Oracle Financial Services Capital Adequacy Pack

Installation Guide

Version 8.0.2.0.0

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FINANCIAL SERVICES

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Executive Summary

This document includes the necessary instructions to apply 8.0.2.0.0 Minor Release of OFS Capital Adequacy Pack and perform the required post install configurations. You can find the latest copy of this document in OTN Documentation Library.

TABLE OF CONTENTS

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Preface

This document provides step-by-step instructions to install the Oracle Financial Services Capital Adequacy Pack (OFSCAP) version 8.0.2.0.0 Minor Release.

This chapter discusses the following topics:

- Audience
- How this Guide is Organized
- Recommended Environment
- Related Documents
- Conventions Used

Audience

OFSCAP Installation Guide is intended for administrators and implementation consultants who are responsible for installing and maintaining the application pack components.

Prerequisites for the Audience

The document assumes that you have experience in installing Enterprise components. The following are the expected preparations by an administrator, before initiating the actual installation:

- OFSCAP components
- Oracle Financial Services Analytical Applications Infrastructure (OFSAAI) architecture
- UNIX Commands
- Database Concepts
- Web Server/ Web Application Server

How this Guide is Organized

The Oracle Financial Services Capital Adequacy Pack Installation Guide includes the following topics:

- OFSCAP Application Pack Release 8.0.2.0.0

Recommended Environment

Infrastructure application has been tested with Microsoft Internet Explorer™ browser. For best viewing of Infrastructure pages, set the screen resolution to a minimum resolution of 1024 x 768 pixels.

Related Documents

- *Oracle Financial Services Capital Adequacy Pack User Guide 8.0.2.0.0*

- *Oracle Financial Services Capital Adequacy Pack Installation Guide 8.0.0.0.0*
  These documents are available at OTN Documentation Library

Conventions and Acronyms

Conventions	Description
AIX	Advanced Interactive eXecutive
CAP	Capital Adequacy Pack
GA	General Availability
CA	Controlled Availability
OFSAAI	Oracle Financial Services Analytical Applications Infrastructure
OFS AAAI	Oracle Financial Services Advanced Analytical Applications Infrastructure
RHEL	Red Hat Enterprise Linux
ML	Maintenance Level
Atomic Schema	Database schema where the application data model is uploaded.
Config Schema	Database schema which contains setup related configurations and metadata.

- Actions are indicated in **Bold**.

- Command or query is indicated in `Courier New` font.

1 OFSCAP Application Pack Release 8.0.2.0.0

This Minor Release of OFSCAP Application Pack is cumulative and includes all enhancements and bug fixes done since the OFSCAP Application Pack v8.0.0.0.0 GA (General Availability) release. For more information, refer to Oracle Financial Services Capital Adequacy Pack – Release 8.0.0.0.0 page in OTN Documentation Library.

1.1 Supported Software Versions

You can refer to the OFSAA Technology Matrix 8.0.2.0.0 in OTN Documentation Library to know more about the software versions that are supported by this release of OFS CAP.

1.2 Pre Installation Requirements

You should have OFS CAP 8.0.0.0.0 GA as the minimum patch set level.

For Installation of this release on existing Governance, Risk, and Compliance Application Pack (GRC) Instance, the order of installation should be as follows:

GRC 8.0.2 >> CAP 8.0 >> CAP 8.0.0.0.2 (Bug ID-21767340) >> CAP 8.0.2

1.3 How to Apply this Minor Release?

1.3.1 Installing OFSCAP

Perform the following procedure to download, extract, and install this minor release.

1. Login to https://support.oracle.com/ and search for **23731217** under the *Patches & Updates* tab.

2. Download the OFSCAP Application Pack v8.0.2.0.0 archive file and copy it to your OFSAA server in **Binary** mode.

   > **NOTE:** The archive files are different for every operating system such as AIX, Solaris, and RHEL/Oracle Linux.

