OFS Asset Liability Management

Installation Guide

Release 8.0.6.6.0

July 2020

ORACLE
Financial Services
OFS Asset Liability Management Installation Guide

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## Document Control

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<th>Revision Date</th>
<th>Change Log</th>
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</thead>
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<td>1.0</td>
<td>Jul 2020</td>
<td>Created the document to capture OFSAAI 8.0.6.6.0 Maintenance Level Release.</td>
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1 Preface

This section provides information about the Oracle Financial Services Asset Liability Management (OFS ALM) Application Pack.

You can find the latest copy of this document in the OHC Documentation Library which includes all the recent additions or revisions (if any) done to date.

Before you begin the installation, ensure that you have access to My Oracle Support with the required login credentials to quickly notify us of any issues at any stage.

Topics:
- Intended Audience
- How this Guide is Organized
- Access to Oracle Support
- Related Information Sources
- Conventions
- Abbreviations

1.1 Audience

OFS ALM Application Pack Installation Guide is intended for administrators and implementation consultants who handle installing and maintaining the application pack components.

This document assumes that you have experience in installing Enterprise components and basic knowledge about the following:
- OFS ALM pack components
- OFSAA Architecture
- UNIX Commands
- Database Concepts
- Web server or Web application server

1.2 How this Guide is Organized

The Installation Guide is organized into the following sections:
- OFS ALM Release v8.0.6.6.0
- Appendix A - Installation of R and Oracle R Enterprise (ORE)
1.3 **Access to Oracle Support**

Oracle customers have access to electronic support through My Oracle Support. For information, visit [http://www.oracle.com/pls/topic/lookup?ctx=acc&id=info](http://www.oracle.com/pls/topic/lookup?ctx=acc&id=info)


1.4 **Related Documents**

We strive to keep this and all other related documents updated regularly; visit the [OHC Documentation Library](http://www.oracle.com/pls/topic/lookup?ctx=acc&id=trs) to download the latest version available there. The list of related documents is provided here.

- [Oracle Financial Services Analytical Applications Technology Matrix](http://www.oracle.com/pls/topic/lookup?ctx=acc&id=trs)

1.5 **Conventions**

The following text conventions are used in this document.

**Table 1: Document Conventions**

<table>
<thead>
<tr>
<th>Convention</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>boldface</strong></td>
<td>Boldface type indicates graphical user interface elements associated with an action or terms defined in text or the glossary.</td>
</tr>
<tr>
<td><em>italic</em></td>
<td>Italic type indicates book titles, emphasis, or placeholder variables for which you supply particular values.</td>
</tr>
<tr>
<td>monospace</td>
<td>Monospace type indicates commands within a paragraph, URLs, code in examples, file names, text that appears on the screen, or text that you enter.</td>
</tr>
<tr>
<td><strong>Hyperlink</strong></td>
<td>Hyperlink type indicates the links to external websites and internal document links.</td>
</tr>
</tbody>
</table>
1.6 Abbreviations

The following table lists the abbreviations used in this document.

