

# Oracle® Fusion Middleware

## Release Notes for Oracle HTTP Server



12c (12.2.1.4.0)

E96372-02

January 2020

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 HTTP Server, 12c (12.2.1.4.0)

E96372-02

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# Preface

Oracle HTTP Server 12.2.1.4.0 release notes summarize release information related to new features or enhancements, resolved issues, general issues and workarounds, deprecated and removed functionality, and more.

## Audience

*Release Notes for Oracle HTTP Server* is intended for application server administrators, security managers, and managers of databases used by application servers. This documentation is based on the assumption that readers are already familiar with Apache HTTP Server.

Unless otherwise mentioned, the information in this document is applicable when Oracle HTTP Server is installed with Oracle WebLogic Server and Oracle Fusion Middleware Control. It is assumed that readers are familiar with the key concepts of Oracle Fusion Middleware as described in the *Understanding Oracle Fusion Middleware* and *Administering Oracle Fusion Middleware*.

To install Oracle HTTP Server in standalone mode, see *Installing and Configuring Oracle HTTP Server*.

## 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>.

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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.

## Related Documents

- *Administering Oracle HTTP Server*
- *Using Oracle WebLogic Server Proxy Plug-Ins*

## Conventions

The following text conventions are used in this document:

<b>Convention</b>	<b>Meaning</b>
<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.

# 1

## Introduction

This chapter introduces the Oracle Fusion Middleware Release Notes for Oracle HTTP Server 12.2.1.4.0.

### Topics

- [Latest Release Information](#)
- [Purpose of this Document](#)
- [System Requirements and Specifications](#)
- [Certification Information](#)
- [Product Documentation](#)
- [Oracle Support](#)
- [Licensing Information](#)
- [Oracle HTTP Server Support](#)

## Latest Release Information

This document is accurate at the time of publication. Oracle will update the release notes periodically after the software release. You can access the latest information and additions to these release notes on the Oracle Technology Network at:

<http://www.oracle.com/technetwork/indexes/documentation/index.html>

## Purpose of this Document

This document contains the release information for Oracle Fusion Middleware Release for Oracle HTTP Server. It describes differences between Oracle Fusion Middleware and its documented functionality.

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

## System Requirements and Specifications

Oracle HTTP Server installation and configuration will not complete successfully unless users meet the hardware and software pre-requisite requirements before installation. See [Oracle Fusion Middleware System Requirements and Specifications](#).

## Certification Information

To see versions of platforms and related software for which Oracle HTTP Server is certified and supported, go to <http://www.oracle.com/technetwork/middleware/ias/downloads/fusion-certification-100350.html>.

## Product Documentation

For complete documentation on Oracle HTTP Server, 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

For the latest information on Oracle Fusion Middleware Licensing, see Licensing Information User Manual.

## Oracle HTTP Server Support

Oracle provides technical support for Oracle HTTP Server features.

The following Oracle HTTP Server features and conditions are supported:

- Modules included in the Oracle distribution. Oracle does not support modules obtained from any other source, including the Apache Software Foundation. Oracle HTTP Server will still be supported when non-Oracle-provided modules are included. If non-Oracle-provided modules are suspect of contributing to reported problems, customers may be requested to reproduce the problems without including those modules.
- Problems that can be reproduced within an Oracle HTTP Server configuration consisting only of supported Oracle HTTP Server modules.



# 2

## What's New in this Release

This chapter describes the features and improvements in Oracle HTTP Server. The following topics introduce the new and changed features of Oracle HTTP Server and other significant changes in the guides, and provides pointers to additional information.

### Topics

- [New Features](#)

## New Features

The following are the new features in Oracle HTTP Server (OHS) 12.2.1.4.0:

- SSL is enabled for Oracle HTTP Server admin port. Admin port is used internally by Oracle HTTP Server to communicate with the Node Manager. This port is configured in the `admin.conf` file. SSL is enabled by default on OHS admin port to secure communication over the OHS admin port with the Node Manager. See *Defining the Admin Port* in *Administering Oracle HTTP Server*.
- Default settings for `SSLProtocol` directive has been changed. See *SSLProtocol Directive* in *Administering Oracle HTTP Server*.
- A new configuration directive `SSLProxySessionCache` is introduced. See *SSLProxySessionCache Directive* in *Administering Oracle HTTP Server*.
- Oracle HTTP Server supports reduced downtime upgrade in 12.2.1.4.0. See *Performing a Reduced Downtime Upgrade* in *Upgrading Oracle HTTP Server*.
- Oracle HTTP Server 12.2.1.4.0 product distribution archive file includes an extra file compared to the previous Oracle HTTP Server 12c installers for IBM AIX, HP-UX, Solaris x86, and Solaris SPARC. The name of this new file varies depending on the platform. For example, on HP-UX, the file name will be `fmw_12.2.1.4.0_ohs_hpia64-2.zip`. This new file needs to be present in the directory from where Oracle HTTP Server installer is invoked. There will be no change in the way Oracle HTTP Server installer is invoked or in the way the Oracle HTTP Server installation is done.
- You can use Oracle HTTP Server through Oracle VM templates. For more information about Oracle VM templates, see [Oracle VM Virtual Appliances](#).

