Oracle® Retail Store Inventory Operations Cloud Services

Implementation Guide

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Oracle Retail Store Inventory Operations Cloud Services Implementation Guide, Release 25.0.101.0

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Contents

Send Us Your Comments

Preface

Audience viii
Documentation Accessibility viii
Related Documents viii
Improved Process for Oracle Retail Documentation Corrections ix
Oracle Retail Documentation at the Oracle Help Center ix
Conventions ix

1 Oracle SIOCS Implementation Overview

NextGen SaaS SIOCS 1-1
Oracle Retail Integration Components 1-2
Implementation Considerations 1-2
URL Reference 1-3

2 Setup Users

Terminology 2-1
User Types and Responsibilities 2-1
User Access Control 2-2
Assign Customer-Cloud-Admin User and Security-Admin User 2-2
Assign Implementation Users 2-3
Assign Store Users 2-3

3 Signing into EICS

Login Screen 3-1
Successful Login 3-1
Un-Successful Login 3-1

4 System Configurations

Summary of Admin System Configurations Topics 4-1
Admin Configurations 4-1
Audit Configurations 4-2
Batch Configurations 4-2
    Batch File Configurations 4-2
Functional Areas Related Configurations 4-2
Message Processing Configurations 4-3
Mobile Configurations 4-3
Notification Configurations 4-3
Purge Configurations 4-4
System and Integration Web Service Configurations 4-4
Time Zone Configurations 4-4
UI Configurations 4-4

5 Batch Job Admin

Batch Scheduler 5-1
Batch Activity 5-1
Cleanup Batches 5-1
POM Integration 5-2

6 Initial Data Seeding

Initial Data Seeding 6-1

7 SIOCS UI Spreadsheet Data Loader

Upload Store Assignments 7-1
    Spreadsheet Templates 7-1
Upload Role Assignments 7-1
    Spreadsheet Templates 7-2

8 Report Configurations

9 Store Configurations

10 Mobile Application (SOCS)

Configure Manual Quantity Entry Mode 10-1
Enable Mobile Functionalities 10-1
Mobile Device Management (MDM) 10-2

11 Internationalization and Localization

12 Operational Monitoring

View Operational Issues through EICS Admin UI 12-1
EICS DB Data Viewer User 12-1

13 Integrations

Pricing Integration with Retail Pricing Cloud Service 13-1
Stock Count Export Integration with MFCS 13-1
Sale Data Integration with POS and ReSA 13-2
Xstore Integration - How does SIOCS Process Sales Transactions? 13-2
Web Service: Integration with Manifest System 13-3
Web Service: Integration with External System for Ticket Printing 13-3
ZPL 13-4
Non-ZPL Printing 13-5
RIB Integration Guidance (From SIOCS Perspective) 13-5
Overview 13-5
Unsupported Messages and Payloads 13-6
Unsupported Data within Messages and Payloads 13-6
Errors 13-6
Modify/Delete 13-6
Message Family/Type 13-7
Other Integration Interfaces 13-11
Hybrid Deployment - Integration with on-premise RMS/RIB 13-11
Hybrid Deployment - Integration with MFCS/RICS GBUCS 13-11

14 Customization and Extension

Customization and Extension Considerations 14-1
Code Customization 14-1

15 File Transfer Services

Overview 15-1

16 Logs

EICS Log Debug Settings 16-1
Server Log File Locations 16-1

17 Troubleshooting Tips

Application Login Troubleshooting 17-1
Report Troubleshooting 17-1
RIB (Retail Integration Cloud Service / RICS) Troubleshooting 17-2
Web Service Troubleshooting 17-2
References 17-2

A Appendix: Accessibility

Enterprise Inventory Cloud Service (EICS) A-1
Store Operations Cloud Service (SOCS) A-2

B Appendix: Oracle APEX

What is Oracle APEX? B-1
Suggested APEX Usage in Store Inventory Operations Cloud Service B-1
SQL Workshop B-2
APEX Users, Administration B-2
APEX Installation Admin B-3
APEX Customer Admin/Developer B-3
Database Objects B-3

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Preface

This document provides critical information about the processing and operating details of Oracle Retail Store Inventory Operations Cloud Services.

Audience

This document is for:

- Systems administration and operations personnel
- Systems analysts
- Integrators and implementers

Documentation Accessibility

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Related Documents

For more information, see the following documents in the Oracle Retail Store Inventory Operations Cloud Services documentation set:

- *Oracle Retail Enterprise Inventory Cloud Service Administration Guide*
- *Oracle Retail Enterprise Inventory Cloud Service Inbound and Outbound Implementation Guide*
- *Oracle Retail Enterprise Inventory Cloud Service Security Guide*
- *Oracle Retail Enterprise Inventory Cloud Service User Guide*
- *Oracle Retail Store Inventory Operations Cloud Services Release Notes*
- *Oracle Retail Store Inventory Operations Cloud Services Data Model*
- *Oracle Retail Store Operations Cloud Service Mobile Guide*
- *Oracle Retail Store Operations Cloud Service User Guide*

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To more quickly address critical corrections to Oracle Retail documentation content, Oracle Retail documentation may be republished whenever a critical correction is needed. For critical corrections, the republication of an Oracle Retail document may at times not be attached to a numbered software release; instead, the Oracle Retail document will simply be replaced at the Oracle Help Center (OHC) website, or, in the case of Data Models, to the applicable My Oracle Support Documentation container where they reside.

This process will prevent delays in making critical corrections available to customers. For the customer, it means that before you begin installation, you must verify that you have the most recent version of the Oracle Retail documentation set. Oracle Retail documentation is available at the Oracle Help Center at the following URL:

https://docs.oracle.com/en/industries/retail/index.html

An updated version of the applicable Oracle Retail 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 F123456-02 is an updated version of a document with part number F123456-01.

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Oracle Retail Documentation at the Oracle Help Center

Oracle Retail product documentation is available on the following website:

https://docs.oracle.com/en/industries/retail/index.html

(Data Model documents are not available through Oracle Help Center. You can obtain them 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

Oracle SIOCS Implementation Overview

EICS (Enterprise Inventory Cloud Service) and SOCS (Store Operations Cloud Service) are two separately licensed products.

EICS includes:

- EICS Desktop Client that runs on a browser
- EICS Web Services
- EICS Server Tier
- EICS Database Tier with data access code, batches, reports

SOCS includes:

- Oracle MAF Client that runs on mobile devices
- Oracle Jet Mobile Client that runs on mobile devices and browser

In order to use SOCS, EICS needs to be deployed.

The implementation process includes a needs assessment, business impact analysis, requirements gathering, and other activities. However, this document is concerned only with the specific aspects of a technical implementation. In a typical project life cycle, technical implementations can begin only after the environment has been provisioned. Once a subscription agreement has been signed and Service Activation Request is logged, the Oracle Cloud team will start the provisioning process.

Once the account is provisioned, the Oracle Cloud team provides the following:

- URL to access the EICS Application User Interface (UI) for production and staging environments.
- One Customer Delegate Administrator user account.
- URLs to access the various web services associated with the staging and production environments.

NextGen SaaS SIOCS

- **UI**:
  - No Wavelink UI, No Swing UI. (If you are migrating from on-premise SIM V16.x.)
  - Uses Oracle JET (JavaScript extension technology) based UI for Administration UI.
  - Oracle MAF (mobile application framework). ** Deprecation has been started.
  - Oracle Jet Mobile for mobile UI. **** This would be go forward direction.**
- **Server**:
  - No change in server technology. (If you are migrating from on-premise SIM V16.x.)
  - Some changes to support modified/new functionalities.
- **Database**:

  - Minimal Schema Change.
- **Integration**:
  - Integrates with RICS (Retail Integration Cloud Service).
  - Direct Database integration with MFCS. **** This would be go forward direction.**
- **Web Service APIs** :
  - REST services. **** This would be go forward direction.**

> **Note:**
>
> Point of sale integration web services must use REST interface.

  - SOAP services. ** Deprecation has been started.
- **Security Model**:
  - Authentication: using IDCS.
  - Authorization: EICS Administration UI.
- **Batch scheduling**:
  - Internal to EICS. It has a batch scheduler interface.
  - Using POM (Process Orchestration Management). **** This would be go forward direction.**
- **Deployment**:
  - Deploys with NextGen-MFCS in a shared pluggable deployment. **** This would be go forward direction.**
  - Deploys with GBUCS-MFCS in a hybrid deployment.
  - Deploys with on-premise RMS in a hybrid deployment.

Oracle Retail Integration Components

EICS requires other systems, such as a merchandising system, to provide foundation (item, location, and so on) and transaction data (purchase order, stock order) to operate. This would be integrated through either Direct Database integration with MFCS OR RICS (Retail Integration Cloud Service).

Please note Direct Database integration (shared pluggable database) is the go forward approach.

For more details, see the information on integration in the *Oracle Retail Enterprise Inventory Cloud Service Inbound and Outbound Administration Guide*.

Implementation Considerations

In general, a technical implementation involves the following key steps areas:

- Setup Users
- Signing into EICS
- System Configurations

- Batch Job Admin
- Initial Data Seeding
- Report Configurations
- Store Configurations
- Internationalization and Localization
- Integrations
- Mobile Application (SOCS)

URL Reference

The EICS URLs required for reporting, apex data viewer, EICS to RICS Message Publishing and Web service APIs will need to be formed using the format provided in the *Oracle Retail Enterprise Inventory Cloud Service Inbound and Outbound Integration Guide.*

2

Setup Users

By default, EICS provision one system operator user account and one customer delegate administrator user account. The customer delegate cloud administrator may create additional application admin accounts and implementation user account. Customer cloud administrator may also create a customer security admin user to manage users.

Terminology

This section defines Security Terms used throughout this document.

Table 2-1 Security Terms

Term	Definition
Application Administrator	A customer application admin user who can perform application configurations via EICS admin screen.
Application Implementer	System implementer is user who implements the application.
Application Role	An application role is a collection of users and other application roles. Application roles are defined in applications, and they are not necessarily known to a Java Container.
Application System Operator	Application system operator user can perform application setup and configurations, including operations which are restricted to other application users.
Customer Cloud Administrator	A delegated customer cloud user for customer cloud management tasks, for example create customer security admin user, and other users.
Customer Security Admin	A customer security admin user who can create customer users and assign application roles.
Enterprise Group	An enterprise group is a collection of users and groups. Enterprise groups are defined in security store and are known to java EE server container.
Store Manager	A user who performs store manager role.
Store User	A user who performs store operations with assigned role permissions.
User	A user is an end-user accessing a service or application.

User Types and Responsibilities

Users in SIOCS are divided into the following types based on their job duties.

Table 2-2 User Types and Responsibilities

User Type	Responsibilities
Application Implementer	Data Seeding Configuration Operation Issues

Table 2-2 (Cont.) User Types and Responsibilities

User Type	Responsibilities
Customer Cloud Administrator	Create Additional App Users
Security Admin	
Application Administrator	Configure System
	Configure Store
Store Manager	Store Management
Store User	Store Operations
Retail Home User	A user who can access EICS tile reports on Retail Home and navigate to related operational views in EICS from there.

In addition to application users, integration users need to be setup based on integrated applications.

User Access Control

Users of SIOCS have roles through which they gain access to functions and data.

Security implementation involves the management of:

- Assign security groups to corporate operational users
- Assign application roles to store users

Assign Customer-Cloud-Admin User and Security-Admin User

This is for Retailer's admin to setup other users. This user has application Administrator role assigned. This user can be created and managed by customer in IDCS or OCI IAM.

The Cloud service administrator may setup additional users based on their job duties.

IDCS or OCI IAM Application Roles assigned to Application Admin User:

- admin_users
- security_users
- mps_users
- batch_users
- global_store_users
- full_permission_users

Users also need to be assigned application roles via SIOCS Security Admin Role permission console. For details on how to use the SIOCS administration screens, see the *Oracle Retail Enterprise Inventory Cloud Service Security Guide* and the *Oracle Retail Enterprise Inventory Cloud Service User Guide* Security chapter.

Assign Implementation Users

Implementation users perform the key setup tasks to start your implementation. As part of initial setup, add an implementation user, and give them login credentials and the url for your Oracle Applications. The Cloud service administrator may setup additional users for performing implementation tasks. To create implementation users and the data roles for performing the tasks, the service administrator performs following tasks:

- Create Implementation users and assign appropriate security IDCS or OCI IAM Application Roles in IDCS or OCI IAM
- Assign SIOCS Application Roles in SIOCS Security Admin Console to implementation users, optionally you can create custom roles and data roles to assign to implementation users

Users also need to be assigned application roles via SIOCS Security Admin Role permission console. For details on how to use the SIOCS administration screens, see the *Oracle Retail Enterprise Inventory Cloud Service Security Guide* and the *Oracle Retail Enterprise Inventory Cloud Service User Guide* Security chapter.

