Avanade Advanced Store Replenishment User Guide

Dynamics 365 for Finance and Operations

This document contains confidential and proprietary information of Avanade and may be protected by patents, trademarks, copyrights, trade secrets, and/or other relevant state, federal, and foreign laws. Its receipt or possession does not convey any rights to reproduce, disclose its contents, or to manufacture, use or sell anything contained herein. Forwarding, reproducing, disclosing, or using without specific written authorization of Avanade is strictly forbidden.

The Avanade name and logo are registered trademarks in the US and other countries. Other brand and product names are trademarks of their respective owners.

©2018 Avanade Inc. All Rights Reserved.

Document Information

Document Title:	Promotional previewer user guide
File Name:	Advanced Store Replenishment user guide.docx
Author(s):	Santarao Jella, Nishanth Adepu, Zamir Gori

Document Revision History

Version	**Date**	**Changed By**	**Items Changed Since Previous Version**
1.0	9/9/2015	Santarao Jella	Initial draft
2.0	4/26/2016	Nishanth Adepu	AX 7 Screenshots added.
2.1	8/22/2016	Zamir Gori	Workspace information added
2.1	8/26/2016	Swasti Sundar Swain	Updated New AX 7 Screenshots
2.1	9/18/2018	Swasti Sundar Swain	Updated New Avanade Logo

avanade

©2018 Avanade Inc. All Rights Reserved.

Contents

Avanade Advanced Store Replenishment User Guide 1
1 Introduction 5
2 Audience 5
3 Overview 5
4 Deployment and maintenance 6
5 Advanced Store Replenishment 7
5.1 Introduction 7
5.2 Pre-requisites and Assumptions 8
5.3 Key Personas/Roles 9
5.4 Advanced Store Replenishment Setup 9
5.4.1 Configuration Setup 9
5.4.2 Advanced Store Replenishment asset menu items. 10
5.4.3 Advanced Store Replenishment parameter setups 15
5.4.4 Enabling 'Replenishment Grouping' on Retail Product Hierarchy. 17
5.4.5 Enabling 'Calculate Item topology check box' in on Retail Product Hierarchy 18
5.4.6 Enabling 'Exclude from Replenishment check box' on Product categories during Assortment creation. 19
5.4.7 Attaching Store Calendar to Retail Store 20
5.4.8 Blocked quantity setup 21
5.4.9 Anomalous sales setup form 22
5.4.10 Item exclusion for Replenishment 23
5.4.11 Safety stock coverage and filling rates form 24
5.4.12 Segment Calendar 25
5.4.13 Setting up Nominal quantity and shelf capacity for all products on Released products list page. 27
5.4.14 Setting up Vendors Minimum Order limit 28
5.4.15 Identify Item Stock out days 29
5.5 Coefficients & Other calculations 31
5.5.1 Seasonal coefficient calculation 31
5.5.2 Special sales coefficient setup and calculation 36
5.5.3 Day of week coefficient calculation 38
5.5.4 Store weekly turnover budget coefficient 42
5.5.5 Corrected average sales Calculation 43
5.5.6 Weekly trend coefficient Calculation 46
5.5.7 Calculate Item topology 47

avanade ©2018 Avanade Inc. All Rights Reserved.

5.5.8 Safety stock calculation 50
5.6 Advanced store replenishment- Inquires 51
5.6.1 Advanced replenishment parameters 51
5.6.2 Initialization data 52
5.6.3 Sales history and forecasting information 54
5.7 Order generation 55
5.7.1 Advanced store replenishment orders 55
5.7.2 Automatic order confirmation 59
5.8 Advance store replenishment workspace 60
5.8.1 Summary section 60
5.8.2 Coefficient section 61
5.8.3 Analysis section 61
5.8.4 Related links 62

avanade
©2018 Avanade Inc. All Rights Reserved.

1 Introduction

The 'Advanced Store Replenishment' asset for Dynamics 365 For Finance & Operations is a development, enriching solution for retail.

This document provides detailed information on how to configure and use the tools included in the new asset

2 Audience

This document's audience is end users, typically employees from the Retail department of an organization wishing to learn about the Avanade advanced store replenishment feature. Additionally, the audience includes end users typically store and category managers.

3 Overview

In the current retail process, it is very essential for a retailer that he needs to maintain adequate stocking levels in their stores to satisfy the demands of the customers. For many items in the assortment of the store, these demand patterns are predictable based on the sales run rate of the store and the seasonal patterns of the item and the store. With a large number of items in the assortment, automated tools are needed to generate suggested replenishment based on these prediction factors. There are exceptions to these patterns that will occur from time to time that requires an informed human reviewer. Sometimes the exceptions are due to stock-outs, promotions, new item introduction, existing item discontinuation, and other anomalous events that are not predictable.

The Advanced store replenishment engine, will do two essential tasks to calculate the sales forecasted quantity per item and store and show the suggested procured quantity for provisioning period.

(1) **Calculation Processes** – The Weighted Corrected Average Sales, Day of Week coefficients, and Seasonal coefficients are calculated by summarizing historical sales transactions

(2) **Replenishment Order Process –** Before an order quantity can be determined, the forecast for each day of the provisioning period needs to be calculated. To support this calculation the Weekly Trend coefficient (CTSA) needs to be calculated. The forecast calculation also uses several other coefficients that were calculated during the calculation process or are manually maintained.

The Avanade advanced store replenishment feature is designed to maintain adequate stocking levels in the stores to satisfy the demands of the customers by timely replenishment.

The Avanade advanced store replenishment feature is an extension over the standard Retail module in standard Dynamics 365 For Finance & Operations.

©2018 Avanade Inc. All Rights Reserved.

4 Deployment and maintenance

To deploy the Advanced store replenishment feature, it is necessary to make a complete installation of this feature. A model file having business logic and label information in US English will be delivered with an installation procedure.

