

**Oracle® Retail Merchandising Conversion**  
Implementation Guide  
Release 19.0  
**F24057-02**

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# Preface

This guide provides information about data conversion for the Oracle Retail Merchandising Suite of applications – primarily for the Merchandising Foundation Cloud Service (or Merchandising) and the Pricing Cloud Service (or Pricing). It also describes the tools available to assist in conversion, including the Data Conversion application. This guide covers the functional scope of conversion, as well as the overall data migration approach and details the tools available. It also details the screens and covers content from a user manual perspective for the Data Conversion Application. The approach detailed here is suggestive and can be changed based on your business processes, environments, and delivery phases.

## Audience

The implementation guide is intended for the Oracle Retail Merchandising Operations Management applications integrators and implementation staff, as well as the retailer's IT personnel.

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

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### Improved Process for Oracle Retail Documentation Corrections

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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 on 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 E123456-02 is an updated version of a document with part number E123456-01.

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

## Oracle Retail Documentation on the Oracle Help Center

Oracle Retail product documentation is available on the following web site:

<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

**Navigate:** This is a navigate statement. It tells you how to get to the start of the procedure and ends with a screen shot of the starting point and the statement “the Window Name window opens.”

This is a code sample

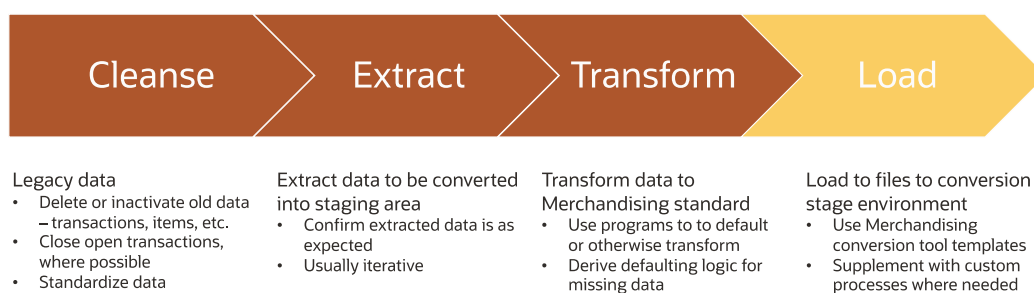
It is used to display examples of code

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# Introduction

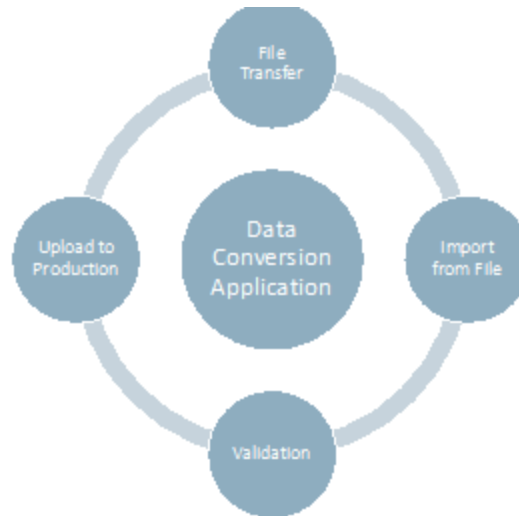
Converting data into Merchandising is a critical step to ensuring a successful implementation of the solution. Depending on your overall approach to the implementation, you may be phasing the solutions in over time – for example, starting with foundation data and then later going live with purchase orders and inventory – or you may be implementing the whole solution at once. This document will speak to the approach of a full end to end implementation of the solution, sometimes referred to as a “big bang” conversion.

At a high level, conversions go through the following steps:



The first three steps occur in your legacy solutions. The last step will be to load the cleansed, extracted, and transformed data into the Merchandising solutions.

The vast majority of this migration of data from legacy applications to Merchandising can be achieved through the Data Conversion application. It works by consuming data files from your legacy solutions and loading them into Merchandising tables. From there, data integrity checks and business validations will be invoked to ensure the correctness of data being migrated. The tool contains screens to guide you through the conversion process. Any errors in the file data are reported at a detailed level to enable you to iteratively correct and re-run through the conversion process. The final converted data will then be exported to your production environment.



When your environments for Merchandising are provisioned, the Data Conversion Application will be part of the installation in non-production environments. It will be installed in the same database as Merchandising, but in a separate schema.

Before this occurs or in parallel to the provisioning process, you will need to start analyzing your legacy data to determine how it maps to the Merchandising data model in order to execute the conversion. This includes looking at data cleansing, extract procedures, and transformation logic. To support this process, two tools are provided as part of this application – data templates and an [offline file validator tool](#). The templates provide detail on the structure of the data files, whereas the offline validator tool can allow you to start pre-validating your transformed data in your legacy environment. These will be described in more detail below.

Then, once you have extracted and transformed your data into the templates, they can be transferred to the conversion environment and loaded into the tool to be validated. The last step, once all conversion related validations and testing is complete, is to load the data into production.

### Roles and Responsibilities

The table below summarizes the roles and responsibilities of the customer and their system integration partner and the roles and responsibilities of the Oracle Cloud Operations team as it relates to conversion.

Customer and System Integrator Partners	Oracle Cloud Operations
Determine legacy data to be converted	Provide the Merchandising and Data Conversion Application in development
Plan and design conversion strategy – phased by function, big bang, other	Work with customers and system integrators to confirm plans for data conversion – final production cutover
Cleanse legacy data and determine mapping to Merchandising tables	
Build extract and transformation programs for legacy data	
Import legacy data files via SFTP and utilize the Data Conversion Application to practice data conversion – determine timings and data issues that require correcting	
Validate data in Merchandising development environment after each trial conversion run	
Execute final conversion on cutover day	Export converted data in development instance and import into production database (lift and shift)
Validate data converted into production instance	

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## Data Entities

### Base Seeding and Manual Configuration

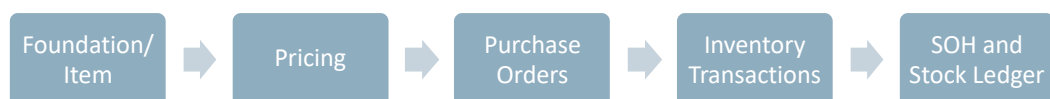
Prior to starting the conversion activities outlined in this document, it is expected that your provisioned Merchandising environment will have the base seeding scripts run, which load core foundational data like valid currency and country codes. Some of these data entities can be tailored for your business, such as calendar, codes, and system options. It is expected this will be done as needed pre-conversion such that any dependent data is configured properly to support the conversion activities. See the Oracle Retail Merchandising Implementation Guide for more details on this configuration.

### Functional Conversion

For tables that will be converted, dedicated processes used to load files of data provided by you based on cleansed data from your legacy systems are outlined in body of this document. These programs will validate data and load it into the Merchandising and Pricing tables. It will also have methods to validate and correct data errors as part of the load process.

For certain tables that are impacted as part of the conversion, there will be calculations done as part of the conversion to calculate initial values based on the converted tables.

When converting data into Merchandising, it is expected that the conversion will follow the general flow below, with the vast majority of the data converted falling into the Foundation and Item category.



### Foundation Data and Item

Regardless of whether you are planning a “big bang” type conversion or planning to rollout in phases by function, you will need to start with foundation data. The data that can be converted as part of foundation data is listed below and broken into categories to help with understanding how you may want to consider converting your data. The details on what is needed to be included in conversion, are included as part of the templates that are downloaded and discussed more in the [Download Templates](#) section below. However, some notes are also included with the foundational entities below to add some additional context to help you determine if you need to convert data into these tables. See also the *Merchandising Implementation Guide* for more details on some of these foundational entities.

One other general note: across all entities you will see the inclusion of tables with a \_TL extension. These tables are used to house translations of the description fields on the main table. In general, if your Merchandising users all use a single language, then these tables do not need to be loaded as part of the conversion.

However, there are a couple exceptions where the description is not held on the main table and therefore will need to be loaded with the primary language as well. These exceptions are called out below.

## Core Foundation

This is data that is required by nearly every Merchandising implementation, with a few exceptions. All the data in this category should be included in your plan or have a rationale for why it is not needed.

Functional Area	Notes
Banners/Channels	Channel is a mandatory attribute for stores and optional warehouses. A channel is a child of a banner, so both entities are needed prior to store conversion.
Transfer Zones	Transfer zones are required for all stores; if you do not wish to leverage this functionality, you can create a single zone to be associated with all stores.
Diff Types, IDs and Groups	Usually this is only required for items that you want to manage at a “parent” or style level that are differentiated by color or size and are most common for soft-line items. But, they can also be used in grocery or hard-lines for flavor, color, or size as well, if you want to manage attribution and pricing at a parent level.
Freight and Payment Terms	<p>These usually are mastered in your financials system, but also need to be set up in Merchandising. The IDs used for the converted terms of both types should match those used in your financial system to ensure that the details on the purchase orders and invoices sent for payment from Merchandising and Invoice Matching are recognized.</p> <p>Also, if using the Retail Financials Integration (RFI) for integration with PeopleSoft, Oracle Financials, or Cloud Financials, there is a cross-reference that would also need to be maintained and needs to be considered in conversion. See the Merchandising Implementation Guide section on Financials Prerequisites for more details.</p> <p>Additionally, for both types of terms, the description for the primary language is on the translation table not the main entity table, so at least one record must be added in the translation table for your primary language for each term added.</p>
VAT	<p>Value Added Tax, or VAT, is required to be set up if you have configured Merchandising to run in the Simple VAT tax mode. This applies for all regions in the world<sup>1</sup> other than retailers operating in the US only, where VAT is not applicable. Even for US implementations, you may decide to implement using Simple VAT to support future expansion into other regions. In this case, at least one VAT code and region must be defined. US stores and warehouses can be defined as exempt.</p> <p>Also, if using the Retail Financials Integration (RFI) for integration with PeopleSoft, Oracle Financials, or Cloud Financials, there is a cross-reference that would also need to be maintained and needs to be considered in conversion. See the Merchandising Implementation Guide section on Financials Prerequisites for more details.</p>

<sup>1</sup> Brazilian tax requirements are not supported by this functionality.

Functional Area	Notes
Transfer Entity	If you have configured the Intercompany Transfer Basis system option to be Transfer Entity, then this is required to be associated with all stores, virtual warehouses, and external finishers. Otherwise it is not required.
Org Units	All Merchandising implementations will require at least one org unit to be configured. These are usually determined by your financials solution and the codes used in Merchandising should be coordinated with financials for conversion.  Also, if using the Retail Financials Integration (RFI) for integration with PeopleSoft, Oracle Financials, or Cloud Financials, there is a cross-reference that would also need to be maintained and needs to be considered in conversion. See the Merchandising Implementation Guide section on Financials Prerequisites for more details.
General Ledger Setup	The General Ledger setup contains key information by set of books used in the GL mapping. One record should be added per org unit to ensure proper mapping to the chart of accounts in your GL.  Also, if using the Retail Financials Integration (RFI) for integration with PeopleSoft, Oracle Financials, or Cloud Financials, there is a cross-reference that would also need to be maintained and needs to be considered in conversion. See the Merchandising Implementation Guide section on Financials Prerequisites for more details.
Currency Rates	Currency rates are generally sourced from an external party and integrated into both Merchandising and your financials solution. For conversion, at least one active rate will be needed for each currency that is relevant for your implementation, including stores, warehouses, partners, and suppliers. This includes a record for the primary currency you configured in Merchandising as part of the install options. For that currency you should use a rate of 1.

## Optional Foundation

This is data that is foundational in nature but is not systematically required and may not be needed for your implementation. For example, seasons and phases tend to be used more for soft-line retailers, and less so for grocers and hard-lines. This information can still be setup later if not done at conversion, if you decide to leverage some of the functionality.

Functional Area	Notes
Cost Components	Only applicable if you have indicated that you are using estimated landed cost in Merchandising as part of the system options configuration. But, even if using ELC, these are not required for initial conversion.
HTS Setup and Definition	Only applicable if Import Management functionality is being used, as indicated by the installation options that you will have defined for Merchandising.
Seasons/Phases	If loading this data, both seasons and phases should be added.
Outside Locations	Generally, only required if you are using estimated landed cost or import management functionality in Merchandising, but may be used for other purposes as well.

Functional Area	Notes
Buyers/Merchants	Optionally can be associated with levels of the merchandise hierarchy.
Calculation Value Bases	Only applicable if you have indicated that you are using estimated landed cost in Merchandising as part of the system options configuration. But, even if using ELC, these are not required for initial conversion.
Freight Types and Sizes	Only applicable if Import Management functionality is being used, as indicated by the installation options that you will have defined for Merchandising. Additionally, for both types and sizes, the description for the primary language is on the translation table not the main entity table, so at least one record must be added in the translation table for your primary language for each type and size added.
Ticket Types	Optionally can be associated with items.
Brands	Optionally can be associated with items.
Diff Ratios	Used for purchase order distribution in Merchandising – creates a basic diff profile that works best for sizes.
Diff Ranges	Can be used to designate a subset of a diff group or a matrix of diffs in two diff groups. Used in purchase order distribution.
Country Attributes	These are really only required for Brazil implementations. For non-Brazil implementations, this is optional.
Inventory Adjustment Reasons, Statuses, Codes	For all three of these entities, the description for the primary language is on the translation table not the main entity table, so at least one record must be added in the translation table for your primary language for each reason, status, and code added, respectively.

## Hierarchies

This data is required prior to setting up any new items or locations. It also contains some optional components, which are highlighted below.

Functional Area	Notes
Company	Only one company should be loaded; company should always have the ID 1.
Division	Top level of the merchandise hierarchy under company; required.
Groups	Level below division in the merchandise hierarchy; required.
Departments	Level below group in the merchandise hierarchy; required. For retail accounting departments, the Markup % of Cost (BUD_INT) should be used as the initial cumulative mark-on % when initializing stock ledger valuation.
Classes	Level below department; required. There are two IDs on this table. Class (CLASS) is the “display ID” for the class that is seen in Merchandising screens. It is unique for a specific department. Class ID (CLASS_ID) on this table is not displayed in Merchandising screens, but is a unique ID across all departments to identify this class. It is used primarily in integration.



Functional Area	Notes
Subclasses	Level below class; required. There are two IDs on this table. Subclass (SUBCLASS) is the “display ID” for the subclass that is seen in Merchandising screens. It is unique for a specific department/class. Subclass ID (SUBCLASS_ID) on this table is not displayed in Merchandising screens, but is a unique ID across all departments to identify this subclass. It is used primarily in integration.
Chain	Top level of the organizational hierarchy below company; required.
Area	Level below chain in the organizational hierarchy; required.
Region	Level below area in the organizational hierarchy; required.
District	Level below region in the organizational hierarchy; required.
Stores and Warehouses	<p>For stores and warehouses, there are multiple templates that can be used, depending on how you plan to configure your locations. If you plan to define a default warehouse for your stores, then you’ll want to use the Warehouse entity for loading your warehouses first and then load your stores using the Store Add with Default WH entity. This will make sure when the business validations are run that they are processed in the correct order.</p> <p>For the first store loaded, you will need to leave the pricing store value null, since the system will attempt to validate the value included. It is not required for the first store created. The store can be added to the correct price zones as part of the Pricing Foundation conversion described below.</p> <p>For warehouses, if you plan to default in a pricing store for the virtual warehouses, then you’ll want to add these after the stores using the Warehouse with Pricing Store entity.</p>
Optional	
UDAs	Defaults can also be defined as part of the conversion for departments, classes, and subclasses to either make the UDAs you define mandatory or default a value for all new items created in the hierarchy.
Transit Times	Used for replenishment and in the Allocation Cloud Service; not needed if not implementing those functions
Store Format	Optional attribute of the store.
Warehouse/ Department	Only needed if implementing Investment Buy functionality in Merchandising
Franchise Customers	Only needed if you have stores that have franchise locations and plan to use the franchise functionality in Merchandising. If so, ensure that the franchise system option is set accordingly.

