

Getting Started with Oracle Cash Flow Engine Cloud Service

User Guide

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ORACLE
Financial Services

Getting Started with Oracle Cash Flow Engine Cloud Service

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Document Control

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1 Get Help

Topics:

- [Get Help in the Applications](#)
- [Learn About Accessibility](#)
- [Get Support](#)
- [Get Training](#)
- [Join Our Community](#)
- [Share Your Feedback](#)
- [Before You Begin](#)

1.1 Get Help in the Applications

Use Help icons to access help in the application.

Note that not all pages have Help icons. You can also access the [Oracle Help Center](#) to find guides and videos.

1.1.1 Additional Resources

- Community: Use [Oracle Cloud Customer Connect](#) to get information from experts at Oracle, the Partner Community, and other users.
- Training: Take courses on Oracle Cloud from [Oracle University](#).

1.2 Learn About Accessibility

For information about Oracle's commitment to accessibility, visit the [Oracle Accessibility Program](#). Videos included in this guide are provided as a media alternative for text-based topics also available in this guide.

1.3 Get Support

You can get support at [My Oracle Support](#).

For accessible support, visit Oracle Accessibility Learning and Support.

1.4 Get Training

Increase your knowledge of Oracle Cloud by taking courses at [Oracle University](#).

1.5 Join Our Community

Use [Cloud Customer Connect](#) to get information from industry experts at Oracle and in the Partner Community. You can join forums to connect with other customers, post questions, and watch events.

1.6 Share Your Feedback

We welcome your feedback about Oracle Applications User Assistance. If you need clarification, find an error, or just want to tell us what you found helpful, we did like to hear from you.

You can email your feedback to [My Oracle Support](#).

Thanks for helping us improve our User Assistance!

1.7 Abbreviations

The following table lists the abbreviations used in this document.

Table 2: Abbreviations

Abbreviations	Description
ALM	Asset Liability Management
AMHM	Attributes Members Hierarchies Module
ANSI	American National Standards Institute
API	Application Programming Interface
ASCII	American Standard Code for Information Interchange
AW	Analytical Workspace
BA	Business Analysts
BI	Business Intelligence
BMM	Business Metadata Management
BP	Business Processor
CF	Cash Flow
CFE	Cash Flow Engine
CSV	Comma Separated Values
DBA	Database Administrator
DQ	Data Quality
DSN	Data Source Name
ELT	Extract Load Transform
EPM	Enterprise Performance Management
ES	External Scheduler
ESIC	External Scheduler Interface Component

Abbreviations	Description
ETL	Extract Transform Load
FTP	File Transfer Protocol
GMV	General Market Variable
HTML	Hyper Text Markup Language
HTTP	Hypertext Transfer Protocol
Infodom	Information Domain
IP	Internet Protocol
JDBC	Java Database Connectivity
JSON	JavaScript Object Notation
JVM	Java Virtual Machine
LDAP	Lightweight Directory Access Protocol
LHS menu	Left hand side menu
MDB	Microsoft Access Database
MOLAP	Multidimensional Online Analytical Processing
OBIEE	Oracle Business Intelligence Enterprise Edition
ODBC	Open Database Connectivity
OFSAAI	Oracle Financial Services Analytical Applications Infrastructure
OLAP	Online Analytical Processing
PBSM	Profitability and Balance Sheet Management
PDF	Portable Data Format
PFT	Profitability Management
RDBMS	Relational Database Management System
RHS	Right Hand Side
SA	System Administrator
SFTP	Secret File Transfer Protocol
SID	System ID
SMS	Security Management System
SQL	Structured Query Language
T2T	Table to Table
TFM	Technical File Maintenance
TNS Name	Transparent Network Substrate Name
TP	Transfer Pricing
UMM	Unified Metadata Manager

Abbreviations	Description
URL	Uniform Resource Locator
VaR	Value at Risk
XML	Extensible Markup Language

1.8 Before You Begin

Refer to following Documents:

- [See What's New](#)

2 Introduction to Oracle Cash Flow Engine Cloud Service

Cash Flow Calculation is an integral part of finance and risk solutions. Cash Flow Engine (CFE) of Profitability and Balance Sheet Management Cloud Service is designed to help institutions to take a fresh and granular look at their cash inflows and outflows. It allows you to calculate Cash Flows of their Assets, Liabilities, and Off-Balance Sheet Products at instrument level. The service measures and models every loan, deposit, and off-balance sheet instrument individually, using Deterministic Methods. This helps gain a better insight into the granularity of cash inflows and outflows to be utilized for multiple non-regulatory and Regulatory purposes. Due to its generic nature CFE is suitable for both financial and non-financial institutions with exposure to financial securities/instruments.

