- [Downloading and Applying Required Patches](#)

### Latest Release Information

This document is accurate at the time of publication. Oracle will update the release notes periodically after the software release.

The Release Notes in this document are specific to the latest Oracle Forms. You can access additional information on the Oracle Forms product page on [Oracle.com](http://Oracle.com).

### Purpose of this Document

This document contains the release information for the latest version of Oracle Forms. It describes differences between the software and its documented functionality.

Oracle recommends you review its content before installing, or working with the product.

### System Requirements and Specifications

Oracle Forms installation and configuration will not complete successfully unless users meet the hardware and software pre-requisite requirements before installation.

To review information such as hardware and software requirements, database schema requirements, minimum disk space and memory requirements, and required system libraries, packages, or patches, see Oracle Fusion Middleware System Requirements and Specifications.

### Certification Information

To see versions of platforms and related software for which Oracle Forms is certified and supported, go to Oracle Fusion Middleware Supported System Configurations.

## Product Documentation

For complete documentation on Oracle Forms, go to <http://docs.oracle.com/en/middleware/>.

## Oracle Support

Oracle customers that have purchased support have access to electronic support through My Oracle Support at <https://support.oracle.com>.

## Licensing Information

Licensing Information help you to understand the program editions, entitlements, restrictions, prerequisites, special license rights, and/or separately licensed third party technology terms associated with the Oracle software program(s).

To review the licensing information document, see Licensing Information User Manual.

## Downloading and Applying Required Patches

After you install and configure Oracle Forms, there might be cases where additional patches are required to address specific known issues.

You can check for the latest patches available for your Oracle Fusion Middleware product or component by registering and logging in to My Oracle Support at: <https://support.oracle.com>.

After you log in to My Oracle Support, click the **Patches & Updates** tab, which provides various tools that allow you to quickly locate the patches most important to your Oracle software installation.

 **Note:**

It important that you review the README file that is included with each patch. The README file includes important information about the requirements and procedures for applying the patch.



# 2

## What's New in this Release

Learn the features, enhancements, and changes made to Oracle Forms.

The following section introduces the new and changed features for Oracle Forms and Reports, and provides pointers to additional information:

- [New Features](#)

### New Features

This section contains information about new and changed features that are being introduced in the release, features that have been enhanced, and changes to existing features.

#### Oracle Forms

The following list provides an overview of new features and enhancements:

- [Oracle Forms Standalone Launcher Improvements](#)
- [Forms Translation Tool](#)
- [Forms Builder Enhancements](#)
- [Forms Runtime Enhancements](#)
- [Updated Database Client Software](#)

Refer to the [Oracle Forms product page](#) for more information.

### Oracle Forms Standalone Launcher Improvements

This release includes the following improvements to the Oracle Forms Standalone Launcher (FSAL).

#### SSL/TLS Certificate Importer

A new Forms Certificate Importer automates the certificate importing process. Manually importing server certificates into the user's Java keystore was often problematic and often required an administrator's intervention.

Refer to the provided HTML page included in the full Forms installation at this URL:

`http://<SERVER>:<FORMS_PORT>/forms/html/fsal.htm`

#### Specify Required Java Version

A new Forms Web Configuration parameter, `fsalJavaVersion`, allows administrators to enforce which Java version is used on the user-tier. Refer to Web Configuration Parameters in *Working with Oracle Forms*.

#### Automatically Detect User Language

Added support for unique configuration settings based on the user's language settings. Refer to Enabling Language Detection in *Working with Oracle Forms* for usage details.

### Expanded `showDetails` Command Line Argument

The latest FSAL `showDetails` parameter helps in troubleshooting application runtime problems. Refer to the provided HTML page included in the full Forms installation at this URL:

`http://<SERVER>:<FORMS PORT>/forms/html/fsal.htm`

### Allow Applications to Run when JARs not Found

A new Forms Web Configuration parameter, `ignoreMissingSaaArchives`, allows an application to run when optional resources are not found.

Unlike when running with other client configuration, FSAL terminates processing during startup if any resource (such as the `icons.jar` file) is not found. This behavior can be frustrating when trying to troubleshoot or when the contents is not relevant when running tests.

To allow the application to continue during testing and/or development, set `ignoreMissingSaaArchives`. Refer to Web Configuration Parameters in *Working with Oracle Forms*.

### Launch FSAL from Web Pages Using Custom Protocol Handlers

Added support for using the custom protocols, `fsal` (for non-SSL/TLS requests) and `fsals` (for SSL/TLS requests). Forms applications can be launched from a web page.

## Forms Translation Tool

This release includes the following new functionality for the Forms Translation Tool.

### Forms XLIFF Extract and Merge Translation Tool

With the new Forms XLIFF Extract and Merge translation tool, applications can be translated to other languages quickly and easily. This tool uses XLIFF, an industry-standard XML file format used for storing localization data (i.e. translations). The tool's output can be edited with any plain text editor or any third-party XLIFF 1.0 compatible editor.

The tool supports Forms `fmb`, `mmb`, and `olb` files.

## Forms Builder Enhancements

This release includes the following enhancements to the Forms Builder.

### Copy PLSQL Code Editor Errors to Clipboard

Errors exposed in the Forms PLSQL Code Editor can be copied to the system clipboard using the mouse.

### FSAL Logging to File

A new Builder environment variable, `FORMS_BUILDER_FSAL_LOGGING`, allows you output runtime information to a log file when running modules from the Builder using the `OneButtonRun` option along with enabling FSAL. This log file can be used for reviewing the application status or troubleshooting issues at design time.

## Forms Runtime Enhancements

This release includes the following Forms runtime enhancements.

