Oracle® Retail AI Foundation Cloud Services

Administration Guide

ORACLE®

Oracle Retail AI Foundation Cloud Services Administration Guide, Release 23.1.201.0

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Preface

This guide describes the administration tasks for Oracle Retail AI Foundation Cloud Services.

Audience

This guide is intended for administrators.

This guide describes the administration tasks for Oracle Retail AI Foundation Cloud Services.

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.

Related Documents

For more information, see the following documents in the Oracle Retail AI Foundation Cloud Services documentation set:

- *Oracle Retail AI Foundation Cloud Services Administration Guide*

- *Oracle Retail AI Foundation Cloud Services Implementation Guide*

- *Oracle Retail AI Foundation Cloud Services Release Readiness Guide*

- *Oracle Retail Analytics and Planning Cloud Services Data Interface*

- *Oracle Retail AI Foundation Cloud Services User Guide*

- *Oracle Retail AI Foundation Cloud Services Assortment and Space Optimization User Guide*

- *Oracle Retail AI Foundation Cloud Services Inventory Optimization User Guide*

- *Oracle Retail AI Foundation Cloud Services Promotion Markdown and Offer Optimization User Guide*

Customer Support

To contact Oracle Customer Support, access My Oracle Support at the following URL:

https://support.oracle.com

When contacting Customer Support, please provide the following:

- Product version and program/module name
- Functional and technical description of the problem (include business impact)
- Detailed step-by-step instructions to re-create
- Exact error message received
- Screen shots of each step you take

Improved Process for Oracle Retail AI Foundation Cloud Services Documentation Corrections

To more quickly address critical corrections to Oracle Retail AI Foundation Cloud Services documentation content, Oracle Retail AI Foundation Cloud Services documentation may be republished whenever a critical correction is needed. For critical corrections, the republication of an Oracle Retail AI Foundation Cloud Services document may at times not be attached to a numbered software release; instead, the Oracle Retail AI Foundation Cloud Services document will simply be replaced on the Oracle Technology Network Web site, or, in the case of Data Models, to the applicable My Oracle Support Documentation container where they reside.

Oracle Retail AI Foundation Cloud Services documentation is available on the Oracle Technology Network at the following URL:

http://www.oracle.com/technetwork/documentation/oracle-retail-100266.html

An updated version of the applicable Oracle Retail AI Foundation Cloud Services document is indicated by Oracle part number, as well as print date (month and year). An updated version uses the same part number, with a higher-numbered suffix. For example, part number E123456-02 is an updated version of a document with part number E123456-01.

If a more recent version of a document is available, that version supersedes all previous versions.

Oracle Retail AI Foundation Cloud Services Documentation on the Oracle Technology Network

Oracle Retail AI Foundation Cloud Services product documentation is available on the following web site:

http://www.oracle.com/technetwork/documentation/oracle-retail-100266.html

(Data Model documents are not available through Oracle Technology Network. You can obtain these documents through My Oracle Support.)

Conventions

The following text conventions are used in this document:

Convention	Meaning
boldface	Boldface type indicates graphical user interface elements associated with an action, or terms defined in text or the glossary.
italic	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

Administrative Tasks

This chapter describes the processes for maintaining users and roles as well as batch processes. For information regarding standard end user activities such as creating and viewing reports, see the *Oracle Retail AI Foundation Cloud Services User Guide*.

Oracle Support

It is considered to be a best practice to have all Oracle Retail AI Foundation Cloud Services support requests submitted through a single point of contact for that customer environment; the client designated administrator is usually designated to perform this role.

The link to use when submitting Service Requests (SR) is:

https://support.oracle.com

Oracle Identity Cloud Service User and Group Management

Oracle Identity Cloud Service (IDCS) or Oracle Cloud Infrastructure Identity and Access Management (OCI IAM) is Oracle's cloud native security and identity platform. They provide a powerful set of hybrid identity features to maintain a single identity for each user across cloud, mobile, and on-premises applications. IDCS or OCI IAM enables single sign on (SSO) across all applications in a customer's Oracle Cloud tenancy. Customers can also integrate IDCS or OCI IAM with other on premise applications to extend the scope of this SSO.

IDCS or OCI IAM is available in two tiers: Foundation and Standard.

- IDCS or OCI IAM Foundation: Oracle provisions this free version of Oracle Identity Cloud Service for customers that subscribe to Oracle Software-as-a-Service (SaaS), Oracle Platform-as-a-Service (PaaS), and Infrastructure-as-a-Service (IaaS) applications. A customer can use this version to provide basic identity management functionality including user management, group management, password management, and basic reporting.

- IDCS or OCI IAM Standard: This licensed edition provides customers with an additional set of features to integrate with other Oracle Cloud services, including Oracle Cloud SaaS and PaaS, custom applications hosted on-premises, on Oracle Cloud, or on a third-party cloud, as well as third-party SaaS applications. Features listed in this pricing tier are applicable for both Enterprise users and Consumer users.

Details of the specific features available in each tier and IDCS or OCI IAM Standard Tier licensing model are available in Administering IDCS or OCI IAM. Retail Insights Cloud Service Suite only requires the Foundation Tier, as the Foundation Tier includes key features such as User and Group Management, Self-Service Profile Management and Password Reset, SSO. However, Oracle Retail AI Foundation Cloud Services customers may wish to consider licensing the Standard Tier of IDCS or OCI IAM to have access to more advanced identity features including Identity Synchronization with Microsoft Active Directory, SSO for Third Party Cloud Services and Custom Applications, Multi-Factor Authentication and generic SCIM Templates.

IDCS or OCI IAM and Oracle Retail AI Foundation Cloud Services Enterprise Roles

When any Oracle Retail AI Foundation Cloud Services cloud service is provisioned, Oracle Retail AI Foundation Cloud Services Enterprise Roles are seeded into the customer's IDCS or OCI IAM instance as Groups. It is expected that customers will also have other groups defined for other cloud services that use this IDCS or OCI IAM instance.