2.1 Key Features

The Key Features are as follows:

- Generate account level Cash Flows using Unique Payment and Repricing Characteristics
- Support for principal and interest payments on different dates and at a different frequency
- Daily Rate Forecasting - Unique Rate for a given day on Repricing
- Fully auditable Cash Flow Output
- Calculate Cash Flows for multiple time horizons
- Multiple accrual basis and Compounding Methods
- Inbuilt Data Validation Rules
- Cash Flow Edits to perform comprehensive quality check on input data
- Model-specific characteristics using patterns and schedules
- Amortize one account using multiple methods
- Incorporate Prepayment and Early Redemption Assumptions
- Amortize premiums and discounts
- Calculate Market Value using multiple Discount Methods
- Apply Business Calendar
- Fresh looking application user interfaces with Oracle Redwood Theme

For more information, see the Cash Flow Engine Reference Guide.

2.2 User Groups

Table 1: User Groups

User Group	Description
------------	-------------

User Group	Description
CFE Administrator	Performs all functional and technical activities. Given to experts who need to create and administer applications and service components.
CFE Analyst	Can create and administer service components, such as assumptions, rules, analysis, dashboards, and reports. Enters data and runs analysis for dimension members to which they have access, also designs reports and other analytical outputs.
CFE Auditor	View and analyze data using various analytical features
For Reports CFE BI Data Steward CFE BI Analyst CFE BI Auditor CFE BI LOB Head	View and analyze reports

For more information, see the User Roles and Privileges Section.

2.3 Guidelines for Working with a Cash Flow Engine

This topic describes an approach to designing and building applications based on your Security Role and the tasks it enables you to perform.

2.3.1 For CFE Administrators

CFE Administrators can perform the following steps to set up Cash Flow Engine:

- Define the folders before creating the assumptions, rules, and processes.
- Extend the Data Model, if required, by registering placeholder columns and tables.

2.3.2 For CFE Analysts

CFE Administrators and Analyst Users of Cash Flow Engine can perform the following steps to set up an application:

- Activate one or multiple Currency
- Define dimensions (such as business dimensions, and so on) using Dimension Management to build the main objects within the application.
- Define Global, User, and Application Preferences
- Define the Interest Rates and Economic Indicators

- Create assumptions and rules.
- Define Cash Flow Process and Cash Flow Edits Processes
- Load the data.
- Create and execute the batches
- Validate the Cash Flow Engine Application Structure to ensure that the application structure confirms to Validation Rules.
- Set up analysis views and other analytic tools so those with User and Viewer Roles can use them.
- Analysis the results.

2.3.2.1 For CFE Auditor

All users, including CFE Auditor, can do most of the following:

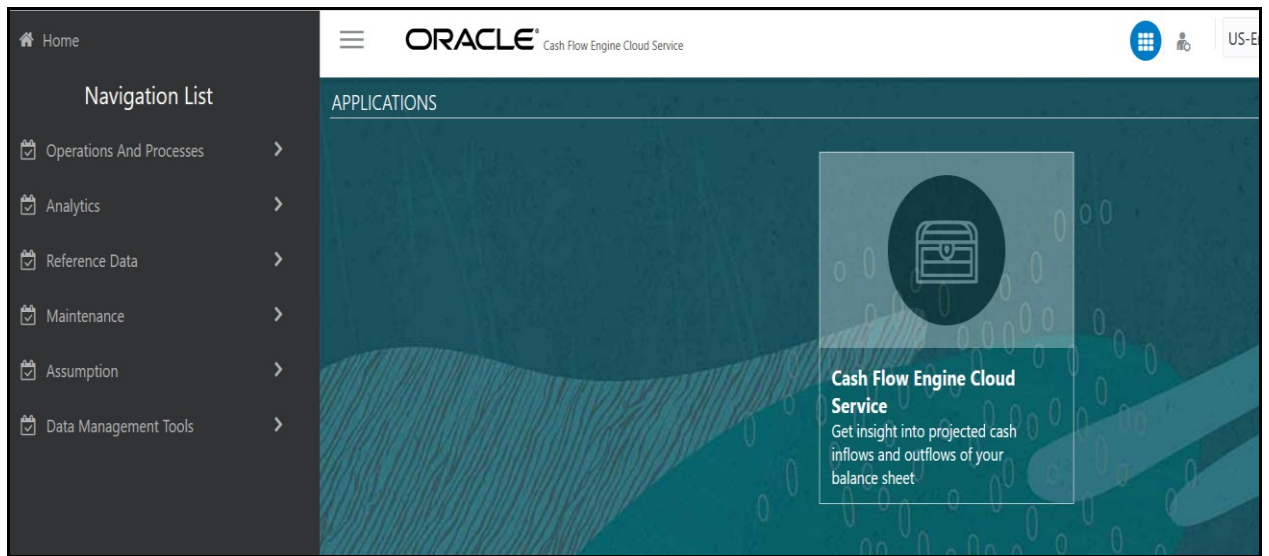
- View rules and assumptions setup in Cash Flow Engine.
- Analyze the Calculated Result Reports.
- Use the analytics features to track and report on Cash Flows.

2.4 Launching Cash Flow Engine

You can launch Cash Flow Engine from the Web Browser.

To open Cash Flow Engine, perform the steps as follows:



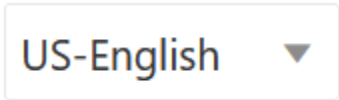
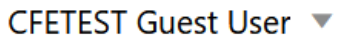


1. In the Web browser, click the link provided by Oracle.
2. Enter your user name and password.
If requested, select an application.
The password is case-sensitive.
3. Click Sign In.
The Cash Flow Engine Home Page is displayed.

Figure 1: Cash Flow Engine Home Page

2.4.1 Cash Flow Engine Home Page

When you log in, you see the Cash Flow Engine Home page.

The Home page contains these main areas:

-  Navigator Screen to access menu items.
-  to Navigate to Admin Console.
-  Displays the language of service.
-  The User Name menu with your user name in the header.
-  Click it to view setup information.
-  Shows the details of Last Login Date and Time.

For more information about help and learning assistance, see Using Cash Flow Engine Library.


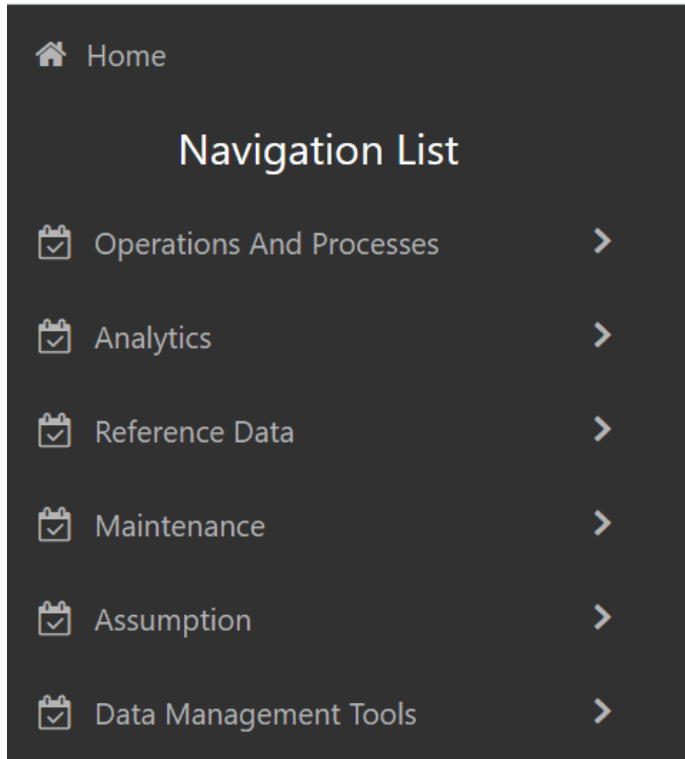
Click  to display the Navigator Screen. This screen serves as a sitemap of the application features and displays links to all of the pages you can access. Use the Navigator Screen to navigate among the rules and processes required to define, review, and analyze the application, and to report results.