Functional Area	Notes
Cost Zone Groups, Zones, and Zone Locations	<p>If you have indicated that you will use Estimated Landed Cost functionality as part of the system options configuration for Merchandising, then cost zone groups will be required for all new items created, and all stores and warehouses will be associated to cost zones in each group defined. Zone groups and zones are used to manage expenses associated with purchasing product and moving it from a lading port to your locations.</p> <p>Two zone groups are added during the installation by default and should be accounted for as part of your conversion, and more can be added, if needed. At a minimum, zones and locations should be added for the seeded groups and locations should be associated with the zones as part of the conversion.</p> <p>See the Merchandising Implementation Guide section on Estimated Landed Cost for more on the cost zone groups seeded as part of the solution.</p>
Department Up-charges	<p>Only applicable if you have indicated that you are using estimated landed cost in Merchandising as part of the system options configuration, which also enables the cost components used to setup up-charges. But, even if using ELC, these are not required for initial conversion.</p>

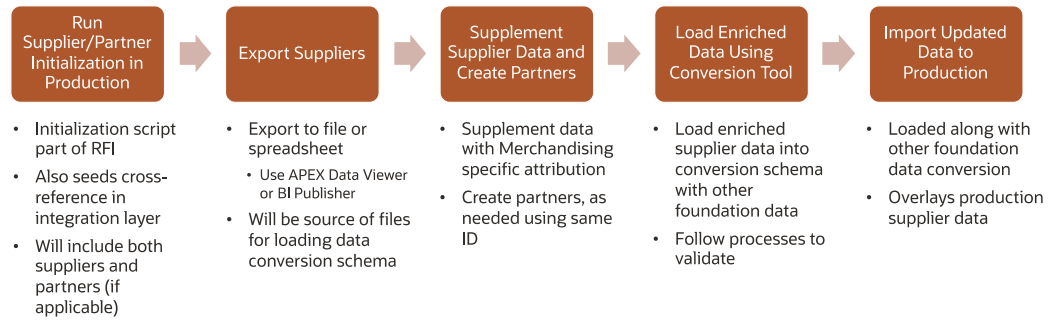
## Pricing Foundation

This is required prior to creating items, but after setting up locations, as the zones are used for initial pricing. This should be setup regardless of whether you are implementing the full Pricing Cloud Service or only simplified mode.

Functional Area	Notes
Zone Group	<p>Create one or more to define how locations will be grouped together for pricing. Needed for initial pricing for your items and for future price changes and clearances.</p>
Initial Price Zone Definitions	<p>Every department, class, or subclass that you have converted into Merchandising should have an initial price zone definition that defines the zone group used for new items in that department and the details on how markup is calculated.</p> <p>Additionally, rounding rules can be included as part of this definition, if applicable. If you choose to setup rounding rules for the initial price zone definition, this must be done in the Pricing screens manually. Rounding rules can also be added later as well.</p>
Zones and Zone/ Locations	<p>Define the zones you want for the zone groups created as described above. And then add rows for your locations. Not all locations need to be in every zone group. Also, warehouses should only be added to zones if you have configured Pricing to manage price for warehouses (via the Recognize Warehouses as Locations system option).</p>

## Suppliers and Partners

If integrating with a financials solution, a slightly different process for converting is recommended based on the dependency for financials as part of the creation process. The diagram below outlines the recommended process.



It is recommended you start with setting up these parties in financials and integrate them to the **production** version of Merchandising as a way to convert the financials owned data into the solution<sup>2</sup>. Oracle Retail Financial Integration (RFI) has a seeding process that is used for this purpose. This also means that any dependent data for suppliers, like org units, freight terms, and payment terms, should be loaded into production. This could be done using either spreadsheet upload or the data conversion tool.

Loading the suppliers and partners from financials into production directly will generate the cross references and Merchandising IDs needed for these entities, however there still will be some Merchandising specific attributes you will need to configure, as well as you will need to copy the entities that are really partners to their own table.

For suppliers, the recommended approach would be to use the APEX Data Viewer functionality<sup>3</sup> to query the supplier table to extract the data that was loaded from financials and use this data as a basis to build the conversion data dat files for both suppliers and supplier sites. The same IDs should be used in conversion to reload these suppliers, but they can have the retail specific data added as well.

For partners, the recommended approach also is to extract the data from the production supplier table and use the data to convert into the partner table. The same IDs should also be loaded into the partner table in Merchandising, along with the attribution from Financials and any new attribution that is retail specific as part of the conversion.

<sup>2</sup> The RFI Implementation Guide will have details on how to query the suppliers to integration to Merchandising from financials for this initial load.

<sup>3</sup> Application Express (APEX) Data Viewer is a tool that allows you to query and update data in your pre-production SaaS environment. Details on how to access and configure users for this environment can be found in the Oracle Retail Merchandising Foundation Administration Guide.

For both of these entities, when the converted data is promoted to production, it will overwrite the data in the Merchandising tables, but the key data setup in the cross references would still be accurate and now the data would include the retail specific attributes as well.

Functional Area	Notes
Partner	This includes both the partner and address information.
Supplier	This includes the suppliers, sites, and addresses. Both suppliers and supplier sites are setup here and should leverage information that you get from financials, if you are using the RFI integration described above. Supplier sites would have the supplier ID in the supplier parent column.
Partner/Org Unit	One row should exist in this table for every supplier site and partner. A supplier site and partner can only belong to one org unit.
Optional	
Import Attributes	Only required if you are using import management in Merchandising.
Inventory Management Parameters	This is primarily used for configuring defaults for suppliers for replenishment purposes. But, also has some PO and item defaults that you may want to configure.
Bracket Costing	Only required if your supplier is flagged as supporting bracket costing.
Delivery Schedules	This is used for replenishment only.

## Core Item

This section outlines the data that is either required for all items or needed for the vast majority of them that you will be converting. All the data in this category should be included in your plan or have a rationale for why it is not needed. If you are using parent/child item structures relationships setup at the parent level will not automatically default to the child level when converting using the Data Conversion application. So, if they are applicable to both levels, they will need to be added to both the parent and the child. Some of the attributes below are not applicable for sub-transaction items (such as barcodes).

Functional Area	Notes
Item	<p>The required data for item includes the item master table as well as the following tables:</p> <ul style="list-style-type: none"> <li>Item/supplier - for orderable items</li> <li>Item/supplier/origin country - for orderable items</li> <li>Item/supplier/manufacturing country - only required if the Merchandising system option for HTS tracking level is set to Manufacturing (the default is Sourcing if not otherwise configured)</li> <li>Item/VAT - if configured to use Simple VAT as the default tax type</li> </ul> <p>It is assumed that only approved, active items will be converted.</p> <p>It is highly recommended that you do not load all items in one large file, but instead consider building separate files (such as, by department, class, or subclass) for better management of data volumes during the validation stages.</p>

Functional Area	Notes
Price History	An initial record with a tran type of 0 is needed on this table for the item with a location of 0. Location level records are added in the item/location ranging described below.
Item Zone Price	To ensure that the location level price is seeded correctly, you'll need to first load the zone level pricing details. This will be used by the Item/Location Ranging described below to set the regular retail price for the item/location combinations as defined by the zone pricing. If your items are on clearance, they will need to be updated with the clearance price after converting zone pricing and item/location ranging. See the <a href="#">Pricing</a> section below.
Item/Location Ranging	To associate stores and warehouses with your items as part of conversion, use the Item Location Ranging entity. This will take care of inserting records for the following entities in Merchandising: Item Location (ITEM_LOC) Item Location Stock on Hand (ITEM_LOC_SOH) <sup>4</sup> Item Location Traits (ITEM_LOC_TRAITS) Item Supplier Country Location (ITEM_SUPP_COUNTRY_LOC) Future Cost (FUTURE_COST) Price History (PRICE_HIST) for tran code 0 It is assumed that only active item/location combinations will be converted.
Item/Location	Pricing for your location will default based on the zone pricing when the item/location ranging process is initiated as described above. However, if you have pricing at some locations that differs from the zone price, you can use this to update those values. This also includes setting of the clearance flag, as needed for items that will be initialized on clearance. If you update the item/location level price you will also want to add a row in the Price History table for the new price as well. See the <a href="#">Pricing</a> section below for more on clearance.

<sup>4</sup> All stock on hand values will be inserted as zeros. The on hands, along with any adjustments to average cost and weight can be updated later in the process as described in the section on Stock on Hand and Stock Ledger.

## Optional Item

This is additional data related to items that may or may not be relevant for your implementation. It can also be added later using the basic Merchandising functionality and mass update capabilities if there is not anything to convert initially. If you are using parent/child item structures relationships setup at the parent level will not automatically default to the child level when converting using the Data Conversion application. So, if they are applicable to both levels, they will need to be added to both the parent and the child. Most of the attributes below are not applicable for sub-transaction items (such as barcodes).

Functional Area	Notes
Supplier/Country Dimensions	This is not required for most items, but should be defined for catch weight items for cases and eaches.
Supplier Units of Measure (UOMs)	Only required if your supplier uses a unit of measure for their case measurements that is in the Miscellaneous UOM class.
Pack Item Details	There are two tables that are required for any converted pack items - one is the basic pack details (PACKITEM) and the other goes one level deeper in detail, if the pack contains any inner packs or uses a pack template (PACKITEM_BREAKOUT). Both tables are required for all packs.
UDAs	If any UDA defaults were converted for departments, classes, and/or subclasses that make certain UDAs required at the item level, make sure that you convert values for those UDAs for all items in the hierarchy as part of your conversion.
Seasons	If loading this data, both seasons and phases should be added. Requires conversion of season information as described above.
Images	At least one image link must be flagged as primary, if added.
Translations	Translations can be added for item master level records and for item images for languages other than primary, if desired.
HTS	Only applicable if Import Management functionality is configured on. Requires conversion of HTS information as described above.
Custom Flex Attributes	If you have configured any custom flex attributes for item, item/supplier, or item/supplier/country then these can be converted as well. Make sure that the attributes are configured and active in advance of conversion. For more information on this functionality, see the Custom Flex Attribute Solutions Implementation Guide.
Upcharges	Only needed if planning to use Estimated Landed Cost functionality, which enables the cost components used to setup up-charges.
Item Location Traits	Not required, but there are some key attributes on this table you may want to set for your implementation that are used to drive customer ordering - including whether or not an item can be backordered.
Tickets	Requires conversion of ticket types as described above.
Related Items	Both header and detail information are required, if you choose to use this functionality.
Pack Templates	Only used in the creation of some pack types.

## Other

This section outlines some other entities that are related foundation and item that may be something you consider for conversion. Everything in this section is optional.

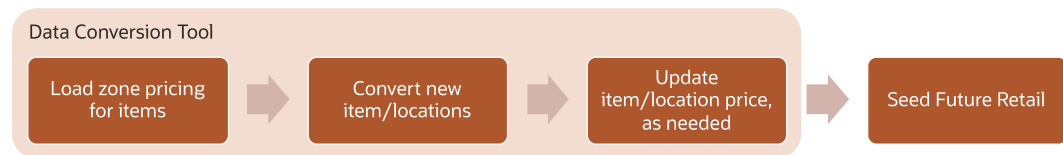
Functional Area	Notes
Substitute Items	Only applicable if you are using Replenishment functionality in Merchandising.
Item Forecasts	Only applicable if you have a forecasting solution and wish to initialize forecasting in conversion. Data used for replenishment and allocation.
Master Replenishment Attributes	Only applicable if you are using Replenishment functionality in Merchandising.
Cost Changes	If you have any pending cost changes that are due to go into effect in your legacy systems that you would like to convert into Merchandising, the scripts in this section will support that conversion. This is optional.

## Pricing

In addition to the pricing related data called out above, there are a couple other components of pricing that you will need to consider for your conversion plan regardless of whether you are planning to use the full Pricing Cloud Service functionality, or operate in simplified mode.

## Future Retail

First, you will need to seed the Future Retail table to establish the initial retail prices that were included as part of your item/location conversion.



The diagram above shows how the steps that were performed in the data conversion tool are used as a basis for this process. Seeding the future retail values will be done by running a Data Conversion Seed Future Retail batch process<sup>5</sup>. Unlike the other data described in this document this process does not use the Data Conversion application, but instead is scheduled using the Process Orchestration and Monitoring (POM) solution. It is required that this be run after your foundation data and item data is loaded, but before your conversion of stock on hand and stock ledger. This program will establish seed records in Pricing for all active item/locations in the system at the time the process is run. The process is intended to run a **single time**, and should be run after the Item Location conversion has been validated. The process looks directly at the ITEM\_LOC table to determine the records to be processed.

<sup>5</sup> This can be scheduled in the Process Orchestration and Monitoring (POM) solution. The job that correlates with this is RPM\_SFR\_DATA\_CONVERSION\_JOB, the process is RPM\_SFR\_DATA\_CONVERSION\_PROCESS\_ADHOC.

## Clearance Markdowns

The other conversion for pricing to consider is any items that are currently on clearance. If you will have items that are actively on clearance when you are converting into Merchandising and Pricing, then you will need to create clearance markdowns in Pricing to initialize the markdown to allow it to be used for a future reset of clearance price, or for any inheritance for new item/location relationships. The conversion of active clearances is also a scheduled event, like the future retail seeding, but will be based on loading data from a file, which is executed by running a clearance conversion process<sup>6</sup>. The below table outlines the data that can be included in the conversion file.

Column	Required?	Data Type	Notes
Item	Yes	Char (25)	Must be a valid sellable, approved item already converted into Merchandising. It can be a parent or transaction level item.
Diff ID	No	Char (10)	If this is included, the item must contain a parent item ID and the diff must be a valid diff for one or more child items for that parent.
Location Type	Yes	Number (1)	Valid values are 0 (store), 1 (zone), or 2 (warehouse).
Location	Yes	Number (10)	Must be a valid location ID for the location type specified.
Clearance Retail	Yes	Number (20,4)	Must be greater than zero. Assumed to be in the currency of the location.
Grouping ID	No	Number (15)	Optional; could be used to group certain converted markdown records together. If not assigned, this will be systematically assigned when the processing occurs.
Clearance Group Description	No	Char (250)	Optional; could be used to describe the grouping of certain converted markdown records together. If not assigned, this will be systematically assigned when the processing occurs.
Markdown Value	Conditional	Char (6)	If the system option to require a markdown number is set to Yes, then this should be included for data consistency. Valid markdown value codes are defined using code type MKDN in Merchandising.
Reason	No	Char (6)	If you choose to include a reason code here, it needs to be a valid reason code. Valid clearance reason codes are defined using code type CMRC in Merchandising.

<sup>6</sup> This can be scheduled in the Process Orchestration and Monitoring (POM) solution. The job that correlates with this is RPM\_CLR\_DATA\_CONVERSION\_JOB, the process is RPM\_CLR\_DATA\_CONVERSION\_PROCESS\_ADHOC.



This process will validate all the required fields in the clearance file are present and that all the data included is valid. It will then insert records into the markdown tables in Pricing based on this data as executed markdowns with an effective date of the current system date. It will also insert a record into the Price History tables to record the markdown details and add future retail records related to the markdowns.

Any errors that occur out of this process will be written to a table (RPM\_DC\_CLEARANCE), which you can view using the using the APEX Data Viewer capability or BI Publisher.

#### Prerequisites

- Configure system options for Pricing; unlike Merchandising, there aren't any seeded values for Pricing, so the system options should be reviewed and setup using the Pricing screen.
- Complete the required Pricing and Item conversion described above to load zone groups, zones, items, and locations fully into the Merchandising tables, not just held in the conversion staging tables.
- The future retail seeding needs to run before you do any clearance conversion.

### Key Assumptions

- The future retail data that is seeded as part of the process described above will use the current date -1.
- The effective date for all converted markdowns will be the **current system virtual date**. Converted markdowns must be unique by item/location/effective date.
- All converted clearance markdowns will be created in Executed status.
- The clearance conversion process is intended to be run a **single time** and assumes no data will be present on the Pricing Clearance table when the program is run.
- Price changes are not supported as part of this conversion process. It is assumed all price changes will be executed prior to your cutover and any future price changes will be entered in Pricing after cutover. The spreadsheet upload or bulk loads could be used to assist with this process, if there are too many to re-create manually.
- Promotions are not supported as part of this conversion process. It is assumed that promotions will be halted during the conversion window for conversion and new future dated promotions will be setup in Pricing after cutover. If any promotions will be ongoing during the conversion window, then they can be created with a start date of the current date in order to continue in the new solution. At this time, the only method of creating promotions in Pricing is using the screens.

### Purchase Orders

Any open purchase orders that cannot be closed prior to conversion will be able to be converted using this process. This conversion includes the conversion of the order and all line items, as well as related data about the order, such as expenses and assessments. If there is a letter of credit associated with the order, this relationship can also be converted. However, it should be noted that the letters of credit themselves are not supported in the Data Conversion Application (see assumptions below). This will be done using the Create Purchase Orders entity in the Data Conversion Application.

Additionally, if the order has been partially shipped and/or partially received, entities also exist in the Data Conversion Application to convert these as well, using the Ship Purchase Orders and Receive Purchase Orders functions, respectively. The Ship Purchase

Orders scripts will create ASN records for the order, while the Receive Purchase Orders function will update the shipment and purchase orders with the receipt details.