The Avanade Global ERP Engineering team will be in charge of Avanade assets maintenance according to our existing process. If this asset pack was released with an SLA, the following has changed.

- The team will support the project teams and if necessary, supply them with code patches and an installation procedure.
- The project teams are in charge of installing patches and must make sure that they are compatible with customer specific developments, if there are any.
- We request that bug fixes made in the field be sent back to the Global ERP Engineering team for inclusion in a maintenance release.
- We request that Enhancements made in the field be sent to the Global ERP Engineering team to be included in a future release.
- Based on availability, the Solution Engineering team is available to help make enhancements to assets for your customer. The only way this is possible, is if Avanade maintains the IP ownership of the enhancement.

avanade

©2018 Avanade Inc. All Rights Reserved.

5 Advanced Store Replenishment

5.1 Introduction

It is very difficult to for the retailer to maintain adequate stocking levels to satisfy the demand of customers. There are exceptions to the demand pattern that will occur from time to time thus requires an informed human reviewer. Sometimes these exceptions are due to stock-outs, promotions, new item introduction, existing item discontinuation, and other anomalous events that are not predictable. The retail replenishment system helps in predicting the demand pattern and maintain adequate stocking level.

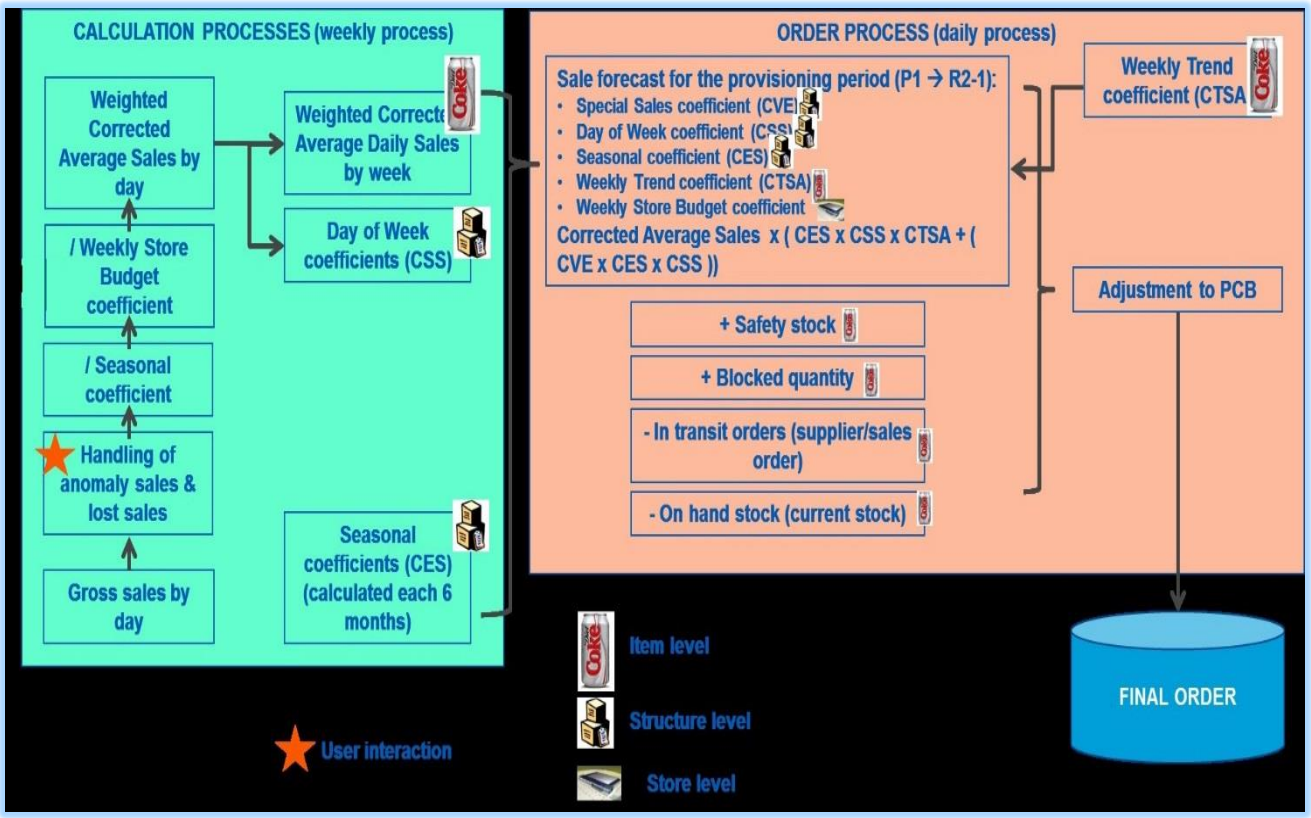
The 'Advanced store replenishment' asset helps the retailer to forecast the sales quantity of each product per day by store based on the sales history, also help to find suggest the correct order quantity. And creates Purchase order and invoiced automatically.
The Avanade advanced store replenishment feature is designed to maintain adequate stocking levels in the stores to satisfy the demands of the customers by timely replenishment.

The Avanade advanced store replenishment feature is an extension over the standard Retail module in standard Dynamics 365 For Finance & Operations.

Capabilities of Advanced store replenishment

- Ability to calculate Corrected average sales per item by store
- Ability to calculate all coefficients like Seasonal, Day of week, Special and weekly trend coefficients
- Ability to calculate Safety stock, Sale forecasts limiter, Adjustment to order multiples and item topology
- Ability to calculate the Sales feasting quantity per day and per provisioning period
- Ability to calculate and arrive the corrected suggested order quantity per item for provisioning period, before the procurement.
- Ability to Order the PO automatically and manually.

©2018 Avanade Inc. All Rights Reserved.