Figure 2: Navigation Path



PBSM Cash Flow Engine Cloud Service Navigation Paths are displayed in the List of Navigation Paths. Access all these pages through the CFE Administrator, CFE Auditor, or CFE Analyst Responsibility.

Table: List of Navigation Paths for Cash Flow Engine Cloud Service

Page	Navigation Path
Cash Flow Process	Select Cash Flow Engine Cloud Service menu, select Operations and Processes, and then select Cash Flow Process
Cash Flow Edits Process	Select Cash Flow Engine Cloud Service menu, select Operations and Processes, and then select Cash Flow Edits Process
Scheduler	Select Cash Flow Engine Cloud Service menu, select Operations and Processes, and then select Scheduler. Following sub-menus are available under Scheduler: Dashboard Define Batch


Page	Navigation Path
	Define Task Schedule Batch Monitor Batch
Report Home Page	Select Cash Flow Engine Cloud Service menu, select Analytics, and then select Home Page
SQL Query Browser	Select Cash Flow Engine Cloud Service menu, select Analytics, and then select SQL Query Browser
My Dashboard	Select Cash Flow Engine Cloud Service menu, select Analytics, and then select My Dashboard
Cash Flow Report	Select Cash Flow Engine Cloud Service menu, select Analytics, and then select Cash Flow Report
Economic Indicator	Select Cash Flow Engine Cloud Service menu, select Reference Data, and then select Economic Indicators
Interest Rates	Select Cash Flow Engine Cloud Service menu, select Reference Data, and then select Interest Rates.
Currency	Select Cash Flow Engine Cloud Service menu, select Reference Data, and then select Currency.
Currency Rates	Select Cash Flow Engine Cloud Service menu, select Reference Data, and then select Currency Rates
Business Management	Select Cash Flow Engine Cloud Service menu, select Reference Data, and then select Business Management. Following sub-menus are available under Business Management: Attribute Member Hierarchy
Holiday Calendar	Select Cash Flow Engine Cloud Service menu, select Reference Data, and then select Holiday Calendar
Preferences	Select Cash Flow Engine menu and select Application Preferences
Behavior Pattern	Select Cash Flow Engine Cloud Service menu, select Maintenance, and then select Behavior Pattern.
Repricing Pattern	Select Cash Flow Engine Cloud Service menu, select Maintenance, and then select Repricing Patterns.


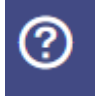




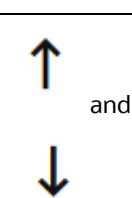

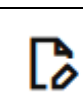

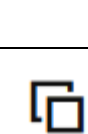





Page	Navigation Path
Configuration	Select Cash Flow Engine Cloud Service menu, select Maintenance, and then select Configuration
Cash Flow Edits Config	Select Cash Flow Engine Cloud Service menu, select Maintenance, and then select Cash Flow Edits Config.
Filter	Select Cash Flow Engine Cloud Service menu, select Maintenance, and then select Filter.
Prepayment Rule	Select Cash Flow Engine Cloud Service menu, select Assumption, and then select Prepayment Rule
Prepayment Models	Select Cash Flow Engine Cloud Service menu, select Assumption, and then select Prepayment Models
Forecast Rates	Select Cash Flow Engine Cloud Service menu, select Assumption, and then select Forecast Rates
Discount Methods	Select Cash Flow Engine Cloud Service menu, select Assumption, and then select Discount Methods
Data Model Extension	Select Cash Flow Engine Cloud Service menu, select Data Management Tools, and then select Data Model Extension
Data File Administration	<p>Select Cash Flow Engine Cloud Service menu, select Data Management Tools, and then select Data File Administration.</p> <p>Following sub-menus are available under Data File Administration:</p> <ul style="list-style-type: none"> Data File Specification File Upload and Download Data File History


2.4.2 Common Icons

Use the icons to view and analyze data and related information for each features.