There is also a Close Purchase Orders option that will allow for any orders that need to be converted as closed, such as if there are unpaid invoices that have not yet been received, to be updated to closed after the prior steps are completed.

## Key Assumptions

- All foundation data needed to support purchase orders and invoices has already been converted in a previous phase of conversion. This includes configuration of the following:
  - Procurement related system options
  - Non-Merch Codes
  - Order Context/PO Types
- PO numbers should be able to be converted from legacy, assuming the legacy number is unique and fits the data requirements of Merchandising. If not, the Vendor Order number could be used to hold the legacy number and a unique PO number created to fit the Merchandising numbering scheme.
- All POs that can be closed in legacy will be closed prior to conversion.
- The following functional areas do not have conversion support at this time: Contracts, Deals, Customs Entry, Letter of Credit, Transportation, Obligations, Actual Landed Cost, Documents, Timelines, Work Orders.
- Any off-invoice deals that exist in legacy should be netted out in the converted PO cost.
- POs received in legacy systems will be reconciled, matched, and paid in legacy. For any open invoices, a process should be run post conversion of purchase orders to load the invoices using the Invoice Matching EDI upload. Invoices will not be converted in this tool.
- Inventory updates that occur during the receipt processing for POs will update inventory; it is assumed that these will be reset during the inventory conversion to the correct values.
- Transactional stock ledger (TRAN\_DATA) records created out of the shipping and receiving of purchase orders should be cleared prior to promoting your data to production. This can be done using APEX Data Viewer.

## Inventory Transactions

It is expected that inventory transactions will be part of the third phase of conversion, following purchase order conversion. Most inventory transactions are not expected to be converted, as it is expected that transactions in your control, such as RTVs, transfers and allocations are closed in legacy before cutover and that there is a hold on creating new transactions until you have moved over to the new system. The exceptions to this are usually customer orders and some sales history.

## Customer Orders

It is likely not possible to put a hold on customer order fulfillment during your cutover to Merchandising. So, in order to support any in process orders you may have, a set of conversion scripts are provided to include the data in Merchandising needed to reserve inventory for the orders.

It is generally assumed that only in process customer orders will be converted into Merchandising and that the history of customer orders for returns purposes would be available in your order management system (OMS).

### Create Customer Orders

Customer orders will be created in a number of different ways based on the details you include in the Create Customer Orders template. These are the types supported in this conversion and in Merchandising:

1. Orders to be sourced and fulfilled from the same store (via pickup or shipment from store)
2. Orders to be sourced and fulfilled from the warehouse (shipping to the customer)
3. Orders to be sourced and fulfilled from the supplier (shipping to the customer)
4. Orders to be sourced from a warehouse or store to be fulfilled from another store (via pickup or shipment from the store)
5. Orders to be sourced from a supplier to be fulfilled from a store (via pickup or shipment from the store)

For type 1, only customer order header and detail records are required. For types 2 and 4, a customer order header record is created along with a customer order type of transfer to orchestrate the movement of goods between locations or to move the inventory to a virtual store for sales processing. Types 3 and 5 use a customer order header record, along with a purchase order, to create the details of the order. These additional transactions will be created based on the data you send in the provided templates.

The details below are provided to help you with how to setup the fulfillment orders as part of the conversion for each type.

	Type 1	Types 2 & 4	Types 3 & 5
Customer Order Number	The overall order number - usually the customer facing number		
Fulfillment Order Number	The child order number representing this specific fulfillment location combination and items (at detail level); can be one to many with the customer order number		
Source Location Type		For Type 2 = WH For Type 4 = WH or ST	SU
Source Location ID		The warehouse or store ID where the goods will be shipped to the fulfillment location or the customer	Supplier Site ID where the goods will be shipped to the fulfillment location or the customer
Fulfillment Location Type	S	Type 2 = V Type 4 = S	Type 3 = V Type 5 = S

	Type 1	Types 2 & 4	Types 3 & 5
Fulfillment Location ID	Physical store where the order will be picked up or shipped to the customer	Type 2 = ecommerce store <sup>7</sup> Type 4 = physical store where the order will be picked up or shipped to the customer	Type 3 = ecommerce store Type 5 = physical store where the order will be picked up or shipped to the customer
Order Placed Store	Either the ecommerce store or the physical store locations where the customer placed their order		

### Ship and Receive Customer Orders

For customer order types 2-5, if there are any open shipments, or if the order was partially received in legacy, then conversion processes should also be run to convert these shipments and receipts. To do this, utilize the Ship Customer Orders and Receive Customer Orders entity templates.

First, the templates to convert any shipments should be run. If carton data has been received as part of the ASN, then that should also be able to be included in the ASN conversion. This template will support both future and backdated shipments.

Then, for those shipments that were previously received, scripts will be run that will allow receipt quantities at the transfer or PO detail level to be entered (along with dates) to process the receipts.

### Key Assumptions

- The customer order number, fulfillment order number, and fulfillment location for type 1 determines a unique order.
- The customer order number, fulfillment order number, and sourcing location for types 2-5 determine a unique order.
- Only in progress customer orders will be converted.
- The conversion of customer order reserved quantities would be part of the stock on hand conversion, not covered by this process.
- When converting customer orders that involve a warehouse, the warehouse used will be a virtual warehouse.
- The customer orders have already been sent to the fulfilling locations (store, warehouse, or supplier). The records in Merchandising are just to finalize the fulfillment of the order.
- The Create Customer Orders process will attempt to validate inventory in Merchandising, if the system option Validate Availability for Customer Orders should be set to unchecked (N) during conversion.
- Inventory updates that occur during the shipment and receipt processing will update inventory; it is assumed that these will be reset during the inventory conversion to the correct values.

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<sup>7</sup> This should be configured as a non-stockholding store.

- Transactional stock ledger (TRAN\_DATA) records created out of the shipping and receiving of customer orders should be cleared prior to promoting your data to production. This can be done using APEX Data Viewer.

## Sales History and Warehouse Issues

Merchandising doesn't require sales history or warehouse issues (outbound transfers or allocations from a warehouse) in order to operate, but some retailers have chosen to convert a certain amount of history in order to help support forecasting, replenishment, or allocation requirements when first implementing Merchandising. You can do that by utilizing the Item Location History (ITEM\_LOC\_HIST) template. Sales and issue history are held by item/location/week.

After conversion of sales history, you will want to schedule the history roll up batches to run to roll up history to the subclass, class, and department levels if you are using the Allocation Cloud Service as well, or if you wish to use this information for reporting purposes. Details on these can be found in the *Oracle Retail Merchandising System Operations Guide, Volume 1*.

### Key Assumptions

- VAT History and Daily Sales Discount tables will not be converted, as they are used for reporting purposes only. They will start to accumulate data after go live when sales begin to be processed.
- Both store sales and warehouse issues will be able to be converted.
- The value, gross profit, retail, and average cost columns can be included in the conversion, but as they are not required, they can be left null.

## Stock on Hand and Stock Ledger

The final step in conversion is to initialize the stock on hand and stock ledger. This should be done after all the other data described above is loaded. Before this step you should also ensure that you have cleaned up all stock on hand information prior to conversion to ensure that stock levels are accurate and you should validate accurate unit cost and unit retail information has been set in the system as part of the initial item/location conversion.

### Stock on Hand

To do this, you'll want to export the Item Location Stock on Hand records that were generated in the Item Location Ranging process described above. Then you will need to update those records with the inventory snapshot values from your legacy solution.

Values that should be initialized as part of this process include:

Column	Notes
Average Cost	If your cost method is configured as standard cost on Merchandising system options, set this to the unit cost value that you used during the item location ranging conversion. Otherwise, set this to the current weighted average cost of the item at this location.

Column	Notes
Stock on Hand	Set this value to the number of units you have on hand that are not part of pack items for this item at this location. This should be inclusive of all reserved quantity, but not include in transit, expected, or backorder.
In Transit	Assumed to be zero unless you have shipped/not received customer orders of type 2 or 4. If so, this should be the total number of units shipped but not received for the receiving store on the customer order transfer.
Pack Component In-Transit	Assumed to be zero even if open customer orders exist, as stores don't track pack inventory.
Pack Component Stock on Hand	Set this value to the total number of units you have on hand that are part of pack items for this item at this location. If the item is a pack and/or the location is a store, it should always be zero.
Transfer Reserved	Assumed to zero unless you have customer orders that have not yet been shipped of types 2 or 4; this would have a value for the shipping store or warehouse only.
Pack Component Reserved	Assumed to zero unless you have customer orders that have not yet been shipped of types 2 or 4 involving pack items; this would have a value for the shipping warehouse only. If the item is a pack and/or the location is a store, it should always be zero.
Transfer Expected	Assumed to zero unless you have customer orders that have not yet been shipped of types 2 or 4; this would have a value for the receiving store only.
Pack Component Transfer Expected	Assumed to be zero even if open customer orders exist, as stores don't track pack inventory.
Customer Reserved	Assumed to be zero unless you have customer orders of type 1 that are open.
Customer Backorder	Set the quantity to the number of units on backorder you have for this location. Backorders are assumed to be managed in your OMS, there are no other records in Merchandising other than this quantity.
Pack Component Customer Backorder	Set the quantity to the number of units for a component of a sellable pack at this location that are on backorder. Backorders are assumed to be managed in your OMS, there are no other records in Merchandising other than this quantity. If the item is a pack and/or the location is a store, it should always be zero.
First Received	Optional - could be used for reporting purposes
Last Received	Optional - could be used for reporting purposes
First Sold	Optional - could be used for reporting purposes
Last Sold	Optional - could be used for reporting purposes
Average Weight	Should be seeded for catch weight simple pack items in the warehouse only.

Column	Notes
Finisher Average Retail	Only needed for external finisher locations if inventory is present at the finisher.
Finisher Units	Only needed for external finisher locations if inventory is present at the finisher.

## Stock Ledger

Once you have created the files based on the information as described above and it has been loaded and validated by the Data Conversion application, you will need to calculate the opening balances for the stock ledger. Stock ledger records will have been seeded based on the conversion of subclasses and locations, but the values will all be zero. This will need to be done for both the month and week (depending on your system option settings) for every subclass/location combination where there is inventory to establish an opening inventory balance in terms of local currency. Below is an overview of the recommended approach for this calculation.

For Cost departments:

- Retail:
  - Unit Retail \* (Stock on Hand + Pack Component SOH + In Transit + Pack Component In Transit)
- Cost:
  - If Cost Method is Average Cost:
    - \* Average Cost \* (Stock On Hand + Pack Component SOH + In Transit + Pack Component In Transit)
  - If Cost Method is Standard Cost:
    - \* Unit Cost \* (Stock On Hand + Pack Component SOH + In Transit + Pack Component In Transit)

For Retail departments:

- Retail:
  - Unit Retail \* (Stock On Hand + Pack Component SOH + In Transit + Pack Component In Transit)
- Cost:
  - $(1 - \text{Cumulative Mark-on } \%)^8 * \text{Unit Retail} * (\text{Stock On Hand} + \text{Pack Component SOH} + \text{In Transit} + \text{Pack Component In Transit})$

Only inventoried, non-pack items will need to be used in this calculation. The same values should be loaded for the current week or month for both tables.

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**Note:** Calculating and applying the updates to the stock ledger based on the stock on hand conversion does not have a supported conversion process at this time. You will need to build a script that can be run by the Oracle Cloud Operations team.

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<sup>8</sup> This calculation should be based on the Cumulative Mark-on % defined in Half Data Budget for the department/location, if not null, or the Markup % of Cost (BUD\_INT) configured for the department.

## Key Assumptions

- RTVs, allocations, and transfers not related to customer orders are not currently supported in the Data Conversion application. Oracle Retail highly recommends that you close all open transactions in your legacy solutions and hold new activity during the conversion cutover window and then start any new activity once you are live in Merchandising.
- The relevant item/location records have already been established at this phase of conversion through the item/location ranging process. If not, then this should be a pre-conversion step for stock on hand conversion.
- Stock Ledger conversion should be done in conjunction with the beginning of an accounting period in order to establish a full month's worth of transactions after cutover. There will be no historical balances converted.
- A primary currency version of opening or closing stock values in the stock ledger is not recorded in Merchandising and so is not required as part of conversion.
- Half Data records will be added for all subclasses and locations converted as part of the foundation conversion. Additional conversion for this table is not required – it will grow over time.
- Half Data Budget will be added for all departments and locations converted with null values in the calculated columns in the foundation conversion. If you wish to update the cumulative mark-on percent in advance of the stock ledger conversion, to use that value for calculating the cost complement, then this can be done in the Merchandising UI using the spreadsheet upload functionality. For more details on this, see the *Oracle Retail Merchandising Foundation Cloud Service Finance User Guide* section on Managing Budgets.
- Week Data should only be updated if the system option for Stock Ledger Time Interval is Week (W).
- Last update datetime and ID will be updated automatically as part of the conversion.
- Unavailable inventory conversion is not currently supported.

## Converting Other Data

For the data entities that are not supported by the Data Conversion application, the following can be leveraged to load data, as needed:

- Leverage **spreadsheet uploads** for loading foundational data not supported in the tool. This may be especially helpful if you want to configure some of the data that Merchandising seeds automatically at provisioning, such as countries and states, or in cases where you do not have a data source in legacy that can easily be used for programmatic conversions, like Sales Audit reference fields.
- Leverage the vast **API library** for converting data not supported in the conversion tool, such as transfers or promotions. All the Merchandising cloud solutions have a number of different APIs that could be leveraged via different integration methods – web services, RIB messages, and batch uploads.
- Write **custom scripts** that can be run in the non-production environment that you are using for conversion. This is similar to the approach described above for Stock Ledger seeding. The APEX Data Viewer in non-production environments allows for the running of PL/SQL scripts that insert, update, or delete records in the Merchandising non-production database. It should be noted, however, that you will not be able to create tables or call base package functions as part of this process.



There are also several areas that are excluded from the eventual export from the non-production environment that you are using for data conversion to the production environment because of dependencies that require them to be set up differently than the data described above.

### Sales Audit Totals and Rules

Sales Audit Totals and Rules are normally excluded from the lift and shift process because there are additional dependencies to fully set them up in a new environment. If you have setup and tested totals and rules up in your non-production environment and want to have them migrated to production, you will need to log an SR to coordinate with the Oracle Cloud Operations team. As part of the SR, they will export the total or rule configurations from the non-production environment, load them into production, and then execute the batches required to generate the procedures used by Sales Audit. Totals and rules can be migrated in worksheet, submitted, or approved status.

### Data Filtering

If you plan to configure Merchandising to filter data based on merchandise or the organizational hierarchy and have set up the configuration for your users in non-production, you can migrate this to your production environment by downloading the configurations into a spreadsheet (Foundation Data > Download Foundation Data) using the spreadsheet templates under template type Data Filtering and then uploading the same into the production environment.

### Duty and Privilege Configuration for Roles

Often the users and/or the roles and duties of users differ between non-production environments and production environments. However, if you are using a non-production environment to test out the configurations for each of the roles to be used in Merchandising solutions, you can migrate the configuration between instances by exporting the configuration from the non-production environment and then re-importing them into production. This is performed in the Oracle Retail Application Administrator Console using the following steps:

1. **Download configurations** by accessing Settings > Security > Policy Backups and selecting the Download action.
2. Edit the XML file that results to remove the \_PREPROD extension from the user roles, so that they will be valid production role names.
3. **Import configurations** by accessing Settings > Security > Policy Patching and then selecting Synch with Patch for the latest patch applied in your environment. This will take you to the Base Policies page, where there is a button, Import Custom Policies, that will allow you to import the file created in the download step.

For more on these functions, see the *Merchandising Administration Guide* chapter on Security.

## Converting Non-Merchandising Solutions

If you are implementing other Oracle Retail solutions at the same time as your Merchandising implementation, or shortly thereafter, Merchandising can be used to seed the data into those environments. It should be planned that those solutions are converted after Merchandising conversion has been completed.

To convert other solutions, such as store solutions (SIOCS, Xstore), planning (MFPCS, A&IPCS), or omni-channel (OROMS, OROB), Merchandising has a number of bulk data integration (BDI) scripts intended to support this. For Retail Insights (ORMI), you can run the full load integration using RDE (Retail Data Extractor) from Merchandising.

## Getting Started

As part of the provisioning process, you should receive the links to access the application from the cloud engineering team, along with information on how to SFTP files into the environment. The link for accessing the tool is similar to the below, with the hostname being replaced by what is applicable for your environments.

<https://<hostname>/DataConversion/faces/Home>

Details on configuring the SFTP connections that will be used for data conversion as well as other areas in Merchandising can be found in the *Merchandising Administration Guide*.