5.2 Pre-requisites and Assumptions

There are few pre-requisites which needs to be done before using the system

1. Retail Products creation in Released products List page/Define all setups like Inventory Unit, Purchase unit, Sales Unit, Item model group, Inventory model group, Site, Warehouse, Creating Unit conversions, define Purchase trade agreement, Item Inventory/Purchase and sales prices etc. and all other inventory dimensions as per Standard Dynamics 365 For Finance & Operations.
2. Create Vendors accounts in the All Vendors form with all required setups as per Standard Dynamics 365 For Finance & Operations.
3. Define the setups Site, Warehouses and Purchase multiple value on Site specific order settings form & Default order settings form
4. Retail product hierarchy should be created for Retail products
5. Assortments should be created and assigned to the stores.
6. Sales history exists by store by item by day for sufficient number of days included in the calculation date ranges.
7. Sales history will be fed to the Dynamics 365 For Finance & Operations system through POS transactions so that full fidelity of data and proper creation of transactions in other journals with the proper financial dimensions are populated.

©2018 Avanade Inc. All Rights Reserved.

8. There will be a one to one relationship between Stores and Site/Warehouse in the configuration of a Store. A Site/Warehouse can be assigned to one Stores. In other words, a Site/Warehouse cannot be assigned to multiple Stores.
9. Transfers between site/warehouse locations will not be used and will not be included in the "Ordered by Not Received" calculations for determining the new order amounts.
10. Unreleased products can't be considered for any coefficients calculation and exclude from Replenishment order process.

5.3 Key Personas/Roles

The following key personas/ Roles will be involved in the setup and usage of this feature in Dynamics 365 For Finance & Operations.

- Retail merchandising manager
- Retail store manager
- Purchasing Manager
- Stores Assistant
- Purchasing agent

5.4 Advanced Store Replenishment Setup

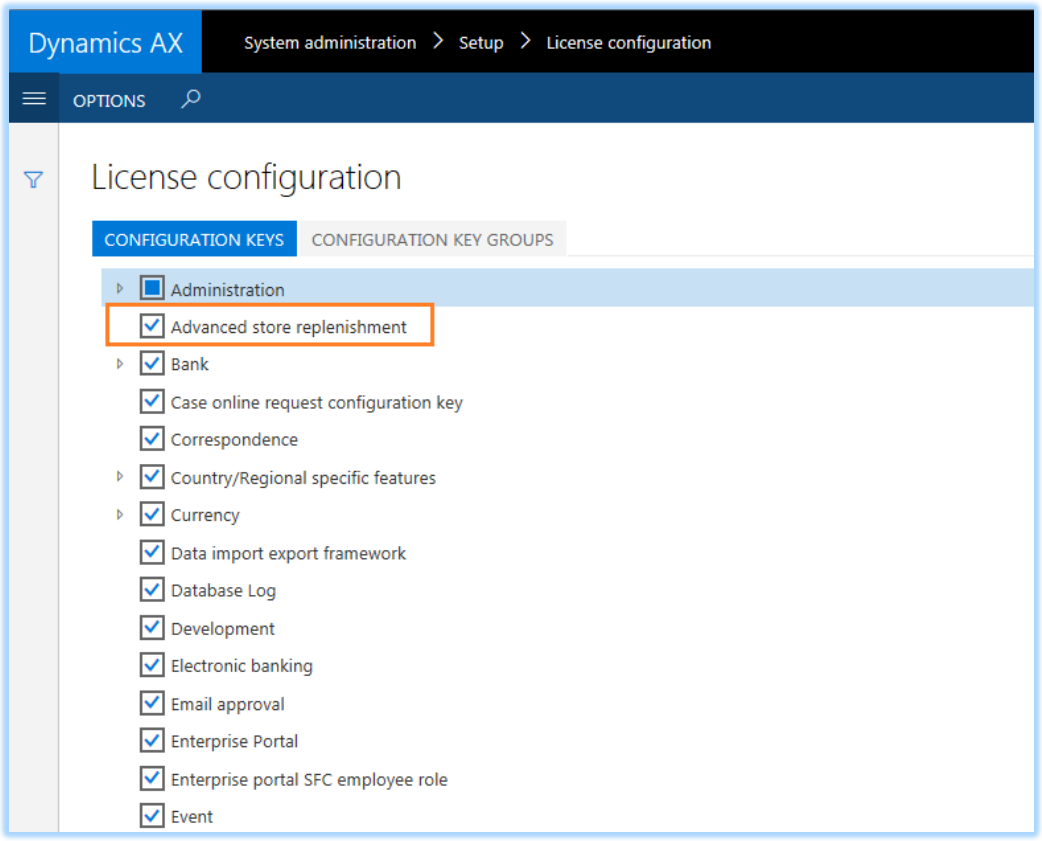
5.4.1 Configuration Setup

Advanced Store replenishment feature use can be controlled for an installation at multiple stages. Setups related to the same should be done correctly to make the feature ready for use. Below are the setups which can be followed for the same:

A new configuration key is provided in the license configuration to enable/disable the 'Avanade Advance Store Replenishment' feature for an installation. The configuration key 'Advanced store Replenishment' as shown below should be marked to make the asset work.

Once the configuration key is marked in the license configuration, field 'Avanade Advanced store replenishment' should be marked to make the asset work for the selected legal entity. For a legal entity by default the checkbox comes as blank.

©2018 Avanade Inc. All Rights Reserved.