Table: Common Icons

Icon Name	Icon	Uses
Add		Click Add icon to build a new rule.

Icon Name	Icon	Uses
Refresh		Click to refresh the Summary Page.
Help		Click to view the Holiday Calendar Rule Help.
Multiple Delete		Select one or more rules in the table and then click the (-) icon at the top right of the Summary Page to delete more than one rule at the same time.
Search		To Search the rule(s)
List View		To view the Rule Summary Page items in List View.
Table View		To view the Rule Summary Page items in Table View.
Ascending and Descending		To sort the rules on Rule Summary Page.
Action		Click to perform view various action options.
View/Edit		Click  in the Action column and select View/Edit to view or edit the contents of a rule in Read/Write format. Depending on User Privileges, the rule will open in either View or Edit mode.
Copy or Save As		Click  in the Action column and select Save As to create a copy of an existing rule.
Delete		Click  in the Action column and select Delete to delete an existing rule.
Execute		To execute a process
Execution Details		To view the execution details of the process.

Icon Name	Icon	Uses
Add New		Click Add icon to add new items on Rule screen.
Add Multiple Rows		Click Add Multiple Rows to add multiple rows at a time.

2.4.3 Common Feature Controls

Many feature screens in Cash Flow Engine include the controls discussed in this topic.

2.4.3.1 Audit Trail

The Audit Trail container is a standard footer container for every PBSM rule type. It displays Created By, Creation Date, Last Modified By, and Modification Date on the Audit Trail tab.

2.4.3.2 User Comments

The User Comments tab may be used to add comments to any rule, subject to a maximum of 4000 characters.

2.5 Quick Tour

The following table provides a bird's eye view of the tasks and the order to execute these tasks using the application. Click the links to read details of each task. You can use the links on this page to help you immediately begin using Cash Flow Engine Cloud Service.

Table: Quick Tour

Order	Task	Who Does This?	Action
1	CPQ Order Placement	Tenant Admin	Subscribe to the application. You will receive a Welcome e-mail with the URL and temporary password.
2	Provision Users	Sys Admin	Configure the Security Management System (SMS) to create users, assign roles, and implement user authorization and authentication. For more information, see Getting Started. Review Standard User Groups and Roles Create Groups and Roles Create/Import Users Assign applications and groups to users Send notification to users.

Order	Task	Who Does This?	Action
3	Set up Application	Business User (CFE Admin)	Performs following tasks: Setup Folder Extend Data Model (if required) Turn on seeded fields Register table-column from UI Placeholder Dimension and Column Registration.
4	Configure Rules	Business User (CFE Analyst)	Configure following CFE Rules: Activate Currency Configure or load Dimension Members and Attribute Configure or Load Hierarchy Set global application and user preferences Configure Economic Indicator Configure Interest Rate Curve Configure Holiday Calendar Configure Repricing Pattern Configure Behavior Pattern Configure Prepayment Model Configure Prepayment Rule Configure Forecast Rates Configure Discount Methods Configure Filter Configure new Cash Flow Edit Rules Configure Cash Flow Edits Process Configure Cash Flow Process
4	Create and Execute Jobs and Batches	Operator	Setup Technical Configuration for CFE Configure Batches for Data ILoaders Configure Batches for Cash Flow Edits Process Configure Batches for Cash Flow Process For more information, see Scheduler Service.

Order	Task	Who Does This?	Action
3	Load Data	Data Admin	Configure Data File Specifications Load Historical Interest Rate Curve Data from UI Load Historical Currency Exchange Rate Data from UI Load Historical Economic Indicator Data from UI Upload Dimension Data files to object store Run Dimension Data Loader Update Dimension Data from UI Upload Instrument Data files to object store Run Stage Instrument Data Loader For more information, see Data Loading.
5	Run Process Rules, generate and analyze Reports	Analyst	Review raw Data Analysis Report Correct/reload data files and rerun Stage Loader, if required Run Processing Instrument Data Loader Review Instrument Data Report Run Cash Flow Edits Process from process UI and/or Batch Review Cash Flow edit log and modify data, if required Run Cash Flow Process from process UI and/or Batch Review Cash Flow Process Log Review Cash Flow Report Export Cash Flow Output Delete Cash Flow Output

3 Glossary

As of Date

Date at which the data is current.