### New Applet Parameter

The new applet parameter, `clientDPIRatio`, allows administrators to dynamically set the `clientDPI` parameter relative to a display size. The `clientDPIRatio` parameter allows the user to use more of the display screen. This is helpful on high resolution monitors that result in application objects appearing extremely small and difficult to view.

### WebUtil Logging Enhancement for CLIENT\_HOST

The underlying Java layer used by Forms has strict syntax requirements related to how it handles calls being sent to external processes. This syntax requires that Forms breaks the request into individual pieces. Forms uses escaping to determine where to break up the command into array elements. Various special characters, spaces, and other character combinations must be properly escaped before they can be processed. As a result, it can sometimes be difficult to properly format calls made with the `WebUtil CLIENT_HOST` or `WEBUTIL_HOST` functions.

To make diagnosing problems with such calls easier, the `WebUtil` "Detailed" logging level has now been enhanced to show more detail about such calls. In short, the call is broken down into individual components and stored as an array. The first array entry is the command and the second is the argument for that command (if one is provided).

Any subsequent array entries will be in the form of a string value. Each string should be complete. This means, for example, that a directory path should not be broken into multiple array cells.

Output Example:

```
WUH[HostCommand.execute()] cmd /c "dir C:\ > \"C:\tmp\my directory\dir.txt\""  
WUH[HostCommand.execute() command array[0]] cmd  
WUH[HostCommand.execute() command array[1]] /c  
WUH[HostCommand.execute() command array[2]] "dir C:\ > "C:\tmp\my  
directory\dir.txt"
```

## Updated Database Client Software

An update to the database client software installed with Forms and Reports to version 19.14. As a result, application modules previously generated with an older version must be regenerated in order to run in this environment.

# 3

## Deprecated and Desupported Features

This chapter provides information about features that have been deprecated and desupported in Oracle Forms and Reports.

- [Deprecated Forms Features](#)
- [Deprecation Notice for Oracle Reports](#)

### Deprecated Forms Features

This section provides information about features that have been deprecated or desupported in Oracle Forms.

For information about features that have been desupported from Oracle Forms, see [Preparing to Upgrade](#).

#### Audio Playback Feature

Beginning with the first release of Oracle Java 8 after April 2025, JavaFX (JFX) is no longer included in Java 8 and is therefore no longer supported.

As a result, audio playback functionality in Forms applications is no longer supported when the user attempts to run an application with Java 8 versions newer than the April 2025 release (in the Java 8 family). Audio playback is only possible when running applications using the Forms Standalone Launcher (FSAL) with Java 17 or newer along with the third party release of JFX.

Refer to Client Configurations in *Working with Oracle Forms* for more information on how to obtain JFX and use FSAL with applications that use audio playback functionality.

#### *sign\_webutil* Utility Script

Although included in this release, the *sign\_webutil* utility script that Oracle Forms provided to self-sign JAR files has been deprecated.

No further development of this utility is planned for the future. Support of this utility may be limited. This utility may be removed from future Forms releases.

It is recommended that you consider using digital signature certificates obtained from an industry recognized Certificate Authority. Although self-signing can be used for testing and development, it should be avoided in production in order to limit any impact to the end-user experience. In order to sign custom JAR files, the Java [jarsigner](#) utility will be needed to insert your certificate into your custom JAR files. Refer to the Java documentation for details on how to use the [jarsigner](#) utility or contact the Certificate vendor for assistance.

## Microsoft Internet Explorer End of Support

Given Microsoft's desupport of Internet Explorer (IE) in 2022, the use of IE to run Oracle Forms can no longer be supported.

The use of Microsoft Edge with IE-Mode to run Oracle Forms as an embedded Java applet is supported, but with limitations.

Specifically, if a failure occurs while using Edge with IE-mode, but the same cannot be reproduced with any other supported Forms client configuration (such as Forms Standalone Launcher or Java Web Start), the issue will be considered unique to the use of IE and will not be investigated as a Forms (or Java) defect. Therefore, the continued use of Oracle Forms running as an embedded Java applet is not recommended.

## Deprecation Notice for Oracle Reports

Although included in this release, Oracle Reports has been deprecated as of Fusion Middleware 12c Release 2 (12.2.1.3.0).

No further development of Oracle Reports is planned for the future. If future releases are made available, Oracle is not planning any functional enhancements for Oracle Reports other than critical bug fixes and changes necessary to make it compatible with a new supporting technology stack. For more information, refer to the Reports Statement of Direction available [here](#).

Oracle recommends migrating to Oracle Analytics Publisher (formerly called BI Publisher) for reporting purposes. Oracle Analytics Publisher is Oracle's strategic product for enterprise reporting. This reporting solution allows authoring, managing, and delivering pixel-perfect customer facing reports against various data sources with web browser or familiar desktop tools.

# 4

## Lifecycle Management Information

This chapter describes the installation, configuration, upgrade and migration issues associated with Oracle Forms.

The following sections are included:

- [Oracle Forms Installation and Configuration Issues](#)
- [Upgrade and Migration Issues](#)

### Oracle Forms Installation and Configuration Issues

This section describes installation and configuration changes, issues and their workarounds.

It includes the following topics:

- [Oracle Forms Server on IBM AIX Might Crash While Serving the User Request](#)
- [Oracle Forms Application Supports JACOBS Version 1.18 and later](#)
- [Forms Using 19.14.0.0 Database Client](#)
- [Update SqlDeveloper Version](#)
- [Eclipse/Jetty Version Required for Java Script and Java Web Start Integration](#)
- [Update the `setStartupEnv.sh` File](#)
- [Post Installation Tasks](#)

### Relinking Oracle Forms Executables After Installation

This installation includes several database client library updates. These libraries provide functionality and technology like PL/SQL, OracleNet, and others. On Unix/Linux installation, some of these updates are not being linked to the Forms executables and therefore the updates they contain are not exposed.