Assign Store Users

The Customer security admin user will need to setup the additional application users and store users using IDCS or OCI IAM and assign EICS application permissions and stores to store users via SIOCS Security Users Screens.

Store assignments control the stores available for a user to login to. Users can be assigned access to specific stores through the SIOCS security admin UI.

Steps to setup users and permissions:

- Custom Security Admin creates application users in Oracle Identity Cloud Service (IDCS) or Oracle Cloud Infrastructure Identity and Access Management (OCIIAM)
- Assign IDCS or OCI IAM Application Roles which are applicable to application users based on their job duties
- Define Custom Roles for non-Administrator role. You may assign the Default ADMINISTRATOR role to admin user.
- Assign permissions to Role:

  EICS defines two default application roles (ADMININISTRATOR and MANAGER), you may define custom roles to control user accesses based on job duties. There are 350+ roles permissions that decide how users access functionality. For details, see the *Oracle Retail Enterprise Inventory Cloud Service Administration Guide* - Configuration chapter.
- Assign user to roles and stores:

  Once stores are seeded into EICS, in SIOCS Security screen, customer security admin can assign users to stores, application roles. You may assign a single user to stores or use SIOCS UI Spreadsheet Data Loader to upload user role assignments.

  See *Oracle Retail Enterprise Inventory Cloud Service Security Guide* - Application Security chapter, Mass Assigning Roles and Stores section and SIOCS UI Spreadsheet Data Loader.

3
Signing into EICS

When you launch the EICS URL, you are re-directed to login Screen.

Login Screen

Use the EICS login screen to sign in the EICS application.

Oracle Identify Cloud Service (IDCS) or Oracle Cloud Infrastructure Identity and Access Management (OCI IAM) requires you to provide a valid user ID and password set up in IDCS or OCI IAM and select **Sign In**. The user must also be assigned proper roles and permissions within EICS.

Successful Login

If the User ID and password are valid, IDCS or OCI IAM authenticate the user, and if the user is configured in EICS, the system logs the user in.

Un-Successful Login

Please see Troubleshooting Tips.

4

System Configurations

There is 200+ system configuration settings applicable across the product functionalities. Depending on which functionality would be used, please read and configure settings accordingly.

Users with ADMINSTROR application role and admin_users IDCS or OCI IAM Application Role have permissions to update configurations. Some of restricted configuration settings requires users to have sysop_users IDCS or OCI IAM Application Role.

For more information on configuration please see *Oracle Retail Enterprise Inventory Cloud Service Administration Guide* - Configuration chapter.

Summary of Admin System Configurations Topics

The property settings that displayed on the Configure System Screen are listed below in groups:

- Admin Configurations
- Audit Configurations
- Batch Configurations
- Functional Areas Related Configurations
- Message Processing Configurations
- Mobile Configurations
- Notification Configurations
- Purge Configurations
- System and Integration Web Service Configurations
- Time Zone Configurations
- UI Configurations

Admin Configurations

Table 4-1 Admin Configurations

Configuration Topic	Descriptions
Admin	Configurations under this topic contains general application admin settings. See *Oracle Retail Enterprise Inventory Cloud Service Administration Guide* - Configuration chapter for details.

Audit Configurations

Table 4-2 Audit Configurations

Configuration Topic	Descriptions
Audit	Configurations under this topic contains auditing settings. See *Oracle Retail Enterprise Inventory Cloud Service Administration Guide* - Configuration chapter for details.

Batch Configurations

Table 4-3 Batch Configurations

Configuration Topic	Descriptions
Batch	Configurations under this topic contains settings for batch settings, such as file import path, object-storage/FTS (file transfer service) locations, and so on.

Batch File Configurations

At the time of provisioning, the Oracle Cloud team configures an object-storage/FTS (file transfer service) to facilitate the import and export of the batch files in and out of the cloud service. The batch file paths are set during EICS application installation. If the paths changed after installation, system operator may update the path using EICS system configuration screen.

Functional Areas Related Configurations

Table 4-4 Functional Area Specific Configurations

Configuration Topic	Descriptions
Carton Lookup	Configurations under this topic contains settings for Container Lookups.
Customer Order	Configurations under this topic contains settings for Customer Order Fulfilment.
DSD Receiving	Configurations under this topic contains settings for Direct Store Receiving.
Inventory Adjustment	Configurations under this topic contains settings for Inventory Adjustment.
Item Basket	Configurations under this topic contains settings for Item Basket.
Item Lookup	Configurations under this topic contains settings for Item Lookup.
Item Price	Configurations under this topic contains settings for Item Price.
Ops	Configurations under this topic contains settings related to specific functional area operations.
RTV	Configurations under this topic contains settings for Return to Vendor.
RTV Shipment	Configurations under this topic contains settings for Return to Vendor Shipment.
Shelf Replenishment	Configurations under this topic contains settings for Shelf Replenishment.

Table 4-4 (Cont.) Functional Area Specific Configurations

Configuration Topic	Descriptions
Stock Counts	Configurations under this topic contains settings for Stock count.
Transfer Receiving	Configurations under this topic contains settings for transfer receiving.
Transfer Shipment	Configurations under this topic contains settings for transfer shipment.
transfers	Configurations under this topic contains settings for transfers.
UIN	Configurations under this topic contains settings for item Unique Identification Number processing configurations.

Message Processing Configurations

Table 4-5 MPS Configurations

Configuration Topic	Descriptions
MPS	Configurations under this topic contains settings for MPS (Message Processing). See *Oracle Retail Enterprise Inventory Cloud Service Administration Guide* - Configuration chapter for details.

Mobile Configurations

Table 4-6 Mobile Configurations

Configuration Topic	Descriptions
Mobile	Configurations under this topic contains settings for Mobile Client. See *Oracle Retail Enterprise Inventory Cloud Service Administration Guide* - Configuration chapter for details.

Notification Configurations

Table 4-7 Notification Configurations

Configuration Topic	Descriptions
Notification	Configurations under this topic contains settings for notification settings. See *Oracle Retail Enterprise Inventory Cloud Service Administration Guide* - Configuration chapter for details.

Purge Configurations

Table 4-8 Purge Configurations

Configuration Topic	Descriptions
Purge	Configurations under this topic contains settings for data purge, such as days to hold, and so on. See *Oracle Retail Enterprise Inventory Cloud Service Administration Guide* - Configuration chapter for details.

System and Integration Web Service Configurations

Table 4-9 System and Integration Web Service Configurations

Configuration Topic	Descriptions
System Setting	Configurations under this topic contains settings for generic system configurations, and so on, external web service URLs, and system setting refresh rates, and so on. See *Oracle Retail Enterprise Inventory Cloud Service Administration Guide* - Configuration chapter for details.

Time Zone Configurations

Table 4-10 Time Zone Configurations

Configuration Topic	Descriptions
TIME ZONE	Configurations under this topic contains settings to determine if GMT time zone settings are used. See *Oracle Retail Enterprise Inventory Cloud Service Administration Guide* - Configuration chapter for details.

UI Configurations

Table 4-11 UI Configurations

Configuration Topic	Descriptions
UI	Configurations under this topic contains UI related settings, such as UI search limits, and so on. See *Oracle Retail Enterprise Inventory Cloud Service Administration Guide* - Configuration chapter for details.

5

Batch Job Admin

> **Note:**
>
> This section is applicable only for non-POM integrated SIOCS environments. For POM-integrated environments, refer to the topic: POM Integration

Batch Scheduler

EICS provides a batch scheduler interface that allows customers to enable/disable batch jobs and schedule batches with specific intervals.

Please note this is part of EICS itself.

For more details, see the information on batches in the *Oracle Retail Enterprise Inventory Cloud Service Administration Guide* Batches Chapter- Job Scheduler.

Batch Activity

Admin users and system operator can view batch job activities via EICS Batch Job Admin Screen.

See *Oracle Retail Enterprise Inventory Cloud Service Administration Guide* Batch Job Admin Chapter- Job Admin screen.

Cleanup Batches

The scheduled batch jobs that perform cleanup of old data have been moved to systems operations. The scheduling and execution of these batch jobs is necessary for the functioning of the application. Each of these jobs will be scheduled to run by default on a cycle, often daily. As systems operations, these will not appear on the batch screen unless the user is an Oracle system operations account.

However, most of these cleanup batch jobs have a retention policy that is configurable in the systems configuration. The system configuration is available to standard customer accounts where they can set those configurations within specified range.

Cleanup Batch List

- Activity Locks
- Adhoc Stock Count
- Batch Directories
- Batch Log
- Closed Transfers
- Completed UINs

- Customer Orders
- DSD and Purchase Orders
- Invalid Users
- Invalid User Roles
- Inventory Adjustments
- Item
- Item Baskets
- Item Hierarchy
- Item Price
- Notifications
- Price Change Worksheet
- Price History
- Related Items
- Resolved UIN Problems
- RFID
- Sales Posting
- Shelf Adjustments
- Staged Messages
- Stock Counts
- Store Orders
- Temporary UINs
- Vendor Returns

POM Integration

Process Orchestration and Monitoring (POM) is a user interface which allows user to schedule, track and manage batch jobs. It uses REST APIs to trigger and get status of the batch jobs.

Refer to the Process Orchestration and Monitoring Guides for more details on using this tool.

- **User Guide**: https://docs.oracle.com/en/industries/retail/retail-process-orchestration-monitoring/24.1.101.0/use.html
- **Implementation Guide**: https://docs.oracle.com/en/industries/retail/retail-process-orchestration-monitoring/24.1.101.0/implement.html

Refer to Chapter:5 Batches in the *EICS Administration Guide*, for more details on batch jobs.

POM's key features are:

- POM provides comprehensive batch scheduling and monitoring capabilities for Oracle Retail SaaS Applications
- Configurable Scheduler for time-based Invocation of Hourly, Ad-Hoc or Cyclic
- Configurable Schedulerfor tailoring batch to specific customer needs such as enabling/ disabling certain jobs

- Configurable notifications with ability to send e-mail notifications
- Provides the ability to Monitor and Control all aspects of Schedule Executions such as Re-Run, Skip, put a Job on Hold, etc
- Easily identifies jobs that are failed, waiting for the dependencies and long-running jobs

6
Initial Data Seeding

Initial Data Seeding

Data seeding is a process where EICS seed enterprise foundation information from external system, such as merchandise hierarchy, items, locations, items, suppliers, and related data.

See *Oracle Retail Enterprise Inventory Cloud Service Administration Guide* - Data Seeding chapter.

7

SIOCS UI Spreadsheet Data Loader

Use EICS Spreadsheet Data Loader to upload data to the EICS application tables from spreadsheets. Spreadsheet Data Loader is applicable to small or medium data file up to a few Megabytes.

EICS UI spreadsheets loader provides following features:

- Download the templates
- Upload user store assignments
- Upload user role assignments
- Data Validations

Upload Store Assignments

You can assign users to stores using EICS Spreadsheet data loader in EICS Admin Security screen. User must exist in credential store (for example, Oracle IDCS).

You must have the Application Administrator job role or privileges.

Spreadsheet Templates

UserAssignmentsTemplate.xlsx/Store Assignments:

Table 7-1 Spreadsheet Templates

Field	Description	Required
Action	The assignment action, choose value from dropdown, assign, revoke.	Yes
Action Value	N/A	No
Username	The username to assign the store.	Yes
Store ID	The store Id to assign to user.	Yes

See *Oracle Retail Enterprise Inventory Cloud Service Security Guide* and *Oracle Retail Enterprise Inventory Cloud Service User Guide* Security chapter.

Upload Role Assignments

You can assign users to roles using EICS Spreadsheet data loader in EICS Admin Security screen. User must exist in credential store (for example, Oracle IDCS or OCI IAM).

The role must exist in EICS.

You must have the Application Administrator job role or privileges.

Spreadsheet Templates

UserAssignmentsTemplate.xlsx/Role Assignments:

Table 7-2 Spreadsheet Templates

Field	Description	Required
Action	The assignment action, choose value from dropdown, assign, revoke.	Yes
Action Value	N/A	No
Username	The username to assign the store.	Yes
Role Name	The role name to assign to user.	Yes
Store ID	The store Id to assign to user.	No
Start Date	User start date.	No
End Date	User end date.	No

See *Oracle Retail Enterprise Inventory Cloud Service Security Guide* and *Oracle Retail Enterprise Inventory Cloud Service User Guide* Security chapter.