Upon provisioning a new cloud service instance, Oracle Retail AI Foundation Cloud Services creates a single delegate customer administrator user. The customer administrator user has the ability to define password complexity and rotation rules. All Application User maintenance is performed by Customer Administrators via IDCS or OCI IAM. A key feature of IDCS or OCI IAM is that basic user maintenance can be further delegated via identity self-service. When application users are created in IDCS or OCI IAM, they must be associated with an appropriate Oracle Retail AI Foundation Cloud Services Enterprise group to access Retail Insights Cloud Service Suite.

For instructions on managing users and groups in IDCS or OCI IAM, follow the Manage Users and Groups IDCS or OCI IAM document at the following URL:

https://docs.oracle.com/en/cloud/paas/identity-cloud/index.html

https://docs.oracle.com/en-us/iaas/Content/Identity/home.htm

Oracle Retail AI Foundation Cloud Services Default Enterprise Roles

Oracle Retail AI Foundation Cloud Services is built with role-based access. Permissions are associated with roles.

The following roles are available:

Table 1-1   User Roles

Job Role	Role Description
AIF Platform	
ADMINISTRATOR_JOB	A user who understands all the parameters driving the application and is responsible for their configuration as well as managing the credential store for CE, RPM, and so on.
ANALYTIC_EXPERT_JOB	Responsible for understanding the retailer's business, has some business analytics training, and has been trained in the use of the CDT and DT applications.
ASSORTMENT_PLANNER_JOB	The Assortment Planner is responsible for creating the category assortments, to meet the roles, strategies, and tactics set for the category by the Category Manager. Multiple category assortments are created, for each cluster or store. One planner can be responsible for multiple categories.

Table 1-1   (Cont.) User Roles

Job Role	Role Description
CLUSTERING_ADMINISTRATOR_JOB	Responsible for planning, building, and analyzing store clusters based on a variety of store and category attributes to support assortment, pricing, and space planning business processes in the Store Clustering Module.
CUSTOMER_ANALYST_JOB	Develops customer segments and analyzes their customer shopping and buying behavior to determine customer differentiation, trends, and opportunities in Customer Segmentation Module.
CUSTOMER_SEGMENT_ADMINISTRATOR_JOB	Responsible for analytical defaults and configuration, testing, and model diagnosis. This includes Filter, Sampling and Attribute Mining in the Customer Segmentation Module.
FORECAST_ANALYST_JOB	Reviews and approves forecasts on a day-to-day basis. An advanced forecast analyst may also be responsible for forecast parameter maintenance and demand modeling activities.
MARKET_ANALYST_JOB	Reviews customer segments with business experts, suited (distinctly) for targeted promotion, category and assortment planning, targeted pricing, customer, and market basket analytics in Customer Segmentation module.
MARKET_BASKET_ANALYSIS_JOB	A user who understands the retailer's business, has some business analytics training, and is responsible for reviewing sales transaction affinity analysis.
MERCHANDISER_JOB	A Store Merchandiser (or In-Store Merchandiser) is an hourly employee who executes the placement and assembly of retail fixtures, adjustment of shelves and arrangement and placement of product on the shelves in accordance with CAD drawings and planograms.
RETURN_LOGISTICS_JOB	A user who is familiar with the retailer's product categories and has been trained in the use of the AE application.
SIZE_PROFILE_ANALYST_JOB	Responsible for system parameter maintenance to support size profile calculations. May also be responsible for approval of size profiles. A user who understands size and profile estimations and is able to review and submit them for the retailer's business.
SIZE_PROFILE_OPT_JOB	A user who understands size and profile estimations and is able to review and submit them for the retailer's business.
SOCIAL_ANALYTICS_JOB	A user who understands the retailer's business, has some business analytics training, and has been trained in the use of the Social Analytics application.
ATTRIBUTE_EXTRACTION_JOB	A user who is familiar with the retailer's product categories and has been trained in the use of the Attribute Extraction.
ATTRIBUTE_BINNING_JOB	A user who understands the retailer's business, has some business analytics training, and has been trained in the use of the CDT application and attribute binning application.
DATA_SCIENCE_ANALYST_JOB	Data Science Analyst role for a retailer using Innovation Workbench using APEX Workspace
DATA_SCIENCE_ADMINISTRATOR_JOB	Data Science Administration role for Retailer using Innovation Workbench using APEX Workspace
DATA_SCIENCE_ORCL_ADMIN_JOB	Data Science Cloud Administration role for a retailer using Innovation Workbench using APEX Workspace
DATA_SCIENCE_OLDS_ADMIN_JOB	Role to enable the administration of python notebook service under Innovation Workbench

Table 1-1   (Cont.) User Roles

Job Role	Role Description
DATA_SCIENCE_OLDS_ANALYST_JOB	Role to enable the Python notebook for an analyst under Innovation Workbench.
POSLOGS_SERVICE_JOB	Point of Sales broadcast listener role to enable integration between AI Foundation Cloud Services and Oracle XStore.
PLATFORM_SERVICES_ADMINISTRATOR_ABSTRACT	Platform Services role required for accessing services.
Assortment Space Optimization	
CATEGORY_MANAGER_JOB	Product-assortment-centric user who is interested in viewing ASO results and in the translation of data between CMPO, Retail Analytics, and ASO.
SPACE_PLANNER_JOB	A Store Planner is a corporate employee with responsibility for designing the layout of floor plans, department sizes and locations, the layout of fixtures and aisles, applying health, safety and welfare guidelines, and managing and publishing floor-plan versions. This user is also responsible for the day-to-day micro-space optimization activities.
MERCHANDISING_ANALYST_JOB	Main business user responsible for day-to-day micro-space optimization activities
SPACE_ADMINISTRATOR_JOB	Responsible for general system setup and configuration tasks related to the business
FORECAST_MANAGER_JOB	Responsible for analytical configuration, testing, and model diagnosis.
Promotions and Markdowns Optimization	
BUYER_JOB	Responsible for a department or departments and makes the budget decisions for pricing recommendations. Approves or rejects an OO run. Responsible for the translation of data between OO and Oracle Retail Price Management (RPM) and Oracle Retail Customer Engagement (CE).
PRICING_ANALYST_JOB	Main business user responsible for day-to-day pricing optimization activities (e.g., creating scenarios).
PRICING_MANAGER_JOB	Responsible for analytical configuration, testing, and model diagnosis. Oversees the work done by the pricing analyst.
PRICING_ADMINISTRATOR_JOB	Responsible for the general system setup and configuration tasks related to the business.
Offer Optimization	
CHATBOT_QNA_VIEW_JOB	Conversational AI role to enable frequently asked question types of bot conversation.
CHATBOT_SERVICE_JOB	Conversational AI role to enable integration between AI Foundation Cloud Services and Oracle Chatbot.
CHATBOT_VIEW_JOB	Conversational AI role to enable real time bot conversations.
TARGETED_OFFER_JOB	User who probably works in the marketing department and who is responsible for accepting or rejecting targeted offers that are sent out to customers.
Inventory Optimization	