Table 2: Abbreviations

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>BDP</td>
<td>Big Data Processing</td>
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<tr>
<td>DBA</td>
<td>Database Administrator</td>
</tr>
<tr>
<td>DDL</td>
<td>Data Definition Language</td>
</tr>
<tr>
<td>DEFQ</td>
<td>Data Entry Forms and Queries</td>
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<tr>
<td>DML</td>
<td>Data Manipulation Language</td>
</tr>
<tr>
<td>EAR</td>
<td>Enterprise Archive</td>
</tr>
<tr>
<td>EJB</td>
<td>Enterprise JavaBean</td>
</tr>
<tr>
<td>ERM</td>
<td>Enterprise Resource Management</td>
</tr>
<tr>
<td>FTP</td>
<td>File Transfer Protocol</td>
</tr>
<tr>
<td>HDFS</td>
<td>Hadoop Distributed File System</td>
</tr>
<tr>
<td>HTTPS</td>
<td>Hypertext Transfer Protocol Secure</td>
</tr>
<tr>
<td>J2C</td>
<td>J2EE Connector</td>
</tr>
<tr>
<td>J2EE</td>
<td>Java 2 Enterprise Edition</td>
</tr>
<tr>
<td>JCE</td>
<td>Java Cryptography Extension</td>
</tr>
<tr>
<td>JDBC</td>
<td>Java Database Connectivity</td>
</tr>
<tr>
<td>JDK</td>
<td>Java Development Kit</td>
</tr>
<tr>
<td>JNDI</td>
<td>Java Naming and Directory Interface</td>
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<tr>
<td>JRE</td>
<td>Java Runtime Environment</td>
</tr>
<tr>
<td>JVM</td>
<td>Java Virtual Machine</td>
</tr>
<tr>
<td>LDAP</td>
<td>Lightweight Directory Access Protocol</td>
</tr>
<tr>
<td>LHS</td>
<td>Left Hand Side</td>
</tr>
<tr>
<td>MFA</td>
<td>Multi-Factor Authentication</td>
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<tr>
<td>MOS</td>
<td>My Oracle Support</td>
</tr>
<tr>
<td>OFSAA</td>
<td>Oracle Financial Services Analytical Applications</td>
</tr>
<tr>
<td>OFSAAI</td>
<td>Oracle Financial Services Analytical Application Infrastructure</td>
</tr>
<tr>
<td>OFSAAAI</td>
<td>Oracle Financial Services Advanced Analytical Applications Infrastructure Application Pack</td>
</tr>
<tr>
<td>OHC</td>
<td>Oracle Help Center</td>
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<tr>
<td>OLAP</td>
<td>On-Line Analytical Processing</td>
</tr>
<tr>
<td>OLH</td>
<td>Oracle Loader for Hadoop</td>
</tr>
<tr>
<td>Abbreviation</td>
<td>Meaning</td>
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<tr>
<td>--------------</td>
<td>----------------------------------------------</td>
</tr>
<tr>
<td>ORAAH</td>
<td>Oracle R Advanced Analytics for Hadoop</td>
</tr>
<tr>
<td>OS</td>
<td>Operating System</td>
</tr>
<tr>
<td>RAM</td>
<td>Random Access Memory</td>
</tr>
<tr>
<td>RDBMS</td>
<td>Relational Database Management System</td>
</tr>
<tr>
<td>RHEL</td>
<td>Red Hat Enterprise Linux</td>
</tr>
<tr>
<td>SFTP</td>
<td>Secure File Transfer Protocol</td>
</tr>
<tr>
<td>SID</td>
<td>System Identifier</td>
</tr>
<tr>
<td>SSL</td>
<td>Secure Sockets Layer</td>
</tr>
<tr>
<td>TNS</td>
<td>Transparent Network Substrate</td>
</tr>
<tr>
<td>URL</td>
<td>Uniform Resource Locator</td>
</tr>
<tr>
<td>VM</td>
<td>Virtual Machine</td>
</tr>
<tr>
<td>WAR</td>
<td>Web Archive</td>
</tr>
<tr>
<td>XML</td>
<td>Extensible Markup Language</td>
</tr>
</tbody>
</table>
2 OFS ALM Release v8.0.6.6.0

OFS Asset Liability Management Installation Guide (OFS ALM) Maintenance Level (ML) release v8.0.6.6.0 includes all the bug fixes and minor enhancements done since the previous Minor release v8.0.6.0.0.

This ML release of OFS ALM can be installed on a setup with any Oracle Financial Services Analytical Applications (OFSAAS) v8.0.6.0.0 Application Pack.

