# Oracle® Retail Advanced Inventory Planning

Release Notes

Release 15.0

December 2015

This document highlights the major changes for Release 15.0 of Oracle Retail Advanced Inventory Planning (AIP).

## Overview

Oracle Retail Advanced Inventory Planning is a suite of modules designed to manage the supply chains of large retailers at the supplier, warehouse, store, and e-commerce levels. The system couples time-phased replenishment and allocation algorithms to produce an actionable receipt plan over time. This plan is based on demand forecasts, replenishment parameters, and inventory availability at the numerous supply points within the supply chain.

The user interacts with the AIP system through a number of modules:

- Store Replenishment Planning (SRP) Workbooks are used to maintain the replenishment characteristics for stores. These workbooks allow the user to analyze system output and perform what-if style analysis when replenishment parameters are changed.
- Warehouse Replenishment Planning (WRP) Workbooks are used to maintain the replenishment characteristics for warehouses. These workbooks allow the user to analyze system output and perform What-if style analysis when replenishment parameters are changed.
- Data Management is used to maintain the supply chain and network flow information. Sourcing links, lead times, and other data are managed in this module.
- The Network Replenishment Workbook combines worksheets containing warehouse-specific replenishment data with those containing store-specific replenishment data into one workbook. This allows users to view a more complete picture of the replenishment plan within a supply chain without having to switch between workbooks. Users are also able to perform What-if analysis on the replenishment plan by changing various replenishment parameters.
- AIP Dashboard for the Fusion Client allows users to view AIP receipt plan data without having to build a workbook.

- Using the receipt plan, Order Management formally prepares those orders that need to be fulfilled. This preparation includes the assignment of an order number.

> **Note:** AIP Java/Oracle, AIP on Oracle, and AIP Oracle are often used interchangeably to refer to those parts of AIP that access the Oracle relational database. This includes the Data Management and Order Management GUI components and a host of UNIX shell scripts and PL/SQL modules.

## AIP Within the Oracle Retail Suite

AIP is one of several integrated applications within the Oracle Retail Suite. The suite allows a retailer to manage its supply chain from demand forecasting to the generation of orders, which can then be shared with collaborative planning partners.

Viewed at a high level, the process across the Oracle Retail Suites takes the following form:

1. Oracle Retail Demand Forecasting (RDF) provides a forecast of consumer demand. This data is made available to AIP.
2. The AIP batch run produces an actionable receipt plan using replenishment parameters maintained inside AIP. Hierarchy and inventory data are provided by a merchandising system such as Oracle Retail Merchandising System (RMS).
3. The receipt plan is then sent to the Order Management module within AIP, where those orders that need to be fulfilled are formally prepared for execution. This preparation includes the assignment of an order number.
4. Order Management then submits the appropriate orders to the merchandising system, where purchase orders and transfers are communicated to other systems. These orders are returned to AIP in subsequent batch runs as on-order or in-transit quantities.
5. Sales forecasts and order plans can then be shared at the appropriate level with suppliers by using a collaborative planning, forecasting, and replenishment (CPFR) product, so that trading partners can prepare for the forthcoming orders.

## AIP Versions and Corresponding RPAS Versions

The following table provides a history of AIP since the 13.0 release. The table lists each version of AIP together with the version of the Retail Predictive Application Server (RPAS) foundation to which it is tied.

| Date | Version Category | AIP Version | RPAS Version |
|---|---|---|---|
| June 9, 2008 | Full Release | 13.0 | 12.1.2.21 |
| August 15, 2008 | Patch Update (AIX, HP-UX) | 13.0.1 Patch | 13.0.1.2 |
| August 22, 2008 | Full Release (Solaris) | 13.0.1 | 13.0.1.2 |
| October 31, 2008 | Patch Update (AIX) | 13.0.1.1 | 13.0.1.11 |