8

Report Configurations

EICS ships with around 30+ built-in operational reports. These reports are requested from the EICS user interface. The reports are displayed in PDF on the EICS user interface. These reports cannot be modified.

See *Oracle Retail Enterprise Inventory Cloud Service Administration Guide* Reporting chapter and *Oracle Retail Enterprise Inventory Cloud Service Administration Guide* Appendix D: Report Formats.

9
Store Configurations

Once stores are seeded into EICS, you can change default store configurations.

There is 100+ configuration settings applicable specific for a store(s).

Users with ADMINSTROR application role and admin_users IDCS or OCI IAM Application Role have permissions to change store configurations.

Store Admin UI also provides mass store configuration updates features to update configurations for all stores or list of stores.

For details, see the *Oracle Retail Enterprise Inventory Cloud Service Administration Guide* Configuration chapter.

10

Mobile Application (SOCS)

SOCS is a hybrid mobile platform that gets distributed through a mobile application archive (.maa) file from the Oracle Software Delivery Cloud (OSDC). Go to https://edelivery.oracle.com and search for **Store Operations Cloud Service** to get the mobile archive file. This .maa needs to be built into either an Android build (apk) or an iOS build (ipa).

For details, see the *Oracle Retail Store Operations Cloud Service Mobile Guide*.

Configure Manual Quantity Entry Mode

For MAF client, you need to set the numeric entry popup on MAF will have its mode defaulted to either scan mode or override mode.

For details, see the *Oracle Retail Enterprise Inventory Cloud Service Administration Guide* Configuration chapter.

Enable Mobile Functionalities

By default, the EICS application installer set following value as false.

```
input.sim.mobile.client.enabled = false
```

By disabling **Access Execution UI**, Mobile Client (SOCS) access on following functional areas is disabled. If a customer has purchased SOCS licenses, then following access permissions need to be enabled in order to use these functionalities on mobile client.

- Access Execution UI
- Access Inventory Adjustments
- Access DSD Receiving
- Access RTV
- Access RTV Shipment
- Access Transfer
- Access Transfer Shipment
- Access Transfer Receiving
- Access Customer Order
- Access Stock Count
- Access Shelf Replenishment
- Access Open Transactions
- Access Notifications
- Access Item Basket

Mobile Device Management (MDM)

Retailers need to use their own MDM infrastructure to push mobile updates to each store/device.

Due to corporate guidelines, Oracle Retail SOCS is not permitted to be distributed via Google or Apple Play Stores.

We have concerns that any MDM (Mobile Device Management) tool that relies on Google Play Store – even when used in enterprise-managed-deployment mode — may also not be allowed as part of the contractual agreement.

Retailers should not be using any MDM tool that uses Google Play Store – either directly or indirectly.

Examples of MDM tools that rely on Google Play Store are *ManageEngine MDM, Microsoft Intune, Radix MDM,* and *Vantage MDM*.

> **Note:**
>
> Please note that this list is not a complete list. There are 100s of MDM tools available, so Retailers need to do their own verification.

In case your corporate already uses one of these MDM tools (that rely on Google Play Store) your options could be:

- Explore the MDM administration, to see if it offers a configuration to use its own internal cloud storage for the application instead of using or indexing the Google Play Store.
- Explore the MDM administration, to see if it offers a configuration that allows a different MDM tool to be used for SOCS Mobile — one that does not use Google Play Store.
- Move away from such a MDM tool to another MDM that does not use Google Play Store directly or indirectly.

11

Internationalization and Localization

SIOCS supports translation into following locales out of the box:

1. Arabic
2. Chinese (Simplified)
3. Chinese (Traditional)
4. Croatian
5. Dutch
6. English
7. French
8. German
9. Greek
10. Hungarian
11. Italian
12. Japanese
13. Korean
14. Polish
15. Portuguese (Brazilian)
16. Russian
17. Spanish
18. Swedish
19. Turkish

Extension hooks for adding new locales

Translation records for these new locales have been defaulted to English.

Translation value can be updated for these locales by accessing administration screen on EICS Admin UI.

1. Albanian
2. Armenian
3. Azerbaijani
4. Belarusian
5. Bengali
6. Bosnian
7. Bulgarian
8. Burmese

9. Czech
10. Danish
11. Estonian
12. Filipino
13. Finnish
14. Georgian
15. Hebrew
16. Hindi
17. Indonesian
18. Kazakh
19. Khmer
20. Lao
21. Latvian
22. Lithuanian
23. Malay
24. Norwegian
25. Romanian
26. Serbian
27. Slovak
28. Slovene
29. Thai
30. Ukrainian
31. Urdu
32. Uzbek
33. Vietnamese

EICS Admin UI translations relies on following two bundle categories:

1. Framework bundles: owned by Oracle JET and Oracle Retail platform team.
2. EICS bundles: owned by EICS.

These bundles are merged at runtime to provide an overall translation bundle which is used to provide translated UI content.

For updating Oracle provided translations Administration UI provides a setup screen.

For more details, see the information in the *Oracle Retail Enterprise Inventory Cloud Service Administration Guide* Internationalization chapter.

SOCS (built using Oracle MAF) follows an XML format to organize translation records within a translation bundle. Each supported locale will have its on XLF file. For example, translations for French locale could be found under `xxxMobileViewControllerBundle_fr.xlf` file. For information on how to update the mobile translations, see the *Oracle Retail Store Operations Cloud Service Mobile Guide*.

12

Operational Monitoring

To assist system operators and implementers to view operational issue, following tools can assist users with job monitoring activities.

View Operational Issues through EICS Admin UI

To view EICS application operational issues, EICS provides an Operational Issues Admin UI. For details, see *Oracle® Retail Enterprise Inventory Cloud Service Administration Guide*.

EICS DB Data Viewer User

In addition to data sources users, EICS database installation also creates a DB data viewer user.

This user has read permissions to all tables/synonyms owned by EICS master schema. This DB data viewer user can be used by system implementer or system operator to perform necessary job monitoring activities. This user has the following database roles assigned to it:

- sim_business_viewer
- sim_admin_viewer
- sim_mps_viewer
- sim_security_viewer
- sim_rib_viewer

13
Integrations

This chapter describes the integration setup within EICS to Integrate with other systems.

For completed integration interfaces, see *Oracle® Retail Enterprise Inventory Cloud Service Inbound and Outbound Integration Guide*.

- Pricing Integration with Retail Pricing Cloud Service
- Stock Count Export Integration with MFCS
- Sale Data Integration with POS and ReSA
- Xstore Integration - How does SIOCS Process Sales Transactions?
- Web Service: Integration with Manifest System
- Web Service: Integration with External System for Ticket Printing
- RIB Integration Guidance (From SIOCS Perspective)
- Other Integration Interfaces
- Hybrid Deployment - Integration with on-premise RMS/RIB
- Hybrid Deployment - Integration with GBUCS MFCS/RICS

Pricing Integration with Retail Pricing Cloud Service

Clearance Transaction Import

See *Oracle® Retail Enterprise Inventory Cloud Service Administration Guide* Batch Chapter: Clearance Transaction Import

Price Change Transaction Import

See *Oracle® Retail Enterprise Inventory Cloud Service Administration Guide* Batch Chapter: Price Change Transaction Import

Promotion Offer Import (N/A): Requires Field Enabled Integration

SIOCS does not use Oracle Retail Pricing Cloud Service Interface PromotionOffer_Tx. It requires field enabled integration. At this point, the pricing service does not post promotion price by item/date, so there is nothing for SIOCS to use. SIOCS does have a generic promotion interface for the retailer to integrate promotion price into.

Stock Count Export Integration with MFCS

Stock Count Export

When a Unit Amount stock count is authorized, a Unit and Amount Stock Counts Export file is generated.

See *Oracle® Retail Enterprise Inventory Cloud Service Administration Guide* Appendix: Unit and Amount Stock Counts Export.

Sale Data Integration with POS and ReSA

Retail Sale Audit Import Batch

See:

- *Oracle® Retail Enterprise Inventory Cloud Service Administration Guide* Batch chapter
- *Oracle® Retail Enterprise Inventory Cloud Service Inbound and Outbound Integration Guide*

Xstore Integration - How does SIOCS Process Sales Transactions?

Configuration

SIOCS now does a-synchronous processing for sales transactions.

Processing

1. The basic form and structure of the POS transaction is validated. If this fails, the entire service call is rejected. *** please see validation checks for this step #1 below.
2. The transactions are broken up into items. Each item is then categorized as associated to order or not associated to order.
3. All records are written into POS_TRANSACTION table to be processed later.
4. MPS processing sub-queue is notified with a request number to process a group of transaction records.
5. MPS processes records in bulk groups by type for efficiency.
    - Items that succeed are processed.
    - Items that fail are written back to POS_TRANSACTION table with failed status and a record is written to POS_TRANSACTION_LOG to capture the failure

      *** please see error handling for this step #5 below.

Error Handling During Processing Step 1

If any error occurs in the first step, the entire web service call is failed and rejected.

The following errors can occur in Step 1.

- If sale upload is configured to GMT and a non-GMT date is sent.
- If more than one store is found on the input.
- If the single store found in the input is not an existing store.
- If the maximum number of (configured) total items is exceeded.
- If duplicate records are found in the input itself.
- If duplicate records are found in already existing data.

Error Handling During Step 5

If an unexpected or system error occurs, the entire request will fail, and all records associated to the request will not process.

If an expected or business error occurs, it is handled, and the specific item only is failed, and processing continues until the request is complete.

Failed items with business errors can be dealt with in SIOCS POS administration screen.

> **Note:**
>
> If a sales audit process is used, depending on the type of failure, the audit change process could send an audited file back to SIOCS, which means it may not be required to fix the error in SIOCS since it will be overlaid by the transaction coming from the sales audit application.

Web Service: Integration with Manifest System

See:

- *Oracle® Retail Enterprise Inventory Cloud Service Administration Guide* - Integrate with Manifest System
- Web Service URL:

  System Integrator provides the external Web Service URL. This URL is taken as input by the EICS installer to update system configuration entry in the database.

  The URL can also be updated via EICS System Configuration UI using the below configuration.

  SIOCS is not a package shipping management system. It calls an external shipping-manifest system that acts as a broker for multiple courier entities such as FedEX, UPS, DHL, national mail carriers and so on.

  Details of the shipping manifest web service are captured in the WSDL. Details of the data elements are provided in the XSD.

  – Download Shipping-Manifest-Service jar from the External Integration Artifacts Download Files section of MOS Doc ID 2614551.1.

  – Please look at all the definitions/wsdl in that JAR and write service as needed. This service will run on a server outside of Oracle network.

  – Please log a service request to allow-list this server URL.

  – Please use the Credentials Administration UI under Technical maintenance to update credential details. For details, please see *Oracle® Retail Enterprise Inventory Cloud Service Administration Guide* - Chapter 6.
- Web Service User alias: manifest-user
- Web Service: Integration with External System for Ticket Printing

Web Service: Integration with External System for Ticket Printing

See:

- *Oracle® Retail Enterprise Inventory Cloud Service Administration Guide* - Ticket Print
- Web Service URL:

  System Integrator provides the external Web Service URL. This URL is taken as input by the EICS installer to update system configuration entry in the database.

  SIOCS is not a printing system that manages printers & formats. Tickets are sent to an external web service endpoint; that is implemented by any system that needs to receive tickets. The external system is responsible for managing printing.

  Communication to the External printer can follow three paths:

  – Bluetooth or WiFi printing This method connects the mobile client (MAF) directly the printer. There is no need to leverage a print server. Depending on the implementation, SIOCS will send the ZPL and all relevant data directly to the connected printer.

  – MPS - Third party printing This method will leverage a web service to send ticket print requests to a network connected printer by leverage a print server maintained by the customer. There are two methods to connect to this external server depending on the “Maximum number of Tickets to use synchronous call” setting. If printing more tickets then configured SIOCS will send the print request to the MPS staging table.

  – Direct Webservice connect - Third party printing When printing less than the “maximum number of tickets to use synchronous” system option, SIOCS will send the ticket print request to a web service end point directly bypassing the MPS staging table. This is a faster method of communicating to the printer service, however this method should be reserved for small print quantities. When printing in bulk this method should be avoided.

  To process the staged tickets, the **TicketPrint** outbound MPS work type needs to be enabled through the MPS Work Type screen. Please refer to the *Oracle Retail Enterprise Inventory Cloud Service Administration Guide* for details on MPS Work Type screen.

  The external web service is called **tps-TicketPrint** and has one operation **printTickets**.

  Details of the ticket printing web service are captured in the WSDL. Details of the ticket data elements are provided in the XSD.