To get started with using the Data Conversion application, you will first need to configure users for the roles, duties and privileges of the application. There are two roles by default that have been configured for this application:

- Data Conversion Operator (DATA CONV\_OPERATOR\_JOB)
- Data Conversion Administrator (DATA CONV\_ADMIN\_JOB)

Duty	Priv	Description
Data Clean-up Duty	Data Clean-up Priv	By default, this is assigned to the administrator role only. This privilege allows for access to the System Administration screen.
Data Inquiry Duty	Data Viewer Priv	This privilege allows for access to the View Uploaded Data screen.
Data Validation Duty	Basic Data Validation Priv	This privilege allows for access to the Data Validation screen.
	Business Data Validation Priv	This privilege allows for access to the Business Validation screen.
Mass Upload Duty	Mass Upload Priv	This privilege allows for access to the Mass Upload screen.
Report Viewer Duty	Report Viewer Priv	This privilege allows for access to the in-context reports.

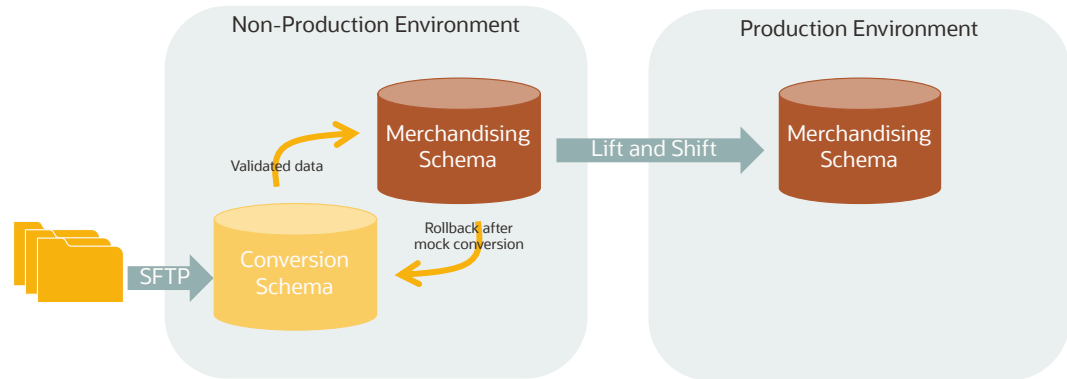
As with other roles, the data conversion roles are associated with users in the Identity Cloud Service (IDCS)<sup>9</sup> and the duties and privileges assigned to the roles are managed in the Oracle Retail Application Administration Console (ORAAC)<sup>10</sup>. Each of the screens and functions noted above will be described in more detail later in this document.

The diagram below shows, at a high level, how the conversion schema is set up in relation to your non-production environment. Files are imported via SFTP into the conversion schema and then validated data is loaded into the non-production Merchandising schema.

<sup>9</sup> For more information on managing users and roles in IDCS, see [Managing Users, User Accounts, and Roles](#)

<sup>10</sup> For more information on configuring duties and privileges for roles, see the *Merchandising Administration Guide*.

It is expected that you will iterate multiple times, loading data and validating between the conversion schema and the Merchandising schema. Once you have validated, the data is all loaded correctly in the non-production environment, including the running of any custom scripts to load data not supported in the tool, you will coordinate with the Oracle Cloud Operations team to load the data into production, often referred to as “Lift and Shift”. The rest of this document will describe in more details how the conversion tool supports this high-level flow of data.



## Key Assumptions

- Data filtering in Merchandising should be turned off during data conversion activities. It can be re-enabled after conversion is completed.
- All system option configurations in Merchandising and Pricing are updated as appropriate for your implementation prior to starting the conversion. You can perform this via the UI or by updating directly in the non-production environment schema using APEX Data Viewer.
- Because of changes that may occur to foundation data structures during a major update, it is recommended that you clear the data conversion environment using the [mock conversion](#) functionality and reload what you previously had converted (with updates to templates as needed) before continuing the conversion.
- The Data Conversion application is supported in English only. However, the converted data can and should be loaded in the primary language for your implementation, with additional translations included where applicable.

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# Data Mapping and Transformation

## Overall Customer Responsibilities

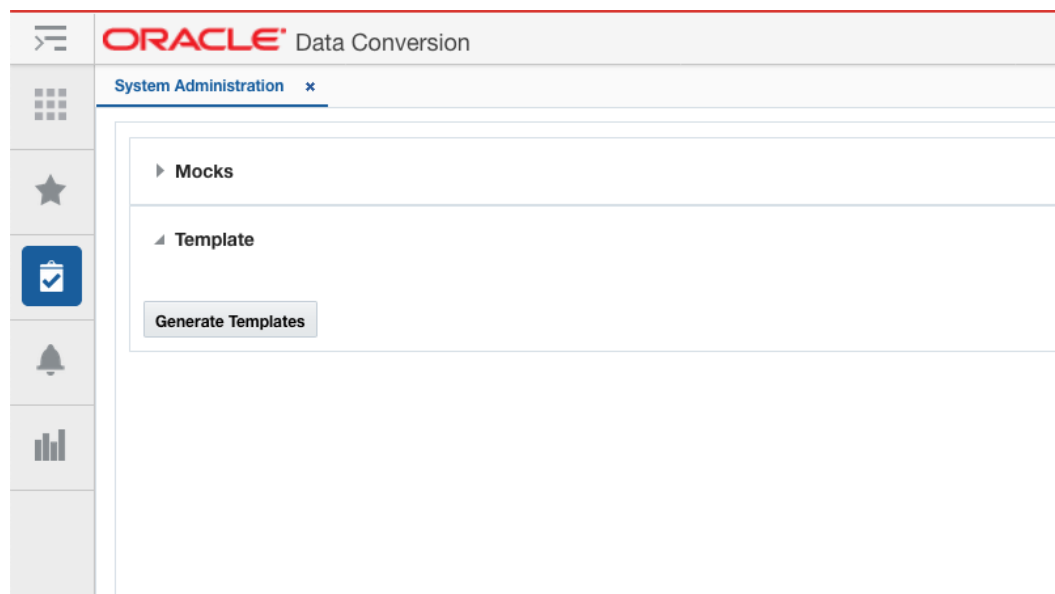
Across all functional areas of conversion, there are some basic customer responsibilities as it relates to data conversion that you and your system implementation partner need to consider. You will be responsible for:

- Defining rules to determine which data in legacy systems will be converted.
- Cleaning up data in legacy and closing all open transactions that can be closed prior to conversion to minimize the data needing to be converted. It is generally assumed that any closed transactions in legacy will not be converted, bringing only active data forward into Merchandising.
- Building extracts and transformation programs to format all data into the structure needed to utilize the conversion tool outlined later in this document. Where necessary, these programs should also include defaults for attributes not available in legacy.

The method of extraction and data cleansing in your legacy solutions can use various tools and methods in order to transform it into the format expected in Merchandising. However, the transformed data must be formatted into the format described in the provided templates in order to load properly using this tool.

## Download Templates

To download the templates that give the format for the various data entities to be converted, access the System Administration screen in the Data Conversion application.



Click the **Generate Templates** button to download the templates. This will prompt you to save the generated zip file containing all the .dat files to your local machine.

There will be one file per table that can be supported in the conversion and each file will contain details on:

- File naming pattern
  - For example, the naming pattern for the DEPS table is defined as deps\*.dat. The \* in the name can be replaced by a number (such as deps1.dat, deps2.dat) or just left off, depending on your conversion plans.
  - If the filename does not match the pattern it will be ignored and will not be picked for loading.
- Column sequences
  - Your data files must follow the sequence of the columns specified in the template. If any column data is to be left as null, then it should be present, but just left blank.
- Data type and length of each column in the table, including a short description of the columns and table
- Whether the column is mandatory
- Primary key for the table, along with any foreign or unique keys and any check constraints

---

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**Note:** This file is generated based on the Merchandising data model and only the database level validations are listed. The business level validations are not called out.

---

---

```

DEPS.dat
COMMENT #####
COMMENT Oracle RMS Data Converter sample file.The lines beginning with 'COMMENT' will be ignored
COMMENT Entity : DEPS
COMMENT Table Comments : This table contains one row for each department within the company. Whenever a department name etc., is used by Oracle Retail,
or a department number is validated, it is always COMMENT selected from this table. The values C and R represent whether the markup % was based on a %
of Cost or Retail.C is markup based on percentage of Cost: ((Retail - Cost)/Cost) * 100 R is markup COMMENT based on percentage of Retail ((Retail -
Cost)/Retail) * 100
COMMENT #####
COMMENT Delimiter to be used: ,
COMMENT #####
COMMENT File name patter : deps*.dat
COMMENT #####
COMMENT COLUMN DETAILS:
COMMENT #####
COMMENT COLUMN_NUMBER:1
COMMENT COLUMN_NAME:DEPT
COMMENT DATATYPE:NUMBER(4,0)
COMMENT MANDATORY:Y
COMMENT DEFAULT VALUE:
COMMENT COLUMN_COMMENTS:Contains the number which uniquely identifies the department.
COMMENT #####
COMMENT COLUMN_NUMBER:2
COMMENT COLUMN_NAME:DEPT_NAME
COMMENT DATATYPE:VARCHAR2(120)
COMMENT MANDATORY:Y
COMMENT DEFAULT VALUE:
COMMENT COLUMN_COMMENTS:Contains the name of the department.
COMMENT #####
COMMENT COLUMN_NUMBER:3
COMMENT COLUMN_NAME:BUYER
COMMENT DATATYPE:NUMBER(4,0)
COMMENT MANDATORY:N
COMMENT DEFAULT VALUE:
COMMENT COLUMN_COMMENTS:Contains the number which uniquely identifies the buyer for that department.
COMMENT #####
COMMENT COLUMN_NUMBER:4
COMMENT COLUMN_NAME:MERCH
COMMENT DATATYPE:NUMBER(4,0)
COMMENT MANDATORY:N
COMMENT DEFAULT VALUE:
COMMENT COLUMN_COMMENTS:Contains the number which uniquely describes the merchandiser for that department.
COMMENT #####
COMMENT COLUMN_NUMBER:5
COMMENT COLUMN_NAME:PROFIT_CALC_TYPE
COMMENT DATATYPE:NUMBER(1,0)
COMMENT MANDATORY:Y
COMMENT DEFAULT VALUE:
COMMENT COLUMN_COMMENTS:Contains a number which indicates whether profit will be calculated by Direct Cost or by Retail Inventory. Valid values are: 1 =
Direct Cost, 2 = Retail Inventory
COMMENT #####
COMMENT COLUMN_NUMBER:6
COMMENT COLUMN_NAME:PURCHASE_TYPE
COMMENT DATATYPE:NUMBER(1,0)
COMMENT MANDATORY:Y
COMMENT DEFAULT VALUE:
COMMENT COLUMN_COMMENTS:Contains a code which indicates whether items in this department are normal merchandise, consignment stock or concession items.
Valid values are: 0 = Normal Merchandise, 1 = Consignment Stock, 2 = Concession Items
COMMENT #####
COMMENT COLUMN_NUMBER:7
COMMENT COLUMN_NAME:GROUP_NO
COMMENT DATATYPE:NUMBER(4,0)
COMMENT MANDATORY:Y
COMMENT DEFAULT VALUE:
COMMENT COLUMN_COMMENTS:Contains the number of the group in which the department exists.
COMMENT #####
COMMENT COLUMN_NUMBER:8
COMMENT COLUMN_NAME:BUD_INT
COMMENT DATATYPE:NUMBER(12,4)
COMMENT MANDATORY:Y
COMMENT #####

```

## Key Data File Assumptions

When generating your data files based on the template format, there are few key things to keep in mind.

- The data for each table will need to be loaded separately as its own .dat file – at least one per table.
- The file names should match exactly the pattern specified in the template. The file names are case sensitive and should match the case in the prescribed pattern.
- The delimiter to be used to separate the data for each column must be a comma.
- The data file should contain all the columns as expected by the template. If one or more columns are to be left null, then they should still be separated with commas signifying no value; see example below. If the value of null is loaded as 'null', then it will be considered as a string with value 'null'.
- If a comma is a part of the data, then it should be escaped using '\\',
  - For example, if an address field value is No. 21,2<sup>nd</sup> Street, it should be provided as: No.21\\,2<sup>nd</sup> Street
- There should be no empty lines in between rows in your files, as it might consider it as the end of the file.

The tool mandates some of the data files to be zipped. The file name of the zip file as well as the individual files within should be as per the recommended pattern.

This is specific to cases where records to multiple dependent tables are to be validated, processed, and loaded together. When zipping your files, ensure that there is only one file per table.

**IMPORTANT:** The files should be directly zipped and not zipped as a folder (For example, the unzip process of the tool, expects to extract the files directly without encountering any folders).

## Department Example

Below is an example of a file used for loading department data, named deps100.dat. In the example, you can also see examples of how to format null columns and use the escaping comma.

```

1 1015,Lighting,1000,700,1,0,304,35,53.8462,,C,C,1,1,N,,,,
2 1016,Kitchen Home Improvement,1000,701,1,0,304,15,17.6471,,C,C,1,1,N,,,,
3 1017,Bathroom,1000,702,1,0,304,15,17.6471,,C,C,1,1,N,,,,
4 10dd18,Windows\, Doors,101,830,1,0,304,30,42.8571,,C,C,1,1,N,,,,
5 1019,Lawn, Garden,103,830,1,0,304,45,81.8182,,C,C,1,1,N,,,,
6 1020,Tools,635,700,1,0,305,55,122.2222,,C,C,1,1,N,,,,
7 1d0021,Hardware,635,701,1,0,305,6w0,150,,C,C,1,1,N,,,,
8 1022,Plumbing,635,702,1,0,305,45,81.8182,,C,C,1,1,N,,,,
9 1023,Heating/Cooling,1000,700,1,0,305,65,185.7143,,C,C,1,1,N,,,,
10 1024,Hardware Services,1000,701,1,0,305,10,11.1111,,C,C,1,1,N,,,,
11 1025,Dogs,1000,702,1,0,306,25,33.3333,,C,C,1,1,N,,,,
12 1026,Cats,1000,840,1,0,306,25,33.3333,,C,C,1,1,N,,,,
13 1027,Birds,1000,840,1,0,306,25,33.3333,,C,C,1,1,N,,,,
14 1028,EngineParts/Filters,1000,8.00E+45,1,0,307,45,81.8182,,C,C,1111,1,N,,,,
15 1029,Exhaust,Emission,610,845,1,0,307,45,81.8182,,C,C,1,1,N,,,,
16 1030,Tires, Wheel Care,610,845,1,0,307,45,81.8182,,C,CO,1,1,N,,,,
17 1031,Music,5,700,1,0,308,35,53.8462,,C,C,1,1,N,,,,
18 1032,Books Reference*,1000,701,1,0,308,45,81.8182,,C,C,1,1,N,,,,
19 1033,Newspaper Magazine,1000,702,2,7,308,10,11.1111,,C,R,0,1,N,,,,
20 1034,Video/DVD,1000,700,1,0,308,20,25,,C,C,1,1,N,,,,
21 103s5,Games/Software,1000,701,1,0,308,20,25,,C,C,1,1,N,,,,
22 1036,Plush,1000,702,1,0,309,55,122.2222,,C,C,1,1,N,,,,
    
```

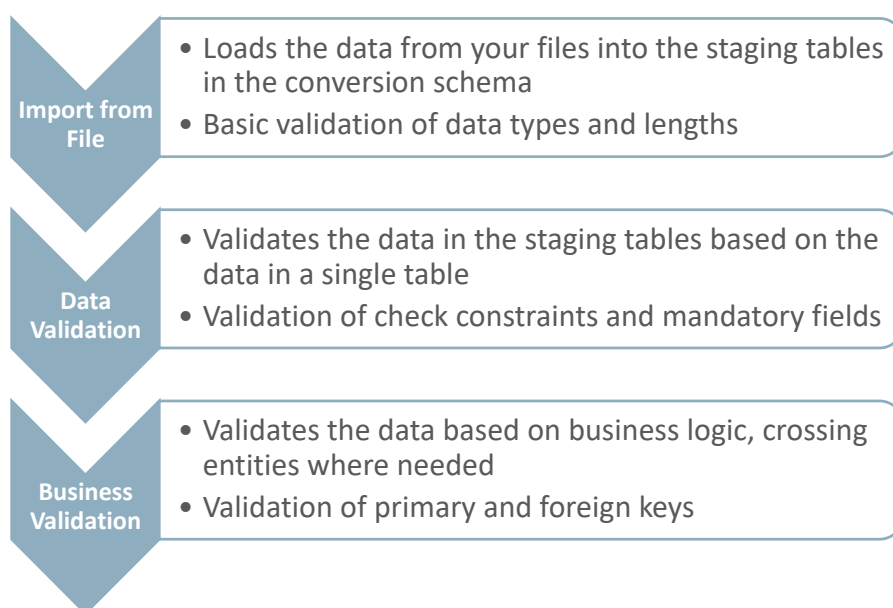


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## Data Conversion Application

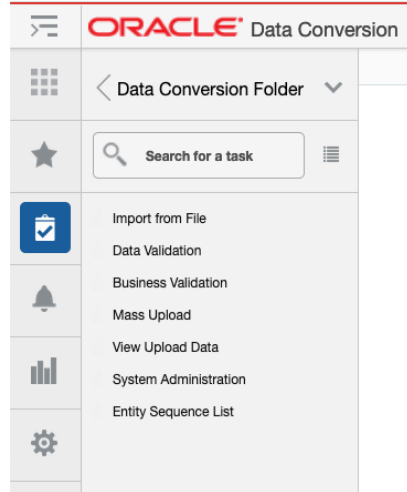
Once your files have been created with the expected file name patterns and format, they can be moved to the folder in the app server for uploading via SFTP. You will have received instructions from the Oracle Cloud Operations team for moving files via SFTP that should be followed here.