Path: System Administration → Setup → License Configuration

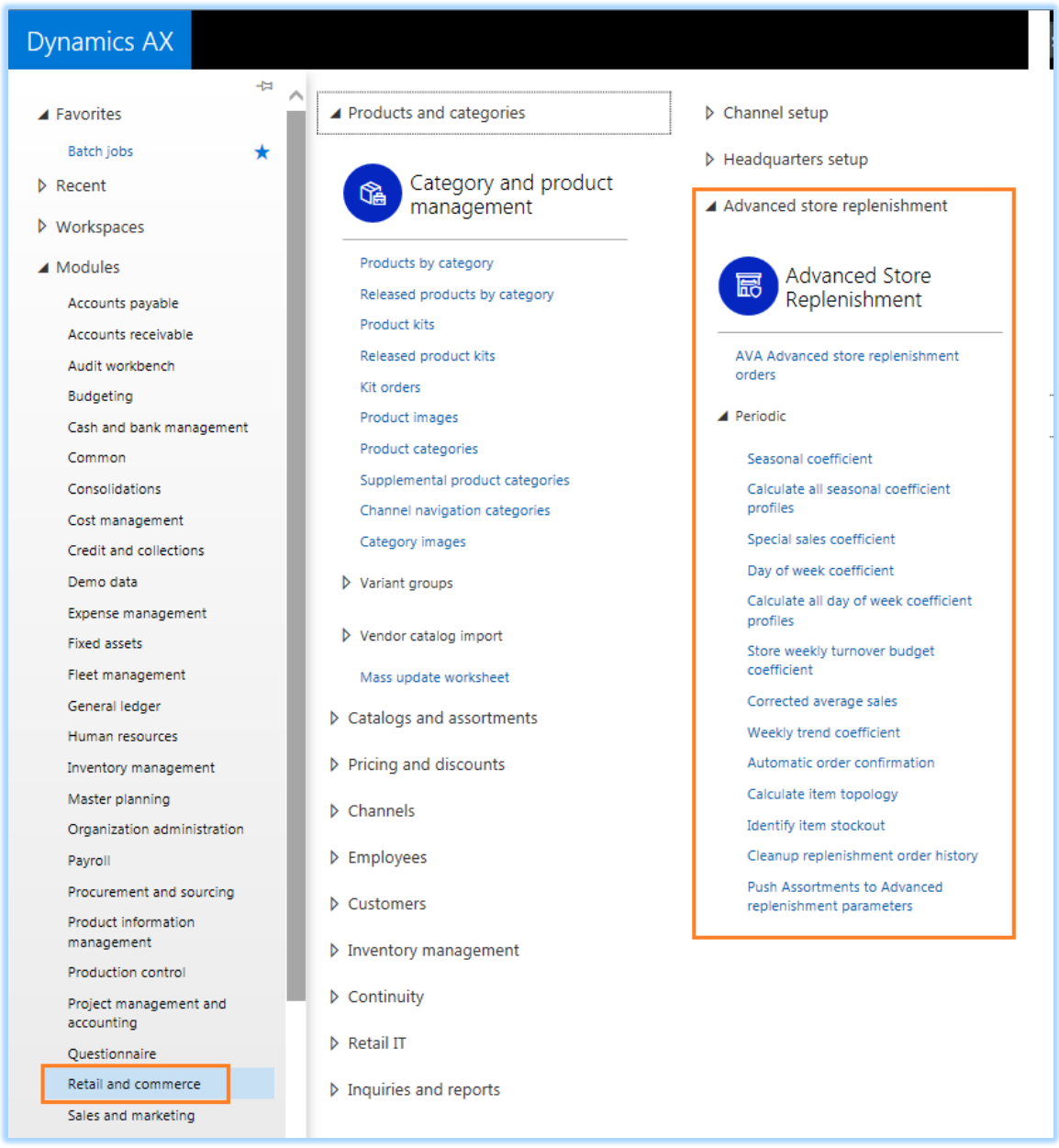
5.4.2 Advanced Store Replenishment asset menu items.

With Avanade Advanced Store Replenishment Asset implemented, all the menu items for the Advance store replenishment asset are visible to the user of every legal entity in the following sections.

avanade

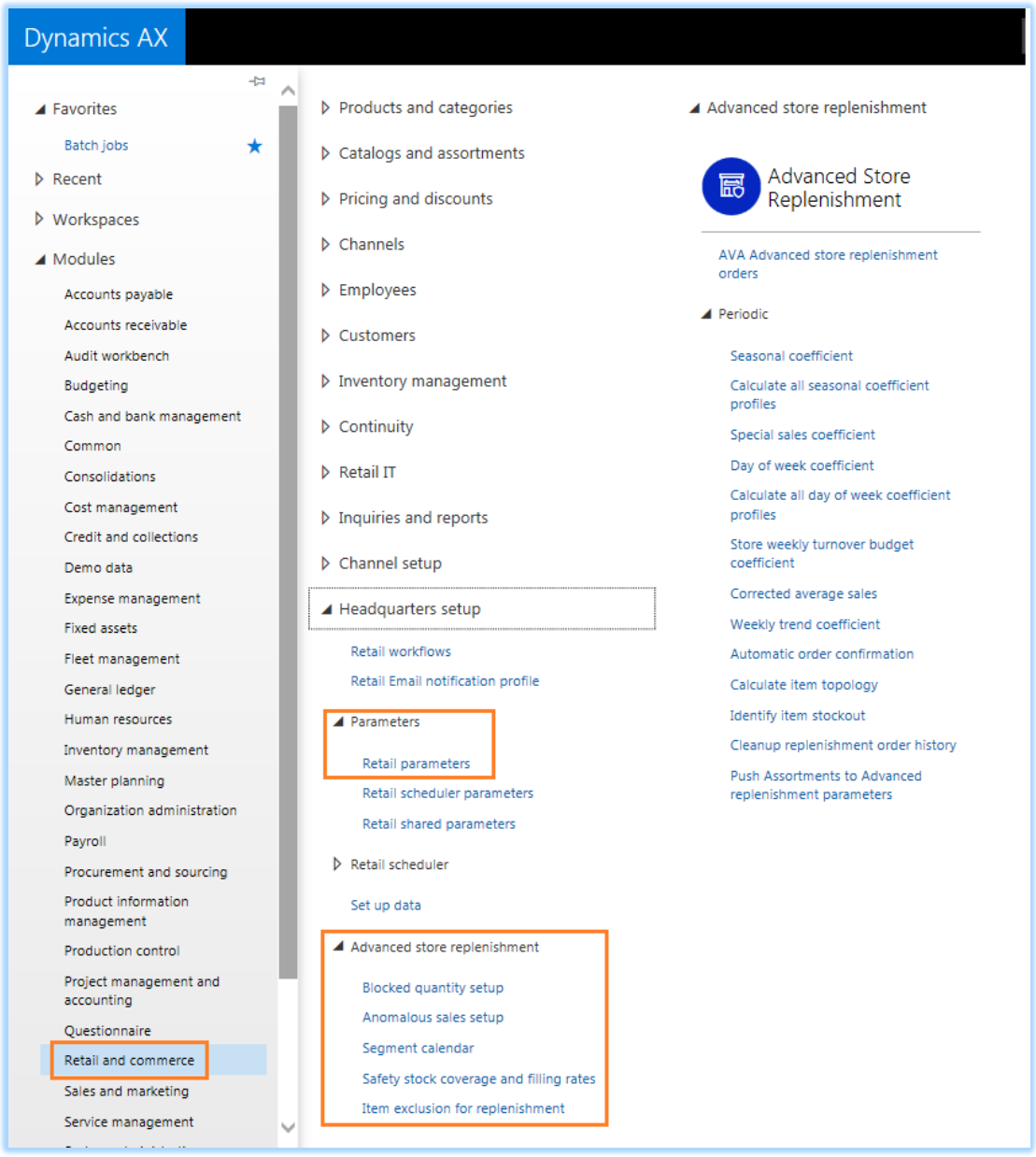
©2018 Avanade Inc. All Rights Reserved.