| Date | Version Category | AIP Version | RPAS Version |
|---|---|---|---|
| December 19, 2008 | Patch Update<br>(AIX) | 13.0.2 | 13.0.2.1 |
| August 7, 2009 | Full Release<br>(Solaris, OEL, AIX, HP-UX) | 13.1.1 | 13.0.4 |
| March 31, 2010 | Full Release and Patch Update<br>(AIX 5.3, AIX 6.1, HP-UX 11.31, OEL 5.2, Solaris 10) | 13.1.2 | 13.1.2.3 |
| August 31, 2010 | Patch Update<br>(AIX 5.3, AIX 6.1, HP-UX 11.31, Linux 5.2, Solaris 10) | 13.1.3 | 13.1.2.19 |
| October 29, 2010 | Full Release<br>(AIX 5.3, AIX 6.1, HP-UX 11.31, OEL 5.3, Solaris 10) | 13.2 | 13.2 |
| January 31, 2011 | Hot Fix<br>(AIX 5.3, AIX 6.1, HP-UX 11.31, OEL 5.3, Solaris 10) | 13.2.0.2 | 13.2.1 |
| July 8, 2011 | Full Release<br>(AIX 5.3, AIX 6.1, HP-UX 11.31, OEL 5.3, Solaris 10) | 13.2.2 | 13.2.2.9 |
| November 4, 2011 | Patch Update<br>(AIX 6.1, HP-UX 11.31, OEL 5.5, Solaris 10) | 13.2.3 | 13.2.3 |
| April 13, 2012 | Patch Update<br>(AIX 6.1, HP-UX 11.31, OEL 5.5, Solaris 10) | 13.2.4 | 13.3 |
| May 3, 2012 | Full Release<br>(AIX 6.1, HP-UX 11.31, OEL 5.5, Solaris 10) | 13.3 | 13.3 |
| December 21, 2012 | Full Release<br>(AIX 6.1, HP-UX 11.31, OEL 5.8, Solaris 10) | 13.4 | 13.4.0.1 |
| August 23, 2013 | Patch Update<br>(AIX 6.1, HP-UX 11.31, OEL 5.8, Solaris 10) | 13.4.1 | 13.4.1 |
| December 14, 2013 | Full Release<br>(AIX 6.1, 7.1,HP-UX 11.31, OEL 6.3, Solaris 11) | 14.0 | 14.0 |
| August 15, 2014 | Patch Update<br>(AIX 6.1, 7.1,HP-UX 11.31, OEL 6.3, Solaris 11) | 14.0.1 | 14.0 |
| December 19,2014 | Full Release<br>(AIX 7.1,HP-UX 11.31, OEL 6.3, Solaris 11) | 14.1 | 14.1 |

| Date | Version Category | AIP Version | RPAS Version |
|---|---|---|---|
| August 21, 2015 | Patch Update<br>(AIX 7.1,HP-UX 11.31, OEL 6.3, Solaris 11) | 14.1.1 | 14.1.1 |
| December 15, 2015 | Full Release<br>(AIX 7.1,HP-UX 11.31, OEL 6.x, OEL 7.x, Solaris 11.2) | 15.0 | 15.0 |

# Hardware and Software Requirements

See the *Oracle Retail Advanced Inventory Planning Installation Guide* for information about the following:

- Hardware and software requirements
- Oracle Retail application software compatibility information

# Functional Enhancements

AIP 15.0 includes the following functional enhancements.

## Improved Spoilage Calculations

With 15.0, several updates have been made to how spoilage is calculated in AIP. This allows AIP to better serve retailers, such as grocers, who handle perishable products within their supply chain. The definition of expected spoilage remains the same as previous releases. It is the quantity of a SKU at a store whose product life expires at the end of any given day and therefore becomes unsellable at that point.

Previously, AIP was not taking into account the difference in transit time between a store and its source when considering the product life of a SKU. All SKUs had the same product life upon receipt at a store.By changing the definition of Product Life to represent the minimum life at the point of shipment to the store the aging of inventory now incorporates the differences in transit times to the store.

The ability for AIP to track inventory composition by expiration date has also been introduced for this release. Now instead of having all available inventory lumped together in one pool regardless of when it expires, AIP internally tracks how much is due to expire on any given day.

Being able to track the inventory composition by expiration date allows AIP to take into account the fact that inventory is not always sold in a First in-First out manner. A certain percentage of shoppers buy inventory in a Last in-First out manner. So when those purchases occur, inventory is not taken out of the product that is about to spoil but rather the inventory that is the farthest away from its expiration date. To account for this behavior, AIP introduces a new parameter called the Inventory Consumption Parameter (ICP).

With 15.0, AIP also introduces the ability for the composition of current inventory to be loaded by expiration date.

In addition, the composition of external receipts can be loaded with an associated expiration date. This applies to both On Orders and In Transits.

## Multiple Deliveries per Day at Stores

In previous releases of AIP, any given SKU could be delivered to a store location only on a once per day basis. With the 15.0 release, AIP now allows for store locations to receive multiple deliveries of the same product on the same day.

Smaller quantities can then be delivered individually throughout the day instead of all at once. It is important to note that this functionality only applies to store destinations.

The 15.0 release also introduces the capability to re-plan and release the remainder of a day's deliveries intra-day.