Once this is complete, you will be ready to use the Data Conversion Application to load data from these files into the conversion schema. Data can be loaded one table at a time or in bulk. For your first runs, you may want to run tables individually to determine if there are any major formatting issues that need correcting in your transformation programs.



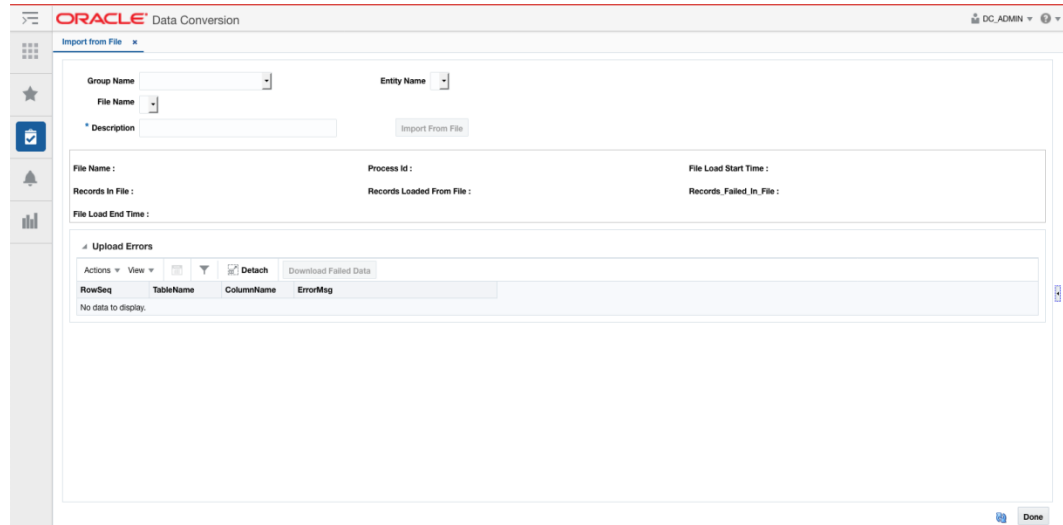
## Logging In

Log in to the Data Conversion application with your configured username and password. Once logged in, your task list should look like the picture below, depending on the privileges granted to you.

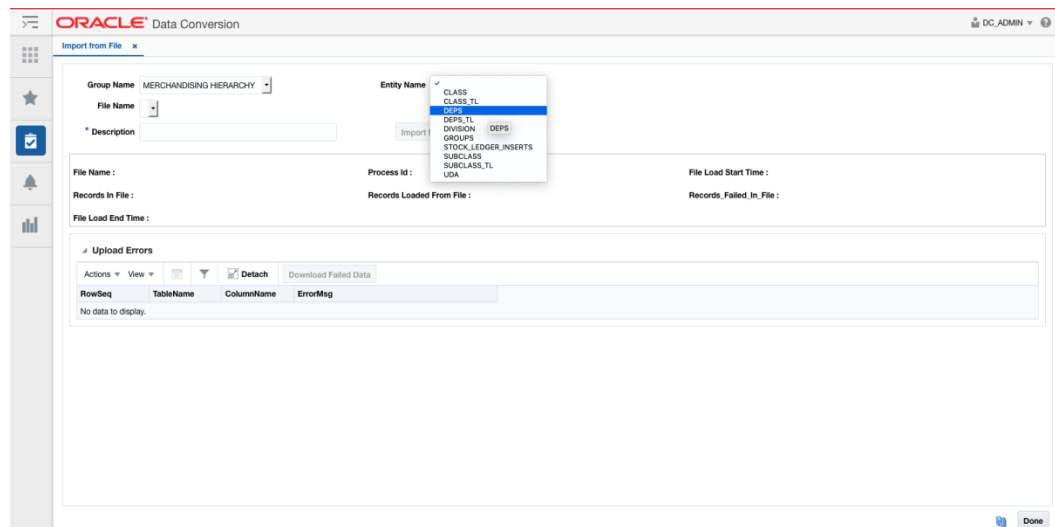


## Import from File

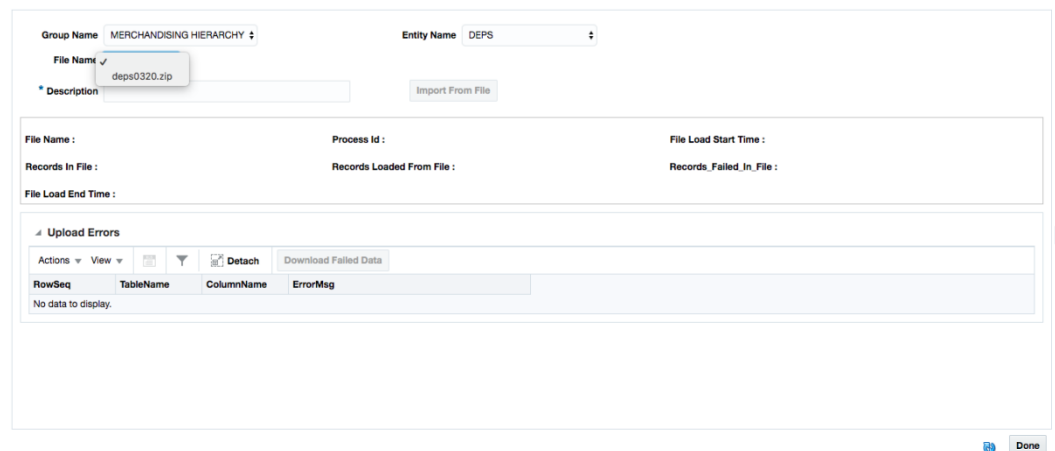
Start with the Import from File option. This screen will aid you in loading data from the files you uploaded to the staging tables present in the data conversion schema. See the [Entity Sequence List](#) section in the appendix for details on the entity groups, entities, naming conventions, and file types supported for this step in the process.



Select the entity group whose data you want to load. Then select the entity name for the table whose files you want to load. In the example below, DEPS is selected to load department data.



Next, select a file name to load. The dropdown will display the list that is available for loading based on the group and entity combination selected. In this example, a .zip file has been selected that contains two .dat files – one for DEPS and one for VAT\_DEPS.



Then, provide a description to identify the process. This will enable the **Import From File** button. On clicking the button, the data is imported from the file to staging tables. During import, the zip file is extracted for the individual dat files, when applicable.

At this stage, all files are considered individually, so no errors will be raised for missing files for tables that have a dependency on the entity selected, like in this example where DEPS and VAT\_DEPS have dependencies.

This allows you to load the dependent tables separately. If not loaded prior to reaching the business validation step, the missing dependent records would be caught during that stage.

The screenshot displays the Oracle 'Import from File' interface. At the top, the 'Group Name' is 'MERCHANDISING HIERARCHY' and the 'Entity Name' is 'DEPS'. The 'File Name' is 'deps0320.zip' and the 'Description' is 'Loading department file 0320'. A summary section shows: File Name: deps0320.zip, Process Id: 1418, File Load Start Time: 04/10/2018 23:26:30, Records In File: 255, Records Loaded From File: 252, Records Failed In File: 3, and File Load End Time: 04/10/2018 23:26:46. Below this is an 'Upload Errors' table with columns for RowSeq, TableName, ColumnName, and ErrorMsg. The table lists three errors: RowSeq 117 (Duplicate Record), RowSeq 153 (ORA-06502: PL/SQL: numeric or value error: character...), and RowSeq 159 (Duplicate Record). On the right, a 'Validation Results' bar chart shows 'Records Loaded' at approximately 252 and 'Records Failed' at 3. Below the chart is a 'Top Errors' pie chart showing 33.3%.

RowSeq	TableName	ColumnName	ErrorMsg
117	DEPS		Duplicate Record
153	DEPS	GROUP_NO	ORA-06502: PL/SQL: numeric or value error: character...
159	DEPS		Duplicate Record

Each file upload is identified using a Process ID. This becomes the identifier while progressing with the validation and load actions on the successive screens. After the import completes, a summary of the import results can be seen in the middle of the screen.

- File Name: this is the original file you imported.
- Process ID: unique identifier for the upload generated by the application.
- Records in File: total records detected in the original file.
- Records Loaded from File: the total records that were successfully loaded into the staging tables from the selected file.
- Records Failed in File: the total records rejected from the file.
- Start and end timings: date and time stamps for these data points to help you gauge the time it takes to load your data and better plan your conversion timeframes.

For all the above statistics, if the original file was a zip file then it is the sum of all the records in all the dat files contained in the zip file displayed in this section.

## View Upload Errors

Records with errors are displayed in the table at the bottom of the screen. This table shows which row in the original file had the error, which table it was trying to load, the column in error, and details on what error occurred.

Upload Errors			
RowSeq	TableName	ColumnName	ErrorMsg
117	DEPS		Duplicate Record
153	DEPS	GROUP_NO	ORA-06502: PL/SQL: numeric or value error: charact...
159	DEPS		Duplicate Record

For the above error examples, the file below is an example of a file that may have generated the second two errors.

```

138 3408,Test KI Dept,1000,702,1,0,220,10,11.1111,,R,C,1,1,Y,
139 3409,Building Materials,1000,700,1,0,304,20,25,,C,C,1,1,Y,
140 3410, Paint*,1000,701,1,0,304,35,53.8462,,C,C,1,1,Y,
141 3411,Lighting,1000,700,1,0,304,35,53.8462,,C,C,1,1,Y,
142 3412,Kitchen Hm Imprvmt,1000,701,1,0,304,15,17.6471,,C,C,1,1,Y,
143 3413,Bathroom,1000,702,1,0,304,15,17.6471,,C,C,1,1,Y,
144 3414,Tools,635,700,1,0,305,55,122.2222,,C,C,1,1,Y,
145 3415,Plumbing,635,702,1,0,305,45,81.8182,,C,C,1,1,Y,
146 3416,Heating/Cooling,1000,700,1,0,305,65,185.7143,,C,C,1,1,B,
147 3417,Hardware Services,1000,701,1,0,305,10,11.1111,,C,C,1,1,Y,
148 3418,Dogs,1000,702,1,0,306,25,33.3333,,O,O,1,1,K,
149 3419,Cats,1000,840,1,0,306,25,33.3333,,C,C,1,1,Y,
150 3420,Birds,1000,840,1,0,306,25,33.3333,,C,C,1,1,Y,
151 3421,Books Reference*,1000,701,1,0,308,45,81.8182,,C,C,1,1,Y,
152 3422,Video/DVD,1000,700,1,0,308,20,25,,C,C,1,1,Y,
153 3423,Plush,1000,702,1,0,wgeqwe,55,122.2222,,C,C,1,1,Y,
154 3424,Dolls,1000,855,1,0,309,55,122.2222,,C,C,1,1,Y,
155 3425,Frames,1000,860,1,0,310,70,233.3333,,C,C,1,1,Y,
156 3426,Lenses,1000,860,1,0,310,60,150,,C,C,1,1,Y,
157 3427,Personal Care*,1000,701,1,0,311,30,42.8571,,C,C,10,10,Y,
158 3428,Health Products,1000,702,1,0,311,35,53.8462,,C,C,1,1,Y,
159 3410, Paint*,1000,701,1,0,304,35,53.8462,,C,C,1,1,Y,
160

```

At this stage, records can be rejected due to the following reasons:

- Data type mismatches in any of the columns
- Size mismatches in any of the columns
- Duplicate records within the same file based on the primary key of the table

If there a large number of errors, you can export the errors to a spreadsheet by selecting the **Export to Excel** button on the toolbar.

All files that were successfully process will be moved to a process folder and can proceed to the next step. You can also choose to proceed to the next step for the successfully loaded data before correcting the import errors. If you choose to proceed, then the records that had failed can be loaded separately in a new file after making corrections.

## Correct Import Errors

To help with correcting errors, you can use the Download Failed Data option in the screen. This will download the file (maximum size 2MB) to your local machine with only the erroneous records. You can then manually correct them and reload them to trigger a fresh file upload against that data.

After analyzing the errors displayed, you can make corrections in the original file and re-load all data or you may need to correct the legacy data or transformation code and regenerate your files. Regardless of the method, you will need to transfer the corrected file via SFTP and repeat the load process. A new process ID is generated against this second load.

To load a different file for the same or a different entity, click the **refresh** icon (🔄) at the bottom right of the screen, to reset the search section.

To close the screen, click the **Done** button at the bottom of the screen.

## Data Validation

The next step in the process will take the data that was successfully loaded data from the imported files and validate it for data correctness. The validations covered in this step are:

- Mandatory fields/not null checks
- Check constraints on columns
- Complex check constraints on the table rows
- To access this function, click on the Data Validation link from the task list, to open the screen. Then, from the Process drop down, select the process against which the file was loaded. The drop-down allows you to search based on the process description that was provided during file import.

The screenshot displays the Oracle Data Validation interface. At the top, there is a breadcrumb trail: 'Import from File' > 'Data Validation'. A 'Process' dropdown menu is open, showing 'Loading department file 0320' as the selected item, with a search suggestion for 'Loading department file 0320 1418' and a 'More...' link. Below the dropdown is a 'Validate' button. A summary section contains the following fields: 'File Name', 'Records In File', 'Records Loaded From File', 'Records Succeeded Data Validation', 'Records Failed Data Validation', and 'Data Validation Start Time'. Below this is a 'Validation Errors' section with a table. The table has columns for 'Table Name', 'Row Sequence', 'Column Name', and 'Error Message'. The table is currently empty, displaying 'No data to display'. At the bottom right of the interface, there is a 'Done' button and a refresh icon.

Click the **Validate** button to begin data validation on your set of records. Once complete, you will see the statistics for this processing similar to the Import from File screen.

The screenshot shows the Oracle Data Validation interface. At the top, there's a 'Process' dropdown set to 'Loading department file 0320' with a 'Validate Data' button. Below this, statistics are displayed: File Name: depts0320.zip, Records In File: 255, Records Loaded From File: 252, Records Succeeded Data Validation: 249, Records Failed Data Validation: 3, and Data Validation Start Time: 04/10/2018 23:51:04. A 'Validation Errors' section is expanded, showing a table with columns: Table Name, Row Sequence, Column Name, and Error Message. To the right, there are two charts: a bar chart titled 'Validation Results' showing 'Records Loaded' (252) and 'Records Failed' (3), and a pie chart titled 'Top Errors' showing 40.0% and 20.0%.

Table Name	Row Sequence	Column Name	Error Message
DEPS	105	DEPT_NAME	Failed constraint check: DEPT_NAME IS NOT NULL
DEPS	104	DEPT_NAME	Failed constraint check: DEPT_NAME IS NOT NULL
DEPS	104	DEPT	Failed constraint check: DEPT IS NOT NULL
DEPS	148	OTB_CALC_TYPE	Failed constraint check: OTB_CALC_TYPE IN ('C', 'R')
DEPS	148	MARKUP_CALC_TYPE	Failed constraint check: MARKUP_CALC_TYPE IN('R', 'C')

## View Data Validation Errors

The validation errors will be displayed in the table at the bottom of the screen after this process runs. As with the Import from File process, you can see the row number that had the issue, the table with the issue, and the error message indicating the issue. For the Data Validation screen, the column with the issue is also displayed.