a) Retail and commerce→Advanced store replenishment section



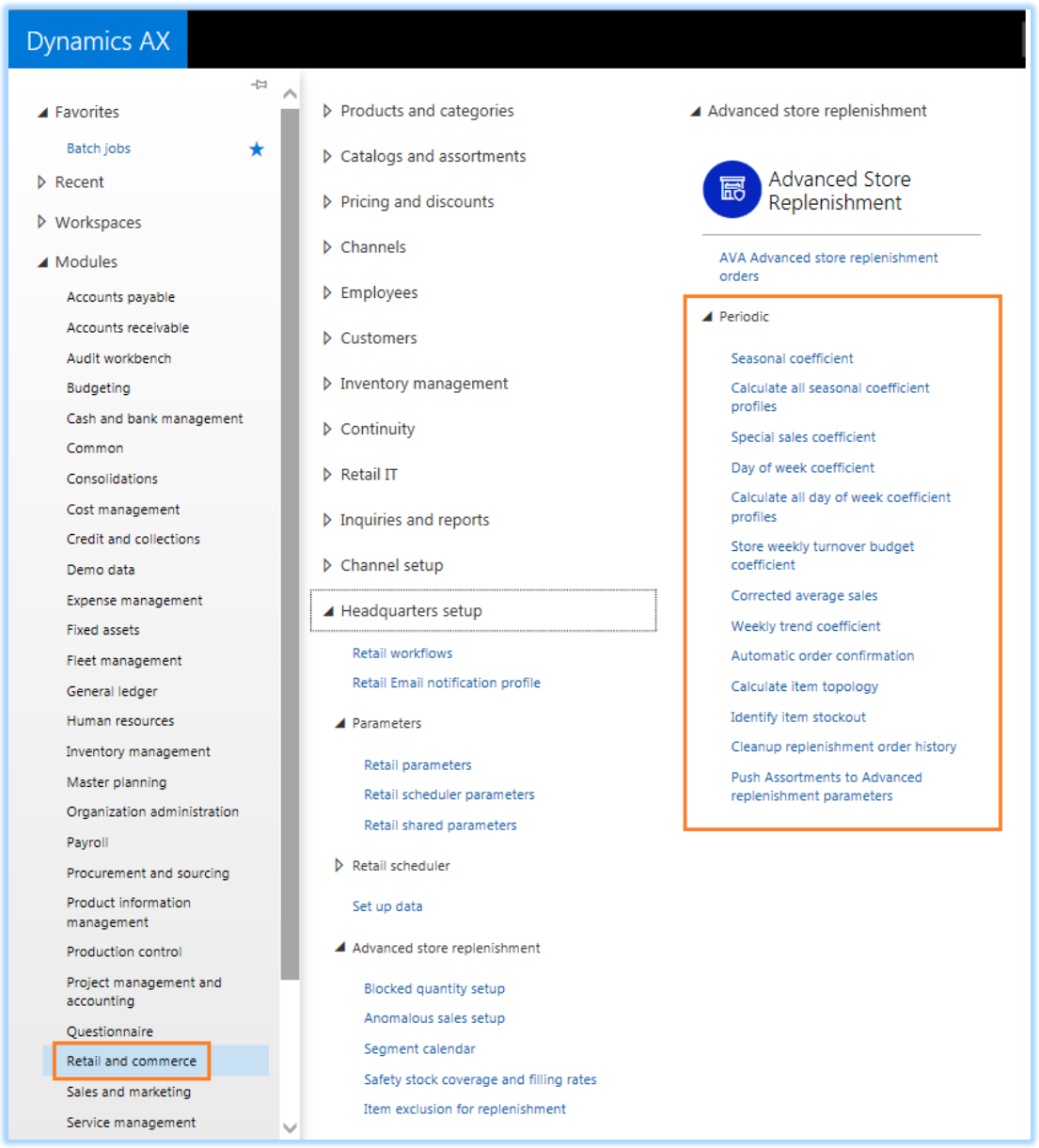
©2018 Avanade Inc. All Rights Reserved.