## Warehouse Intra-day Re-planning and Release

Previously, warehouse receipts in AIP were assumed to be either at the very beginning or very end of any day. Starting with 15.0, AIP now supports warehouse intra-day deliveries. In addition, calculations at the warehouse level can now be re-planned during an intra-day batch run to provide a more accurate reflection of how items such as inventory position currently stand. Previously, only store destinations had these capabilities. It is important to note that a SKU can still be delivered into a warehouse only once per day.

## Network Intra-day Workbook

A new workbook, Network Intra-day is now available to allow users to view and compare the results of intra-day processing to what was generated overnight.

Previously, only store data was generated intra-day and only one delivery per day of a SKU was allowed. These results were shown in the SRP Intra-day workbook. With the introduction of warehouse intra-day deliveries as well as the possibility of store locations having multiple deliveries per day, however, an update to the old store-only workbook was needed. The new Network Intra-day workbook replaces the SRP Intra-day workbook and incorporates intra-day re-planning and multiple deliveries.

There are four additional, filtered views available in this workbook. These views show the packsize-specific details of certain measures that are shown only at a SKU level total in the other views. To access these views, users can right-click in a data cell for a measure they wish to see a packsize-specific breakdown of the data for and choose the appropriate Detail View in the pop-up menu. The resulting packsize view is automatically filtered to show the intersections of the originating data cell.

## Order Review and Approval Workbook

The new Order Review and Approval workbook allows users the ability to look over purchase orders that have been generated in AIP and modify them to better fit their needs and/or approve them for release. Previously, all purchase orders generated by the batch were considered automatically approved and were sent to Order Management Online without the opportunity for review. Starting with the 15.0 release, users are able to look over the values created by the AIP batch calculations and then determine if any manual adjustments need to be made.

## Non-integer Packs

AIP now supports pack-sizes that are non-integer quantities. This helps retailers track inventory of products that are packaged by weight, volume, or some other method that may frequently result in packs that are not a whole number. All inventory

movements, calculations, and processing of these packs are still handled the same as all other previously existing pack-sizes.

### Redefined Reconciliation Periods

Reconciliation periods have been redefined for this release to better accommodate intra-day inventory movements. They no longer are required to start and end on a day, but rather can go from delivery opportunity to delivery opportunity. In addition reconciliation periods are no longer based on the presence of an expected or planned receipt. Rather, they should span from one delivery opportunity to the next, regardless of whether or not a quantity is ordered or received on that delivery opportunity.

### Intra-day Revised Sales Forecast Method Levels

An additional benefit provided by AIP 15.0 is that the Intra-day Revised Sales Forecast Method can now be set at the Global, Default, and Exception levels. Previously, this was a system-wide setting only.

## Documentation Enhancements

AIP 15.0 includes the following documentation enhancements.

### Oracle Retail Order Review and Approval AIP White Paper (Doc ID: 2076972.1)

This white paper is an aid to System Integrators and users of the new Order Review and Approval Workbook.

## Noteworthy Defect Fixes

The following table contains issues that have been fixed for the current release.

| Affected Component | Fixed Issue/Defect | Defect Number |
|---|---|---|
| Batch Process | New files are not being copied to `$interface_rms_dir` folder if existing files are already in the folder. | 21328336 |
| Batch Process | The script, `cron_release.sh` fails. | 22050839 |
| Export | Exception measures for pack size are incorrectly transferred to RPAS. | 21865678 |
| Export | Running allocation exports from AIP Online fails due to an incorrect schema file, `ord_exp_alloc.xml`. | 22066729 |
| Installer | AIP-RPAS installer fails during Fusion client configuration step. | 21660300 |
| Installer | The installer now includes two separate utility scripts to create AIP Owner and AIP user schemas in the database. | 21765631 |
| Integration | AIP DB table schemas did not match the input files from RMS for future delivery/order and tsf files. | 21034146 |
| Integration | Interutil not generating files correctly for formal packs. | 21607962 |

| Affected Component | Fixed Issue/Defect | Defect Number |
|---|---|---|
| Performance | AIP takes too long to tar and zip files from `cron_export_sched.sh`. | 21569711 |
| Pre-allocation | The source transaction number is not displayed in OM screen for linked orders in pre-allocation. | 21788706 |
| Workbooks | An illegalParse error is received when building the Dynamic Rule Based Index USA workbook. | 21418218 |
| Translations | In AIP Online, some of the foreign language translations are too long for the current fields and are being truncated. This is occurring for different fields depending upon the language it is translated into. | 15986091 |

## Known Issues

The following table contains known issues for the current release.