3. Shut down all the OFSCAP Services. For more information, refer to the *Start/Stop Infrastructure Services* section in Oracle Financial Services Capital Adequacy Pack Installation Guide – Release 8.0.0.0.0.

4. Assign WRITE permission to the files/ folders such as commonscripts, EXEWebService, ficapp, ficweb, and ficdb in the **$FIC_HOME** folder by executing the command:

   ```
   chmod -R 750 $FIC_HOME
   ```

5. If you have Unzip utility, skip to the next step. Download an Unzip utility (OS specific) and copy it in **Binary** mode to the directory that is included in your PATH variable,

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typically **$HOME** path or directory in which you have copied the OFSCAP 8.0.2.0.0 application pack.

▪ Uncompress the unzip installer file using the command:

```
uncompress <unzip utility filename>
```

> **NOTE:** In case you notice an error message "**uncompress: not found [No such file or directory]**" when the package is not installed, contact your UNIX administrator.

▪ Execute the following command to provide EXECUTE permission to the application pack file:

```
chmod 751 OFSCAP_80100_<OperatingSystem>.zip
```

6. Extract the contents of the OFSCAP 8.0.2.0.0 application pack archive using the command:

```
unzip_<os> -a <name of the file to be unzipped>
```

> **NOTE:** The above "**-**a" option is mandatory to unzip the archive file.
> For example: `unzip_aix -a OFSCAP_80100_<OperatingSystem>.zip`

7. Update the **UPLOAD_MODEL**, **MODEL_TYPE**, **DATAMODEL**, and **DM_DIRECTORY** parameters in **params.conf** file present in *OFS_CAP_ADQ_PACK/OFS_CAP_ADQ/conf/* location as detailed in the file.

8. Execute the following script in the CONFIG SCHEMA:

    CSSMS_GROUP_MAST_PRE.sql

9. Execute the following script in CONFIG schema, after updating the values of **##INFODOM##** and **##FCSEG##** fields, as detailed in the following file:

    BASEL_FORECAST_OFSAA_SETUP_APPLN_DTLS.sql

10. Provide EXECUTE permission to the OFSAAIUpdate.sh file. Navigate to the location where the OFSCAP application is extracted and execute the command:

```
chmod 750 OFSAAIUpdate.sh
```

11. Execute **OFSAAIUpdate.sh** file.

    Verify if the application is applied successfully by checking the log file generated in the installation folder. You can ignore ORA-00001, ORA-00955, ORA-02260, and ORA-01430 errors in the log file. In case of any other errors, contact Oracle Support.

12. For more information on securing your OFSAA Infrastructure, refer note 1540442.1 in My Oracle Support (MOS).

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13. After successful installation of OFSCAP 8.0.2.0.0 application, perform the following steps:

    ▪ 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>/qaelce/jsp_servlet

        ▪ **Websphere**:
           <Websphere installation directory>/AppServer/profiles/<Profile name>/temp/<Node name>/server1/<Application name>/<.war file name>

    ▪ Remove all occurrences of below mentioned tag from $FIC_WEB_HOME/webroot/WEB-INF/web.xml file.

       <url-pattern>/basel/AttributionAnalysis/*</url-pattern>

    ▪ Remove the AttributionStruts.xml tag from the $FIC_WEB_HOME/webroot/WEB-INF/classes/Struts.xml file.

    ▪ Delete the AttributionStruts.xml file from $FIC_WEB_HOME/webroot/WEB-INF/classes folder.

    ▪ Map the Attribution UI function codes to Attribution roles such as Attribution Admin, Attribution Analyst, and Attribution Audit.

14. Add umask 0027 in the `.profile` of the UNIX account which manages the WEB server to ensure restricted access permissions.

15. Generate the application EAR/WAR file and redeploy the application onto your configured web application server. For more information on generating and deploying EAR / WAR file, refer to the *Post Installation Configuration* section in Oracle Financial Services Capital Adequacy Pack Installation Guide – Release 8.0.0.0.0.