To correct this, it is necessary to relink as follows:

1. Set the `ORACLE_HOME` environment variable and point it to the Forms home, for example:  

```
export ORACLE_HOME=<FORMS_HOME>
```
2. Issue the following commands:  

```
cd $ORACLE_HOME/procbuilder/lib  
make -f ins_procbuilder.mk sharedlibs dejvm_install  
cd $ORACLE_HOME/forms/lib  
make -f ins_forms.mk sharedlib frmopmn_wrp_install frmctrl_install  
frmweb_install frmcmpb_install frmcmp_install frmbld_install
```

## Oracle Forms Server on IBM AIX Might Crash While Serving the User Request

After you have successfully installed and configured Oracle Forms Server on IBM AIX, you might notice the Forms server crashing while serving the user requests. You might also see the following error text:

```
exec(): 0509-036 Cannot load program frmweb because of the following errors:  
rtdld: 0712-001 Symbol CreateIoCompletionPort was referenced from  
module $ORACLE_HOME/lib/libcIntsh.so(), but a runtime definition of the symbol was not  
found.
```

To resolve this issue for IBM AIX, enable the IOCP module in Forms Server installation machine.

On IBM AIX on POWER Systems (64-Bit), enable I/O completion ports (IOCP) before initiating the install process.

To check if the IOCP module is enabled, run the `lsdev` command: `$ lsdev | grep iocp`

The following sample output shows the IOCP status is set to `Defined` and hence not enabled:

```
iocp0      Defined      I/O Completion Ports
```

By default, IOCP is set to `Defined`.

To enable IOCP, set IOCP status to `Available` using the following procedure:

1. Log in as root and run the following command: `# smitty iocp`.
2. Select `Change / Show Characteristics of I/O Completion Ports`.
3. Change configured state at system restart from `Defined` to `Available`.
4. Run the `lsdev` command to confirm the IOCP status is set to `Available`:

```
$ lsdev | grep iocp  
iocp0      Available      I/O Completion Ports
```

Perform a system restart to make the changes permanent.

## Oracle Forms Application Supports JACOB Version 1.18 and later

Oracle Forms 12.2.1.19 uses the third-party library, JACOB, for enabling OLE support when using WebUtil. This Forms version supports JACOB 1.18 and later. However, the installation is pre-configured to use JACOB 1.18-M2. It will be necessary to make changes in the WebUtil configuration if any other version is used.

JACOB is a JAVA-COM bridge that enables you to call COM automation components from Java. It uses JNI to make native calls to the COM libraries. JACOB runs on x86 and x64 environments supporting 32 bit and 64 bit JVMs.

Regardless of which version you choose to use, you must download, sign, and insert the library set into the appropriate directories before use. Refer to the Forms Builder Help for more information.

Current releases are available on GitHub here: <https://github.com/freemansoft/jacob-project/releases>.

## Forms Using 19.14.0.0 Database Client

The following are the issues with Forms using the database client:

- This Forms installation is based on Oracle Database 19.14.0.0. As a result, all application modules must be regenerated prior to running. Once application modules have been regenerated in the new version, they (source or runtime files) will not be backward compatible with any earlier versions. Backup copies of application modules should be created before attempting to regenerate or open in the Forms Builder. This process cannot be reversed.
- User exits should be regenerated using a version 19.14.0.0 pre-compiler.

## Update SqlDeveloper Version

If the domain being created (or extended) is to include Forms Application Deployment Service (FADS), the SqlDeveloper version installed in the associated Oracle Home must be upgraded to version 18.2 or later, but not newer than version 21.4.3. This update must be completed before configuring the WLS domain to include FADS.

For more information, refer to Installing the Forms Application Deployment Services in the *Installing Oracle Forms* guide.

## Eclipse/Jetty Version Required for Java Script and Java Web Start Integration

Eclipse/Jetty version 9.4.5 or later is required for Forms Java Script Integration (WebSocketJSI). If using Jetty version 10.x or later, the user must use Java 11 or later to run the application.

This jar file must be signed with a trusted and known certificate. For information on how to sign jar files see the Java documentation. If using Java Web Start for deployment, add the Jetty jar reference to `extensions.jnlp`.

The required file (`jetty-all-<version>.jar`) can be downloaded here: <https://repo1.maven.org/maven2/org/eclipse/jetty/aggregate/jetty-all/>.

## Update the `setStartupEnv.sh` File

After installing Oracle Forms and Reports on a SUSE Linux machine and creating the WLS Domain, update the `LD_LIBRARY_PATH` environment variable in the `setStartupEnv.sh` file.

If you do not provide a value for this environment variable, you will encounter an HTTP 404 error when running a form.

To update the `setStartupEnv.sh` file:

1. Stop all managed servers.
2. Locate `setStartupEnv.sh` file in the `$DOMAIN_HOME/bin` directory and open it for editing.



3. Add the following entry immediately below the comments near the top of this file, but above the first code line:

```
LD_LIBRARY_PATH="<ORACLE_HOME>/lib${CLASSPATHSEP}${LD_LIBRARY_PATH}"  
export LD_LIBRARY_PATH
```

where *<ORACLE\_HOME>* is the fully-qualified path to the Oracle Home directory for this installation.

4. Save the changes and close the file.
5. Restart the server(s) and retest.

## Post Installation Tasks

After installing and configuring Oracle Forms, administrators should identify the relevant expiration dates embedded in the provided applet JAR files in order to be prepared for their eventual expiration. These files are stored in the directory, *\$ORACLE\_HOME/forms/java*. There are several signatures embedded within some of the provided JARs (for example, *frmall.jar*). Each signature has a unique purpose and expiration date. For information about how digital signatures work, refer to the [Oracle Java](#) documentation.