Table 1-1   (Cont.) User Roles

Job Role	Role Description
INVENTORY_ANALYST_JOB	Works closely with the buyer to ensure product distribution aligns to strategy. Main business user responsible for day-to-day inventory optimization activities (e.g., reviewing strategies, recommendations, and so on).

Note that in stage and pre-production environments, users are assigned roles that are appended with _PREPROD.

# Nightly Batch File Uploads

This section describes the file upload process. For details regarding file contents and formatting refer to the *Oracle Retail AI Foundation Cloud Services Implementation Guide*. The Private/Public Keys must be generated and the public Key must be associated with your SFTP Account for the file uploads. The Adding Authorized Keys section describes the step-by-step method to generate the Keys (2048 bit RSA Keys).

Adding Authorized Keys

Here is the process to generate a 2048 bit RSA key and add the same to the SFTP server. This is done with the help of WinSCP tool on Windows. However, the same can be done using ssh-keygen on Linux as well.
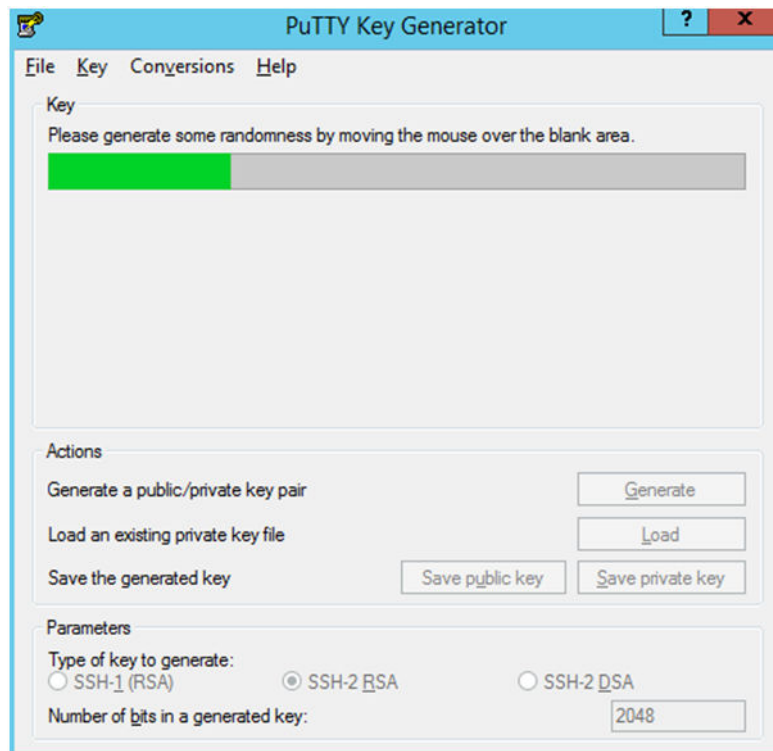
1. Launch WinSCP and select Tools -> Run PuttyGen.

2. Select "SSH-2 RSA" for the type of key to generate and enter "2048" for the number of bits in a generated key field. Click **Generate**.

Figure 1-1   Key Generator
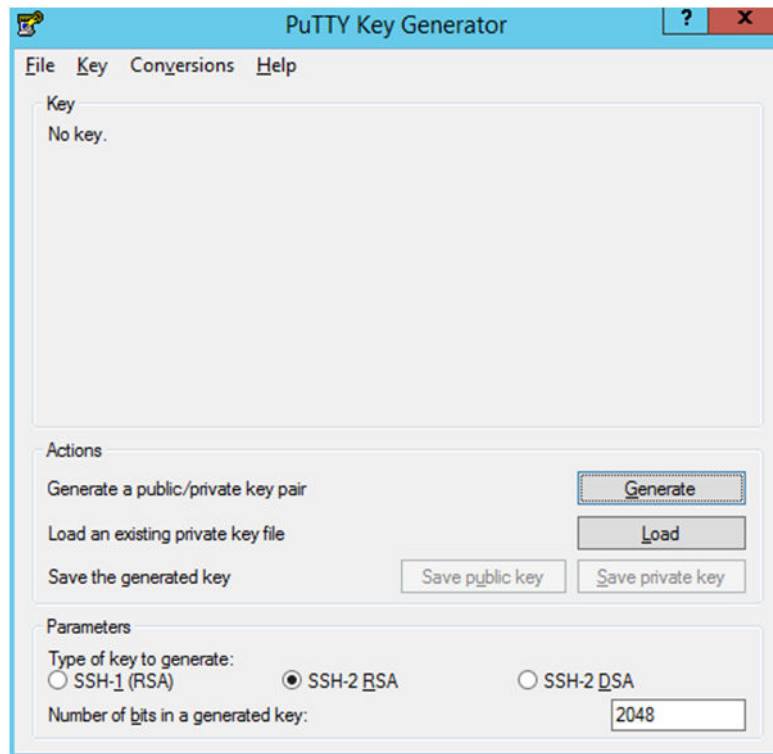
3. Move the mouse over the blank space in the window until the key is generated.

**Figure 1-2   Key Generator Progress**

4. Once the key is generated, click the **Save public key** button to save the public key to a file.

5. Click the **Save private key** button to save the Private key to a file. Confirm to save it with/ without a passphrase.

6. Open an SR with Oracle Support, to associate the Public half of the Key with your SFTP account (attach the Key with the SR).