16. After the successful installation of the application pack, restart all the OFSCAP services. For more information, refer to the *Start/Stop Infrastructure Services* section in Oracle Financial Services Capital Adequacy Pack Installation Guide – Release 8.0.0.0.0.

1.4 Additional Configurations

1.4.1 Map Application User(s) to User Group

Once the OFSCAP application pack is installed, the following User Groups have to be mapped to the respective Domains, as detailed in the following table:

User Group Name	Domain Name
OREC Modeler	OREC Sandbox and OREC Application
OREC Approver	OREC Sandbox and OREC Application

These mappings are required to enable the Modeler and Approver functionalities of OREC application. Once the preceding mapping is done, you can map Users to the OREC Modeler and OREC Approver User Groups.

You can perform these tasks from the **User User Group Map** and **User Group Maintenance** sections of Oracle Financial Services Analytical Applications Infrastructure. For more information refer to *Oracle Financial Services Analytical Applications Infrastructure User Guide* available at OTN Documentation Library.

1.4.2 Configurations for Enterprise Modeling

The following configurations are applicable only if OFS Enterprise Modeling is licensed and enabled in the OFSAA instance on which this release is being installed.

1.4.2.1 Configuration of Oracle R distribution and Oracle R enterprise (ORE)

You can refer the *OFS Advanced Analytical Applications Infrastructure Application Pack Installation and Configuration Guide – Release 8.0.0.0.0*, available in OTN Documentation Library for information on configuration of Oracle R distribution and Oracle R Enterprise.

1.4.2.2 Configuration of Open R

1. Install OFSAAIRunner package which is available in $FIC_DB_HOME/lib folder. This acts as bridge between OFSAAI and ORE/R.

   For more information, refer to *Post Installation Configuration section* of OFSAAAI Installation Guide available at OTN Documentation Library.

2. Install the following packages:

   - Package **zoo - zoo_1.7-12.tar.gz** - https://cran.r-project.org/web/packages/zoo/index.html

   - Package **xts - xts_0.9-7.tar.gz** - https://cran.r-project.org/web/packages/xts/index.html

- Package **PerformanceAnalytics_1.4.3541.tar.gz** - https://cran.r-project.org/web/packages/PerformanceAnalytics/index.html

- Package **moments_0.14.tar.gz** - https://cran.r-project.org/web/packages/moments/index.html

- Package **fitdistrplus_1.0-5.tar.gz** - https://cran.r-project.org/web/packages/fitdistrplus/index.html

- Package **plyr_1.8.3.tar.gz** - https://cran.r-project.org/web/packages/plyr/index.html

- Package **Rcpp_0.12.2.tar.gz** - https://cran.r-project.org/web/packages/Rcpp/index.html

- Package **hexbin_1.27.1.tar.gz** - https://cran.r-project.org/web/packages/hexbin/index.html

- Package **evir_1.7-3.tar.gz** - https://cran.r-project.org/web/packages/evir/index.html

1.4.2.3   Syntax for Installing R Packages

For OFSAAI Runner on Database server: -

1. Login as oracle user on Database server.

2. Type **ORE** to get ORE console.

3. Enter **install.packages("<OFSAAIRunner package name>")** and press enter.

For other packages, login as relevant user with which Oracle R is installed.

1. Type **R** to get R console.

2. Enter **install.packages("<package name as listed in point 3>")** and press enter.

> **NOTE:** Ensure that the ORACLE_SID is set in ORACLE profile

1.4.2.4   Installing Additional Packages for R

Once R installation is done, base packages get installed with R. After installation is complete, we need to install following additional packages used for modeling in OREC:

- library(PerformanceAnalytics)

- library(MASS)

- library(fitdistrplus)

- library(evd)

- library(truncgof)

- library(truncdist)

- library(actuar)

- library(GeneralizedHyperbolic)

- library(plyr)

- library(timeSeries)

- library(timeDate)

- library(bbmle)

- library(stats)

- library(DistributionUtils)

- library(copula)

- library(plyr)

- library(moments)

- library(hexbin)

- library(evir)

- library(lattice)

- library(kSamples)

- library(SuppDists)

- library(cramer)

- library(matrixcalc)

- library(EnvStats)

- library(lqmm)

- library(vcd)

You can install the packages using any of the following method:

Automated Installation (Recommended)

As the installation of additional packages in R may be a repetitive process, to avoid manual effort and packages inter-dependency related errors and issues, following are the steps that automate the packages installation process to a great extent.