The signed JAR files can be found in the *ORACLE\_HOME/forms/java* directory.

You can test the desired JARs using the *jarsigner* executable in the JDK included in the installation. For example:

- On Windows: `jarsigner -verify -verbose frmall.jar | find "expire"`
- On Unix/Linux: `jarsigner -verify -verbose frmall.jar | grep "expire"`

The Signer Certificate date represents the last date that the certificate can be used to sign new JAR files. Since the provided JARs were signed before that date, this expiration is mostly irrelevant and can be ignored. However, it may be used in the event the Timestamp cannot be validated, which requires an Internet connection.

The Timestamp is used to ensure that the JAR was signed during a valid period. This validation test can continue through the expiration date of the Timestamp. As mentioned, if the Timestamp cannot be validated the Signer Certificate expiration is assumed to be the last valid date the JAR can be used.

If you have JAR files that are approaching the Timestamp expiration, contact Oracle Support in order to receive updated files.

## Upgrade and Migration Issues

This section describes issues associated with the upgrade and migration process of Oracle Forms.

It includes the following topics:

- [Upgrade Guidance](#)
- [Improved Security Handling for the \*formsweb.cfg\* File](#)
- [Enhanced Forms Webutil File Transfer Speeds](#)

## Upgrade Guidance

To view the list of Oracle Forms changed or obsolete features, see *Preparing to Upgrade*.

To upgrade Oracle Forms, see *Upgrading Oracle Forms* in the *Installing Oracle Forms* guide.

## Improved Security Handling for the `formsweb.cfg` File

All `userid` entries in the file are automatically encrypted when the server starts. This feature is enabled by default on new installations. When upgrading, the administrator must manually enable this feature.

Complete these steps when upgrading from versions earlier than 12.2.1.4 to enable the auto encryption of the `userid` parameter. If you are performing a ZDT upgrade, complete all the three steps. If you are performing a non-ZDT upgrade, skip step 1 and complete steps 2 and 3.

1. Set the `forms.userid.encryption.enabled` server parameter to `true` for the Admin Server and the Forms Managed Servers.  
Refer to *Customizing Domain Wide Server Parameters* in the *Administering Server Startup and Shutdown for Oracle WebLogic Server* guide and set the `forms.userid.encryption.enabled` parameter using the `setUserOverridesLate.sh` file (`setUserOverridesLate.cmd` for Windows).

2. Run the following commands using WLST (online mode) to provide grants to the Forms application/mbeans to access the Forms application keystore.

- Commands for zero downtime (ZDT) upgrade

```
grantPermission(codeBaseURL="file:${common.components.home}/../forms/
provision/
forms-config-
mbeans.jar",permClass="oracle.security.jps.service.keystore.KeyStoreAcce
ssPermission",
permTarget="stripeName=formsapp,keystoreName=formskfs,alias=*",
permActions="*")
```

```
grantPermission(codeBaseURL="file:${domain.home}/servers/${
weblogic.Name}/tmp/_WL_user/
formsapp_12.2.1/-",permClass="oracle.security.jps.service.keystore.KeySt
oreAccessPermission",
permTarget="stripeName=formsapp,keystoreName=formskfs,alias=*",permAction
s="*")
```

- Commands for Non-ZDT upgrade

```
grantPermission(codeBaseURL="file:${common.components.home}/../forms/
provision/
forms-config-
mbeans.jar",permClass="oracle.security.jps.service.keystore.KeyStoreAcce
ssPermission",
```

```
permTarget="stripeName=formsapp,keystoreName=formskfs,alias=*",  
permActions="*")  
  
grantPermission(codeBaseURL="file:${domain.home}/servers/${  
{weblogic.Name}/  
tmp/_WL_user/  
formsapp_12.2.1/-",permClass="oracle.security.jps.service.keystore.KeySt  
oreAccessPermission",  
permTarget="stripeName=formsapp,keystoreName=formskfs,alias=*",permAction  
s="*")
```

3. Restart the Admin Server and the Forms Managed Servers.

## Enhanced Forms Webutil File Transfer Speeds

In this release, we have improved Forms Webutil file upload and download transfer speeds by up to 30% by increasing the maximum allowable value of `WebUtilMaxTransferSize` to 24573.

### Note:

When upgrading, run the `create_webutil_db.sql` script included in the installation to ensure you can take advantage of the improved file transfer speeds. Make sure you generate and use the `webutil.pll` file that is included in the installation. Do not copy this file from an earlier version.

# 5

## Known Issues and Workarounds

This chapter lists the known issues and workarounds associated with Oracle Forms.

The following topics are included:

- [Oracle Forms Issues and Workarounds](#)

### Oracle Forms Issues and Workarounds

This section details issues pertaining to Oracle Forms, and their workarounds.

**Table 5-1 Oracle Forms Issues and Workarounds**

Issue	Operating System	Description
Oracle HTTP Server (OHS) may not start after applying any Database 19 bundle or PSU patch to the Middleware home.	All	Attempting to install a database bundle or PSU patch to the Middleware home resulted in a patch conflict error. To overcome the error, you chose to use one of these options: <code>-rollback</code> , <code>-force</code> , or <code>-force_conflict</code> .  After successfully completing the database patch installation, OHS no longer starts.  This issue is expected to be corrected in the October 2023 Critical Patch Update (CPU) release. If you experience this behavior after applying the October 2023 or later CPU patch, contact Oracle Support Services.
Oracle Forms Builder Run Form Button Fails	All	Attempting to use the Run Form button in the Forms builder may fail if the form is not first saved in a directory included in <code>FORMS_PATH</code> . Alternatively, add the working directory to <code>FORMS_PATH</code> . This will generally be the <code>MIDDLEWARE_HOME \bin</code> directory. This is an intended change in behavior, which prevents directory paths from being added to a URL. Although not recommended, the behavior of previous versions can be restored by removing (or commenting) the entire <code>FORMS_MODULE_PATH</code> entry from <code>default.env</code> .