2.1 Pre-installation Requirements

The following pre-installation steps are required for this release:

- The minimum patch level installed must be OFS ALM Release 8.0.6.0.0.
- Ensure that the unlimited cryptographic policy for Java is enabled during the installation of OFS ALM 8.0.6.0.0. For more information, see the Enabling Unlimited Cryptographic Policy section in the OFS Analytical Applications Infrastructure Administration Guide.
- It is mandatory to install the OFS ALM 8.0.6.6.0 ML only on Java 8 with JCE enabled. Therefore, configure the Java version of the following to Java 8 with JCE enabled.
  - OFSAAS Processing Tier (where this ML will be installed)
  - Web server (Tomcat, WebSphere, or WebLogic)

NOTE

To upgrade Java 7 to Java 8 in an existing OFSAAS 8.0.6.x.x instance, see Appendix P in the Oracle Financial Services Asset Liability Management Installation and Configuration Guide 8.0.6.0.0.

- The OFS ALM 8.0.6.6.x release supports Oracle Database 19c in addition to the continued support on Oracle Database 12c. For details about configuring the Oracle Database Release 19c Server and Client for existing installations of OFSAAS running Oracle Database Release 12c Server and Client, see the MOS Doc ID: 2699715.1.
- In an environment consisting of multiple OFSAAS applications, if the October 2020 Critical Patch Update is applied for any one application, it is mandatory to apply the respective October 2020 Critical Patch Updates for all other applications on that OFSAAS instance, regardless of the application’s version. See the My Oracle Support Doc ID 2724021.1 for details.

2.2 Installing this Release

To install this release patch, follow these steps:

1. Log in to My Oracle Support and search for 31520860 under the Patches & Updates tab.
1. Download the OFS ALM 8.0.6.6.0 ML Release archive file and copy to your OFSAAS server in Binary mode.
NOTE: There are different archive files for different operating systems such as AIX, Solaris, and RHEL/OEL.

2. Stop all the OFSAAI services. For more information, see the Stopping Infrastructure Services section in the Oracle Financial Services Asset Liability Management Installation and Configuration Guide 8.0.6.0.0.

3. Log in to the OFSAA server as a non-root user and navigate to the $FIC_HOME directory.

4. Assign WRITE permission to the files and directories such as commonscripts, EXEWebService, ficapp, ficweb, and ficdb using the command:
   
   chmod -R 775 *

5. If you have the Unzip utility, skip to the next step or download the Unzip utility (OS-specific) and copy it in Binary mode to the directory that is included in your PATH variable, typically $HOME path or directory in which you have copied the 8.0.6.0.0 ML.
   
   Uncompress the unzip installer file using the command:
   
   `uncompress unzip_<os>.Z`

   *Assign EXECUTE permission to the utility using the command:
   
   `chmod 751 unzip_<os>`
   
   For example, `chmod 751 unzip_aix`

6. Extract the contents of the 8.0.6.0.0 ML archive file using one of the following commands:
   
   `unzip_<os> -a <name of the file to be unzipped>`
   
   Or
   
   `unzip -a <name of the file to be unzipped>`

   *The above “-a” option is mandatory to extract the archive file. An example for AIX operating system,
   
   `unzip_aix -a p31284429_80660_AIX64.zip`

7. Update the parameters in the `params.conf` file present in the
   
   `/OFS_ALM_PACK/OFS_ALM/conf/` directory. The update instructions are present in the file itself.

8. Navigate to the `/OFS_ALM_PACK` directory to assign EXECUTE permission to the ML patch installer script using the command:
   
   `chmod 755 OFSAAIUpdate.sh`
9. Complete the patch upgrade using the command:

   ./OFSAAIUpdate.sh

10. Verify if the ML patch is applied successfully by checking the log file generated in the
    /OFS_ALM_PACK/OFS_ALM/logs directory. You can ignore error codes ORA-00001, ORA-02292, ORA-00955, and ORA-02260 in the log file. For any other errors, contact My Oracle Support.

    **NOTE** For upgrade on Hive Infodom, you can encounter an exception
    “PL/SQL: ORA-00942: table or view does not exist”. You can
    ignore this error.