Validation Errors

Table Name	Row Sequence	Column Name	Error Message
DEPS	105	DEPT_NAME	Failed constraint check: DEPT_NAME IS NOT NULL
DEPS	104	DEPT_NAME	Failed constraint check: DEPT_NAME IS NOT NULL
DEPS	104	DEPT	Failed constraint check: DEPT IS NOT NULL
DEPS	148	OTB_CALC_TYPE	Failed constraint check: OTB_CALC_TYPE IN ('C', 'R')
DEPS	148	MARKUP_CALC_TYPE	Failed constraint check: MARKUP_CALC_TYPE IN('R', 'C')

In the example above, you can see several example errors that might occur during this stage. In this case, three records (row numbers: 105, 104, and 148) have failed data validations. In some cases, there were multiple issues for a particular row of data, but as you can see failures for every column are captured.

After analyzing the errors displayed, you can either make corrections on the original file or continue processing the records that were successfully validated. If you choose to continue to the business validations, then you can use the same process ID to continue processing just the successfully validated records.

## Correct Data Validation Errors

To correct the errors, you can make corrections in the original file and re-load all data or you may need to correct the legacy data or transformation code and regenerate your files. To help with this process, use the **Download Failed Data** button to download the erroneous records into a file, bounded by size configurations on the deployed application. Then, you will need to re-import the file and then re-run the data validation process to validate that all errors have been corrected. A new process ID is generated against this second load.

To validate another process, click the refresh icon (🔄) at the bottom right of the screen. This will reset the search section.

Close the screen by clicking on the **Done** button at the bottom of the screen.

## Business Validation

Records that have been successfully validated will next be validated for business rules and, if successful, will be loaded to the main Merchandising tables. The validations covered in this step are:

- Primary keys
- Foreign keys
- Unique keys
- Merchandising and Pricing business validations

To access this screen, click Business Validation link in the task list. From the Process drop down, select the process against which the file was loaded. The drop-down allows you to search based on the process description that was provided during file import.

The screenshot displays the Oracle Data Conversion Business Validation interface. At the top, the 'Process' dropdown is set to 'deps'. A 'Skip Business Validation' checkbox is visible. Below the process selection, there are 'Load' and 'More...' buttons. The main area is divided into several sections:

- Results:** A summary table with columns for File Name, Records In File, Records Loaded From File, Records Succeeded Data Validation, Records Failed Data Validation, Records Loaded To Main Table, Records Failed Business Validation, Business Validation Start Time, Business Validation End Time, and Status.
- Validation Errors:** A table with columns for Table Name, Row Sequence, Column Name, Error Message, and Error Type. It currently shows 'No data to display'.
- Validation Results:** A section on the right sidebar showing 'No data to display'.
- Top Errors:** Another section on the right sidebar showing 'No data to display'.

A 'Done' button is located at the bottom right of the interface.

At this point, you will also be given an option to skip business validations and directly load all records that have passed the first two steps of the process (Import from File and Data Validation). If you do this, then records will be loaded from staging to the main Merchandising tables without doing any validation against database constraints. This can speed up the process of loading data, but can result in loading incorrect data that may be harder to correct later. It is **not** recommended to use this process for initial conversion runs. Additionally, this option will get overridden for the entities that do not insert the data directly as it is in the input files. For example, if there are calculations for some columns that need to be made prior to loading the data into the tables.



Click the **Load** button to run the business validations and load data to the main tables.

**Validation Results**

Category	Records
Import	103
Data Validation	101
Load	91

**Top Errors**

Error Type	Percentage
BUYER_NOT_EXIST	31.8%
INVALID_GROUP_ID	36.8%
MERCHANT_NOT_EXIST	31.4%

Once the process completes, the loading statistics are displayed in the screen, giving details of total records processed and how many were successful or had errors.

## View Business Validation Errors

The validation errors will be displayed in the table at the bottom of the screen after this process runs. As with the previous steps, you can see the row number that had the issue, the table and column with the issue, and the error message indicating the issue.

Table Name	Row Sequence	Column Name	Error Message	Error Type
DEPS	88	buyer	Buyer does not exist.	Error
DEPS	97	group_no	Invalid Group.	Error
DEPS	97	merch	Merchandiser does not exist.	Error
DEPS	97	buyer	Buyer does not exist.	Error
DEPS	98	group_no	Invalid Group.	Error
DEPS	98	merch	Merchandiser does not exist.	Error
DEPS	98	buyer	Buyer does not exist.	Error
DEPS	99	group_no	Invalid Group.	Error
DEPS	99	merch	Merchandiser does not exist.	Error
DEPS	99	buyer	Buyer does not exist.	Error

## Correct Business Validation Errors

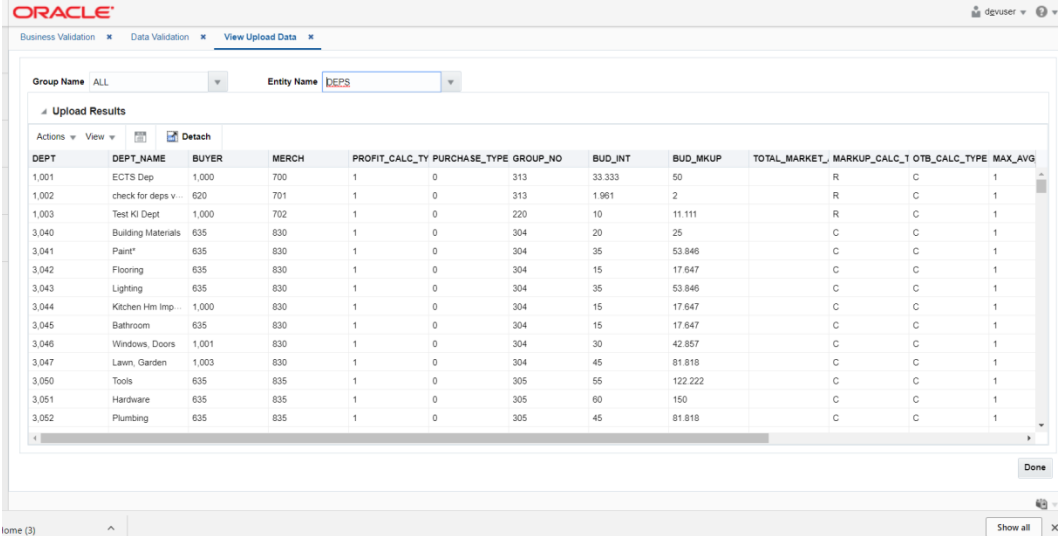
To correct the errors, you can make corrections in the original file and re-load all data or you may need to correct the legacy data or transformation code and regenerate your files. To help with this process, use the **Download Failed Data** button to download the erroneous records into a file, bounded by size configurations on the deployed application. Then, you will need to re-import the file and then re-run the data and business validation process to validate that all errors have been corrected. A new process ID is generated against this second load.

To validate another process, click on the refresh icon (🔄) at the bottom right of the screen to reset the search section. Or close the screen by clicking the **Done** button at the bottom of the screen.

## View Uploaded Data

After performing the three steps outlined above, it is highly recommended that you verify the records have made it into the base tables as expected. To assist with this the View Upload Data screen can be used.

To access this screen, select the View Upload Data option from the task list and select the group name and entity you wish to view.



The screenshot shows the Oracle View Upload Data screen. At the top, there are tabs for Business Validation, Data Validation, and View Upload Data. Below the tabs, there are dropdown menus for Group Name (set to ALL) and Entity Name (set to DEPS). The main area displays a table titled 'Upload Results' with columns: DEPT, DEPT\_NAME, BUYER, MERCH, PROFIT\_CALC\_TY, PURCHASE\_TYPE, GROUP\_NO, BUD\_INT, BUD\_MKUP, TOTAL\_MARKET\_, MARKUP\_CALC\_T, OTB\_CALC\_TYPE, and MAX\_AVG. The table contains 15 rows of data. At the bottom right of the table area, there is a 'Done' button. At the bottom of the screen, there is a 'Show all' button.

DEPT	DEPT_NAME	BUYER	MERCH	PROFIT_CALC_TY	PURCHASE_TYPE	GROUP_NO	BUD_INT	BUD_MKUP	TOTAL_MARKET_	MARKUP_CALC_T	OTB_CALC_TYPE	MAX_AVG
1.001	ECTS Dep	1,000	700	1	0	313	33.333	50		R	C	1
1.002	check for depts v-	620	701	1	0	313	1.961	2		R	C	1
1.003	Test KI Dept	1,000	702	1	0	220	10	11.111		R	C	1
3.040	Building Materials	635	830	1	0	304	20	25		C	C	1
3.041	Paint*	635	830	1	0	304	35	53.846		C	C	1
3.042	Flooring	635	830	1	0	304	15	17.647		C	C	1
3.043	Lighting	635	830	1	0	304	35	53.846		C	C	1
3.044	Kitchen Hm Imp.	1,000	830	1	0	304	15	17.647		C	C	1
3.045	Bathroom	635	830	1	0	304	15	17.647		C	C	1
3.048	Windows, Doors	1,001	830	1	0	304	30	42.857		C	C	1
3.047	Lawn, Garden	1,003	830	1	0	304	45	81.818		C	C	1
3.050	Tools	635	835	1	0	305	55	122.222		C	C	1
3.051	Hardware	635	835	1	0	305	60	150		C	C	1
3.052	Plumbing	635	835	1	0	305	45	81.818		C	C	1

No changes can be made to the data in this screen; however, you can use the Export to Excel option to export the data if you see errors that need correcting.

You can also view the data in the Merchandising screens or directly in the database using the APEX Data Viewer (via the link in Merchandising).

## Mass Upload

This feature is provided in the application to trigger an upload of multiple entities sequentially through the same three stages described above. It is not recommended to use this during the initial conversion cycles, but rather is intended to be used during the final runs, where there is a higher level of confidence that the data files are clean.

You can use this to trigger an upload for each of the entity groups, one after the other or everything together. If you choose the first option, then you should ensure that the groups are triggered sequentially, one after the other, as per the sequence defined in appendix. Not following this could lead to errors stating mismatch between dependent records.

Only one mass upload process can run at a time. Trying to create a new mass upload process will throw an error if the first hasn't completed. Additionally, when a mass upload is being run, the remaining screens for individual upload (import, validate, load) should not be used. As a Prerequisite, the required files should be available on the configured upload folder, similar to when using the Import from File screen. The mass upload process will process the files that match the prescribed pattern

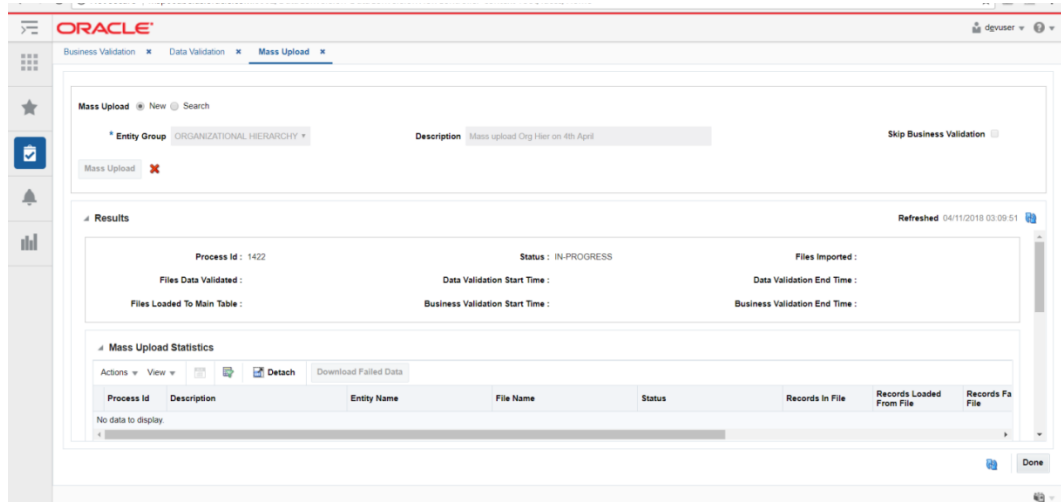
To access the screen to initiate the mass upload, click on the Mass Upload option in the task list. Next, select the **New** radio button and then select the entity group for the mass upload. If you want to trigger it for all entities, then select the All option<sup>11</sup>.

Then, you will next need to provide a description for the process.

Similar to the Business Validation process, you are given the option to skip business validations at this point by checking the Skip Business Validation checkbox. This will directly load all successfully validated records from the import and data validation stages into the Merchandising tables. If you choose to do this, then records will be loaded from staging to main Merchandising tables without doing any validation against database constraints like primary key, foreign key, or unique key violations. This can speed up the process of loading data, but can result in loading incorrect data that may be harder to correct later. Additionally, this option will get overridden for the entities that do not insert the data directly as it is in the input files. For example, if there are calculations for some columns that need to be made prior to loading the data into the tables.

<sup>11</sup> Best practice for using the Mass Upload is to use the entity group level for your initial runs to make it easier to find and correct format and data errors. Then, once there is a level of confidence in the converted data, the All option can be selected.

Click the **Mass Upload** button to trigger the mass upload, which is an asynchronous process. You will need to click the **refresh** icon button (🔄) to see the status of the process.



Once you have kicked off a process, a stop icon button (✖) will be enabled. This can be used to halt the execution for in cases where you wish to make some alterations and restart. Restarting will be a fresh mass upload process. This option will be available only in the initial stage where the records are not yet moved to main table. Once the mass upload process has started moving the records to the main table, then the option will not be available in order to prevent any corruption of data.

Once the upload is completed the status on the screen for this process will be marked as COMPLETE. The Results panel provides the statistics for the overall mass upload process.

**Results** Refreshed 04/19/2018 02:50:42

Process Id : 173  
 Files Data Validated : 22  
 Files Loaded To Main Table : 22

Status : COMPLETE

Data Validation Start Time : 04/19/2018 02:49:07  
 Data Validation End Time : 04/19/2018 02:50:20  
 Business Validation Start Time : 04/19/2018 02:50:20  
 Business Validation End Time : 04/19/2018 02:50:35

Files Imported : 22

**Mass Upload Statistics**

Process Id	Description	Entity Name	File Name	Status	Records In File	Records Loaded From File	Rec File
174	Mass upload of Core entities - tsfzone0412.zip	TSFZONE	tsfzone0412.zip	COMPLETE	7	7	0
175	Mass upload of Core entities - cost_compon...	COST_COMPONENTS	cost_components0412.zip	COMPLETE	664	664	0

## Mass Upload Results

**Mass Upload Statistics**

Process Id	Description	Entity Name	File Name	Status	Records In File	Records Loaded From File	Rec File
105	MUCORE8 - half0412.zip	HALF	half0412.zip	COMPLETE	420	420	0
106	MUCORE8 - half0000.zip	HALF	half0000.zip	COMPLETE	420	420	0
107	MUCORE8 - banners_channels0412.zip	BANNERS_CHANNELS	banners_channels0412.zip	COMPLETE	11	11	0
108	MUCORE8 - tsfzone0412.zip	TSFZONE	tsfzone0412.zip	COMPLETE	7	7	0
109	MUCORE8 - cost_components0412.zip	COST_COMPONENTS	cost_components0412.zip	COMPLETE	664	664	0
110	MUCORE8 - seasons0412.zip	SEASONS	seasons0412.zip	COMPLETE	24	24	0
111	MUCORE8 - state0412.zip	STATE	state0412.zip	COMPLETE	2304	2304	0

At the bottom of the page, a table provides the details of the individual child processes. Each file will be loaded in a separate child process and is listed in the table with details like file name, record count, processing status, and so on.

Like in the other screens, a **Download Failed Data** button is provided to download the records that have failed for the selected child process into a file with details on all three validation steps.

## View Errors

To view the errors for each child process, select the row in the Mass Upload Statistics table. This will display the data in three separate tables below – one for each stage of the process – in the Errors section. Each of these tables also have a **Download Failed Data** button so that the errors for each stage can be exported and viewed separately.

The screenshot shows the 'Errors' section with three expandable panels. The 'Business Validation Errors' panel is expanded, displaying the following table:

Row Sequence	Table Name	Column Name	Error Message	Error Type
1	CALENDAR	FIRST_DAY	Record already exists in : CALENDAR.	Error
1	CALENDAR	MONTH_454_YEAR_454	Record already exists in : CALENDAR.	Error
2	CALENDAR	FIRST_DAY	Record already exists in : CALENDAR.	Error
2	CALENDAR	MONTH_454_YEAR_454	Record already exists in : CALENDAR.	Error
3	CALENDAR	FIRST_DAY	Record already exists in : CALENDAR.	Error

## Download Errors

For completed processes, the consolidated errors for the entire upload process can be downloaded using one of two options:

### Download Errors

For this option, a .csv file with the errors for all the files processed in the selected mass upload will be generated. If the file is less than 2MB in size it will be generated to your machine. If not, it will be moved to your SFTP folder for you to access.