  – Download tps- TicketPrintService jar from the External Integration Artifacts Download Files section of MOS Doc ID 2614551.1.

  – Please look at all the definitions/wsdl in that JAR and write service as needed. This service will run on a server outside of Oracle network.

  – Please make sure outbound TicketPrint MPS work type has been enabled.

  – Please log a service request to allow-list this server URL.

  – Please use the Credentials Administration UI under Technical maintenance to update credential details. For details, please see *Oracle® Retail Enterprise Inventory Cloud Service Administration Guide* - Chapter 6.

- Web Service User alias: ticket-user

ZPL

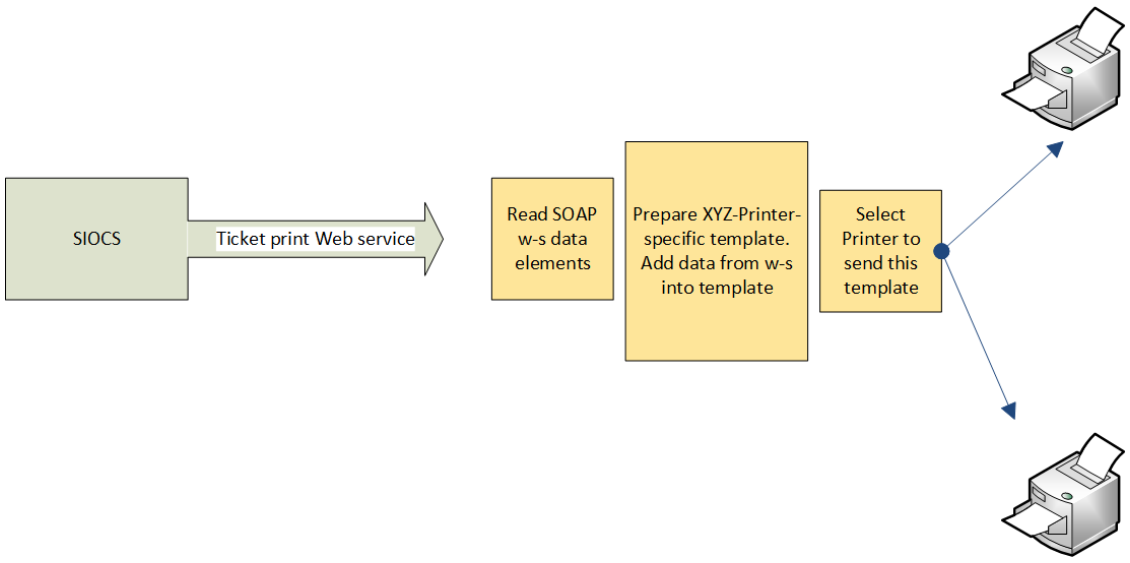
- ZPL is a proprietary ticket formatting language used for printing to Zebra printers.
- ZPL is not entirely an ASCII format and is not readable without tools.
- If not using ZPL ticket printing on Zebra printers, then usage of ZPL is not recommended.
- If using ZPL with ZPL printers, SIOCS allows for the placement of tags within the ZPL design (managed by ZPL tools).

- SIOCS will then replace those tags with the correct data before sending the ticket information to the web service endpoint.
- ZPL files and formats are created and managed by tools and software outside of SIOCS. Files are uploaded into SIOCS.

Non-ZPL Printing

- Information captured in printer administration is sent with the ticket information, such as printer name and address.
- The custom development of the printing system (or middleware system designed to speak to a printing solution) must use the printer and ticket information to determine how to print.
- Ticket information can be used to determine format of ticket to print, but such tasks as matching the ticket type information to a template managed by the implementing system.
- Once a template in the middleware system is identified, the middleware system should use ticket information to populate the template and print the ticket. SIOCS does not manage printing templates.
- Printer information can be used to determine which printer it should be sent to.
- Printing templates are created and manages by tools and software outside of SIOCS as part of a custom or middleware product.

Figure 13-1 Ticket Printing



RIB Integration Guidance (From SIOCS Perspective)

Overview

The Oracle Retail Integration Bus (RIB) is a fully distributed integration infrastructure that implements messaging using Asynchronous JMS Publish/Subscribe Fire-and-Forget model.

The concept of message-bus is that one product broadcasts information and each product or cloud service only subscribes to those message families/payloads that they are interested in. Everything else is ignored.

To process all messages intended for ordering systems, pricing systems, or any other external systems would require massive processing of mapping, then writing to the database, and then reading messages that are not intended for processing in our system to discard them.

To avoid all the processing and overhead, messages not intended for SIOCS are simply dropped at the point of receiving them from the RIB.

Unsupported Messages and Payloads

When an entire family or message type is not used or desired in SIOCS, then it is not subscribing to and does not arrive at SIOCS.

The message type and payload have no injector that places the RIB payload into the MPS staged message processing workflow in SIOCS.

Unsupported Data within Messages and Payloads

In the case of some message families or types, a brief look at the internal information of the message may also determine, it is not meant for SIOCS.

1. SIOCS does not process non-stockholding stores (stores with no inventory). So, if a payload arrives for a message family and type we support, but the payload contains an internal attribute, usually labeled "stockholding_ind" that is set to "N", the payload is dropped as it is not intended for the SIOCS system.
2. SIOCS does not process virtual stores so limited itself by store type. If the payload contains a store type attribute, then SIOCS only processes COMPANY ("C") stores and FRANCHISE ("F") stores.
3. When dealing with quantities, a quantity of 0 primarily means a cancellation or removal of that item or detail from a transaction, and so it is deleted. There may be exception to this in certain circumstances.

Errors

Errors that occur within the RIB through injection in MPS are logged and managed within the RIB.

Errors that occur within MPS staged messages within SIOCS are logged and can be seen and managed with MPS management workflow.

Messages that are successfully processed, including successfully being ignored as not relevant to the store, do not log any information.

Modify/Delete

In the case of transaction data, in some cases if the transaction is actively being processed by a user or business functionality in the store, it may have already passed a state where it can be modified or canceled.

Message Family/Type

The following table contains a list of message families and types that SIOCS subscribes to (incoming) or broadcasts (publishes out) to other systems.

It indicates the family name, message type, payloads used within the family, whether SIOCS publishes or subscribes to it, and whether it is part of the initial data seeding.

Message type suffixes indicates intent of the payload: **Cre** means create information, **Mod** means modify information, and **Del** means cancel or delete information.

Table 13-1 Message Family/Type

Message Family	Message Type	Payload	Publish/ Subscribe	Seeded	SIOCS Data
ASNIn	ASNInCre ASNInMod	ASNInDesc	Subscribe	No	Store Delivery
ASNOut	ASNOutCre	ASNOutDesc	Publish	No	Store Shipment
ClrPrcChg	ClrPrcChgCre ClrPrcChgMod ClrPrcChgDel	ClrPrcChgDesc ClrPrcChgRef ClrPrcChgDtlRef	Subscribe	No	Clearance Price Change
CoInvAvail	COInvAvailMod	COInvAvailDesc	Publish	No	Customer Order Store Inventory Shift Notification
Diffs	DiffCre DiffDel DiffMod	DiffDesc DiffRef	Subscribe	Yes	Differentiators
DSDReceipt	DSDReceiptCre DSDReceiptMod	DSDReceiptDesc	Publish	No	Non-PO DSD Receipt
FulfilOrd	FulfilOrdStDlvCre FulfilOrdReqDel FulfilOrdApprDel	FulfilOrdDesc	Subscribe	No	Fulfillment Orders
FulfilOrdCfm	FulfilOrdCfmCre	FulfilOrdCfmDesc	Publish	No	Fulfillment Order Confirm
FulfilOrdCfm Cnc	FulfilOrdCfmCncCre	FulfilOrdRef	Publish	No	Fulfillment Order Cancel
InvAdjust	InvAdjustCre	InvAdjustDesc	Publish, Subscribe	No	Stock Movement Notification
InvReq	InvReqCre	InvReqDesc	Publish	No	Store Order/ Item Request
ItemLoc	ItemLocCre ItemLocDel ItemLocMod ItemLocReplMod	ItemLocDesc	Subscribe	Yes	Item Location Item Replenishment

Table 13-1 (Cont.) Message Family/Type

Message Family	Message Type	Payload	Publish/ Subscribe	Seeded	SIOCS Data
Items	ItemBOMCre ItemBOMDel ItemBOMMod ItemCre ItemDel ItemHdrMod ItemImageCre ItemImageMod ItemImageDel ItemUPCCre ItemUPCDel ItemUPCMod	ItemBOMDesc ItemDesc ItemHdrDesc ISCDimDesc ItemImageDesc ItemTcktDesc ItemUPCDesc	Subscribe	Yes	Item Item Details Item UPC Item Image
Items	RelItemHeadCre RelItemHeadMod RelItemHeadDel RelItemDetCre RelItemDetDel RelItemDetMod	RelatedItemDesc	Subscribe	Yes	Related Items
Items	ItemSupCre ItemSupDel ItemSupMod ItemSupCtyCre ItemSupCtyDel ItemSupCtyMod ISCDimCre ISCDimMod ISCDimDel ISCMfrCre ISCMfrDel ISCMfrMod	ItemSupCtyDesc ItemSupCtyMfrDesc ItemSupDesc	Subscribe	Yes	Supplier Items Supplier Manufacturer Supplier Country
Items	ItemUDALOVCre ItemUDALOVMod ItemUDALOVDel ItemUDAFFCre ItemUDAFFMod ItemUDAFFDel ItemUDADateCre ItemUDADateMod ItemUDADateDel	ItemUDADateDesc ItemUDAFFDesc ItemUDALOVDesc	Subscribe	Yes	Item User Defined Attributes

Table 13-1 (Cont.) Message Family/Type

Message Family	Message Type	Payload	Publish/ Subscribe	Seeded	SIOCS Data
MerchHier	ClassCre ClassMod ClassDel DeptCre DeptMod DeptDel SubclassCre SubclassMod SubclassDel	MrchHrClsDesc MrchHrDeptDesc MrchHrSclsDesc	Subscribe	Yes	Department Class Subclass
Order	POCre PODel PODtlCre PODtlDel PODtlMod POHdrMod	PODesc PORef	Subscribe	No	Purchase Order
Partner	PartnerCre PartnerDel PartnerMod PartnerDtlCre PartnerDtlDel PartnerDtlMod	PartnerDesc PartnerOUDesc PartnerRef	Subscribe	Yes	Finishers
PrmPrcChg	MultiBuyPromoCre MultiBuyPromoMod MultiBuyPromoDel PrmCnlItemLocCre	PromotionDesc	Subscribe	No	Promotions
RcvUnitAdj	RcvUnitAdjCre RcvUnitAdjMod	RcvUnitAdjDesc	Subscribe	No	Adjusts Supplier Deliveries
Receiving	ReceiptCre ReceiptOrdCre	ReceiptDesc	Publish	No	Transfer Receipt, Purchase Order Receipt, Receipt with Customer Order
RegPrcChg	RegPrcChgCre RegPrcChgMod RegPrcChgDel	RegPrcChgDesc RegPrcChgDtl	Subscribe	No	Regular Price Change
RTV	RTVCre	RTVDesc	Publish, Subscribe	No	Warehouse Return
RTVReq	RTVReqCre RTVReqMod RTVReqDel RTVReqDtlCre RTVReqDtlDel RTVReqDtlMod	RTVReqDesc RTVReqRef	Subscribe	No	Supplier Return

Table 13-1 (Cont.) Message Family/Type

Message Family	Message Type	Payload	Publish/ Subscribe	Seeded	SIOCS Data
SeedData	DiffTypeCre DiffTypeDel DiffTypeMod	DiffTypeDesc DiffTypeRef	Subscribe	Yes	Differentiator Types
ShipInfo	ShipInfoCre	ShipInfoDesc	Publish	No	Pre-Shipment Notification
SOStatus	SOStatusCre	SOStatusDesc	Publish, Subscribe	No	Transfers Shipments
StkCountSch	StkCountSchCre StkCountSchMod StkCountSchDel StkCountSchDtlDel	StkCountSchDesc	Publish	No	Stock Count Schedule
StockOrder	SOCre SODtlCre SODtlDel SODtlMod SOHdrDel SOHdrMod	SODesc SORef	Subscribe	No	Transfer Allocation
Stores	StoreCre StoreDel StoreMod StoreDtlCre StoreDtlDel StoreDtlMod	StoreDesc StoreRef	Subscribe	Yes	Store
UDAs	UDAHdrCre UDAHdrMod UDAHdrDel UDAValCre UDAValMod UDAValDel	UDADesc UDARef UDAValDesc UDAValRef	Subscribe	No	User Defined Attributes
Vendor	VendorAddrCre VendorAddrDel VendorAddrMod VendorCre VendorDel VendorHdrMod VendorOUCre VendorOUDel	VendorAddrDesc VendorAddrRef VendorDesc VendorRef	Subscribe	Yes	Suppliers
WH	WHCre WHDel WHMod	WHDesc WHRef	Subscribe	Yes	Warehouse

Other Integration Interfaces

See *Oracle® Retail Enterprise Inventory Cloud Service Inbound and Outbound Integration Guide*.