11. After successful installation of the ML, follow these steps:
    - Execute the `.profile` file using the following command:
      
      . $HOME/.profile
    - Clear the application cache. Navigate to the following path depending on the configured
      web application server and delete the files.
      
      - Tomcat:
        
        <Tomcat installation
        folder>/work/Catalina/localhost/<Application
        name>/org/apache/jsp
      - WebLogic:
        
        <WebLogic installation location>/domains/<Domain
        name>/servers/<Server name>/tmp/_WL_user/<Application name>
      - WebSphere:
        
        <WebSphere installation directory>/AppServer/profiles/<Profile
        name>/temp/<Node name>/server1/<Application name>/<.war file
        name>

12. Delete the existing EAR or WAR file available in the $FIC_HOME/ficweb directory.

13. Install the OFSAAI Runner package. This is an optional step and applicable only if you have
    installed Oracle R Enterprise Edition (ORE). For more information, see Installing OFSAAI Runner
    Package with Enhancements for OFSAAI 8.0.6.6.0.

14. Restart all the OFSAAI services. For more information, see the Starting Infrastructure Services
    section in the Oracle Financial Services Asset Liability Management Installation and
    Configuration Guide 8.0.6.0.0.

15. Generate the application EAR or WAR file and redeploy the application onto your configured
    web application server. For more information on generating and deploying the EAR or WAR file,
    see the Post-installation Configurations section in the Oracle Financial Services Asset Liability
    Management Installation and Configuration Guide 8.0.6.0.0.
3 Post-installation Steps

The following post-installation steps are required for this release:

- Download and apply the 31846136 one-off patch. See the Readme packaged with the patch for further instructions on how to install.
4  Additional Configurations

Topics:
- Install the Updated OFSAAI Runner

4.1  Install the Updated OFSAAI Runner

**NOTE**

1. This is a post-installation configuration and is applicable if you have installed Oracle R Enterprise (ORE) for Oracle Financial Services Enterprise Modeling (OFS EMF) Application.

2. This configuration is not applicable for Tomcat web server.

If OFS Enterprise Modeling is licensed and enabled in your OFSAA instance, uninstall the OFSAAI Runner package and reinstall the latest available OFSAAI Runner package. For details on uninstallation and reinstallation, see the Configuring Oracle R distribution and Oracle R Enterprise (ORE) section in the *Oracle Financial Services Asset Liability Management Installation & Configuration Guide 8.0.7.0.0*. 
Appendix A - Installation of R and Oracle R Enterprise (ORE)

This is an optional step and required only if you intend to use Term Structure Parameter Estimation functionality under Interest Rates of Rate Management for computing term structure parameters. Both OFS Funds Transfer Pricing and OFS Asset Liability Management applications require term structure parameters for all Monte Carlo engine-based calculations (OAS, VaR, and EaR).

The following are the prerequisites:

- Install R and Oracle R Enterprise Server on the Oracle Database server. For more information, see the Oracle® R Enterprise Installation and Administration Guide
- Oracle R Enterprise (Server) version 1.4.1
- Configuration for Oracle R Enterprise
- Grant the RQADMIN role to atomic schema

You can grant the RQADMIN role in SQL*Plus by logging in to the database with DBA privileges and provide the following privilege to Atomic Schema:

```
GRANT RQADMIN TO < atomic_schema>
```
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Raise a Service Request (SR) in [My Oracle Support (MOS)](https://support.oracle.com) for queries related to the OFSAAS applications.
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- Is the information clearly presented?
- Do you need more information? If so, where?
- Are the examples correct? Do you need more examples?
- What features did you like most about this manual?

If you find any errors or have any other suggestions for improvement, indicate the title and part number of the documentation along with the chapter/section/page number (if available) and contact the My Oracle Support.

Before sending us your comments, you might like to ensure that you have the latest version of the document wherein any of your concerns have already been addressed. You can access My Oracle Support site that has all the revised or recently released documents.