At-Risk Period

The time horizon for Value-at-Risk, such as the difference between the time in the future when we evaluate a portfolio loss and the As of Date.

Balance Sheet Planning

Balance Sheet Planning performs distributed budgeting of all balance sheet and income statement accounts.

Base Rates

Section in Oracle Cash Flow Engine Service that stores the interest rates associated with the data As-of-Date.

Basis Points

1/100th of a percent (abbreviated as "bps")

Cash Flow Instrument Table

An instrument table that contains all of the OFSAA Cash Flow Columns required by the cash flow engine.

Cash Flow Column

Column in an instrument table used by the OFSAA Cash Flow Engine to perform Cash Flow analysis on a record.

CPR

Constant Prepayment Rate (CPR) is a measure of an Annualized Prepayment Rate.

Credit Risk

The risk that a loan holder will be unable to repay any portion of the loan. Current Rate Risk Profit Component of funding Center Rate Risk Results attributed to current mismatches of assets and liabilities.

Data Filter Rule

Data Filters are used to define which data should go into a Processing Run.

De-annualize

To compute the monthly equivalent rate of an Annual Rate.

Duration

Duration is the rate of market value change with respect to discount rate changes. It is a measure of market value sensitivity: the lower the value, the less sensitive the market value to changes in interest rates.

Funding Center

Area in a financial institution that receives the transfer pricing charge and credit for funds.

Funds Transfer Pricing

A method for valuing all sources and uses of funds for a balance sheet.

General Ledger

The main data source that defines an institution's financial reality. The General Ledger reflects all accounting entries.

Grid

A logical grouping of cells often surrounded by scroll bars.

Hierarchy

Hierarchical structure for dimension members in OFS Applications (Examples: organizational and product type)

Historical Rates Table

PBSM repository for all historical actual interest rates.

Instrument

Synonymous with an account record or an individual contract.

Instrument Table

A type of table contained in the OFSAA database used to store account level information. Instrument Records Rows in the OFSAA database that carry transaction account level information (Example: deposit account by deposit account)

Interest Rate Code

User defined code to reference a yield curve or single rate index for historical analysis, transfer pricing, and interest rate forecasting purposes.

Last Repricing Date

Date the rate last changed for an adjustable rate instrument and the origination date for a fixed rate instrument.

Liquidity Premiums

A charge levied on a long-term instrument to compensate for illiquidity of the funds.

Log in

To access the programs and database of any OFSAA Application by providing a valid user name and password.

Market Price of Risk

In financial economics theory the Market Price of risk is a measure of inter-temporal risk-aversion of the aggregate investor; for example, a high market price of risk during some future period means that investors will be more risk-averse, and that rates for that term should be higher to compensate for this risk; in practical terms, the market price of risk is the "plug" that makes the risk-neutral rates price risk-free bonds correctly.

Market Value

In Monte Carlo, average of the (scenario specific) present values. In deterministic processing, it is the present value of the cash flows of the specific scenario.

Next Repricing Term

Repricing frequency for an adjustable rate instrument and the original term to maturity for a fixed rate instrument.

Profitability Management

Profitability Management assists customers in developing multiple levels of profitability (Example: organizational, product, customer, account profitability).

Prepayment

A reduction in the principal balance of a transaction record prior to the contracted schedule date.

Present Value

In Monte Carlo, sum of cash flows paid by a security along a particular rate scenario, discounted by the stochastic discount factor. In deterministic processing, the sum of the cash flows discounted by the deterministic discount factor.

PSA

A prepayment specification method established by the Public Securities Association, which relates the CPR to the age of that instrument.

Reconciliation

The process of comparing information from one data source to another

Reporting Currency

An active currency to which balances in other currencies are consolidated, often used for reporting.

Single Rate

An interest rate code with only one point defined (Examples: prime rate and 11th District Cost of Funds Index).

OFSAA Support

Raise a Service Request (SR) in [My Oracle Support \(MOS\)](#) for queries related to the OFSAA Applications.

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- 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?

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