### Download Failed Data

For this option, a .zip file with the data from failed rows will be generated. This could then be corrected and reprocessed separately. If the file is less than 2MB in size it will be generated to your machine and can be downloaded from the UI. If not, it will be moved to your SFTP folder for you to access.

The screenshot displays the 'Mass Upload' application interface. At the top, there are tabs for 'Mass Upload', 'System Administration', and 'Mass Upload'. Below the tabs, there is a search section with a 'Description' dropdown set to 'test core' and a 'Search' button. The 'Results' section shows a summary for Process Id: 707, Status: COMPLETE, and Files Imported: 3. It also includes data and business validation start and end times. Below this, the 'Mass Upload Statistics' section is visible, featuring a table with columns for Process Id, Description, Entity Name, File Name, Status, Records In File, Records Loaded From File, and Records Failed. The table lists three processes: 708 (BANNERS\_CHANNELS), 709 (COMPHEAD), and 710 (BUYER\_MERCHANT), all with a status of COMPLETE. A red box highlights the 'Download Errors' and 'Download Failed Data' buttons in the top right of the Results section.

Process Id	Description	Entity Name	File Name	Status	Records In File	Records Loaded From File	Records Failed
708	test core - banners_channels0412.zip	BANNERS_CHANNELS	banners_channels0412.zip	COMPLETE	11	11	0
709	test core - comphead0412.zip	COMPHEAD	comphead0412.zip	COMPLETE	1	1	0
710	test core - buyer_merchant0412.zip	BUYER_MERCHANT	buyer_merchant0412.zip	COMPLETE	55	55	0

## Search for a Mass Upload Process

You can also search for a previously executed mass upload by accessing the screen and selecting the **Search** radio button. Next, select the process you wish to search for and click Search. The status is provided in the Results panel.





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## Load to Production Environment

After completing your conversion of data and validating all the resultant data, the last step is to promote the data into your production environment, also known as “lift and shift”. This process will need to be performed in coordination with the Oracle Cloud Operations team. Log an SR to schedule with that team.

The extract of data from the non-production environment to the production environment is a full export of the schema and a full overwrite of the production schema. Therefore, you should ensure all data you do not want promoted from the schema has been removed, such as any data in the RIB queue tables or any tran data records generated as part of PO or customer order conversion. This can be done by deleting the records using the APEX Data Viewer. It is assumed that this would normally occur on the final day of cutover after completing multiple trial, or mock, conversions.

Below are the tables to consider for cleanup:

- WOOUT\_MFQUEUE
- WOIN\_MFQUEUE
- WH\_MFQUEUE
- UDA\_MFQUEUE
- TSF\_MFQUEUE
- SUPPLIER\_MFQUEUE
- STORE\_MFQUEUE
- SEEDOBJ\_MFQUEUE
- SEASON\_MFQUEUE
- RUA\_MFQUEUE
- RTVREQ\_MFQUEUE
- PARTNER\_MFQUEUE
- ORGHIER\_MFQUEUE
- ORDER\_MFQUEUE
- MERCHHIER\_MFQUEUE
- LOCATION\_CLOSED\_MFQUEUE
- ITEM\_MFQUEUE
- ITEM\_LOC\_SOH\_MFQUEUE
- ITEMLOC\_MFQUEUE
- DIFFTYPE\_MFQUEUE
- DIFFID\_MFQUEUE
- DIFFGRP\_MFQUEUE
- DELIVERY\_SLOT\_MFQUEUE
- COMPANY\_CLOSED\_MFQUEUE
- COMPANY\_CLOSED\_EXCEP\_MFQUEUE
- CODES\_MFQUEUE
- BRAND\_MFQUEUE

- BANNER\_MFQUEUE
- ALLOC\_MFQUEUE

For the actual lift and shift there is a standard set of tables that are excluded, such as those related to data filtering and security (roles, privileges, and duties), materialized views, temporary tables, spreadsheet template configuration, and Sales Audit rules and totals. If necessary, you can coordinate with the Oracle Cloud Operations team to add other tables to this list as well, such as if you are performing a phased conversion by functional area.

Prior to executing the lift and shift, the production schema will be backed up and RIB, Golden Gate, and Merchandising solutions will be brought down. After the import is completed, the Oracle Cloud Operations team will execute a series of standard clean-up activities in your production environment. These include

- Creating an export file for re-syncing your target DAS environment via Golden Gate
- Clearing any integration queues and re-enabling triggers and constraints
- Resetting the sequences in production
- Validating the correct business date is set
- Bringing back up the RIB, Merchandising solutions, and Golden Gate

You will then be able to start your validation of the production environment.

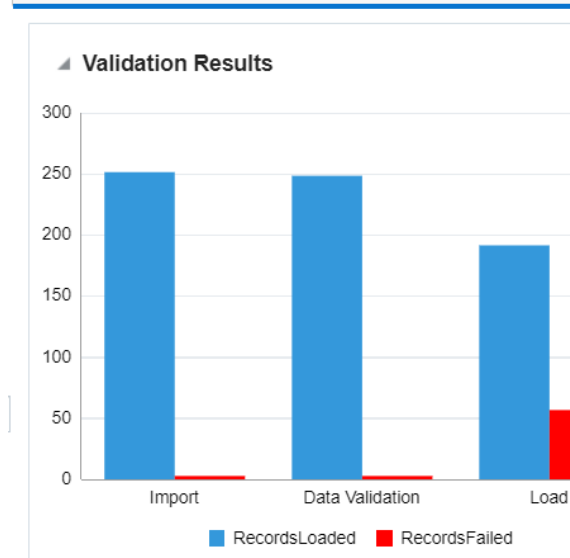
## Monitoring and Troubleshooting

As you are loading and validating data through this tool, the progress can be monitored using the reports visible in the user interface. Additionally, the outcome of the validation processes is available in the UI, including the status of the process, the start and end times, and the records processed successfully and in error. For further troubleshooting read-only access has also been provided to the Data Conversion schema through the Merchandising APEX Data Viewer link.

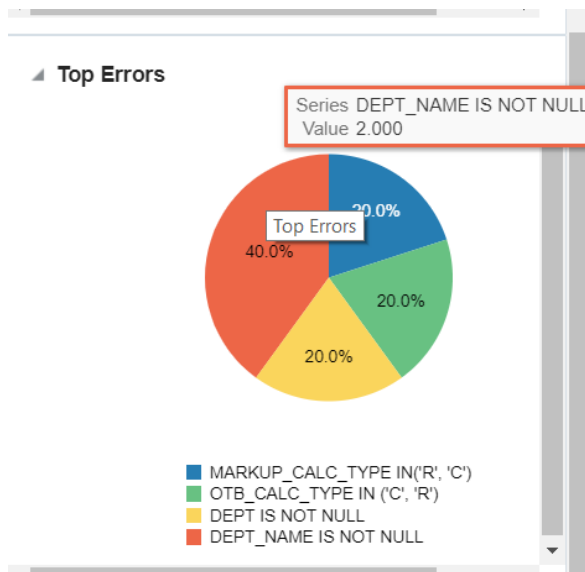
## Contextual Reports

Additionally, to better analyze the errors, two contextual reports are available in each of the screens described above.

### Validation Results



This summarizes validation results for the current process ID across all three steps in the loading process. Top Errors



This shows the top errors encountered for the process ID being viewed. For example, if you are in the Import from File screen, it will show you the top errors from the file import; whereas in the Data Validation screen, it will show you the top errors from the data validation against the process ID. This may help highlight commonly occurring errors that require corrections on the legacy side or in your transformation programs.

## User Interface Monitoring

At each stage along the import and validation process, the Data Conversion tool screens provide statistics for the processing of the upload, including start and end times, number of errors, and number of records successfully processed. Also, for Business Validation and Mass Upload, if you have configured a certain data entity to run using threads or chunks, you will be able to monitor the completion by chunk during business validation by clicking the **Refresh** icon button (🔄) in the results section.

Results			Refreshed 04/08/2020 12:24:26
File Name : deps0412.dat	Records In File : 103	Records Loaded From File : 101	
Records Succeeded Data Validation : 98	Records Failed Data Validation : 3	Records Loaded To Main Table : 91	
Records Failed Business Validation : 7	Business Validation Start Time : 02/20/2020 03:09:27	Business Validation End Time : 02/20/2020 03:09:29	
Status : COMPLETE			

## Database Monitoring

For larger processes that may take longer to complete due to the volume of data being processed, read-only access has been provided to the data conversion schema to support:

- Monitoring completion by chunk
- Debugging validation errors

The key tables that are available in the Data Conversion schema for troubleshooting and debugging are described in the table below<sup>12</sup>.

Table Name	Description
DC_MASTER_PROCESS_TRACKER	Used in data conversion and contains the processes associated to a mass upload process. It shows the relationship between each of the individual processes spawned in the mass upload.
DC_PROCESS_TRACKER	Contains information on the conversion process against a process ID. The information in this table is similar to what you see in the various screens, including start and end times for each phase of the process, and the count of records processed successfully and in error by phase.
DC_IMPORT_STATUS	Used during <a href="#">file import</a> to calculate the file size and monitor progress.
DC_FILE_ERRORS	Used to hold the errors encountered during <a href="#">file import</a> . In addition to the error messages, it also indicates the Merchandising table and column names for which the error applies. This is the same information displayed in the table in the Import from File screen.
DC_FILE_ERROR_DATA	Used to hold the rejected data during <a href="#">file import</a> . Note: the data may be split across multiple columns for a single row in this table due to size.
DC_VALIDATION_ERROR	Holds the errors encountered in the <a href="#">data validation</a> stage. In addition to the error messages, it also

<sup>12</sup> To query the tables in the Merchandising schema, you'll need to use the RDC01 qualifier on the table, as synonyms were not created for these objects (for example, RDC01\_DC.DC MOCKS).

Table Name	Description
	indicates the Merchandising table and column names for which the error applies. This is the same information displayed in the table in the Data Validation screen.
SVC_ADMIN_UPLD_ER	Contains errors encountered while uploading data to Merchandising tables from Data Conversion tool during the <b>business validation</b> stage. In addition to the error messages, it also indicates the Merchandising table and column names for which the error applies. This is the same information displayed in the errors table in the Business Validation screen.
DC MOCKS	Used to hold data on a mock cleanup cycle, including the start and end date, and status (STARTING, STARTED and COMPLETED).
DC MOCK EXCEPTION	If any errors are encountered when performing the clean-up cycle, they will be shown in this table.

Other tables in the data model should be considered more metadata for the solution and, although visible in the database, are likely not useful for troubleshooting. Some details on these tables below.

Table Name	Description
DC_ENTITY	This table is used in data conversion for holding information on the entities supported in the Data Conversion tool
DC_ENTITY_DETAIL	This table provides the details of the staging tables into which data from the input files would be loaded
DC_ENTITY_GROUP	This table is used in data conversion for holding the entity groupings
DC_ENTITY_GROUP_LIST	This table is used in data conversion for holding the entity group to entity mappings
DC_MERCH_SEED_TABLES	This table holds information on the tables seeded during installation.
DC_SEQ_MAPPING	Contains the sequences used by the base Merchandising tables. These sequences would be automatically ramped up to keep in line with the data loaded in the Data Conversion tool.
DC_SEQUENCE_BKP	Used to back up the sequence values at the end of each mock cycle.
DC_SYSTEM_OPTIONS	Holds the system level parameters for the Data Conversion tool. Configuration changes to this by end users is not supported.
RTK_ERRORS	Contains one row for each error message used by the Data Conversion tool in your primary language. This table is populated during installation of the tool and cannot be modified.

Table Name	Description
RTK_ERRORS_TL	Contains translations of the error messages used by the Data Conversion tool into other languages applicable for your users. This table is populated during installation of the tool and cannot be modified.
CORESVC_ITEM_ERR	This is a temporary table used when loading item data during business validation. The errors are then moved to the SVC_ADMIN_UPLD_ER table.
CORESVC_COSTCHG_CHUNKS	This is a temporary table that contains information about chunks that are used to process cost change data.
CORESVC_COSTCHG_ERR	This is a temporary table used when loading cost change data during business validation. The errors are then moved to the SVC_ADMIN_UPLD_ER table.
CORESVC_PO_CHUNKS	This is a temporary table that holds the chunking information for the PO tables.
CORESVC_PO_ERR	This is a temporary table used when loading purchase order data during business validation. The errors are then moved to the SVC_ADMIN_UPLD_ER table.

For more information on the columns for each of these tables as well as the staging tables used during the import and validation processes, please see the data model which can be viewed on My Oracle Support under ID 2619103.1.

## Mock Conversions

During the data conversion process, it is assumed that you will go through multiple iterations of conversion while you fine tune the extracts and transformations from your legacy solutions. To support this, a feature exists in the Data Conversion application for you to perform the mock cycles and then revert the data back to the initial environment, with just your configured Merchandising installation seeded data. This is done by baselining the data in the database prior to starting any of the conversions.

To access this function, click on the System Administration link in the task list. In the System Administration screen, click Start Mock and click Yes on the confirmation message in order to kickoff the refresh process. The refresh will run as an asynchronous process.

Mock	Start Date	End Date	Status
1	4/26/2018		COMPLETED
2	5/10/2018		STARTING

The status of the current refresh, as well as previously requested refresh processes are shown in the Mocks table. To see the latest status, click the **refresh** icon button (🔄).

Once the status is STARTED, it means that the new refresh has been created and users can continue their conversion activities. Please wait until it moves to STARTED status. If the process appears to be stuck in STARTING status, contact the Oracle Cloud Operations team for assistance. It is important to refrain from triggering the process again until the previous request is complete.

The mock cycle runs through the following statuses:

- STARTING - Background database processes are running to cleanup conversion data for a new mock cycle.
- STARTED - The instance has been cleaned of conversion data and is ready for the new mock cycle.
- COMPLETED - The current cycle is closed.

### Important Notes

The screen should be used with caution by users with higher privileges. Clicking the **Start Mock** button will cleanup up the data and it cannot be reverted.

It is recommended that users are logged out from all Merchandising applications, as well as the Data conversion applications before triggering this.

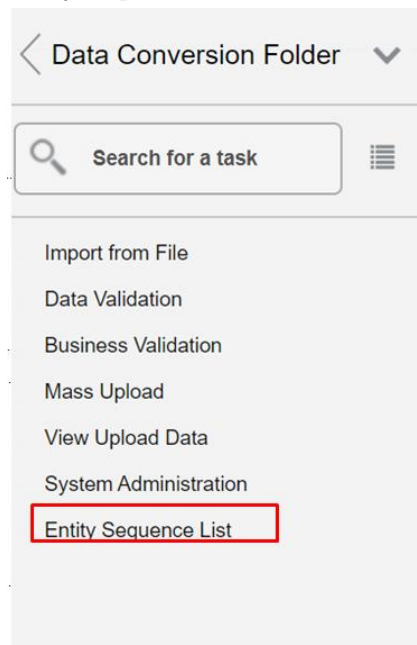
When there is a need to patch Merchandising during conversion, then the conversion data will **always** be cleaned up and the environment will be brought back to the initial seeding. Hence, you will need to accordingly and align your conversion cycles with the patching plans.





## Appendix: Entity Sequence List

The Entity Sequence screen in the Data Conversion tool will provide you with the list of entities that can be loaded through the Data Conversion tool. The screen also lists the entity file formats, entity grouping and the load sequences. To access this screen, select Entity Sequence List from the task list.



The screen contains three tables – entity groups, entity details, and entities.