To use Oracle HTTP Server through Oracle VM templates, you must download Oracle Fusion Middleware 12c (12.2.1.4.0) HTTP Server VM template from Oracle Software Delivery Cloud, import it into Oracle VM Manager, and then deploy the template as a virtual machine. Oracle Fusion Middleware 12c (12.2.1.4.0) HTTP Server VM template provides a pre-installed Oracle Home with Oracle HTTP Server. This template does not include a Oracle HTTP Server standalone domain. You can use this template to create and configure an Oracle HTTP Server standalone domain, by following the instructions described in *Configuring in a Standalone Domain* in the *Installing and Configuring Oracle HTTP Server*.

- Oracle HTTP Server 12.2.1.4.0 installation includes an update to the database client software installed with Fusion Middleware. The database patch set included

is 12.1.0.2.190716. If you execute the command `opatch lsinventory`, the patch identification number for this update will appear as 29494060 on Linux/Unix and 30220086 on Microsoft Windows.

# 3

## Lifecycle Management Information

This section describes the lifecycle management information for Oracle HTTP Server.

### Topics

- [Upgrading from Earlier Releases of Oracle HTTP Server](#)
- [Other Upgrade Notes](#)

## Upgrading from Earlier Releases of Oracle HTTP Server

To upgrade your Fusion Middleware environment (and Oracle HTTP Server) to 12.2.1.4.0 from an earlier release, follow the instructions in *Upgrading with the Upgrade Assistant*.

## Other Upgrade Notes

The current release of Oracle HTTP Server is based on Apache Server 2.4. If you are using an earlier release of Oracle HTTP Server, note the following:

### FilterProvider

The syntax of the `FilterProvider` directive under `mod_filter` has changed in Apache 2.4. This directive must be upgraded manually.

See [http://httpd.apache.org/docs/2.4/mod/mod\\_filter.html](http://httpd.apache.org/docs/2.4/mod/mod_filter.html) and <http://httpd.apache.org/docs/2.4/upgrading.html>.

### Authorization and Access Control

There have been significant changes in authorization and access control configuration in Apache 2.4. Oracle HTTP Server Upgrade Assistant does not upgrade the authorization and access control directives to the new configuration style. Instead, Oracle HTTP Server includes the `mod_access_compat` module to provide compatibility with old configurations.

Oracle recommends that you manually upgrade the authorization and access-control configuration to Apache 2.4 style. See <http://httpd.apache.org/docs/2.4/upgrading.html#run-time>.

### umask Settings

Prior to Oracle HTTP Server 12c (12.2.1), the operating system level `umask` setting was applicable to Oracle HTTP Server as well. With Oracle HTTP Server 12c (12.2.1), a new property is introduced in `ohs.nodemanager.properties` file to specify the `umask` setting. By default, a value of 0027 is used. See [Configuring the Log File Creation Mode \(umask\) \(UNIX/Linux Only\)](#).

# 4

## Known Issues and Workaround

### Topics

- [In IBM AIX, OHS Server Startup Fails Even After Successful Installation and Configuration of Oracle HTTP Server](#)
- [In IBM AIX, Continuously Hitting Web Application Through Oracle HTTP Server Generates a Large Error Log](#)
- [Dynamic Monitoring Service Displays Incorrect Message if Oracle HTTP Server is Down](#)
- [No Automatic Port Allocation for Standalone Instances](#)
- [Problem Setting MPM Name in Fusion Middleware Control](#)
- [Metrics Fail to Load after Restarting Oracle HTTP Server Through Oracle Enterprise Manager Fusion Middleware Control Console on HP IA](#)
- [WebLogic Server Plug-ins for Apache](#)
- [Mod\\_security SecRemoteRules Directive Use-case Does Not Work on HP-Itanium](#)
- [A Caution Message Appears at Startup for OHS and CLASSIC on AIX](#)
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- [An Incorrect Step Appears on the Installation Complete Screen](#)
- [Warning Messages in make.log File](#)
- [SSL Certificate Chain Is Required on Certain Browsers](#)

## In IBM AIX, OHS Server Startup Fails Even After Successful Installation and Configuration of Oracle HTTP Server

### Issue

Impacted Platforms: IBM AIX

After successful installation and configuration of Oracle HTTP Server 12.2.1.4.0 , the Oracle HTTP Server (OHS) startup fails with following error:

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

### Workaround

Oracle HTTP Server 12.2.1.4.0 is bundled with IBM AIX Database client 12.1.0.2.0 version. The issue is related to the IOCP API symbols dependency in IBM AIX Database 12.1.0.2 client library. Enable the IOCP module in the machine where Oracle HTTP Server is installed to resolve this issue.