Hybrid Deployment - Integration with on-premise RMS/RIB

SIOCS has enabled this integration option in order to integrate with on-premises Oracle Retail Merchandising System; field enablement would be required.

As noted in the Oracle SIOCS Implementation Overview chapter, File Transfer Service (FTS) would play a key role in enabling this integration.

Depending on the version of Retail Merchandising System (RMS), RIB payloads may differ as well. Solution Implementers will have to perform additional analysis on changes and implement custom integration methods as needed. If the integrating RMS/RIB version is v19.x or v16.x, the payloads would be much more compatible in terms of required attributes than dealing with older versions of RMS/RIB.

Oracle Retail Integration bus (RIB) would always be deployed along with RMS; hence RIB-on-premises would integrate with SIOCS.

At high level, field enablement would be needed for the following:

- Foundation Data seeding and pricing integration

  For file layout and more detail, please see the Standalone Data Seeding section in the *Oracle Retail Enterprise Inventory Cloud Service Administration Guide*.
- File movement between SIOCS and RMS
  - ReSA file (SIMT) import into SIOCS
  - Stock Count export from SIOCS to RMS
- Third party file imports

  For more information, please see the FTS Enabled Third Party File Import Batches section within the File Transfer Services chapter in the *Oracle Retail Enterprise Inventory Cloud Service Inbound and Outbound Integration Guide*.
- In order to publish messages to RIB located on-premises from SIOCS, RIB endpoint needs to be allow listed. You must submit a service request on My Oracle Support to allow list the on-premises rib server url and port.
  - Once allow listed, SIOCS to RMS communication via RIB can commence through standard RIB- SOAP services.
  - Similarly on-premise RMS would use RIB-SOAP-injector service to communicate with SIOCS.

Hybrid Deployment - Integration with MFCS/RICS GBUCS

SIOCS has enabled this integration option to integrate with MFCS/RICS v19.x deployed in GBUCS. In this integration method, the following entities are configured upon request. You must submit a service request on My Oracle Support to get this configured.

- ReSA files (SIMT) — from MFCS to SIOCS
  - MFCS invokes SIOCS FTS end points to push files from sFTP

  - Retail Sale Audit Import Batch consumes the SIMT file into SIOCS from the FTS/Imports object storage prefix.
- Pricing files - Regular and Clearance Price Event files are pushed from Oracle Retail Pricing Cloud Service (RPCS) into SIOCS object storage (FTS) via Oracle Retail Integration Cloud Service (Bulk Data Integration (BDI) File Creator Jobs).
  - PriceChange_Tx_fileCreator_ProcessFlow_From_RMS and Clearance_Tx_fileCreator_ProcessFlow_From_RMS extract price changes and clearances from RPCS and transfer them to the SIOCS FTS/Imports Object Storage prefix.
  - Regular Price Change File Import Batch and Clearance File Import Batch programs process the .csv files and populate the ITEM_PRICE table in SIOCS.
- Stock Count Results – After completion of Stock Count in SIOCS, the results file is automatically exported from SIOCS server's file system to the MFCS sFTP server and transferred into the MFCS server's file system. For further details on how the STK_* files are processed within MFCS, refer to the Merchandising Batch Operations Guide.
- MFCS will continue to send inventory transactions via Oracle Retail Integration Cloud Service (RIB) to SIOCS
  - ** SIOCS end points are publicly exposed and not required to be allowlisted from the RICS server.
- SIOCS will continue to send inventory transactions via Oracle Retail Integration Cloud Service (RIB) to MFCS
  - ** RIB Publisher url will be allowlisted and configured in SIOCS by Oracle.

14

Customization and Extension

Customization and Extension Considerations

This section provides considerations for customization and extension.

Code Customization

No customization to the core application code is permitted.

No write access to the database or data model is permitted.

15
File Transfer Services

Overview

Oracle Cloud Infrastructure Object Storage is an internet-scale, high-performance storage platform that offers reliable and cost-efficient data durability. File Transfer Service (FTS) for the Store Inventory Cloud Services are available as JSON REST services. These APIs allows you to manage uploading and downloading files to Object Storage.

Access to files is through a Pre-Authenticated Request (PAR), which is a URL that requires no further authentication to upload or download to the application's object storage. To retrieve a PAR, you must use the appropriate FTS services.

The FTS APIs enables external application to import files to and export files from Object Storage used by the solutions.

See *Oracle Retail Enterprise Inventory Cloud Service Inbound and Outbound Integration Guide* - File Transfer Services chapter.

16

Logs

This chapter describes the integration setup within EICS to Integrate with other systems.

EICS Log Debug Settings

EICS debug settings apply to EICS-server, JET-Admin-UI and MAF-mobile-UI.

The server would be the main place for debug logging. Accessing logs is only via filesystem at least for EICS logs. WebLogic logs can be viewed in the console, if needed.

If a log level change is needed to troubleshoot a problem, in addition to, changing debug settings, restarting the server is required.

Debug Configuration file: `sim-server-resources.jar -> logback.xml`

Server: For the server debug, it's possible to access through MBeans (JMX), otherwise it requires changing deployed files, which means restarting the server.

JET Admin UI (EICS): Does allow for changing logging through the browser console, but this would be after application startup. So, any logging for the start/login processes would need the configuration on the server to be changed (deployed).

MAF UI (SOCS): would require a new build and tools to access the logs.

Server Log File Locations

Table 16-1 Server Log File Locations

#	Log Type	Log Location
1	EICS application log	Server: <eics weblogic server> Log directory: <eics_domain_home>/log For example: /u01/domains/wls_sim/SIMDomain/log sim.log, sim.1.log, …, sim.log.log sim_services.log (For clustered environment, need to check all nodes log locations)
2	Domain and admin server log	Server: <eics weblogic server> Log directory: <eics_domain_home>/servers/AdminServer/logs SIMDomain.log AdminServer.log access.log

Table 16-1 (Cont.) Server Log File Locations

#	Log Type	Log Location
3	Application server log	Server: <eics weblogic server> Log directory: <eics_domain_home>/servers/sim-server_1/logs For example: /u01/domains/wls_sim/SIMDomain/servers/sim-server_1/logs sim-server_1.log sim-server_1.out access.log

17

Troubleshooting Tips

Application Login Troubleshooting

Report Troubleshooting

RIB (Retail Integration Cloud Service / RICS) Troubleshooting

Web Service Troubleshooting

References

Application Login Troubleshooting

Table 17-1 Application Login Troubleshooting

#	Error Category	Solution Hint
1	Customer Admin User login issue	1. Verify user exists in Oracle IDCS or OCI IAM (Notes: a default admin user is also created in EICS database) 2. Verify user in IDCS or OCI IAM has assigned the following IDCS or OCI IAM Application Roles: admin_users security_users mps_users batch_users global_store_users 3. Verify user in SIOCS has assigned ADMINISTRATOR SIOCS Application Role
2	Store user login failure on web client after version upgrade	Clear browser cache. Custom cache headers are used which do not allow the web client application to be cached by the browser. Users are required to clear the existing copy of the client that is already cached on their systems by clearing the browser cache before logging into the web client first time after a version update.
3	Store user login failure	See *Oracle® Retail Enterprise Inventory Cloud Service Administration Guide* - Security chapter for details.

Report Troubleshooting

Table 17-2 Report Troubleshooting

#	Error Category	Solution Hint
1	EICS report connection issue	Verify Reporting WSDL in EICS System Configuration screen setup.

RIB (Retail Integration Cloud Service / RICS) Troubleshooting

Table 17-3 RIB (RICS) Troubleshooting

#	Error Category	Solution Hint
1	RIB injection user connection issue	Verify user has been assigned the following IDCS or OCI IAM Application Role: integration_users
2	RIB publisher connection issue	Verify the credentials of rib-user alias matches between in both EICS credential store and RIB-SIM. In RIB-SIM server, that the user needs to be in ribAdminGroup.

Web Service Troubleshooting

Table 17-4 Web Service Troubleshooting

#	Error Category	Solution Hint
1	RIB injection user connection issue	1. Verify user has been assigned integration_users IDCS or OCI IAM Application Role 2. Verify web service end point url 3. Verify web service policy

References

1. Oracle® Retail Store Inventory Operations Cloud Services Data Model residing on My Oracle Support

2. Oracle Retail Integration Cloud Service Integration Guide

3. Oracle Retail Enterprise Integration Overview Guide

A

Appendix: Accessibility

Accessibility involves making your application usable for persons with disabilities such as low vision or blindness, deafness, or other physical limitations. This means, for example, creating applications that can be:

- Used without a mouse (keyboard only).
- Used with assistive technologies such as screen readers and screen magnifiers.
- Used without reliance on sound, color, animation, or timing.

Enterprise Inventory Cloud Service (EICS)

This user interface is designed using Oracle JavaScript Extension Toolkit (JET). Oracle JET components have built-in accessibility support that conforms to the Web Content Accessibility Guidelines version 2.0 at the AA level (WCAG 2.0 AA), developed by the World Wide Web Consortium (W3C). Please note that since different browsers themselves support accessibility somewhat differently, user experience tends to differ on different web-browsers.

Oracle JET components provide support for:

- Keyboard and touch navigation

  Oracle JET components follow the Web Accessibility Initiative - Accessible Rich Internet Application (WAI-ARIA) guidelines.

- Zoom

  Oracle JET supports browser zooming up to 200%.

- Screen reader

  Oracle JET supports screen readers such as JAWS, Apple VoiceOver, and Google Talkbalk by generating content that complies with WAI-ARIA standards, and no special mode is needed.

- Oracle JET component roles and names

  Each Oracle JET component has an appropriate role, such as button, link, and so on, and each component supports an associated name (label), if applicable.

- Sufficient color contrast

  Oracle JET provides the Alta theme which is designed to provide a luminosity contrast ratio of at least 4.5:1.

Besides use of JET components, the following updates were made to application.

- Added alternative texts to images/logos/icons as needed.
- Added labels as needed to gui widgets.
- Color Contrast was adjusted.
- Improved error identification & display, so screens readers can read meaningful information.

Store Operations Cloud Service (SOCS)

This user interface is designed using Oracle Mobile Application framework (MAF). MAF AMX UI and data visualization components have a built-in accessibility support, with most components being subject to the accessibility audit. Oracle MAF is a hybrid framework which means same codebase gets complied and rendered on IOS and Android mobile platforms.

MAF accessibility is achieved using WAI-ARIA. Please note that iOS and Android mobile platforms and versions, support WAI-ARIA to varying degrees.

So your MAF Accessibility experience will be greatly influenced by a given platform's support.

Besides use of MAF components, following updates were made to application.

- Added alternative texts to images/logos/icons as needed.
- Added alternative texts for background images.
- Added short-descriptions UI elements on list screens.
- Color Contrast was adjusted.
- Improved error identification & display, so screens readers can read meaningful information.

B

Appendix: Oracle APEX

This section covers the following topics:

- What is Oracle APEX?
- Suggested APEX Usage in Store Inventory Operations Cloud Service
- APEX Users, Administration
- Database Objects

What is Oracle APEX?

Oracle Application Express (abbreviated APEX, previously named Oracle HTML DB) is a web-based software development environment that runs on an Oracle database. Application Express is a minimal code web application development tool for the Oracle database which enables end users to design, develop and deploy visually pleasant, responsive, database-driven applications, either on-premises or in the cloud.

Oracle Application Express combines the qualities of a minimal code tool such as productivity, ease of use, and flexibility, with the qualities of an enterprise development tool such as security, integrity, scalability, availability and built for the web.

The following are just a few advantages for the customer using APEX:

- Easy to deploy and configure.
- HTML / Browser based database experience for end user.

Suggested APEX Usage in Store Inventory Operations Cloud Service

Oracle APEX is a bolt-on piece so customers (that is, retailers) can browse the database for transactions.

Oracle APEX components applicable to EICS includes:

- SQL Workshop

  This component allows a user to perform SQL operation on the database. Please refer to the SQL Workshop section for more details.