Steps – Log into WinSCP

The Upload steps uses the private key generated in the earlier section.
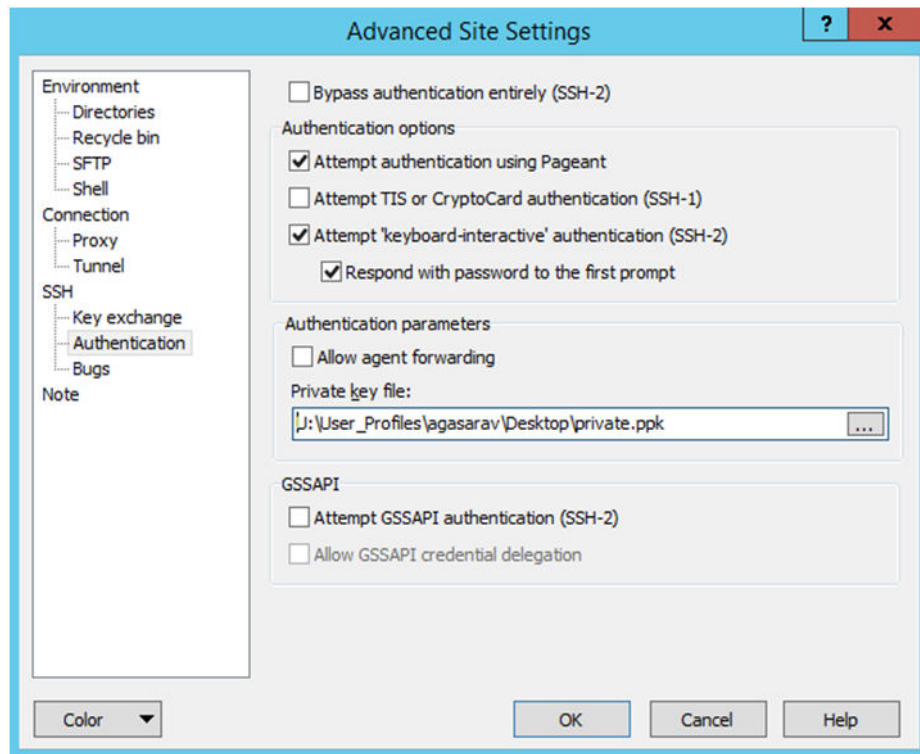
1. Launch WinSCP and connect to <SFTP Server> using port 22.

2. Enter the username and click **Advanced**.

3. Click **Authentication**.

4. In the Private Key File field, click the **Browse** button and select the private key created in the earlier section.

Figure 1-3   Advanced Site Settings Dialog
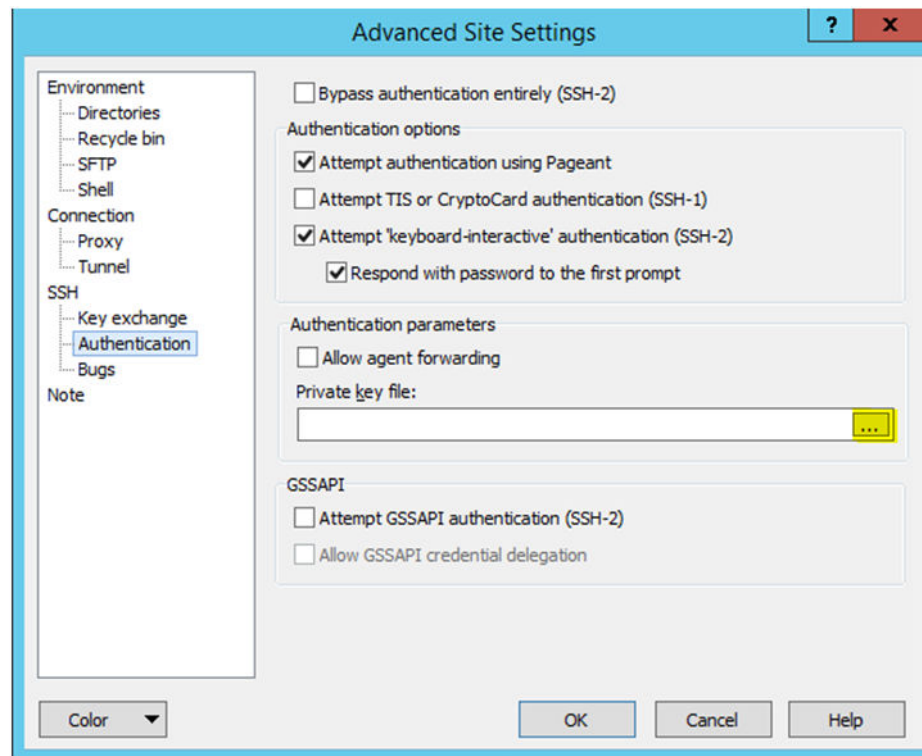
5. After loading the private key file, click **OK**.

Figure 1-4   Private Key File Loaded

6. Click **Login**. The window does not prompt for a password and logs into the SFTP server. Provide a passphrase if one has been set up.

Steps to Upload the Batch File

Log into the WinSCP by following the Steps – Log into WinSCP section.

1. Transfer all data files to the directory /<SFTP User>.

2. Create a directory called COMMAND under /<SFTP User>if it does not already exist.

3. Change to the /<SFTP User>/COMMAND directory.

4. Transfer an empty file called COMPLETE.

Export File Downloads

Log into the WinSCP by following the Steps – Log into WinSCP section. Here is the download file process.

1. Change directory to /<SFTP User>/EXPORT.

2. Download all data files.

Archiving_Reports – Agent Creation and Execution

1. After creating an Analysis (report) that must be refreshed and saved to a file for downloading, from the OBIEE home screen select **New -> Agent**.