1. Log in to the host Linux machine where R is installed with your NIS credentials or any other user which has sudo privileges.

2. Once logged in change to root user using either of the command below:

   sudo su root

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OR

sudo su - root

3. If this host machine is behind proxy servers in your network, then it will fail to connect to CRAN website from where we download the packages. Therefore we need to set the proxy with following command:

export http_proxy=http://jp-proxy.jp.oracle.com:80

> **NOTE:** Note that this setting will be valid only for the current session. If you like to set the proxy permanently for your server, then copy the above command in your .profile file.

4. Create a R script with the following R code:

```
list.of.packages <-
c(""PerformanceAnalytics","MASS","fitdistrplus","evd","truncgof"
,"truncdist",

"actuar","GeneralizedHyperbolic","plyr
","timeSeries","timeDate","bbmle",

"stats","DistributionUtils","copula","plyr","moments","hexbin","
evir",

"lattice","kSamples","SuppDists","cramer","matrixcalc",
"EnvStats", "lqmm", "vcd"")

new.packages <- list.of.packages[!(list.of.packages %in%
installed.packages()[,"Package"])]

if(length(new.packages))
install.packages(new.packages,dependencies=TRUE

,repos="http://cran.uk.r-project.org")
```

Create a file, paste the above code and name the file with .R extension. For example test.R**.**

In this case User has to just give the packages names. In case the package is not installed, the below script will automatically install using the existing mirror set in profile.

> **NOTE:** Ensure that the firewall is not enabled.

User can explicitly set the repos path in case any repository is not working. Repos if not passed, will be taken from the .R profile.

5. Once you have created and saved the R script execute the script at the Linux command prompt as following:

Rscript --no-save --no-restore --verbose test.R > test.log 2>&1

Where, test.R is the R script that you have created and test.log is the log file that will be created in the current directory and it will contain all the output of the commands and warnings and errors if any.

Manual Installation

In case the host machine do not have access to the internet or if setting proxy is not allowed, perform the following procedure to install the additional packages:

1. Get all the packages along with their dependencies copied to the host machine's local directory. For example, */home/ofsaa/*.

    You can get the packages either downloading it from CRAN from the machine which has internet access or can copy from any other machine if it has the packages.

    > **NOTE:** Make sure all the dependent packages are also copied to the host.

2. Once logged in change to root user using either of the command below:

    sudo su root

    OR

    sudo su – root

3. Create a R script (for example **test.R**) with the following R code:

    ```
    list.of.packages <- c("hexbin",
    "plyr","xts","zoo","PerformanceAnalytics","moments","Rcpp","fitd
    istrplus","actuar","evir","SuppDists","cramer","kSamples")

    new.packages <- list.of.packages[!(list.of.packages %in%
    installed.packages()[,"Package"])]

    if (length(new.packages))

    {

    install.packages("kSamples",contriburl="file:// /home/ofsaa/")

    install.packages("cramer",contriburl="file:// /home/ofsaa/")

    install.packages("SuppDists ",contriburl="file:// /home/ofsaa/")

    install.packages("GeneralizedHyperbolic ",contriburl="file://
    /home/ofsaa/")

    install.packages("evd",contriburl="file:// /home/ofsaa/")
    install.packages("actuar",contriburl="file:// /home/ofsaa/")
    ```

```
install.packages("bbmle",contriburl="file:// /home/ofsaa/")

install.packages("fitdistrplus ",contriburl="file://
/home/ofsaa/")

install.packages("moments ",contriburl="file:// /home/ofsaa/")

install.packages("PerformanceAnalytics ",contriburl="file://
/home/ofsaa/")

install.packages("zoo ",contriburl="file:// /home/ofsaa/")

install.packages("xts ",contriburl="file:// /home/ofsaa/")

install.packages("Rcpp ",contriburl="file:// /home/ofsaa/")

install.packages("plyr ",contriburl="file:// /home/ofsaa/")

install.packages("evir ",contriburl="file:// /home/ofsaa/")

install.packages("hexbin ",contriburl="file:// /home/ofsaa/")

}
```