> **Note:**
>
> APEX has other capabilities but those are not applicable for SaaS deployed products such as EICS.

SQL Workshop

The SQL Workshop provides tools that enable users to view database objects. Users can run queries on the database but will be restricted from running DDL and DML scripts on the EICS schema or creating any reference to the tables from EICS schema. This would be controlled via database privileges assigned to an APEX schema user. An APEX schema user can access database tables listed in Table B-1.

The following key features are provided by this Oracle APEX component:

- Object Browser

  Object Browser enables a tree control to view object properties and create new objects.
- SQL Commands

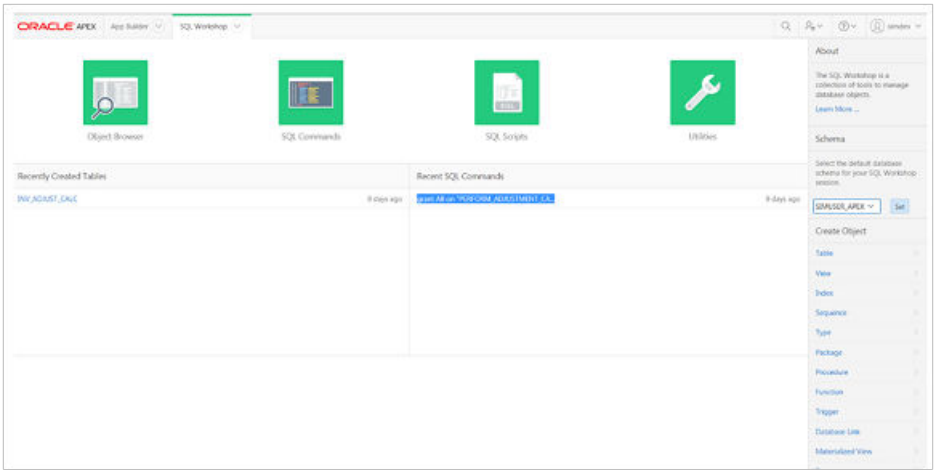
  The SQL Commands tool enables a user to execute ad hoc SQL on the APEX schema.
- SQL Scripts

  SQL Scripts enables a user to store and run scripts on the APEX schema.
- Query Builder

  Query Builder enables a user to create join queries using drag and drop.
- Create Object Wizard

  Create object wizard provides a user-friendly interface for the user to create various database objects. This helps the user create tables, view, sequence, packages and so on, on the current APEX schema.

Figure B-1 SQL Workshop



APEX Users, Administration

There are two (2) types of users:

- APEX Installation Admin
- APEX Customer Admin/Developer

APEX Installation Admin

This user (SIOCS_APEX_ADMIN) gets created during APEX installation at the time of provisioning and is administered by Oracle Cloud Operations.

The initial APEX customer administrator user is provided access to the workspace by this user.

This user will provide the necessary privileges to the customer users and block the unwanted features from APEX (REST Service, Team Development and so on.)

APEX Customer Admin/Developer

This user is the Customer Service Administrator entered into the system during the Cloud Subscription ordering process. Access to the SIOCS_READ_WRITE or SIOCS_READ_ONLY workspace is granted to this user at the time of environment provisioning depending on the environment type, that is, non-production or production respectively.

This initial user will be required to login to the ORDS (Apex Data Viewer) URL (https://<eics_external_load_balancer_address>/<CUST_ ENV>/ords) to add other customer users to the workspace.

The Administrator is required to provision users to have access to the workspace.

For more information on various administrator activities, please check the *Oracle Application Express Release 20.2 Administer Guide* at the following website: `https://docs.oracle.com/en/database/oracle/application-express/20.2//admin.html`

`APEX READ ONLY SCHEMA USER`, for example, RTLWSP01	Database user has READ privilege on EICS database objects listed in Table B-1 and Table B-4.
`APEX READ WRITE SCHEMA USER`, for example, RTLWSP01_RW	Database user has READ and WRITE privilege on EICS database objects listed in Table B-1. Database user has only READ privilege on EICS database objects listed in Table B-4.

Database Objects

The list of database objects available on APEX as synonyms.

Tables

Table B-1 Tables

Name	Description
ACTIVITY_DELIVERY	This table holds store activity information for receiving.
ADDRESS	This table holds the various addresses for the entities that is, store, supplier, finisher and warehouse along with their types.
ARV_ACTIVITY_HIST	This table holds archived data from user activity table.
ARV_EXPORT	This table contains last export archive activity info.
ARV_ITEM_UIN_HIST	This table contains item UIN archived data.
ARV_RFID_HIST	This table contains RFID transactions archived data.

Table B-1 (Cont.) Tables

Name	Description
ARV_STORE_ITEM_STOCK_HIST	This table contains store item stock transaction archived data.
ARV_TICKET_HIST	This table contains ticket history archived data.
CODE_DETAIL	This table holds the defined available code along with their type descriptions that are used in the system.
CODE_TYPE	This table contains one row for each different set of codes used by the system. The specific codes are defined in the CODE_DETAIL table.
CUSTOM_ATT_ADMIN	This table contains the list of custom attributes configured for the transactions.
DELIVERY_SLOT	This table is delivery slot master table, values are from RMS. (Reserved for future use.)
DIFFERENTIATOR	This table will hold all possible sizes, size combinations, colors, flavors, scents, patterns, and so on, along with their associated NRF industry codes. For example, include blue for a differentiator type of color, large for a differentiator type of size, and lavender for a differentiator type of scent.
DIFFERENTIATOR_TYPE	This table holds the available differentiator types that an item can contain. For example, Size, Color, Scent, and so on.
DLS_PRICE	Data Loading Staging table holds the price data loaded from third party price import file.
DLS_RFID	Data Loading Staging table holds the RFID data loaded from third party RFID import file.
DSD	This table holds one row for each direct supplier delivery (DSD) that is received in the system.
DSD_ADJUSTMENT	This table holds direct supplier delivery (DSD) adjustments.
DSD_CARTON	This table holds one row for each carton that a direct supplier delivery (DSD) contains.
DSD_CARTON_CDA	This table contains the values for the custom attributes associated to a vendor delivery carton.
DSD_CARTON_CFA	This table contains the list of custom flex attribute associated to the vendor delivery carton.
DSD_CDA	This table contains the values for the custom attributes associated to a vendor delivery.
DSD_CFA	This table contains the list of custom flex attribute associated to the vendor delivery.
DSD_LINE_ITEM	This table holds one row for each item that is in the carton of a direct supplier delivery (DSD).
DSD_LINE_ITEM_ATT	This table holds extended attributes associated to direct supplier delivery (DSD) line items.
DSD_LINE_ITEM_UIN	This table holds the specific UIN information associated with the direct supplier delivery (DSD) line items.
FUL_ORD	This table holds store fulfillment orders.
FUL_ORD_BIN	This table holds bins created for picks of store fulfillment orders.
FUL_ORD_CDA	This table holds the values for the custom attributes associated to a fulfillment order.

Table B-1 (Cont.) Tables

Name	Description
FUL_ORD_CFA	This table contains the list of custom flex attribute associated to the fulfillment order.
FUL_ORD_DLV	This table holds deliveries created for store fulfillment orders.
FUL_ORD_DLV_CDA	This table contains the values for the custom attributes associated to a fulfillment order delivery.
FUL_ORD_DLV_LINE_ITEM	This table holds the fulfillment order delivery line items.
FUL_ORD_DLV_LINE_ITEM_ATT	This table holds extended attributes associated to line items of deliveries for store fulfillment orders.
FUL_ORD_DLV_LINE_ITEM_UIN	This table holds the UINs of line items for deliveries of store fulfillment orders.
FUL_ORD_LINE_ITEM	This table holds store fulfillment order line items.
FUL_ORD_PICK	This table holds picks created for store fulfillment orders.
FUL_ORD_PICK_CDA	This table contains the values for the custom attributes associated to a fulfillment order pick.
FUL_ORD_PICK_LINE_ITEM	This table holds line items associated to a pick created for store fulfillment orders.
FUL_ORD_RV_PICK	This table holds reverse picks created for store fulfillment orders.
FUL_ORD_RV_PICK_CDA	This table contains the values for the custom attributes associated to a fulfillment order reverse pick.
FUL_ORD_RV_PICK_LINE_ITEM	This table contains line items associated to fulfillment order reverse picks.
GROUP_SCHEDULE_EXTRACT	This table holds the data populated via batch processes for today's process to do. The data will be cleared out at the end of the run.
ICLS_CLEARANCE	Integration Change Log Staging (ICLS) table holds the clearance price change records.
ICLS_PRICE_CHANGE	Integration Change Log Staging (ICLS) table holds the regular price change records.
IDLS_DIFFERENTIATOR	Initial Data Loading Staging (IDLS) tables contain the data loaded from initial data seeding files.
IDLS_DIFFERENTIATOR_TYPE	
IDLS_ITEM	
IDLS_ITEM_CFA	
IDLS_ITEM_COMPONENT	
IDLS_ITEM_DESCRIPTION	
IDLS_ITEM_HIER	
IDLS_ITEM_IMAGE	
IDLS_ITEM_UDA	
IDLS_PARTNER	
IDLS_PARTNER_ADDRESS	
IDLS_PARTNER_ITEM	
IDLS_RELATED_ITEM	
IDLS_RELATED_ITEM_TYPE	

Table B-1 (Cont.) Tables

Name	Description
IDLS_STORE	
IDLS_STORE_ADDRESS	
IDLS_STORE_ITEM	
IDLS_STORE_ITEM_CFA	
IDLS_STORE_ITEM_PRICE	
IDLS_STORE_ITEM_PRICE_HST	
IDLS_STORE_ITEM_STOCK	
IDLS_STORE_UIN_ADMIN_ITEM	
IDLS_SUPPLIER	
IDLS_SUPPLIER_ADDRESS	
IDLS_SUPPLIER_CFA	
IDLS_SUPPLIER_ITEM	
IDLS_SUPPLIER_ITEM_CTRY	
IDLS_SUPPLIER_ITEM_MFR	
IDLS_SUPPLIER_ITEM_UOM	
IDLS_SUPPLIER_ORG	
IDLS_SUPP_ITEM_CTRY_DIM	
IDLS_TRANSFER_ZONE	
IDLS_UDA	
IDLS_UDA_LOV	
IDLS_UOM_CLASS	
IDLS_UOM_CONVERSION	
IDLS_WAREHOUSE_ADDRESS	
IDLS_WAREHOUSE_ITEM	
IDLS_WAREHOUSE_VIRTUAL	
IDL_CONTROL	This table holds the Initial Data Loading (IDL) control records.
IDL_CONTROL_DETAIL	This table holds the Initial Data Loading control detail records.
IDL_LOG	This table holds the Initial Data Loading log records.
IDL_TYPE	This table holds the Initial Data Loading module type records.
INV_ADJUST	This table holds the inventory adjustment records.
INV_ADJUST_CDA	This table holds the values for the custom attributes associated to inventory adjustments.
INV_ADJUST_LINE_ITEM	The table holds the item associated to the inventory adjustments.
INV_ADJUST_LINE_ITEM_ATT	This table holds extended attributes associated to line items of inventory adjustments.
INV_ADJUST_LINE_ITEM_UIN	This table holds the UIN associated to inventory adjustments.

Table B-1 (Cont.) Tables

Name	Description
INV_ADJUST_REASON	This table holds the defined reason codes that are available for attaching to a stock inventory adjustment. Each reason code contains a disposition.
INV_ADJUST_TEMPLATE	The table holds defined the inventory adjustment templates.
INV_ADJUST_TEMPLATE_ITEM	This table holds the line item associated to the defined inventory adjustment templates.
ITEM	This table contains one record for each item defined for the company. It contains the base information for an item that is consistent across all locations.
ITEM_BASKET	This table stores data about Item Basket transactions.
ITEM_BASKET_CDA	This table contains the values for the custom attributes associated to an item basket.
ITEM_BASKET_HIERARCHY	This table holds one row for each level of the hierarchy that is assigned to the item basket.
ITEM_BASKET_LINE_ITEM	This table contains items on an Item Basket.
ITEM_CFA	This table contains the list of custom flex attribute associated to the item.
ITEM_COMPONENT	This table defines all of the items contained within a simple or complex pack item. For a simple pack there will be only one record for the pack item listing its member item and a complex pack will have more than one record denoting pack component listing.
ITEM_DESCRIPTION	This table contains item descriptions and their associated locales. Item description for system integration locale is maintained in item table.
ITEM_HIERARCHY	This table holds merchandise hierarchy information.
ITEM_HIERARCHY_ATTRIB	This table holds extended attributes assigned to item hierarchies at a store.
ITEM_IMAGE	This table holds the item image information.
ITEM_ISN	This is the primary SCAN table containing scan data for the item.
ITEM_ISN_CDA	This table contains the values for the custom attributes associated to an ITEM ISN.
ITEM_ISN_TYPE	This table contains the item_isn types.
ITEM_PRICE	This table holds one row for each price change. These can either be created by EICS, if the store is allowed to control the pricing or they are loaded in from an external system (that is, RPM).
ITEM_PRICE_HISTORY	This table holds historical archive of the retail-selling unit price at which a given item is being sold.
ITEM_QR_CODE	This table contains the item QR code image information.
ITEM_UDA	This table holds all the User Defined Attribute (UDA) entries associated with a specific item.
ITEM_UIN	This is the primary UIN table holding detailed information about a specific UIN, most significantly its current status.
ITEM_UIN_HISTORY	This tables holds records of each alteration or action taken upon the ITEM_UIN table with basic auditing information added.