**Table 5-1 (Cont.) Oracle Forms Issues and Workarounds**

<b>Issue</b>	<b>Operating System</b>	<b>Description</b>
Web Start Does Not Work When WLS_FORMS is Behind a Proxy	All	Attempting to start a Forms application using Web Start will fail if WLS_FORMS is behind a proxy server. To correct this problem, set WEBSTART_CODEBASE in formsweb.cfg to the fully qualified path of the CODEBASE as it appears from the external server. For example, http://OHShost:OHSport/forms/java.

**Table 5-1 (Cont.) Oracle Forms Issues and Workarounds**

Issue	Operating System	Description
<p>Changes and Workarounds Affecting the Number of Characters that can be Typed into an Item</p>	All	<p><b>Issue</b></p> <ol style="list-style-type: none"> <li data-bbox="1105 359 1469 930"> <p>1. When a form is created using the Forms builder (frmbld), the item property Query Length defaults to zero. When a form was compiled in releases before 11g, this value (zero) caused the Query Length to default to the value of the Maximum Length property. In Oracle Forms 11g, the Query Length defaults to two plus the value of the Maximum Length property. If the behavior of prior releases is desired, then you must set the environment variable <code>FORMS_QUERY_LENGTH_DELTA</code> to '0' when the form is compiled.</p> </li> <li data-bbox="1105 953 1469 1902"> <p>2. The DATE format masks determine the number of characters that can be typed into a text item or combo box. In general, this number is the maximum of the number of characters required for the "output" format mask and for any allowable "input" format mask. The process how "input" and "output" format masks are selected for a combo box, or for a text item whose format mask is not set is described in <i>About Format Elements for Dates</i>. Notice that the <code>FORMS_USER_DATE_FORMAT</code> or <code>FORMS_USER_DATETIME_FORMAT</code> environment variable may specify multiple input format masks. Also observe that for any input format mask that does not contain <code>FX</code>, alternate format masks are also allowable, as described in <i>String-to-Date Conversion Rules in Format Models</i> in the SQL Reference in the Oracle Forms Builder Online Help.</p> </li> </ol>

**Table 5-1 (Cont.) Oracle Forms Issues and Workarounds**

Issue	Operating System	Description
		<p>Note one exception to the rules spelled out above. The behavior described in <i>String-to-Date Conversion Rules</i> allow a fully spelled-out month to be entered for a numeric month (MM form mask element) or abbreviated month (MON form mask element). However, in this case, the number of characters that can be typed into a text item or combo box allows only enough room for an abbreviated month.</p> <p>Prior to 11gR1, input DATE format masks were not taken into account. In 10gR2 (10.1.2), the number of characters the end user was allowed to type into a DATE item was determined solely from the output format mask. In Forms 6i (6.0.8), the Maximum Length property of the DATE item was also taken into account.</p> <p><b>Workaround</b></p> <p>The changes in behavior documented above may affect users who have set the Auto-Skip property for a DATE item. The end user may now be allowed to type more characters into a specific DATE item, in which case auto-skip will not occur in cases where it did occur before 11gR1. To ensure that auto-skip occurs, add the FX modifier to the format mask that will be used for the item, for example, FXYYYY/MM/DD. If there is no item-specific format mask (that is, no format mask is set either in the item's property palette or programmatically), then the item's format mask will be derived from environment variables. The FORMS_USER_DATE_FORMAT and FORMS_USER_DATETIME_FORMAT environment variables are recommended as they take precedence over any NLS</p>

**Table 5-1 (Cont.) Oracle Forms Issues and Workarounds**

Issue	Operating System	Description
		<p>environment variables that might affect DATE format masks.</p> <p>Notice that specifying the <code>FX</code> modifier will disallow the alternate format masks that are described in <i>String-to-Date Conversion Rules</i> in <i>Format Models</i> of the SQL Reference. Also observe that the</p> <p><code>FORMS_USER_DATE_FORMAT</code> and <code>FORMS_USER_DATETIME_FORMAT</code> environment variables can explicitly specify alternate format masks, separated by vertical bars, for example, <code>FXDD-MON-YYYY FXMON-DD-YYYY</code>. If the <code>FORMS_OUTPUT_DATE_FORMAT</code> and <code>FORMS_OUTPUT_DATETIME_FORMAT</code> environment variables are not set, the output format masks are derived from the first format mask specified in each of the <code>FORMS_USER_DATE_FORMAT</code> and <code>FORMS_USER_DATETIME_FORMAT</code> environment variables.</p>
ORA-01031 error	All	<p>Forms Builder throws an "ORA-01031: Insufficient Privileges" error when connecting to ATP-S (Shared). This error can be ignored. However, as a result of this condition, Remote Dependency Mode is set to "TIMESTAMP".</p>
Attempts to compile/generate Forms modules that are from a previous version may throw an error	All	<p>Attempts to compile/generate Forms modules that are from a previous version may throw this error and fail to generate the needed FMX or MMX module:</p> <p>PL/SQL ERROR 422 at line &lt;NUMBER&gt;, column &lt;NUMBER&gt;</p> <p>This issue is corrected in Forms Quarterly Patch Release (QPR). Ref. 35687821</p>