Figure 1-5   Create a New Agent
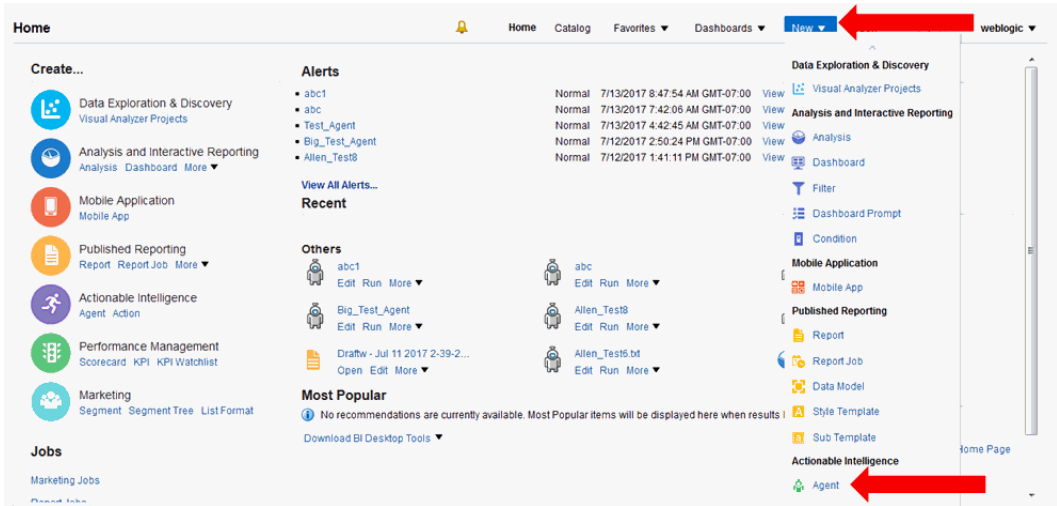
2. After setting the schedule for the Agent execution, go to the Delivery Content tab and select the analysis report.The other settings on this tab such as format will be overridden by other selections on the Actions tab.

Figure 1-6   Delivery Content Tab
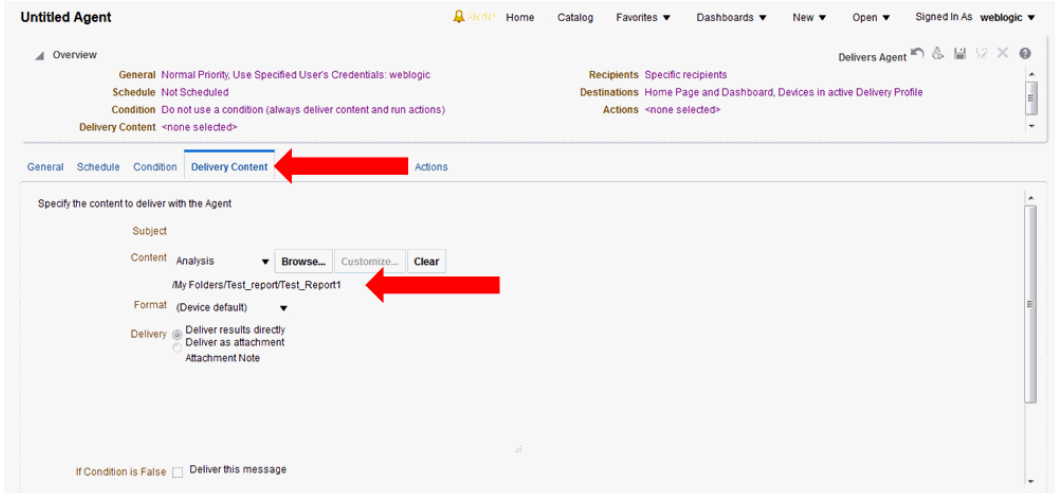
3. Ignore the Recipients and Destinations tabs. Go to the Actions tab and add a new Action that Invokes a Java Method.

Figure 1-7   Action Tab
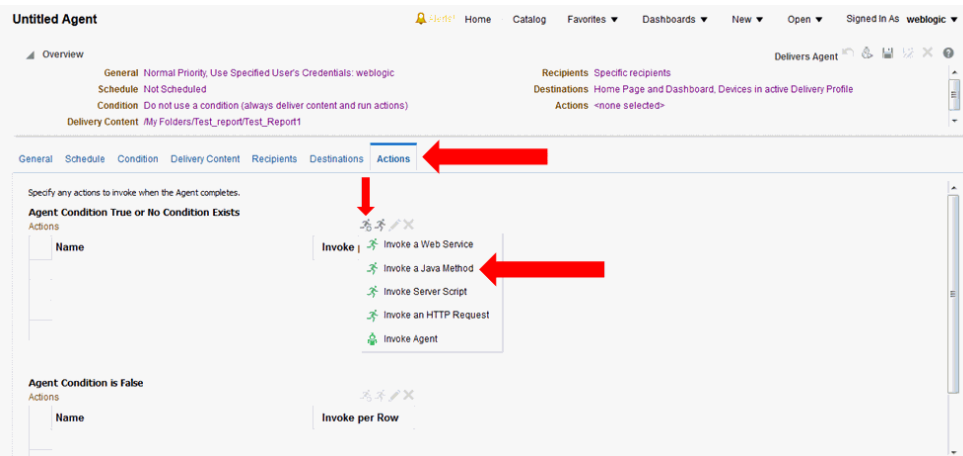
4. Select "REPORT ARCHIVE EJBs / biserver / ArchiveReports / BIReportArchieveApplication-ArchiveReports-ArchiveReports / ArchiveReport".