ORACLE Data Conversion User

Entity Sequence List

**Groups**

Sequence	Group Name
1	CORE
2	MERCHANDISING HIERARCHY
3	ORGANIZATIONAL HIERARCHY
4	PRICING
5	MULTIPLE SET OF BOOKS
6	SUPPLIERS
7	ITEMS
8	PURCHASING
9	SALES HISTORY
10	COST_CHANGE

**Entity Details**

Sequence	Entity Name	Input File Format	Input File Pattern
1	BANNERS_CHANNELS	zip	banners_channels*.zip
2	TSFZONE	zip	tsfzone*.zip
3	COST_COMPONENTS	zip	cost_components*.zip
4	HTS_SETUP_DATA	zip	hts_setup_data*.zip
5	HTS_DEFINITION_DATA	zip	hts_definition_data*.zip
6	COMPHEAD	zip	comphead*.zip
7	OUTLOC	zip	outloc*.zip
8	BUYER_MERCHANT	zip	buyer_merchant*.zip
9	CVB_HEAD	zip	cvb_head*.zip
10	DIFF_ID	zip	diff_id*.zip

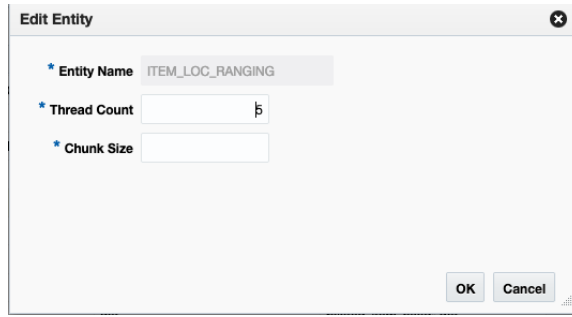
Download Entity List Save Save and Close Cancel

## Entity Groups

The entity group table shows the groups that are used for organizing sets of tables for conversion. You will select the group in the screens when importing and validating data, as described above. Clicking on the different rows in this table will show the entity details contained in each group.

## Entity Details

In the entity details table, you will be able to see the sequence within each group that the entities will be processed. Additionally, it shows the expected file naming convention for your files and the type (\*.dat or \*.zip). Additionally, clicking the **edit** icon button or the Action menu item will allow you to manage the thread count and chunk sizes when processing. This may be especially important for larger data sets being loaded. It is only enabled for entities that are expected to have larger data volumes such as, item/location ranging, as shown below, and is used during the Business Validation phase. Clicking on the different rows in the Entity Details table will provide details about the entities represented in each file.



The screenshot shows a dialog box titled "Edit Entity" with a close button in the top right corner. The dialog contains three labeled fields: "Entity Name" with the value "ITEM\_LOC\_RANGING", "Thread Count" with the value "5", and "Chunk Size" which is currently empty. At the bottom right of the dialog are two buttons: "OK" and "Cancel".

## Entities

This table lists each of the table that are in the highlighted row in the Entity Details table. For a row that has a file format of \*.dat, there will be just one row. But, for those with a \*.zip format, there will be multiple tables listed that are loaded as a group. Each row in this table will show the naming convention for that specific table and the name of the staging table that is used for that entity.

ORACLE Data Conversion User

Entity Sequence List

5	MULTIPLE SET OF BOOKS
6	SUPPLIERS
7	ITEMS
8	PURCHASING
9	SALES HISTORY
10	COST_CHANGE

Entity Details

Sequence	Entity Name	Input File Format	Input File Pattern
2	RPM_ITEM_ZONE_PRICE	dat	rpm_item_zone_price.dat
3	ITEM_CHARGES	zip	item_charges.zip
4	PACKITEM_BREAKOUT	dat	packitem_breakout.dat
5	PRICE_HIST	dat	price_hist.dat
6	ITEM_LOC_RANGING	zip	item_loc_ranging.zip
7	ITEM_LOC	dat	item_loc.dat
8	ITEM_LOC_SOH	dat	item_loc_soh.dat
9	ITEM_TICKET	dat	item_ticket.dat
10	RELATED_ITEM_HEAD	dat	related_item_head.dat
11	RELATED_ITEM_DETAIL	dat	related_item_detail.dat

Entities

App Table Name	File Name	Staging Table Name
NIL_DETAIL	nil_detail.dat	SVC_NIL_DETAIL
NIL_TRAIT	nil_trait.dat	SVC_NIL_TRAIT

Download Entity List Save Save and Close Cancel

The **Download Entity List** button on this page can be used to download a csv file containing all details for entity groups, entities relationship, file formats and sequencing. This may be a helpful reference to download while designing, building, and testing your conversion load programs.



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## Appendix: Offline File Validator

In order to help with the preparation of the data files, apart from the above detailed templates, an additional java-based utility is available to validate the correctness of your generated files before they are loaded into the Data Conversion Application. The jar can be downloaded onto a local machine and does not require any database to run it.

This application, along with the templates, serve as useful tools to help you in generating the right files even before the Data Conversion Application and Merchandising environments have been provisioned.

### Prerequisites

- The system where this validator is loaded should have JDK (Java Development Kit) installed supporting Java 8 or higher.
- The DataConversionFileValidator.jar should be copied in the local folder of the system.
- The data should be in .dat file format (values separated by commas) in the format dictated by the templates.
- The folder that contains the input .dat files should have read and write permission.

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**Note:** This tool will identify errors with respect to data type mismatch, size mismatch and check constraint failures that are within a single file. It will not cover: primary, foreign, or unique key checks, or any other business validation. It will also not validate the file name pattern.

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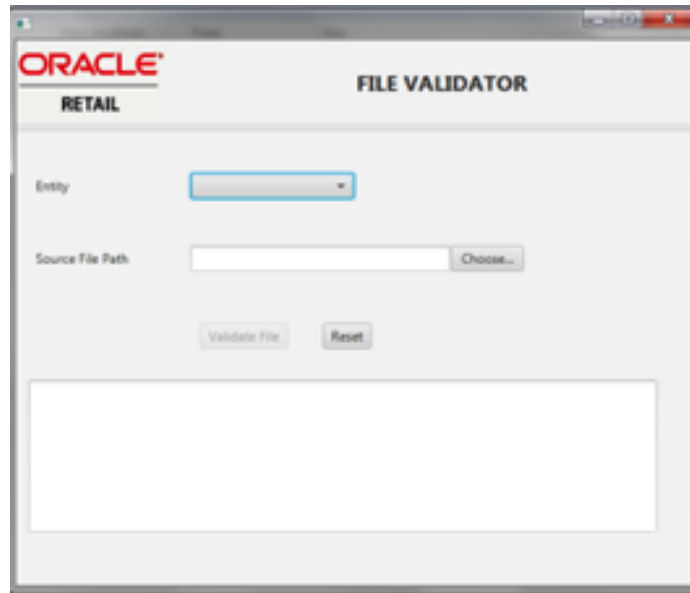
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### Download the Off-line File Validator

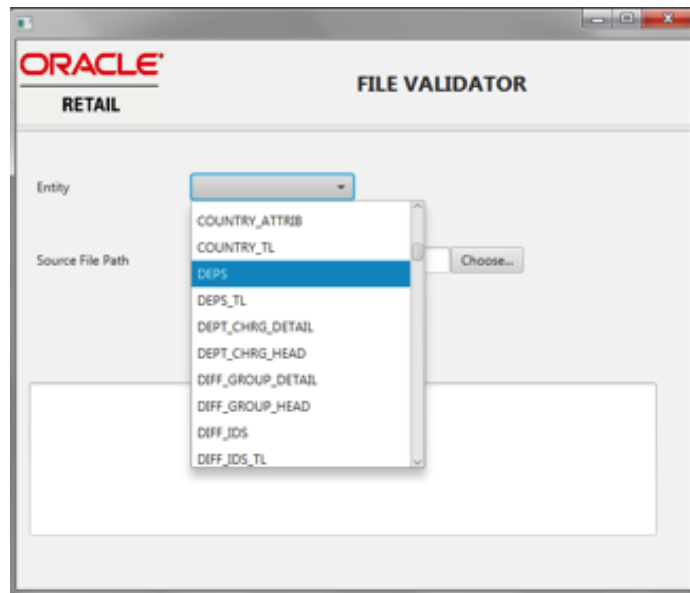
This tool is available on My Oracle Support under document ID 2538102.1. In order to download the tool, you will need a password. This password can be obtained by logging an SR and requesting the information for the relevant version of Merchandising.

## Use the Off-line File Validator

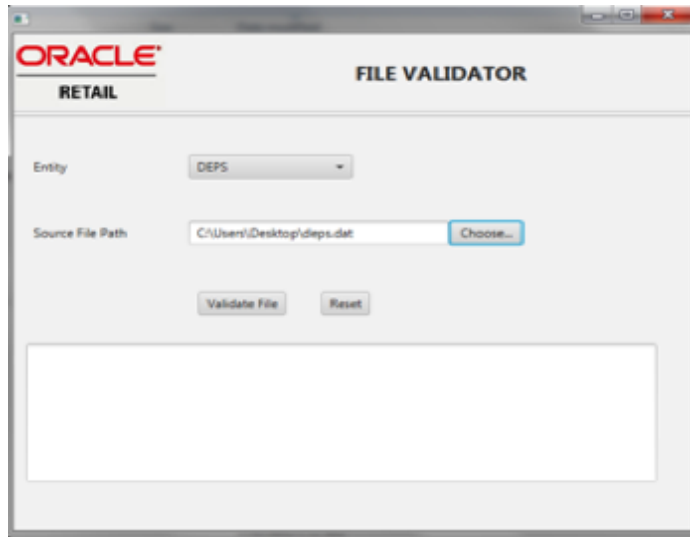
To use the Off-line File Validator tool, double click the DataConversionFileValidator.jar to run the application.



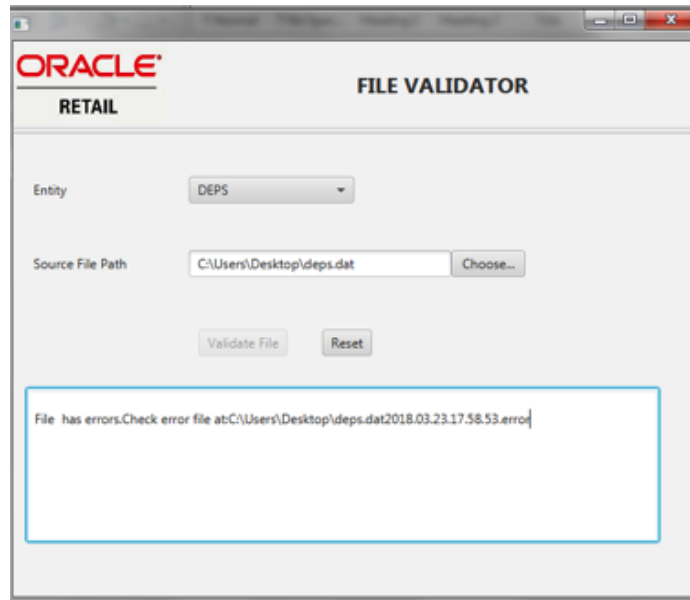
Select the entity (table) whose file you want to validate.



Choose the source file path.



Click the **Validate File** button. If the data has errors, then an error file is generated and the file path is displayed in the text area.



Below is an example of what an error file might look like.

```

1
2 Error: line No-8 Column-DEPT ErrorMessage:Field is Mandatory
3
4 Error: line No-11 Column-DEPT ErrorMessage:Invalid Number
5
6 Error: line No-14 Column-DEPT_NAME ErrorMessage:Field is Mandatory
7
8 Error: line No-18 Column-MARKUP_CALC_TYPE ErrorMessage:Field is Mandatory
9 Error: line No-18 Column-PROFIT_CALC_TYPE ErrorMessage:Size exceeded
10 Error: line No-18 Column-DEPT ErrorMessage:Invalid Number
11 Error: line No-18 Column-BUYER ErrorMessage:Invalid Number
12 Error: line No-18 Column-MAX_AVG_COUNTER ErrorMessage:Invalid Number
13
14 Error: line No-19 Column-MARKUP_CALC_TYPE ErrorMessage:Field is Mandatory
15 Error: line No-19 Column-PROFIT_CALC_TYPE ErrorMessage:Size exceeded
16 Error: line No-19 Column-BUYER ErrorMessage:Invalid Number
17 Error: line No-19 Column-MAX_AVG_COUNTER ErrorMessage:Invalid Number
18
19 Error: line No-21 Column-BUD INT ErrorMessage:Invalid Number
20 Error: line No-21 Column-DEPT ErrorMessage:Invalid Number
21
22 Error: line No-28 Column-MERCH ErrorMessage:Size exceeded
23 Error: line No-28 Column-MAX_AVG_COUNTER ErrorMessage:Size exceeded
24

```

## Bulk Offline Validation

The tool also supports triggering the validation of multiple files together. This is done without using the UI, via the command prompt. To use this approach, run the jar file with arguments as:

```
Java -jar DataConversionFileValidator.jar <TABLE_NAME> <File_name>
```

This will validate the file specified.

To trigger validation of multiple files together, create a batch file containing the arguments for table name and source file path. Then in a command prompt, go to the directory where the batch file is located and run the batch file. This will execute the command in sequence without launching the application UI.

Here is an example of a batch file.

```

@echo off
java -jar DataConversionFileValidator.jar DEPS C:\Users\data_conversion_dat_files\deps.dat
java -jar DataConversionFileValidator.jar ITEM_MASTER C:\Users\data_conversion_dat_files\item_master.dat
java -jar DataConversionFileValidator.jar ITEM_TICKET C:\Users\data_conversion_dat_files\item_ticket.dat
java -jar DataConversionFileValidator.jar PACKITEM_BREAKOUT C:\Users\data_conversion_dat_files\packitem_breakout.dat
EXIT /B

```



## Appendix: Frequently Asked Questions

This section calls out the possible encountered issues while using the tool, and suggests solutions for these.

Issue	Potential Solution
Why is my file not listed in the Import from File screen?	<p>Validate that the file is present in the configured folder.</p> <p>Validate that the file pattern matches the prescribed pattern.</p> <p>Ensure the rules described above for data file preparations are followed.</p>
Why was one of the files in the zipped file not processed?	Validate that the file pattern of the .dat file matches the prescribed pattern.
I do not wish to load data for a table that is a part of the zip file. Can it be excluded?	Yes, such files can be excluded. If there is a dependent file that has been missed in the zip file, then while running the business validations, it will be called out as errors.
I'm getting an exception while clicking on the file list in import screen. How do I resolve this issue?	Verify if the upload folder set in DC_SYSTEM_OPTIONS table matches to the configured upload folder in the app server
Why is the halt button on the Mass Upload not enabled?	This will be enabled only for certain conditions to prevent data corruption. For more details see the <a href="#">Mass Upload</a> section above.
How do I verify if the records have actually gotten loaded into the staging tables from the screen?	The statistics on the import screen and list of errors would help identify if records were not processed.
How do I verify if records are actually loaded into main Merchandising tables?	The <a href="#">View Uploaded Data</a> screen can be used to validate the data loaded. Additionally, the APEX Data viewer can also be used.
How do I revert/modify the records loaded in the staging tables from the UI?	You would need to correct the data in the source files and re-run as a fresh upload with the modified data without processing the earlier loaded data through to the end of the process.
How do I revert/modify the records loaded into the main tables from the UI?	Once data is loaded into the main Merchandising tables in production, the only way to modify it is via Merchandising supported methods – UIs, spreadsheet uploads, and so on. If it is still in the pre-production environment, then the APEX Data Viewer can be used to update the data as well.

Issue	Potential Solution
If a Merchandising application is running on the same data conversion environment, can I open and work in the application?	There is nothing stopping users from opening the Merchandising applications connected to the same Merchandising schema where conversion is being done. But if any data is modified by users, then there could be instances where the sequences are not in sync with the loaded data and this could lead to errors. It is recommended all users be kept out of the Merchandising screens while running conversion.
How can transactions (transfers, PO, and so on) be loaded?	At this time, purchase orders and customer orders are the only transactions that can be converted using this application. It is recommended other transactions be closed in your legacy applications prior to conversion and new transactions be created in Merchandising when needed. See also the <a href="#">Data Entities</a> section.
How can flex attributes be converted?	Flex attributes, or CFAS, can be converted at this time only for item, item/supplier, and item/supplier/country levels. In order to convert the data, the attributes will first need to be configured in both your stage and production environments. See the <i>Oracle Retail Merchandising CFAS Implementation Guide</i> for details on this configuration.
Does the offline validator verify file name patterns?	No.
What is the maximum file size supported for upload?	Importing data of file size of less than 1GB is supported. However, processing large volumes takes up a lot of memory and reduces performance, especially where complex business validations are executed. Therefore, it is recommended that, in cases of large files, the data are broken up into multiple files.  The maximum number of records in file supported will depend on the entity being loaded.
If we have multiple files for an entity, could the files be loaded together?	Yes. For this, place these files alone in the upload folder and use the Mass upload screen to trigger an upload at the entity group level. This will process the files placed in the Upload folder.
Can a zip file have two dat files for the same table?	No, if you have multiple files for the same table and are zipping files to load dependent tables together, you need to have one zip file per table/dat file for the dependent tables.
What will happen if I have two files with the same name?	While SFTP'ing files, the second file will overwrite the first.
If the filename does not match the pattern, what would happen?	Such files will not be listed in the import screen and the mass upload will ignore/skip the files.
How long does it take to download the templates?	This usually takes about 60 seconds, but could be longer based on network latency.