**Table 5-1 (Cont.) Oracle Forms Issues and Workarounds**

<b>Issue</b>	<b>Operating System</b>	<b>Description</b>
LD_PRELOAD Setting Required for Signal Chaining Facility	Linux/UNIX	The LD_PRELOAD setting in default.env is required for the working of signal chaining facility in JVM version 1.5 and later. If you are creating or using other environment files, the setting in the environment file for LD_LIBRARY_PATH and LD_PRELOAD must be the same as in default.env.
Unable to Generate some Modules Types Using some NLS_LANG Settings	Linux/UNIX	<p>When setting the NLS_LANG Territory to some regions, the compiler may fail and throw FRM-30312.</p> <p>To workaround the issue change the NLS_LANGUAGE from the typical region's language to AMERICAN. For example, change CROATIAN_CROATIA.UTF8 to AMERICAN_CROATIA.UTF8.</p>

**Table 5-1 (Cont.) Oracle Forms Issues and Workarounds**

Issue	Operating System	Description
Builder and other Forms utilities not working after completing out-of-place upgrade.	Microsoft Windows	The tooling used to perform the out-of-place upgrade does not update the Windows Registry key associated with the Middleware Oracle Home. As a result, all sub-keys that contain a reference to the path of the Oracle Home will refer to the old location and not the new location.

**⚠ WARNING :**

Because improperly altering the Windows Registry can cause permanent damage to the operating system, it is important to crea

**Table 5-1 (Cont.) Oracle Forms Issues and Workarounds**

Issue	Operating System	Description
		<p>te a backup of the key being altered and/or the entire Registry. If you are not familiar with editing the Registry, please consult with someone who has experience making such changes and/or refer to</p>

**Table 5-1 (Cont.) Oracle Forms Issues and Workarounds**

Issue	Operating System	Description
Shortcut Keys not Working with JAWS	Microsoft Windows	<p data-bbox="1386 348 1442 573">your Microsoft documentation.</p> <p data-bbox="1105 632 1468 982">To correct the problem, review the entries found in the Registry key associated with this Middleware installation (for example, HKEY_LOCAL_MACHINE\SOFTWARE\Oracle\KEY_OracleHome&lt;NUMBER&gt;). Manually correct any entries that refer to the path where the Oracle Home was previously located. The corrected value should refer to the path of the new Home location.</p> <p data-bbox="1105 995 1468 1234">When using Forms Builder with JAWS, the keyboard shortcuts Ctrl+Insert to create items are not working. As a workaround, use the menu-mnemonics. Use Alt+E to open the <b>Edit</b> menu, then R to choose <b>Create</b> to create items.</p>
Stop dejvm Before Stopping and Restarting WLS_FORMS	Microsoft Windows	<p data-bbox="1105 1247 1468 1451">Before restarting the Oracle WebLogic managed server, all the JVM Controller processes (dejvm) started by that server must be stopped. Otherwise, WLS_FORMS will not restart after a shutdown.</p>

**Table 5-1 (Cont.) Oracle Forms Issues and Workarounds**

Issue	Operating System	Description
Unclear Text and Image Rendering	Microsoft Windows	<p>On desktops where the Display scaling value is set to any value other than 100%, some distortion may be seen when using Java 11 or later with Forms Standalone Launcher.</p> <p>As a workaround, change the Windows Display scaling setting to 100%. It may be necessary to log out of the current Windows session and log in again for the changes to completely restore proper rendering.</p> <p>One or more of the following Java switches may also help to mitigate the issue. Exactly which is needed will depend on the exact symptom.</p> <ul style="list-style-type: none"> <li>• - Dsun.java2d.dpiaware=true</li> <li>• - Dsun.java2d.uiScale=true</li> <li>• - Dsun.java2d.autoScaleThreshold=1.5</li> <li>• - Dsun.java2d.uiScale=1.0</li> </ul>
Runtime Issue in Oracle Forms Compiler	Solaris	<p>To resolve crash of Oracle Forms compiler at exit, while running compiler, Forms Builder and setting the NLS_LANG, user also needs to set the environment variable LC_ALL.</p> <pre>export LC_ALL=C</pre>

Table 5-1 (Cont.) Oracle Forms Issues and Workarounds

Issue	Operating System	Description
HTTP 404 error when running a form	SUSE Linux	<p>After a seemingly successful installation and creation of the WLS Domain, all attempts to run a form result in an HTTP 404 error.</p> <p>To resolve the issue:</p> <ol style="list-style-type: none"><li>1. Stop all managed servers.</li><li>2. Locate the <code>setStartupEnv.sh</code> file in <code>\$DOMAIN_HOME/bin</code> directory and open it for editing.</li><li>3. Add the following entry immediately below the comments near the top of this file, but above the first code line: <pre>LD_LIBRARY_PATH="<i>&lt;ORACLE HOME&gt;</i>/lib\${CLASSPATHSEP}\${LD_LIBRARY_PATH}" export LD_LIBRARY_PATH</pre>where <i>&lt;ORACLE HOME&gt;</i> is the fully-qualified path to the Oracle Home directory for this installation.</li><li>4. Save the changes and close the file.</li><li>5. Restart the server(s) and retest.</li></ol>

**Table 5-1 (Cont.) Oracle Forms Issues and Workarounds**

Issue	Operating System	Description
The installer fails to install software prerequisites and displays an error message	SUSE Linux, Enterprise Server 15 only	<p>When installing on SUSE Linux Enterprise Server 15, the installer stops without installing the required OS packages and displays an error message. This is a known issue and has been fixed in patch 35299885.</p> <p>In order to perform the installation on SUSE Linux Enterprise Server 15, download and install patch 35299885 when starting the Installer. You can find the patch on the Oracle Support site at <a href="https://support.oracle.com/epmos/faces/PatchResultsNDetails?patchId=35299885&amp;platformId=2000">https://support.oracle.com/epmos/faces/PatchResultsNDetails?patchId=35299885&amp;platformId=2000</a>.</p>

 **Note:**

Review the included Readme carefully before attempting to install the software.