On IBM AIX in IBM POWER Systems (64-Bit), enable I/O completion ports (IOCP) before initiating the install process. To enable IOCP ports, set the status of the IOCP port to *Available*.

To check if the IOCP port is *Available*, enter the `lsdev` command as follows:

```
$ lsdev | grep iocp
```

By default, IOCP status is set to *Defined*, and hence not enabled. The following example output shows that the IOCP status is set to *Defined*:

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

Complete the following steps to set IOCP status to *Available*:

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
```

5. Perform a system restart to make the changes permanent.

## In IBM AIX, Continuously Hitting Web Application Through Oracle HTTP Server Generates a Large Error Log

### Issue

Impacted Platforms: IBM AIX

IBM AIX users continuously hitting a web application that has many users (for example, greater than 400) through Oracle HTTP Server might experience a large error log being generated.

### Workaround

This is a performance tuning issue that can be corrected by updating some of the IBM AIX system parameters and Oracle HTTP Server tuning parameters.

For example,

#### For IBM AIX system parameters:

1. Ensure that the following parameters are available in `/etc/security/limits`:

```
nofiles = -1
nofiles_hard = -1
```

2. Ensure that the following parameters are available in `/etc/rc.net`:

```
/usr/sbin/no -o sb_max=6192000
/usr/sbin/no -o tcp_sendspace=4096000
/usr/sbin/no -o tcp_recvspace=4096000
/usr/sbin/no -o udp_sendspace=65536
/usr/sbin/no -o udp_recvspace=655360
```

```

/usr/sbin/no -o rfc1323=1
/usr/sbin/no -o ipqmaxlen=150
/usr/sbin/no -o clean_partial_conns=true

```

### 3. Restart the computer.

#### For Oracle HTTP Server Configuration:

##### 1. Set the `mod_wl_ohs.conf` file to look like the following example:

```

LoadModule weblogic_module    "${PRODUCT_HOME}/modules/mod_wl_ohs.so"
# This empty block is needed to save mod_wl related configuration from EM to
this file when changes are made at the Base Virtual Host Level

<IfModule weblogic_module>
#     WebLogicHost <WEBLOGIC_HOST>
#     WebLogicPort <WEBLOGIC_PORT>
#     MatchExpression *.jsp
WebLogicCluster <host-name>:<port>,<host-name>:<port>,<host-name>:<port>
ConnectTimeoutSecs 99999 //[Optional parameter]
WLIOTimeoutSecs 99999 //[default value 300]
WLSocketTimeoutSecs 99999 //[default value 2]
MatchExpression *

<Location /diagservlet>
#     SetHandler weblogic-handler
#     WLSRequest On
#     WebLogicCluster
#     <host-name>:<port>,<host-name>:<port>,<host-name>:<port>
#     PathTrim /weblogic
#     ErrorPage http://WEBLOGIC_HOME:WEBLOGIC_PORT/
#     </Location>

</IfModule>

```

##### 2. Set the following in the `httpd.conf` file:

```

<IfModule mpm_worker_module>
-
-
-
MinSpareThreads    200 [default value 25]
MaxSpareThreads    800 [default value 75]
-
-
-
</IfModule>

```

## Dynamic Monitoring Service Displays Incorrect Message if Oracle HTTP Server is Down

### Issue

Impacted Platforms: Generic

If you try to get metrics when Oracle HTTP Server is not running, Dynamic Monitoring Service (DMS) displays an incorrect message on `displayMetricTables.display`:

```
wls:/nm/base_domain> displayMetricTables(servers='ohs1',servertype='OHS')
Traceback (innermost last):
  File "<console>", line 1, in ?
  File "/scratch/prkishor/ps3_stg21_sa/oracle_common/modules/oracle.dms/diagnostics-
common-wlst.jar!/wlstScriptDir/OracleDMS.py",
  line 71, in displayMetricTables
  File "<string>", line 1085, in oracledmsDisplayMetricTables
  File "<string>", line 661, in oracledmsHandleException
ImportError: no module named socket
```

**Workaround**

No workaround available.

## No Automatic Port Allocation for Standalone Instances

**Issue**

Impacted Platforms: Generic

In the standalone mode, there is no automatic port allocation for Oracle HTTP Server instances.

**Workaround**

No workaround available.

## Problem Setting MPM Name in Fusion Middleware Control

**Issue**

Impacted Platforms: Generic

The operation of setting Multi-Processing Module (MPM) name succeeds but a false misleading message stating that it has failed appears.

The following error message appears:

```
Error Setting performance Directives
```

**Workaround**

Retry the operation until it succeeds.

## Metrics Fail to Load after Restarting Oracle HTTP Server Through Oracle Enterprise Manager Fusion Middleware Control Console on HP IA

**Issue**

Impacted Platforms: Generic

After a successful collocated Oracle HTTP Server installation on the HP IA-64 platform, Oracle HTTP Server startup metrics fail to load if you restart Oracle HTTP

Server instance through Oracle Enterprise Manager Fusion Middleware Control console. You might get one of the following errors:

```
"Metrics are currently unavailable"
```

```
"Metrics are not configured"
```

#### **Workaround**

Logout and log in from Oracle Enterprise Manager Fusion Middleware Control console after Oracle HTTP Server starts.

## WebLogic Server Plug-ins for Apache

### **Issue**

Impacted Platforms: Generic

If an IPv6 address is specified for WebLogicHost or WebLogicCluster parameter, then WebLogic Server plug-in may be unable to resolve this IPv6 address. This is due to missing or corrupted DLL errors in the Apache Portable Runtime (APR) project library that is shipped with Apache httpd 2.2.x. The underlying APR library is libapr-1.dll. .

This issue applies to WebLogic Server plug-ins for Apache 2.2 on Windows only, and is not applicable to Oracle HTTP Server or any other Listeners or Web Servers.

### **Workaround**

This issue is resolved in Apache httpd 2.2.24.

## Mod\_security SecRemoteRules Directive Use-case Does Not Work on HP-Itanium

### **Issue**

Impacted Platforms: HP-Itanium

SecRemoteRules directive is configured to download mod\_security rules from remote host. If the mod\_security module is unable to download rules, no error message is logged in ohs.log and mod\_security log files.

### **Workaround**

Remote server will have security rules in a text file as follows:

```
rultes.txt:
```

```
SecAction "id:'900006', phase:1, t:none, setvar:tx.max_num_args=255,  
nolog, pass"  
SecRule REQUEST_URI "^/ohs" "id:1234,deny"
```



The `mod_security.conf` file will have one entry to load rules from remote server, as follows:

```
SecRemoteRules test https://remoteserver:4443/rultes.txt
```

Replace the line in the `mod_security.conf` file with the content of `rultes.txt` file.

## A Caution Message Appears at Startup for OHS and CLASSIC on AIX

When the installer is invoked for OHS and CLASSIC on AIX operating systems, the following caution message is displayed:

```
bash-4.2$
/net/slcnas561/export/fa_porting01/ASCLASSIC_122131_shiphomes/stage-rc2/fmw_12
.2.1.4.0_fr_aix_ppc64.bin -J-Djava.io.tmpdir=/scratch/vsunkesu/tmp
-invPtrLoc /scratch/vsunkesu/122140/oraInst.loc
caution: excluded filename not matched: sfx.ini
Launcher log file is
/scratch/vsunkesu/tmp/OraInstall2019-09-10_06-08-56AM/launcher2019-09-10_06-08
-56AM.log.
Extracting the installer . . . . . Done
```

The caution message is printed by the unzip tool and will not affect the installation.

## Launch of OHS and CLASSIC Installer Fails on AIX

OHS and Classic installer fails to launch on AIX operating systems if `"/` is present at the end of value of `-J-Djava.io.tmpdir` parameter.

For example:

```
-J-Djava.io.tmpdir=/scratch/xyz/tmp/
```

Oracle recommends not to use `"/` at the end of value of `-J-Djava.io.tmpdir`.

For example:

```
-J-Djava.io.tmpdir=/scratch/xyz/tmp/
```

## An Incorrect Step Appears on the Installation Complete Screen

When you complete a standalone OHS installation, the step *Start Node Manager and Domain Servers* is displayed as one of the next steps you should take after installation.

This information is incorrect, as there are no domain servers configured during the standalone installation.

## Warning Messages in make.log File

While installing Oracle Web Tier 12c on AIX operating systems, warning messages may appear in the `ORACLE_HOME/install/make.log` file.

These messages can be safely ignored.

## SSL Certificate Chain Is Required on Certain Browsers

When you configure SSL for Oracle HTTP Server, you may need to import the entire certificate chain (rootCA, Intermediate CA's and so on).

Certain browsers, for example Internet Explorer, require that the entire certificate chain be imported to the browsers for the SSL handshake to work. If your certificate was issued by an intermediate CA, you will need to ensure that the complete chain of certificates is available on the browser or the handshake will fail. If an intermediate certificate in the chain expires, it must be renewed along with all the certificates (such as OHS server) in the chain.

# 5

## Documentation Changes

### **Major Changes to Books or Online Help**

Starting Oracle HTTP Server 12.2.1.3.0, the What's New section is added to the *Oracle HTTP Server Release Notes*. This information is available in the *Administering Oracle HTTP Server Guide* for the previous releases.