b) Retail→ Headquarters setup section



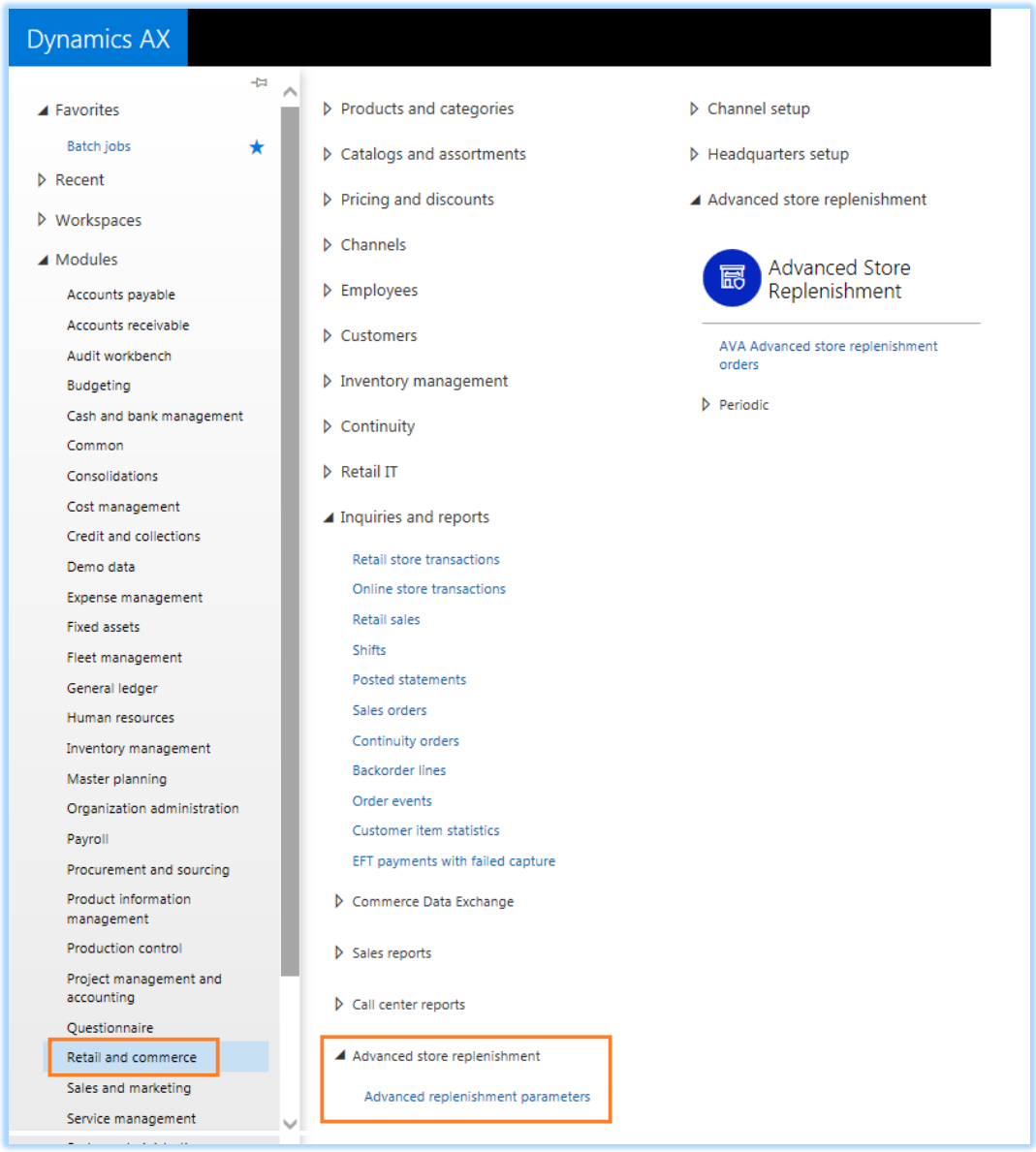
©2018 Avanade Inc. All Rights Reserved.

c) Retail→ Periodic section



©2018 Avanade Inc. All Rights Reserved.