| Affected Component | Known Issue/Defect | Defect Number |
|---|---|---|
| Batch Process | Into-warehouse purchase orders (POs) which are not approved are not scaled. Only auto-approved POs or those which are manually approved are scaled. | 22365906 |
| Batch Process | Warehouse inventory is not cleared after store reconciliation, | 19767480 |
| Batch Process | The ULR is not cleared after the Working Plan is set as the Receipt Plan, | 22157758 |
| Batch Process | The purging script, `aip_purge.sh` on. fails to remove SKU pack-sizes. | 22191130 |
| WebLogic | Language Bundle files for AIP Fusion clients are in Native character encoding. After configuring the AIP-RPAS Fusion Client solutions, use the following steps and command for conversion from Native to ASCII.<br>1. Create a directory and copy all the language `aipBundle_xx.properties` files (where xx=language extensions).<br>2. Ensure that environment variable JAVA_HOME is pointing to JDK instead of JRE.<br>3. Navigate to the new directory created in Step 1.<br>4. Use the following command per language to convert Native to ASCII:<br>`native2ascii -encoding UTF8 aipBundle_xx.properties multisolutionBundle_xx.properties`<br>5. Copy the new ASCII converted language files (multisolutionBundle_xx.properties) to the **${FUSION_CLIENT_INSTALL_DIR}/config/MultiSolution/resources** directory.<br>6. Restart the WebLogic server. | 21614034 |

## Related Documents

For more information, see the following documents in the Oracle Retail Advanced Inventory Planning Release 15.0 documentation set:

- *Oracle Retail Advanced Inventory Planning Administration Guide*
- *Oracle Retail Advanced Inventory Planning Data Management User Guide*
- *Oracle Retail Advanced Inventory Planning Implementation Guide*
- *Oracle Retail Advanced Inventory Planning Installation Guide*
- *Oracle Retail Advanced Inventory Planning Operations Guide*
- *Oracle Retail Advanced Inventory Planning Order Management User Guide*
- *Oracle Retail Advanced Inventory Planning Security Guide*
- *Oracle Retail Advanced Inventory Planning Store and Warehouse Replenishment Planning User Guide for the RPAS Fusion Client*

The following documentation may also be needed when implementing AIP:

- Oracle Retail Planning Batch Script Architecture (BSA) Implementation Guide
- Oracle Retail Integration Bus (RIB) documentation, based on type of deployment
- Oracle Retail Extract Transform and Load (RETL) documentation
- Oracle Retail Predictive Application Server (RPAS) documentation

### My Oracle Support Documents

These Oracle Retail Advanced Inventory Planning Release 15.0 documents are available on My Oracle Support:

`https://support.oracle.com`

- *Oracle Advanced Inventory Planning Calculations for Store and Warehouse Replenishment Planning* (Doc ID 2075628.1)
- *Oracle Retail Order Review and Approval AIP White Paper* (Doc ID 2076972.1)
- *Oracle Retail Supply Chain Creation AIP White Paper* (Doc ID 2081101.1)

### Enterprise Integration Guide (located in the Oracle Retail Integration Suite Library on the Oracle Technology Network)

The Enterprise Integration Guide is an HTML document that summarizes Oracle Retail integration. This version of the Integration Guide is concerned with the two integration styles that implement messaging patterns: Asynchronous JMS Pub/Sub Fire-and-Forget and Web Service Request Response. The Enterprise Integration Guide addresses the Oracle Retail Integration Bus (RIB), a fully distributed integration infrastructure that uses Message Oriented Middleware (MOM) to integrate applications, and the Oracle Retail Service Backbone (RSB), a productization of a set of Web Services, ESBs and Security tools that standardize the deployment.

## Supplemental Training on My Oracle Support

The following document is available on the My Oracle Support Web site. Access My Oracle Support at the following URL:

https://support.oracle.com

### Transfer of Information (TOI) Material (ID 732026.1)

Online training is available to Oracle supported customers at product release. These online courses provide release-specific product knowledge that enables your functional and technical teams to plan, implement and/or upgrade and support Oracle Retail applications effectively and efficiently.

## Documentation Accessibility

For information about Oracle's commitment to accessibility, visit the Oracle Accessibility Program website at http://www.oracle.com/pls/topic/lookup?ctx=acc&id=docacc.

#### Access to Oracle Support

Oracle customers that have purchased support have access to electronic support through My Oracle Support. For information, visit http://www.oracle.com/pls/topic/lookup?ctx=acc&id=info or visit http://www.oracle.com/pls/topic/lookup?ctx=acc&id=trs if you are hearing impaired.