Figure 1-8   Select Java Method
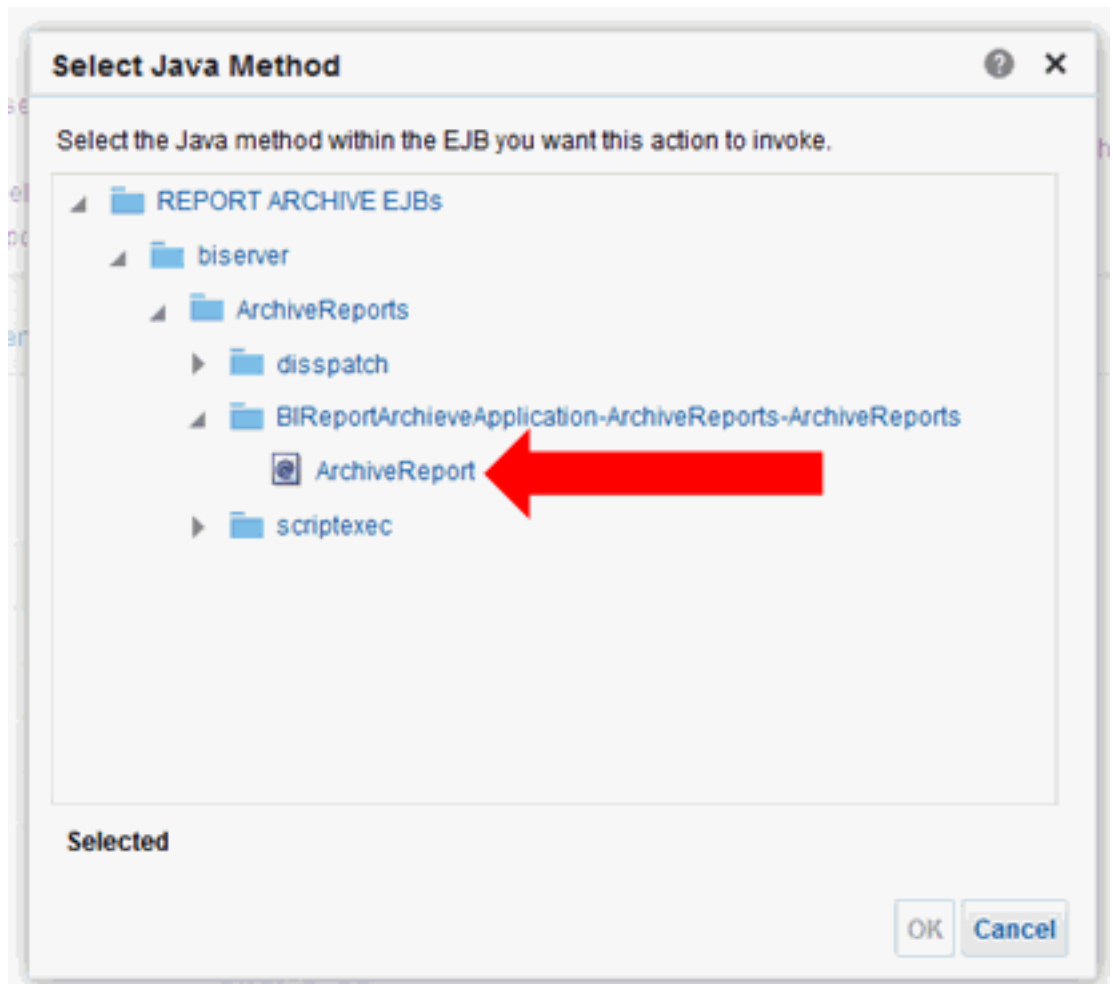
5. Enter the filename that the report must be written to and select **Delivery Content**.

Figure 1-9   New Action Window
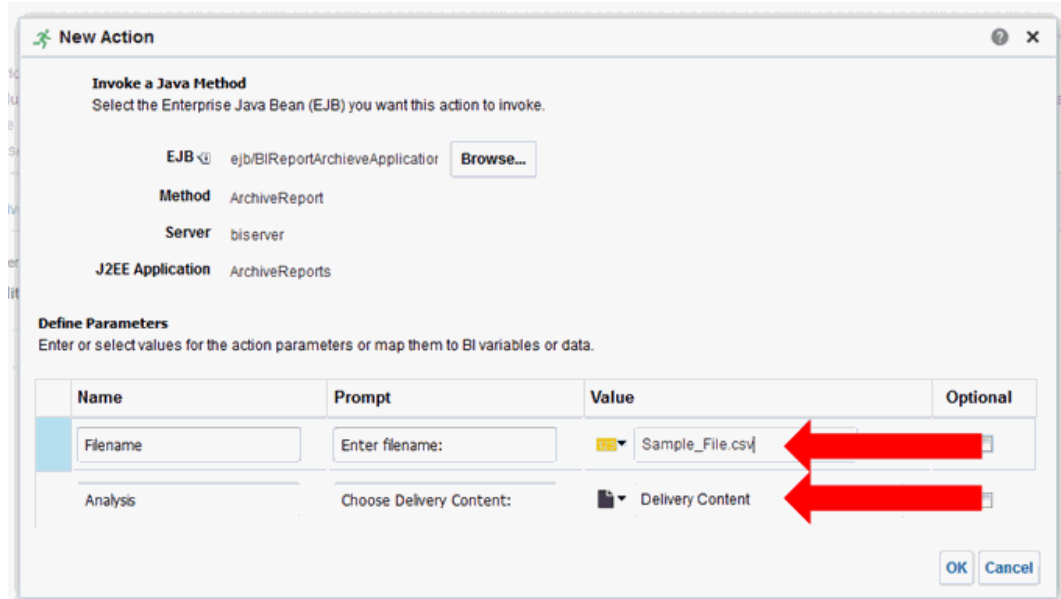
6. Click the small black page icon with the turned corner and select the file format to be written, then click **OK**.

Figure 1-10   Select File Format
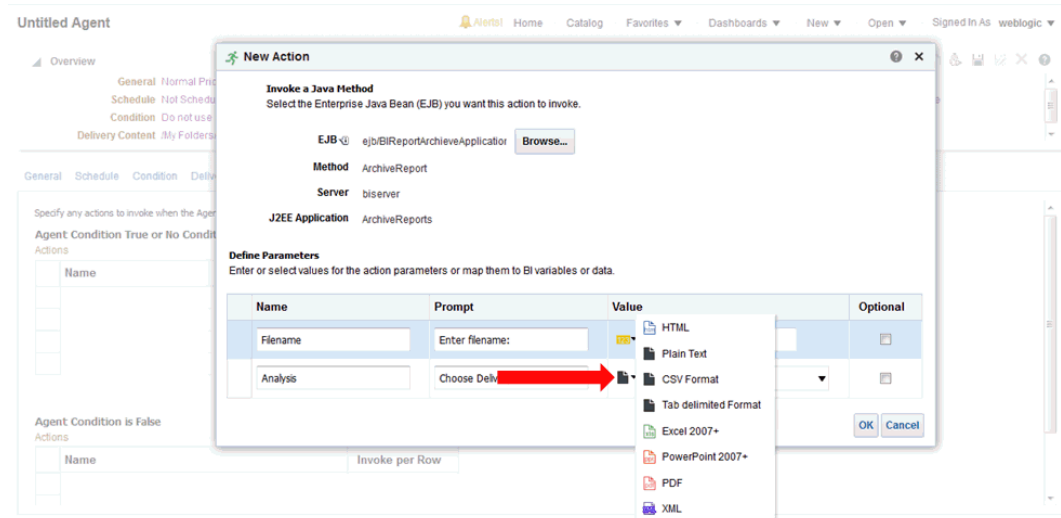
7. Click **Save Agent** and give the Agent a name. At this point the Agent has been defined and will execute according to the defined schedule.