d) Retail→ Inquiries and reports section

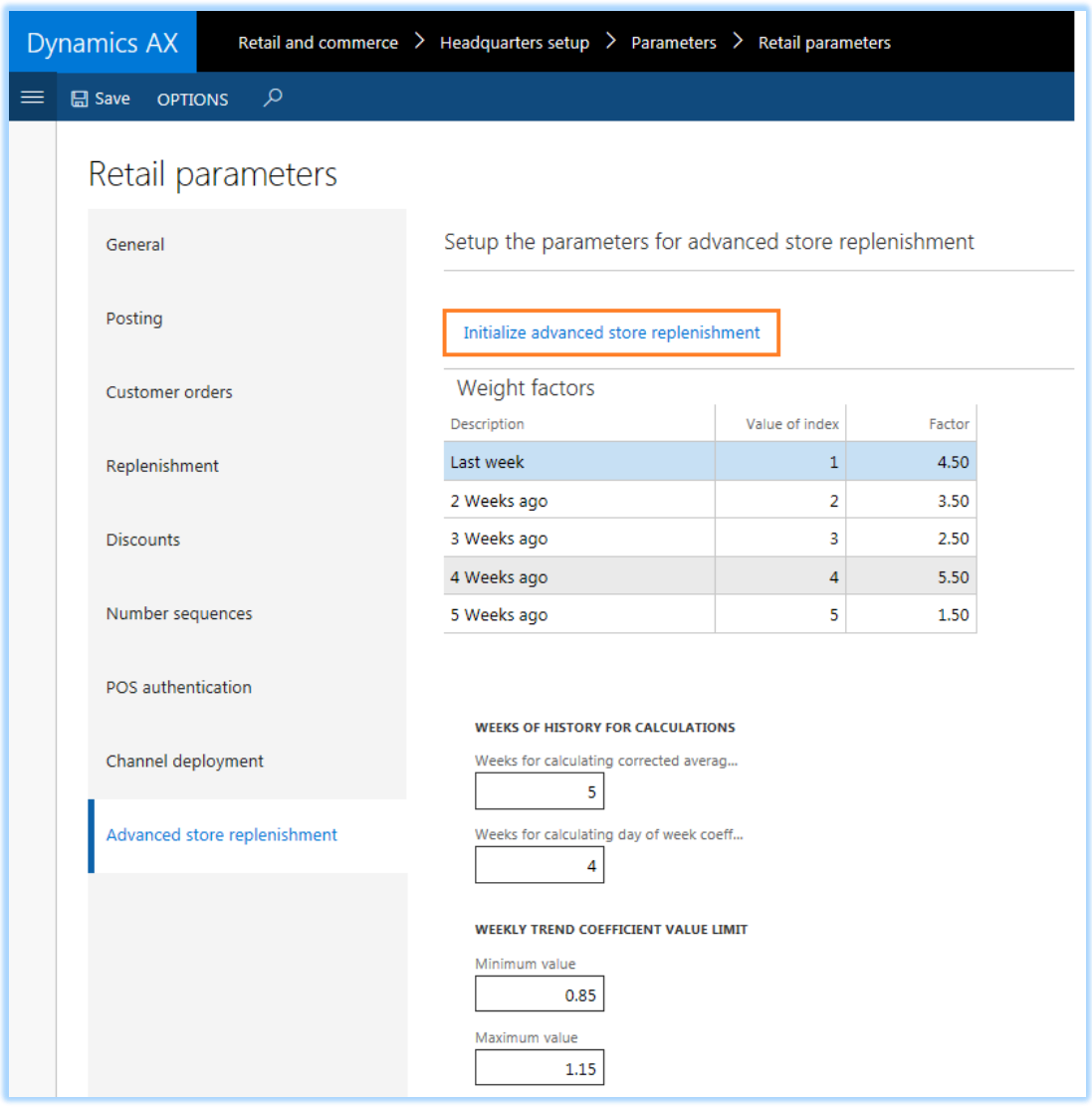


©2018 Avanade Inc. All Rights Reserved.

5.4.3 Advanced Store Replenishment parameter setups

a) All the Advanced Store Replenishment Asset related parameters are provided on the Retail Parameters form (Advanced store replenishment-new fast tab) to make the feature enable/disable for a legal entity. This is to control the feature at company level as it might not be required in each and every legal entity.

b) "Initialize Advanced store replenishment": The user must click and initialize Advanced store replenishment option to create store procedures, which will be used for coefficients and other calculations. Before setup values on advanced store replenishment parameters fields.



Path: Retail and commerce→ Headquarters setup→ Parameters→ Retail Parameters → Advanced store replenishment fast tab.

avanade
©2018 Avanade Inc. All Rights Reserved.

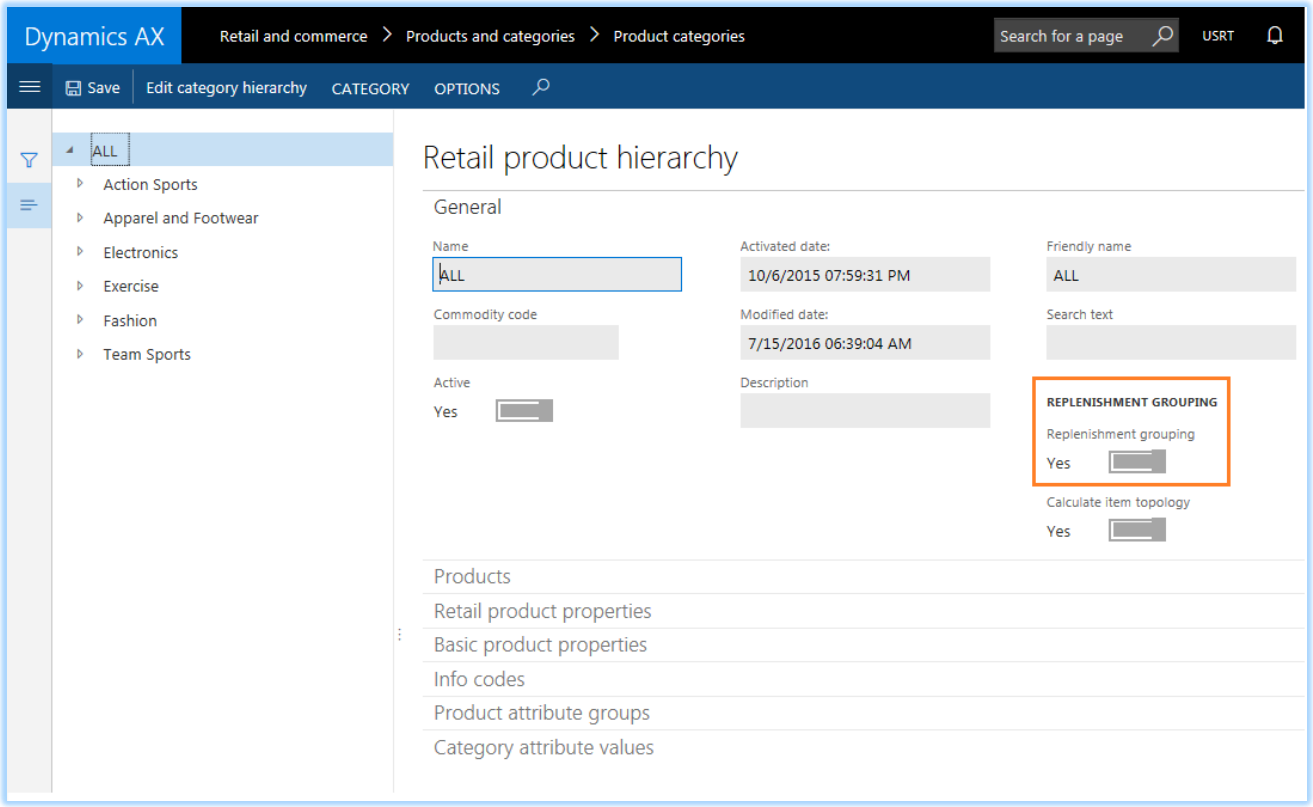
c) The following values should be defaulted on retail parameter fields when user first opens form.