Table B-1 (Cont.) Tables

Name	Description
ITEM_UIN_PROBLEM	This table holds a list of UIN state transformations that failed for some reason. There is an old and new status to help determine what the issue is. This list can be viewed and updated in the UIN Resolution screen.
MPS_STAGED_MESSAGE	This table holds the staged inbound and outbound messages from and to external systems. Note: APEX limitation on CLOB columns: For clob column types, users need to write their query to display first 4000 characters. For example: [select id, business_id, DBMS_LOB.SUBSTR(MESSAGE_data,4000) as message_data, DBMS_LOB.SUBSTR(MESSAGE_ERROR,4000) as message_error from mps_staged_message;]
NONSELLABLE_TYPE	This table holds the non-sellable quantity types.
NOTES	This table holds user-defined notes for different transactions.
PARTNER	This table holds partner information.
PARTNER_ITEM	This table holds items at partner site.
POS_TRANSACTION	This table will hold the details of the POS transaction header and the line items in the transaction.
POS_TRANSACTION_LOG	This table holds the POS transaction processing logs.
PRICE_CHANGE_WORKSHEET	This is a working table that holds the new prices to be extracted into item price table.
PRODUCT_BASKET	This table stores data about product basket transactions.
PRODUCT_BASKET_STORE	This tables holds one record for each store that is assigned to the product basket.
PRODUCT_GROUP	This table holds all product groups that are created within the system. Product Groups are used to schedule events within the system that need to occur at certain times. Product Groups are used for item requests, stock counts (including unit, unit and amount and problem lines), replenishment and wastage.
PRODUCT_GROUP_HIERARCHY	This table holds one row for each level of the hierarchy that is assigned to the product group.
PRODUCT_GROUP_ITEM	This table holds one row for each item that has been added to the product group. It holds items that are added to the product group via the item, supplier or promotion options. For supplier and promotion (which is only used for item request type product groups), only those items that have a replenishment type of SO are added. For the item option, any item specified will be added to the product group.
PRODUCT_GROUP_SCHEDULE	This table holds the defined schedule for any product group of how often the batch program should process the items that belong to the product group.
PRODUCT_GROUP_SCHED_STORE	This table holds one record per store that belongs to the defined product group schedule.
PROD_GROUP_ITEM_BKDN	This is a temporary table that holds product group schedule items breakdown details defined by the product group schedule or product group hierarchy. It is used in product group related event generation.

Table B-1 (Cont.) Tables

Name	Description
PURCHASE_ORDER	This table holds one row for each purchase order per location that has been placed by the company. The purchase order may have been created via a merchandise system message or when a user starts to process a direct store delivery (DSD).
PURCHASE_ORDER_CFA	This table contains the list of custom flex attribute associated to the purchase order.
PURCHASE_ORDER_LINE_ITEM	This table holds items that are associated with respective purchase orders.
RELATED_ITEM	This table contains related item information.
RELATED_ITEM_TYPE	This table holds relationships of related items.
REPLENISH_GAP	This table holds one row per replenishment gap.
REPLENISH_GAP_CDA	This table contains the values for the custom attributes associated to a replenishment gap.
REPLENISH_GAP_LINE_ITEM	This table hold one row per item associated with replenishment gap.
RFID	This table holds the RFID information.
RFID_ADJUST	This table contains the RFID adjustment information.
RFID_HISTORY	This table contains the RFID history information.
RFID_ZONE	This table holds the RFID zone information.
RTV	This table holds header level information of a vendor return document.
RTV_CDA	This table contains the values for the custom attributes associated to a vendor return.
RTV_CFA	This table contains the list of custom flex attribute associated to the vendor return.
RTV_LINE_ITEM	This table hold one record per item associated with vendor return documents.
RTV_SHIP	This table holds one record of header level information for each RTV Shipment.
RTV_SHIP_CARTON	This table holds RTV Shipment Container associated with the respective RTV Shipment record.
RTV_SHIP_CARTON_CDA	This table contains the values for the custom attributes associated to a vendor shipment carton.
RTV_SHIP_CDA	This table contains the values for the custom attributes associated to a vendor shipment.
RTV_SHIP_LINE_ITEM	This table holds items associated with RTV shipment container per RTV shipment record.
RTV_SHIP_LINE_ITEM_ATT	This table holds extended attributes associated to line items of RTV shipment.
RTV_SHIP_LINE_ITEM_UIN	This table hold associated UIN records for each RTV Shipment line items.
SCAN_BLOCK	This table contains item scan block summary for associated transaction.
SCAN_BLOCK_ITEM	This table contains item detail of scanned items within a block.
SCAN_BLOCK_ITEM_ATT	This table contains extended attributes associated to an item of a scan block.

Table B-1 (Cont.) Tables

Name	Description
SCHEDULE_GROUP_ITEM	This is a temporary table that holds the items associated with the store product group schedule.
SEQUENCE_ADMIN	This table contains information about sequence settings for integration.
SHELF_ADJUST	This table holds one record for each shelf adjustment transaction.
SHELF_ADJUST_CDA	This table contains the values for the custom attributes associated to a shelf adjustment.
SHELF_ADJUST_LINE_ITEM	This table holds line item details of the items in a shelf adjustment list.
SHELF_REPLENISH	This table holds one record per shelf replenishment transaction.
SHELF_REPLENISH_BKDN	This table temporarily holds shelf replenishment item breakdown depending on the UI limit parameter.
SHELF_REPLENISH_CDA	This table contains the values for the custom attributes associated to a shelf replenishment.
SHELF_REPLENISH_LINE_ITEM	This table holds one record per item associated with respective shelf replenishment.
SHIPMENT_BOL	This table holds bill of lading records.
SHIPMENT_CARRIER	This table holds delivery carriers.
SHIPMENT_CARRIER_SERVICE	This table holds delivery service types.
SHIPMENT_CARTON_DIM	This table hold the delivery carton dimension information.
SHIPMENT_REASON	This table holds the shipment reasons.
SHIPMENT_WEIGHT_UOM	This table hold shipment weight UOM information.
STOCK_COUNT	This table will hold one row for each stock count in the system. It defines the stock count instances of a stock count schedule. These records are generated by the batch processes using the stock count schedules defined.
STOCK_COUNT_CDA	This table contains the values for the custom attributes associated to a stock count.
STOCK_COUNT_CHILD	This table holds a row for each location that is being counted for the stock count.
STOCK_COUNT_EXPORT	This table holds the stock count line item to be exported to external system.
STOCK_COUNT_IMPORT	This table holds the third-party file information for a third party stock count. The file must follow the RGIS file layout definition.
STOCK_COUNT_LINE_ITEM	This table holds the one record per line item counted on the respective stock count. Each row holds the complete details of the snapshot, counted, recounted (when applicable) and authorized quantities and timestamp.
STOCK_COUNT_LINE_ITEM_ATT	This table holds extended attributes associated to line items of stock counts.
STOCK_COUNT_LINE_ITEM_RFID	This table contains the RFID data for stock count line items.
STOCK_COUNT_LINE_ITEM_UIN	This table holds all the UINs that are assigned to a particular line item on a stock count. It also contains whether the UIN is counted, recounted, or authorized. It is de-normalized to include the UIN description for performance.

Table B-1 (Cont.) Tables

Name	Description
STOCK_COUNT_REJECTED_ITEM	This table contains rejected items from third party stock count.
STOCK_COUNT_SALE	This table will hold the details of the POS transaction header and the line items in the transaction with open stock counts.
STORE	This table holds defined stores within the organization that hold items.
STORE_AUTO_RECEIVE	This table holds mapping of defined stores that will automatically receive stock transfers in from another store.
STORE_GROUP	This table holds the mapping of buddy store relationship for all stores in the system.
STORE_ITEM	This table holds the items which are ranged to a store.
STORE_ITEM_CFA	This table holds the list of custom flex attribute associated to the item for the ranged store.
STORE_ITEM_STOCK	This table holds the current inventory numbers for items on a location basis. The types of inventory buckets that are held include available for sale, unavailable for sale, in transit, and reserved for a pending stock inventory event.
STORE_ITEM_STOCK_HISTORY	This table holds the store item stock transaction history.
STORE_ITEM_STOCK_NONSELL	This table holds non-sellable store item stock information.
STORE_ITEM_STOCK_PUBLISH	This table holds stock adjustment information for external messaging. Records are deleted when processed.
STORE_ORDER	This table contains store order header information.
STORE_ORDER_CDA	This table contains the values for the custom attributes associated to Store Order.
STORE_ORDER_CFA	This table contains store order custom flexible attribute information.
STORE_ORDER_LINE_ITEM	This table contains store order line item information.
STORE_PRINTER	This tables holds the associated printers with the retail stores in which the printers are installed.
STORE_SEQUENCE_AREA	This table holds a floor and an area on a floor inside a retail store that is explicitly identified for tracking inventory, sales activity and other business activities that are important to measuring a stores performance.
STORE_SEQUENCE_ITEM	This table defines a map of an item to a location and what order the item is in within the location.
STORE_SHIP_NETWORK	This table defines the stores that are excluded from shipping-to location for transfer documents and transfer shipments.
STORE_TRANSFER_ZONE	This table holds all transfer zones defined for a given company. Each store can be assigned one transfer zone which limits which locations can move inventory between them.
STORE_UIN_ADMIN_DEPT	This table holds the UIN specific attributes of an item at a store by department and class.
STORE_UIN_ADMIN_ITEM	This table holds all the UIN specific attributes of an item at a store (such as type and label). This overrides the values in STORE_UIN_ADMIN_DEPT table value.

Table B-1 (Cont.) Tables

Name	Description
SUPPLIER	This table holds all of the external sources for merchandise items offered for sale for the company.
SUPPLIER_CFA	This table holds the list of flex attribute associated to the supplier.
SUPPLIER_ITEM	This table holds one row for each item/supplier combination within the system.
SUPPLIER_ITEM_CFA	This table contains the list of custom flex attribute associated to the item for supplier.
SUPPLIER_ITEM_COUNTRY	This table holds one entry for each country associated with an item/suppler. It is used to determine what the case size of an item will be for a particular supplier in the same country as the store.
SUPPLIER_ITEM_COUNTRY_DIM	This table holds dimensions for each item, supplier, supplier country and dimension object combination.
SUPPLIER_ITEM_MANUFACTURE	This table hold country of manufacture for a given item-supplier.
SUPPLIER_ITEM_UOM	This table holds the item supplier data. It also contains the suppliers UOM information.
SUPPLIER_ORGANIZATION	This table holds supplier organization information.
TICKET	This table contains tickets.
TICKET_EVENT	This table contains ticket events to generate tickets.
TICKET_FORMAT	This table contains ticket formats.
TICKET_FORMAT_BASKET	This table contains tickets format and item basket assignment information.
TICKET_FORMAT_BASKET_STORE	This table contains stores assigned to a ticket format and item basket assignment record.
TICKET_HISTORY	This table contains ticket history data.
TICKET_HISTORY_UDA	This table contains UDAs linked to the ticket item.
TICKET_ZPL	This table contains ticket formats.
TOLERANCE	This table holds one row for each ad hoc stock count that is initiated at a store.
TRANSLATION_DETAIL	This table will hold one row for each translated value in the system.
TRANSLATION_KEY	This table contains the list of text strings, keys that can be translated within the system.
TRANSLATION_LOCALE	This table contains one row for each language that the system can be translated into.
TRANSLATION_TEMP	This table is used to process translation.
TRAN_EVENT	This table contains transaction event header information.
TRAN_EVENT_ATTRIBUTE	This table contains transaction event attribute information. The attribute value will be populated depending on the associate transaction event type.
TRAN_EVENT_COMPONENT	This table contains components assigned to the transaction event information.
TRAN_EVENT_EXTRACT	Batch process will populate this table with today's process to do and will clear out at the end of the run.