4. Once you have created and saved the R script execute the script at the Linux command prompt as following:

    Rscript --no-save --no-restore --verbose test.R > test.log 2>&1

    Where, **test.R** is the R script that you have created and **test.log** is the log file that will be created in the current directory and it will contain all the output of the commands and warnings and errors if any.

    NOTE: If you are getting an error about the missing dependency package(s),then download those packages and include in the directory where all other packages are available and run the script again.

1.4.2.5   Configuration for Tomcat

To stop generating static content with one print statement per input line, you need to configure the web.xml file.

To configure web.xml file, follow these steps:

1. Navigate to tomcat/conf folder.

2. Edit web.xml file as explained below:

    Set the mapped file parameter to false in the servlet tag mentioned with
    <servlet-name>jsp</servlet-name>.

```
<init-param>

<param-name>mappedfile</param-name>

<param-value>false</param-value>

</init-param>
```

Appendix A

Frequently Asked Questions

What checks does the 8.0.2.0.0 Controlled Availability (CA) Release patch perform?

- Environment Check- As part of environment check, it performs Java validation, Environment Variables validation, OS specific validation, DB specific validation, and it shuts down all OFSAAI Services (Infrastructure Server, ICC Server, and back-end services).

- Post Install check- As part of Post install check, it checks if OFSAAI services can be successfully started.

Which version of ERwin Data Modeler does OFSAAI support?

OFSAAI now supports ERwin version 9.2 and 9.5 generated xmls in addition to ERwin 4.1, ERwin 7.1, ERwin 7.3 and ERwin 9.0 formats.

What should I do for viewing the log files in Debug level for troubleshooting?

By default, the log level is set as INFO. You need to manually change it to Debug to view the log files in debug level. Based on your requirement, you can change the log level to Warn, Error, or Fatal as well.

1. Navigate to *$FIC_HOME/conf* in the APP layer of your OFSAAI installation.

   - Change the **priority value** to **Debug** in the *RevLog4jConfig.xml* file.

     For example:

     ```
     <root>

       <priority value ="debug" />

       <appender-ref ref="ConsoleAppender1"/>

     </root>
     ```

   - Change the value of **LOGGERLEVEL** in the *DynamicServices.xml* file from **20** to **0**. (**20** is the value for Info and **0** for Debug.)

   NOTE: For multi-tier installation, you need to change the log level to Debug in the *DynamicServices.xml* and *RevLog4jConfig.xml* files, which are present in *$FIC_APP_HOME/conf*, *$FIC_DB_HOME/conf*, and *$FIC_WEB_HOME/conf* as well.

2. Navigate to *$FIC_WEB_HOME/webroot/conf* and change the **priority value** to **Debug** in the *ExportLog4jConfig.xml* , *MDBLogger.xml*, and *PR2Logger.xml* files for viewing log files in Debug level for the modules Archive/Restore, Metadata Browser and RRF respectively.

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3. Generate the application EAR/WAR file and redeploy the application onto your configured web application server. For more information on generating and deploying EAR / WAR file, refer to the *Post Installation Configuration* section in Oracle Financial Services Capital Adequacy Pack Installation Guide – Release 8.0.0.0.0.

4. Restart the OFSAAI Services (APP and WEB). For more information, refer to the *Start/Stop Infrastructure Services* section in Oracle Financial Services Capital Adequacy Pack Installation Guide – Release 8.0.0.0.0.

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