# 6

## Issues Fixed in this Release

The chapter lists the issues fixed in this release.

Refer to the following tables for issues listed by component:

- [Table 6-1](#): Issues Fixed in Oracle Forms
- [Table 6-2](#): Issues Fixed in Oracle Reports
- [Table 6-3](#): Issues Fixed in Oracle HTTP Server

**Table 6-1 Issues Fixed in Oracle Forms**

Issue ID	Description
34807576	CRASH IN IRMVAL() WHEN ACCESSING A RECORD IN A DATA BLOCK
34620714	302000 - NON-ORACLE EXCEPTION WHEN ATTEMPTING TO OPEN LARGE FILES
34602166	ADD_GROUP_COLUMN - COLUMN_WIDTH HAS NO EFFECT IN DYNAMIC RECORD GROUP
34142432	FORMS DYNAMICALLY CREATED JNLP FILES DO NOT EXPIRE
33878830	INCORRECT REPORT STATUS RETURNED ON BI REPORT IF USER DOES NOT HAVE ADMIN PRIVILEGES
33874951	READ_IMAGE_FILE NEEDS TO BE CALLED TWICE TO DISPLAY THE IMAGE
33865599	APPLICATION SUDDENLY BECOMES EXTREMELY SLOW
33845625	FIELD VALUES CHANGE TO #### WITH UTF8 AND "DATA LENGTH SEMANTICS" INSTEAD OF BEING TRUNCATED
33836505	FORMS XML CONVERTER FAILS IN SOME CASES
33768138	FRMWEB.EXE CRASHES WHEN A FORM IS REPEATEDLY OPENED AND CLOSED
33666644	XML CONVERTER CRASHING WHEN CONVERTING XML TO FMB
33589702	MISSING SOME CODE AFTER FMB CONVERSION TO XML
33443189	FRM-93652 WHEN QUERING AN TIF IMAGE FROM A BLOB IN DATABASE
33362978	WINDOW LOSING THE CONTORL OF SPECIFIC SCREEN
32945689	FORMAT MASK WITH CASE INSENSITIVE OPTION THROWS ERROR FRM-40357
32716213	FORM BUILDER CRASHES IF PASTING A SINGLE LINE STRING THAT APPROACHES 32767 INTO EDITOR
32632313	ITEM DOES NOT GET FOCUS WHEN RUN WITH FSAL MODE WITH JAVA 11,13 & 17
32588390	FADS CONFIGURATION ISSUE NO KEYSTORE CREATED AFTER FADS_CONFIG.PY
32575023	FRM-93652 INSERTING DATA INTO A VIEW
32509607	ILLEGALARGUMENTEXCEPTION OCCURS WHEN TYPING JAPANESE(IME) WITH MULTI-LINE YES
32490064	FORMS FADS FAILS TO DEPLOY WHEN MODULES ARE IN ROOT DIR AND PRESERVEDIR=TRUE



**Table 6-1 (Cont.) Issues Fixed in Oracle Forms**

<b>Issue ID</b>	<b>Description</b>
32460115	JAVA CODE WRITTEN AGAINST JDAPI FAILS WHEN RUNNING WITH JDK 8U261 OR NEWER
32448427	INTERMITTENT FRM-93652 ( CRASH ) NAVIGATING VIA NEXT KEY (F7)
32343504	WEBUTIL_HOST.BLOCKING WITH BLOCKALLOWHEARTBEAT FREEZES FORMS - NOTEPAD 2 TIMES
32181938	FORMS FADS NOT ABLE TO PROCESS SQL SCRIPTS AGAINST AUTONOMOUS DATABASE
31920357	FRM-93652 WHEN CLICKING ON IMAGE ITEM AFTER RETURNING FROM ANOTHER APP
31737440	ADMIN CONSOLE/EM HANG ON LOGIN; REFERENCES TO UIFONTPROPERTYPERSISTENCEMANAGER
31621312	UNABLE TO SET A DESIRED AQ LISTENER PORT RANGE IN FORMS
31522541	FORM USING DBMS_AQ CRASHES WITH FRM-93652 ERROR
31504987	AUTODETECT BROWSER LANGUAGE FOR ADAPTATIVE CONFIG IN FSAL
31225296	FADS DEPLOYMENT IS FAILING WHEN USING DBAS LONG CONNECT STRING IN TNSNAMES.ORA FILE
30517090	PARAMETER "MAPFONTS" DOESN'T WORK WHEN USING WIN10 FOR CLIENT OS
30460618	FORMS SESSION CONSISTENTLY CRASHES WITH FRM-93652 WHEN SELECTING A RESORT AFTER LOGIN
30418565	FORMS LISTENER SERVLET NOT GENERATING EXPECTED HTTP HEADER
29323296	FORMS12C DEFAULT WHERE/ORDER BY WITH CARRIAGE RETURN AFTER WHERE/ORDER BY QUERY FAILS WITH FRM-40505
25611527	FRM-92091 ON SET_ITEM_PROPERTY (X_POS) ON IMAGE ITEM AFTER SCROLL
22961892	APPS6: FOCUS LOSS ISSUE WITH WINDOW SWITCHING WHILE OPENING 2ND FORM
21949179	APPS6: FORM CRASHES WHEN THERE IS AN ALERT MESSAGE IN CALLING FORM
8341904	BEVEL PLAIN IS NOT PRESERVED IN FORMS BUILDER