Table B-1 (Cont.) Tables

Name	Description
TRAN_EVENT_ITEM_BKDN	Temporary table holds transaction event items breakdown details defined by the transaction event. This table is used in transaction event related batch generation.
TRAN_EVENT_STORE	This table contains transaction event store association information.
TSF	This table contains the transfer document which captures the request for a transfer to a store, warehouse, or finisher.
TSF_ALLOCATION	This table contains transfer stock allocated to the locations.
TSF_CDA	This table contains the values for the custom attributes associated to a transfer.
TSF_CFA	This table contains the list of custom flex attribute associated to the transfer.
TSF_DELV	This table hold one row for each transfer delivery transaction. The header level information for the delivery is captured on this table.
TSF_DELV_CARTON	This table holds one row for each transfer delivery carton received for the respective transfer delivery transaction record.
TSF_DELV_CARTON_CDA	This table contains the values for the custom attributes associated to a transfer delivery carton.
TSF_DELV_CARTON_CFA	This table contains the list of custom flex attribute associated to the transfer delivery carton.
TSF_DELV_CDA	This table contains the values for the custom attributes associated to a transfer delivery.
TSF_DELV_CFA	This table contains the list of custom flex attribute associated to the transfer delivery.
TSF_DELV_LINE_ITEM	This table holds one row for each item received on the containers associated to respective transfer delivery transactions.
TSF_DELV_LINE_ITEM_ATT	This table holds extended attributes associated to line items of transfer delivery transaction.
TSF_DELV_LINE_ITEM_UIN	This table holds UINs associated to line items of transfer delivery transaction.
TSF_LINE_ITEM	This table holds one row for each item associated with the transfer document.
TSF_SHIP	This table holds one row for each transfer shipment transaction. The header level information for the shipment is captured on this table.
TSF_SHIP_CARTON	This table holds one row for each transfer shipment carton to be shipped for the respective transfer shipment transaction record.
TSF_SHIP_CARTON_CDA	This table contains the values for the custom attributes associated to a transfer shipment carton.
TSF_SHIP_CDA	This table contains the values for the custom attributes associated to a transfer shipment.
TSF_SHIP_LINE_ITEM	This table holds one row for each item to be shipped on the containers associated to respective transfer shipment transactions.
TSF_SHIP_LINE_ITEM_ATT	This table holds extended attributes associated to line items of transfer shipment transaction.
TSF_SHIP_LINE_ITEM_UIN	This table holds UINs associated to line items of transfer shipment transaction.

Table B-1 (Cont.) Tables

Name	Description
UDA	This table holds all the User Defined Attributes (UDAs) available to items.
UDA_LOV	This table holds all valid values associated with a User Defined Attribute (UDA) of UDA Type of LOV (List of Value)
UIN_ATTRIBUTE_IMPORT	This table holds the UIN Attributes for store.
UIN_LABEL	This table holds all the labels that are available in the system for a UIN.
UOM_CLASS	This table is used to save all the uoms created in sim. this table contains columns like uom, uom_class and uom_desc.
UOM_CONVERSION	This table holds all the scientific conversions from one unit of measure to another within a class.
WAREHOUSE	This table holds warehouse information.
WAREHOUSE_ITEM	This table holds items ranged to a warehouse.
WAREHOUSE_VIRTUAL	This table contains all warehouses in the system, including virtual and physical warehouses.

Views

Table B-2 Views

Name	Description
CUST_ORDER_MGMT_LIST_V	This view load data for respective transaction which is been associated with store fulfillment order. Transaction queried for this view are DSD, Purchase Order, Transfer Receiving, Transfer, Transfer Shipment and Customer Order Delivery.
IDLV_ADDRESS	Initial Data Loading Views (IDLV_<table>).
IDLV_DIFFERENTIATOR	
IDLV_DIFFERENTIATOR_TYPE	
IDLV_ITEM	
IDLV_ITEM_CFA	
IDLV_ITEM_COMPONENT	
IDLV_ITEM_DESCRIPTION	
IDLV_ITEM_HIER	
IDLV_ITEM_IMAGE	
IDLV_ITEM_UDA	
IDLV_PARTNER	
IDLV_PARTNER_ADDR	
IDLV_PARTNER_ITEM	
IDLV_RELATED_ITEM	
IDLV_RELATED_ITEM_TYPE	
IDLV_STORE	
IDLV_STORE_ADDR	

Table B-2 (Cont.) Views

Name	Description
IDLV_STORE_ITEM	
IDLV_STORE_ITEM_CFA	
IDLV_STORE_ITEM_PRICE	
IDLV_STORE_ITEM_PRICE_HIST	
IDLV_STORE_ITEM_STOCK	
IDLV_STORE_ITEM_STOCK_NONSELL	
IDLV_STORE_UIN_ADMIN_ITEM	
IDLV_SUPPLIER	
IDLV_SUPPLIER_ADDR	
IDLV_SUPPLIER_CFA	
IDLV_SUPPLIER_ITEM	
IDLV_SUPPLIER_ITEM_COUNTRY	
IDLV_SUPPLIER_ITEM_COUNTRY_DIM	
IDLV_SUPPLIER_ITEM_MANUFACTURE	
IDLV_SUPPLIER_ITEM_UOM	
IDLV_SUPPLIER_ORGANIZATION	
IDLV_TRANSFER_ZONE	
IDLV_UDA	
IDLV_UDA_LOV	
IDLV_UIN_LABEL	
IDLV_UOM_CLASS	
IDLV_UOM_CONVERSION	
IDLV_WAREHOUSE	
IDLV_WAREHOUSE_ADDR	
IDLV_WAREHOUSE_ITEM	
IDLV_WAREHOUSE_VIRTUAL	
ITEM_DIFFERENTIATOR_V	This view loads one row for each item to which contains has associated differentiator data. All the differentiators for an item, its types and description are selected as a single row.
ITEM_HIERARCHY_ATTRIB_V	This view loads mapping of extended attribute to the item hierarchy.
ITEM_ISN_CDA_LIST_V	
ITEM_LIST_V	This view loads minimal or summary information for an item.
ITEM_PRICE_V	This view loads minimal or summary information about the price changes for an item.
ITEM_UDA_V	This view loads information for the user defined attribute (UDA) for an item.

Table B-2 (Cont.) Views

Name	Description
LOCATION_V	This view loads data for all the location entity available in system that is, Supplier, Store, Warehouse and Finisher.
PRODUCT_GROUP_SCHEDULE_V	This view loads data containing Product Group Schedule information.
PROMOTION_V	This view loads data related to Price Promotion for each store.
RPRT_DSD_DISCREPANT_ITM_V	This view is used for populating the data on Direct Delivery Discrepant Items report.
RPRT_DSD_V	This view is used for populating the data on Direct Delivery Report.
RPRT_FUL_ORD_BIN_V	This view is used for populating the data on Customer Order Bin Label.
RPRT_FUL_ORD_DLV_BOL_V	This view is used for populating the data on Customer Order Delivery BOL Report.
RPRT_FUL_ORD_DLV_V	This view is used for populating the data on Customer Order Report.
RPRT_FUL_ORD_PICK_DISC_V	This view is used for populating the data on Customer Order Pick Discrepancy Report.
RPRT_FUL_ORD_PICK_V	This view is used for populating the data on Customer Order Pick Report.
RPRT_FUL_ORD_RV_PICK_V	This view is used for populating the data on Customer Order Reverse Pick Report.
RPRT_FUL_ORD_V	This view is used for populating the data on Customer Order Report.
RPRT_ITEM_BASKET_V	
RPRT_INV_ADJUST_V	This view is used for populating the data on Inventory Adjustment Report.
RPRT_ITEM_DETAIL_V	This view is used for populating the data on Item Detail Report.
RPRT_ITEM_ORDER_QTY_V	This view is used for populating the order quantities on Item Detail Report.
RPRT_PURCHASE_ORD_V	This view is used for populating the data on Purchase Order Report.
RPRT_REPLENISH_GAP_V	This view is used for populating the data on Scan List Report.
RPRT_RFID_HISTORY_V	This view is used for populating the data on RFID History Report.
RPRT_RTV_SHIP_BOL_V	This view is used for populating the data on RTV Shipment BOL Report.
RPRT_RTV_SHIP_V	This view is used for populating the data on RTV Shipment Report.
RPRT_RTV_V	This view is used for populating the data on RTV Report.
RPRT_SHELF_ADJUST_V	This view is used for populating the data on Shelf Adjustment Report.
RPRT_SHELF_REPLENISH_V	This view is used for populating the data on Shelf Replenishment Report.
RPRT_STOCK_COUNT_NOF_V	This view is used for populating the data on Stock Count Rejected Items Report.
RPRT_STOCK_COUNT_V	This view is used for populating the data on Stock Count related reports.
RPRT_STORE_ORDER_V	This view is used for populating the data on Store Order Report.
RPRT_TRANSFER_V	This view is used for populating the data on Transfer Report.

Table B-2 (Cont.) Views

Name	Description
RPRT_TSF_DELV_V	This view is used for populating the data on Transfer Receiving related reports.
RPRT_TSF_SHIP_V	This view is used for populating the data on Transfer Shipment related reports.
STOCK_ITEM_V	The view selects required item related attribute and inventory information to which represent a complete Item.
STORE_AUTO_RECEIVE_V	This view loads the mapping for stores which are defined to auto receive the stock transfer from a give store.
STORE_GROUP_V	This view loads the buddy store related information.
STORE_SHIP_NETWORK_V	This view has details about store shipping network.
SUPPLIER_ITEM_COUNTRY_V	This view load item supplier country information for which item supplier mapping exists.
TICKET_FORMAT_BASKET_V	The unique identifier for the ticket format and item basket assignment record.
TOLERANCE_V	This view loads the tolerance related information for Ad hoc Stock Count (topic = 0) and Customer Order Picking (topic = 1)
UIN_TYPE_V	This view loads the UIN related information about an item for a specific store.

Packages

Table B-3 Packages

Package Functions	Parameters	Description
DATE_UTILS. PRINT_TIMESTAMP	inDate IN timestamp	This function print timestamp.
DATE_UTILS. CONVERT_TIME_ZONE	I_date IN timestamp I_from_time_zone IN varchar2 I_to_time_zone IN varchar2	This function converts date from one time zone to another time zone. If the from time zone is not provided, DB time zone will be used as default.
DATE_UTILS. GET_DATE_AT_START_OF_DAY	I_date timestamp I_time_zone varchar2	This function returns a current day resets to midnight in the current time zone.
DATE_UTILS. GET_DATE_AT_END_OF_DAY	I_date timestamp I_time_zone varchar2	This function returns a current day resets to midnight in the current time zone.
DATE_UTILS. GET_CURRENT_GMT	NA	This function returns current GMT timestamp.
DATE_UTILS. GET_CURRENT_GMT_NUMERIC	NA	This function returns current GMT timestamp in numeric.
TRANSLATION_UTIL. TRANSLATE	i_localeId IN number i_key IN varchar2	This function returns the translated text for given key if exists on translation tables.
DATE_UTILS. PRINT_TIMESTAMP	inDate IN timestamp	This function print timestamp.

Table B-3 (Cont.) Packages

Package Functions	Parameters	Description
DATE_UTILS. CONVERT_TIME_ZONE	I_date IN timestamp I_from_time_zone IN varchar2 I_to_time_zone IN varchar2	This function converts date from one time zone to another time zone. If the from time zone is not provided, DB time zone will be used as default.
DATE_UTILS. GET_DATE_AT_START_OF_DAY	I_date timestamp I_time_zone varchar2	This function returns a current day resets to midnight in the current time zone.

Security Tables

Table B-4 Security Tables

Name	Description
SECURITY_PERMISSION_GROUP	This table contains permission groups that are used to categorize permissions.
SECURITY_ROLE	This table contains role information.
SECURITY_ROLE_PERMISSION	This table contains the relationship between roles and permissions, and includes permission parameters where appropriate.
SECURITY_ROLE_TYPE	This table contains the role types that are used to define roles.
SECURITY_USER	This table contains user information for access control purposes. It includes cached data in hybrid mode.
SECURITY_USER_HISTORY	This table contains transaction history for the user.
SECURITY_USER_ROLE	This table contains role assignments for users.
SECURITY_USER_SETTINGS	This table contains user settings.
SECURITY_USER_STORE	This table contains store assignments for users.

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APEX Documentation List

APEX Installation

Application Builder User's Guide

SQL Workshop Guide

End User's Guide

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