Figure 1-11   Save the Agent
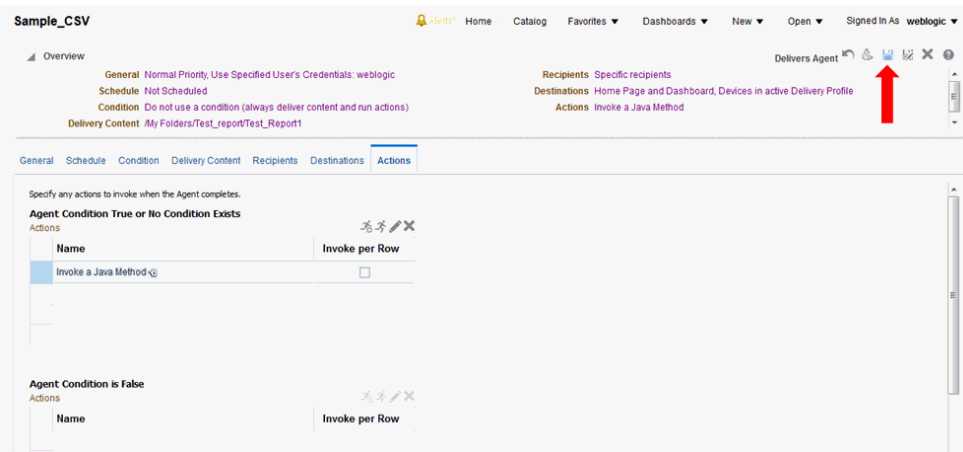
8. If you would like to do an immediate execution of the Agent, you can click **Run Agent Now**.

Figure 1-12   Execute the Agent
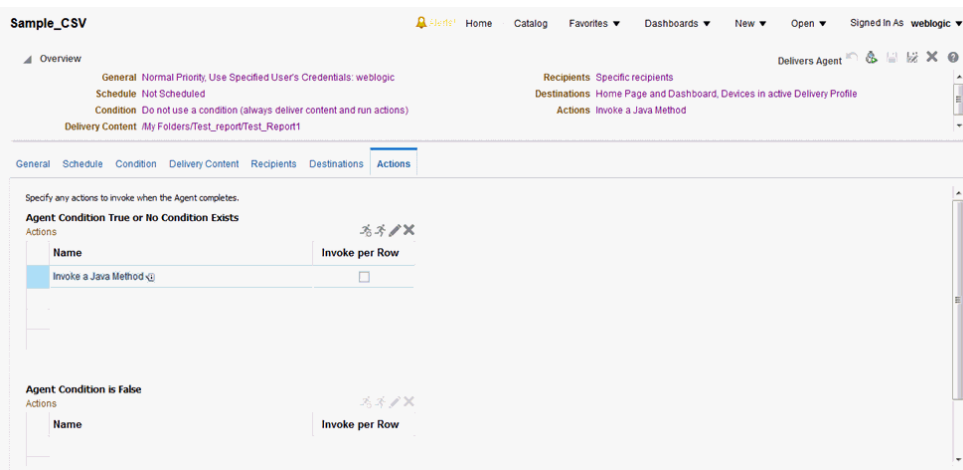
The following dialog box displays while the agent is running:

Figure 1-13   Running Agent Dialog Box
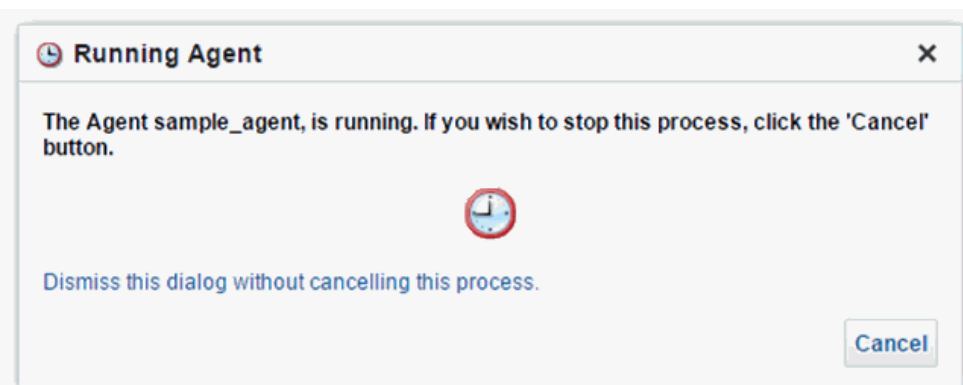
Data Visualization Usage

All implementations of Oracle Retail AI Foundation Cloud Services and Retail Insights Cloud Services include Oracle Data Visualization (DV) as a tool for custom analytics and reporting. Administrators should be aware of how DV is maintained as part of your Oracle Cloud environments so that you can manage user-created content and access permissions in the tool.

Accessing the Application

The URL to access the DV application is below, where xxx and yyy are the specific identifiers for your environment.

https://xxx-yyy-rsi-ris.oracleindustry.com/dv/?pageid=home

Permission to access DV can be granted through IDCS or OCI IAM using the group RetailVisualAnalyzer_JOB (or it's PREPROD equivalent). DV access is also granted automatically if you have certain Retail Insights groups assigned, such as BIAuthors_JOB or RIApplicationAdministrator_JOB.

Managing User Content

User-created content comes in several forms and each type of content is managed separately, as defined below.