**Table 6-2 Issues Fixed in Oracle Reports**

<b>Issue ID</b>	<b>Description</b>
34147526	DISTORTED UNDERLINES IN BOILERPLATE TEXT PDF OUTPUT
33771612	OCI EMAIL DELIVERY DOESN'T WORK FROM REPORTS WITH STARTTLS
33701281	RTL WRONG POSITION OF LEXICAL REFERENCE IN BOILERPLATE TEXT WITH MULTIPLE LINES
33008149	12C REPORTS SERVER TAKING LONG TIME TO FINISH JOBS
32829116	WRONG FORMAT WHEN USING NLS_DATE_FORMAT WITH ENVID AND VARIOUS NLS_LANG
31923666	HEADER REPEAT IN ENHANCEDSPREADSHEET OUTPUT AFTER JDK1.8.0_261 UPGRADE
31036009	GETSERVERINFO PAGE RETURNS REP-56033 ERROR IN REPORTS 12C

**Table 6-2 (Cont.) Issues Fixed in Oracle Reports**

Issue ID	Description
30428859	REP-56048 USING SRW.APPLY_DEFINITION
29836735	REP-56048 AFTER 12C UPGRADE WHEN DESFORMAT=RTF
29749955	XSS VIA URL (WEBCOMMAND HIDDEN PARAMETER)
29749941	XSS IN NEXTPAGE
29607652	DATA MISSING IN DELIMITED OUTPUT FORMAT
27833653	XSS IN ORACLE REPORTS
26919257	DUPLICATE LINES IN RTF OUTPUT AT END OF THE FILE

**Table 6-3 Issues Fixed in Oracle HTTP Server**

Issue ID	Description
34862051	WITH LATEST APACHE 12.2.1.4.0 PLUGIN BITS, TESTS ARE FAILING AND REPORTING " MOD_WL_24.SO: UNDEFINED SYMBOL: ONS_SOCKET_RECV"
34679728	DB19 CLIENT CONSUMPTION IN OHS FOR WINDOWS
34622835	OHS PORTING BUILD CHANGES FOR OHS 12.2.1.4.0BP
34363868	REMOVE DEPENDENCY ON FMW ONS
34118677	LIBTOOL PATCHES DIFF FILE FAILED IN LINUX 0L7 MACHINE ON APACHE_12.2.1.4.0BP_DB19C
34081707	DB19 CLIENT CONSUMPTION IN OHS
34647646	Fix for Bug 34647646
34646873	REMOVE DEPRECATED CIPHERS FROM OHS DEFAULT CONFIGURATION
34642403	CVE-2022-28615
34637603	CVE-2022-31813
34462018	CVE-2022-29824
34374659	UPGRADE VISUAL STUDIO TO > 14 (VISUAL STUDIO 2015) TO SUPPORT EXPAT VERSION >= 2.3.0
34343555	CVE-2022-27782
34287122	CVE-2022-22720
34287094	CVE-2022-22721
34287012	CVE-2022-23943
34062617	CVE-2018-25032
34023890	CVE-2022-25236
33928389	CVE-2021-30641
33711736	CVE-2021-44224
33634542	CVE-2021-42717
33634304	CVE-2021-35940
33544747	CVE-2021-39275
33520669	CVE-2021-40438
33231206	CVE-2020-24977
33157164	MOD_PROXY SSL CONNECTIONS TO AZURE SERVER FAILED "UNKNOWN CERTIFICATE AUTHORITY"

**Table 6-3 (Cont.) Issues Fixed in Oracle HTTP Server**

<b>Issue ID</b>	<b>Description</b>
33109358	OHS PLUGIN FAILS TO PARSE COMPLETE LIST OF SERVERS PRESENT IN JVMID
33090035	CVE-2021-22901
32993828	CVE-2021-3537
32989147	FMW12C - OHS STOPPED ROUTING REQUESTS TO MANAGED SERVERS FREQUENT CORE DUMPS
32958477	CVE-2019-10092
32882917	NOTSTRESS:FA:FMW12C:INTERMITENT COREDUMP FROM OHS AT BASEPROXY::GETNEXTSERVER
32787689	UPDATE PRODUCTION VERSION OF README WITH CORRECT INFORAMTION
32644607	OHS FAILS RPATH TESTS
32524465	CPU INCREASES TO 100% AFTER APPLYING NEW OHS BUNDLE PATCH
32511327	CVE-2020-1927
32500107	CVE-2020-1934
32375814	CHANGE THE ICC COMPILER VERSION FROM 10 TO 12 FOR 12.2.1.4.0 WLS PLUG-INS
32296816	CVE-2020-14155
32294066	CVE-2020-5360
32260626	CVE-2020-1971
32099506	CVE-2020-24977
31927803	ALL SWAP SPACE IS USED FOR HTTPD PROCESSES
31900098	CONNECTING TO IPV6 WLS HOSTS
31798004	12CPS4 OHS COMPONENT START FAILS ON IPV6 OCI INSTANCE
31757426	CVE-2019-10097
31250441	CVE-2020-1967
31038581	CVE-2018-20843
30994995	OHS:501 YODCONTEXTUNWRAP FAILED WHEN AUTHENTICATING TO OAM
30533043	UPGRADED OHS 12.2.1.4 STARTUP FAIL "MALFORMED \UXXXX ENCODING" DUE TO NM-WALLET
30356835	CVE-2019-5482
30269564	DELETEOHSINSTANCE TRYING TO DELETE KEYSTORE WHICH ARE NEVER SYNCED WITH KSS
30256875	MOD_DEFLATE IS MISSING BY DEFAULT
30114182	CVE-2022-21593
28947894	ABOUT 90% MEMORY UTILIZATION IS SEEN AFTER APPLYING OHS BUNDLE PATCH
27821940	CVE-2021-2315