Table 1-2   DV User Content

Object Type	Usage
Projects	DV reports and analyses are saved as Project files in the Oracle Analytics Catalog. In Oracle AI Foundation Cloud Services solutions, you may only use two assigned folders in the catalog: **/My Folders/** and **/Shared Folders/Custom/**. You must not save or modify projects in any other location, as these two folders are the only ones designated for backup between upgrades/patches.
	Projects have their own permissions assigned and are not granted to anyone but the owner by default. The owner must grant the object to administrators if you want them to be centrally managed.
Datasets	Users can create datasets by uploading Excel spreadsheets or by querying pre-defined database connections.
	Datasets have their own permissions assigned and are not granted to anyone but the owner by default. The owner must grant the object to administrators if you want them to be centrally managed.
Connections	Database connections are managed by Oracle at this time, end users are not expected to create or modify these objects.
Data Flows	Data flows are used to combine multiple datasets or perform complex transformations and data mining algorithms. Data flows cannot be seen or administered by anyone but the object owner.
Jobs and Schedules	Data flows are executed using Jobs, which can also be scheduled to run periodically. Only the data flow owner can modify jobs and the associated schedules, even though the jobs are visible to other users.

2
Oracle Digital Assistance

Oracle Digital Assistance (ODA) is a NLP and Machine Learning-based cloud service that enables application-specific interactions. It is a virtual user that assists end users with complex engagements using transactional data to review key business insights and exceptions. It also provides out-of-the-box knowledge sharing by responding to typical Q&A-style questions for customer service and support. ODA features are supported using voice along with conversational interface to distill end user intents, invoke actions, and provide reasonable responses. This enhances consulting services with minimal training and support.

Digital assistance is not a replacement for a web application but a channel that allows the user to complete context-driven tasks using a combination of text messages, voice and, simple UI.

This chapter lists the tasks that a Cloud Administrator must complete to enable digital assistance.

Cloud Administration

As part of cloud administration and deployment, there are two key task that must be performed in a cloud environment:

- Oracle Autonomous Mobile Cloud Enterprise
- Oracle AI Foundation Cloud Services

The following tasks must be performed in the Oracle Autonomous Mobile Cloud Enterprise:

- Accessing/Provisioning Bot Service

  Here is the URL to use for Oracle Autonomous Mobile Cloud Enterprise.

  https://docs.oracle.com/en/cloud/paas/mobile-autonomous-cloud/service-administration/getting-started.html#GUID-B958C87C-027F-4BF5-A523-C6B64DB64718

- Set up SSL certificates for AI Foundation Cloud Services

  https://docs.oracle.com/en/cloud/paas/mobile-autonomous-cloud/manage/credentials-csf-keys-and-certificates.html#GUID-C6467B5F-E07D-4947-8A8A-D511457861E2

The following tasks must be performed in the Oracle AI Foundation Cloud Services.

- Set up SSL certificates for Bot Service in AI Foundation Cloud Services. The Cloud Team must know how to do this.
- Create users and set up roles.

CHATBOT_SERVICE_JOB	Chatbot Service Role will be configured with Webservices for getting data from application database for transactional bots
CHATBOT_VIEW_ROLE	Role to enable Transactional bot in application UI in the contextual area
QNA_VIEW_ROLE	Role to enable QnA bot in application UI in the contextual area

- Test if you are able to access Bot using following url:

http://<hostname or ip>:8080/botsui/bot

A
General Privacy and Security Information

This appendix described data privacy and security.

Privacy by Design

In support of data privacy enhancements, retail applications have created a data privacy web service interface and command line tool to provide retailers with services for requesting access to personal information for review and forget/update the personal information if requested.

Here are examples of the personal information.

- Full Name
- Home address
- Email address
- Date of birth

The following features are provided by RI for using the data privacy command line the tool:

- Right to Access (RTA)

  Retailers can accept and respond to end-user requests for data access, correction, and deletion for individual end-user data records they store in the Oracle service.

- Right to be Forgot (RTF)

  In support of an end-user's right to request to forget/update personal information, retailers can delete/update (mask) an end-user's personal data during the services period. Certain data that is critical for the business or that is part of the legal requirement may not be deleted.

Data Minimization

RI uses the database role, enterprise role, and application role to control who has access to the data. Via the front-end, RI provides default enterprise roles based on their corresponding application roles provided by RI. Users assigned to a specific enterprise role can only access a specific function area. See Administrative Tasks for details. At the database level, different database roles are assigned to different type of users. The front-end user role only has read permission to RI data. The batch user role has read, insert, update, and delete permission to RI data.

In the future release, RI will provide customers with controls and tools to configure data purging based on certain criteria in order to minimize the amount of data used and the length of storage.

Data Deletion

RI is a Business Intelligence system that stores the customer centric/ merchandising data for a specified time limit only, as this is required for making business decisions. When data reaches the threshold, it is deleted from the system.

Customers will have access to controls to configure data purging in a future release of RI.

Right to Access / Right to Forget

RI provides a web service interface (file RetailAppsDataPrivServices-7.0.1-RetailAppsDataPrivServices.ear) for right to access and right to forget. The service provides a REST call to return end-user information based on a provided key and provides a REST call to forget the end-user based on a provided key. The feature is also available via the command line by using jar file RetailAppsDataPrivServices-7.0.1-RetailAppsDataPrivTool.jar

RI provides three groups (type_id) for right to access and right to forget.

- CustomerRecord

  By providing the customer number as key, the end user can access or forget the PII data for the customer, customer address, and history sales information related to this customer.

- Employee

  By providing the employee number as key, the end user can access or forget the PII data for the employee.

- Supplier

  By providing the primary contact name as key, the end user can access or forget the supplier contact name and supplier contact phone number information.

Data Portability

RI provides the capability for the end users to export the downloaded report to transmit data to another controller.

Encryption

RI uses Oracle Transparent Data Encryption TDE tablespace encryption to encrypt entire RI tablespaces.

Data Masking

Oracle data redaction is used for RI data masking. A data redaction policy has been created in RI on columns W_PARTY_PER_D. ETHNICITY_NAME and W_PARTY_PER_D. ETHNICITY_CODE. Only users who are granted EXEMPT REDACTION POLICY can view the data. Out of the box, only the RI batch user is granted EXEMPT REDACTION POLICY.