Parameter Name	Data Type	Default Value	Description
Weeks for Calculating Corrected Average Sales	Numeric	4	(n) number of weeks for calculating Corrected Average Sales
Weeks for Calculating Day of Week Coefficient	Numeric	8	(n) number of weeks for calculating Day of Week Coefficient
Days of suggested replenishment history	Numeric	30	Value for number of days to keep history before deleting it. Integer field should be positive number.
Sales history weights	Array of (n) Numeric	1	Factor to weight each week when calculating the Corrected Average Sales
Day of week error limit	Numeric	9	Value for the sum of the day of week coefficients where a validation error is generated
Weekly trend Coefficient Limit	Numeric	Min:0.85 Max: 1.15	Minimum Value: 0.85 Maximum value: 1.15

©2018 Avanade Inc. All Rights Reserved.

5.4.4 Enabling 'Replenishment Grouping' on Retail Product Hierarchy.

Select the category to be considered for the Replenishment grouping



Path: Retail and commerce-> Product and categories -> Product categories

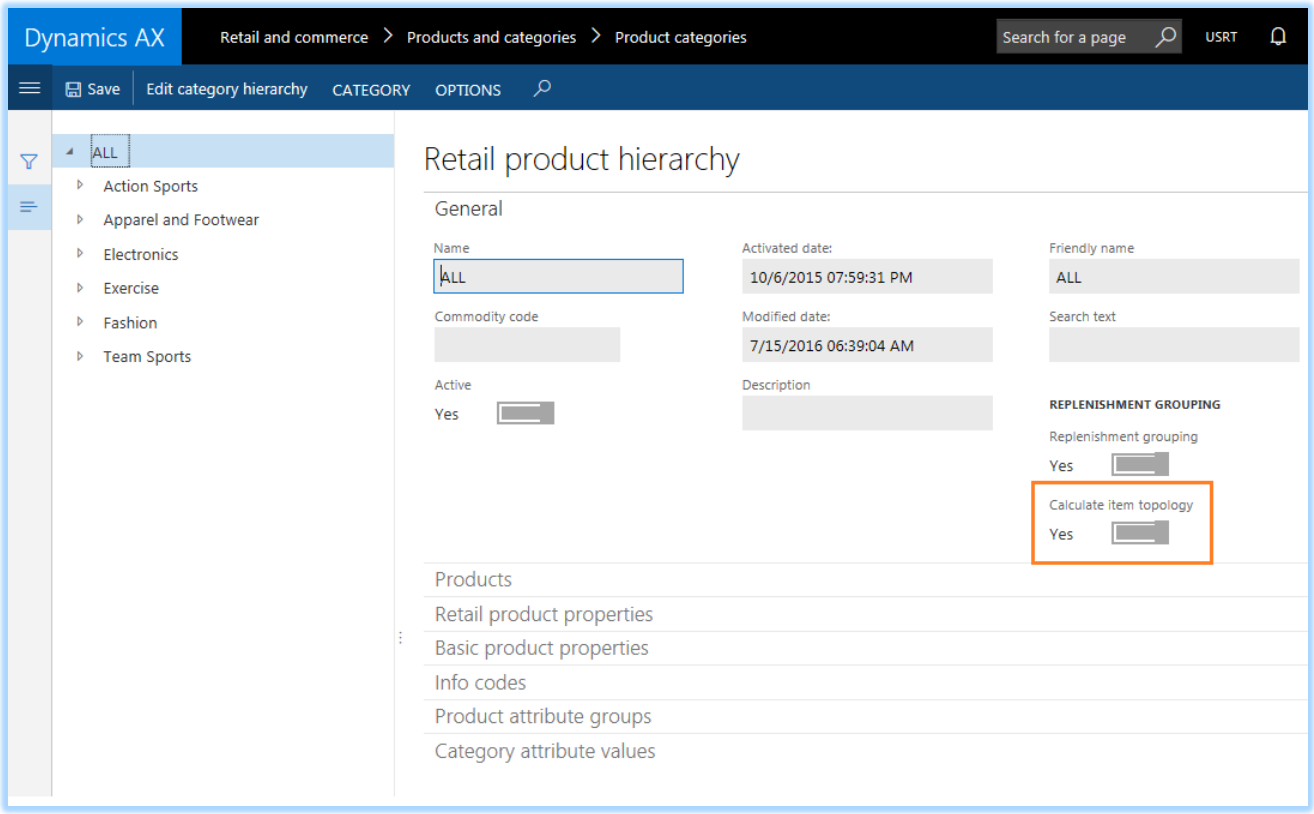
©2018 Avanade Inc. All Rights Reserved.

5.4.5 Enabling 'Calculate Item topology check box' in on Retail Product Hierarchy

a) Enabling the 'Item Topology' check box in the Retail product hierarchy form (General fast tab) to Identified Category during Item Topology calculation. If the user enables check box 'Item Topology' at the parent category level, while running this batch process, the system will update the Item Topology for all products Under Parent Category.

b) Item Topology check box is not editable at Sub products category if the Item topology check box is marked at Parent Category. However, the system will update the Item Topology for all products Under Parent Category.

c) If the user selects "Item topology" at sub category level, the system will update the Item Topology for all products Under Sub category only.



Path: Retail and commerce-> Product and categories -> Product categories

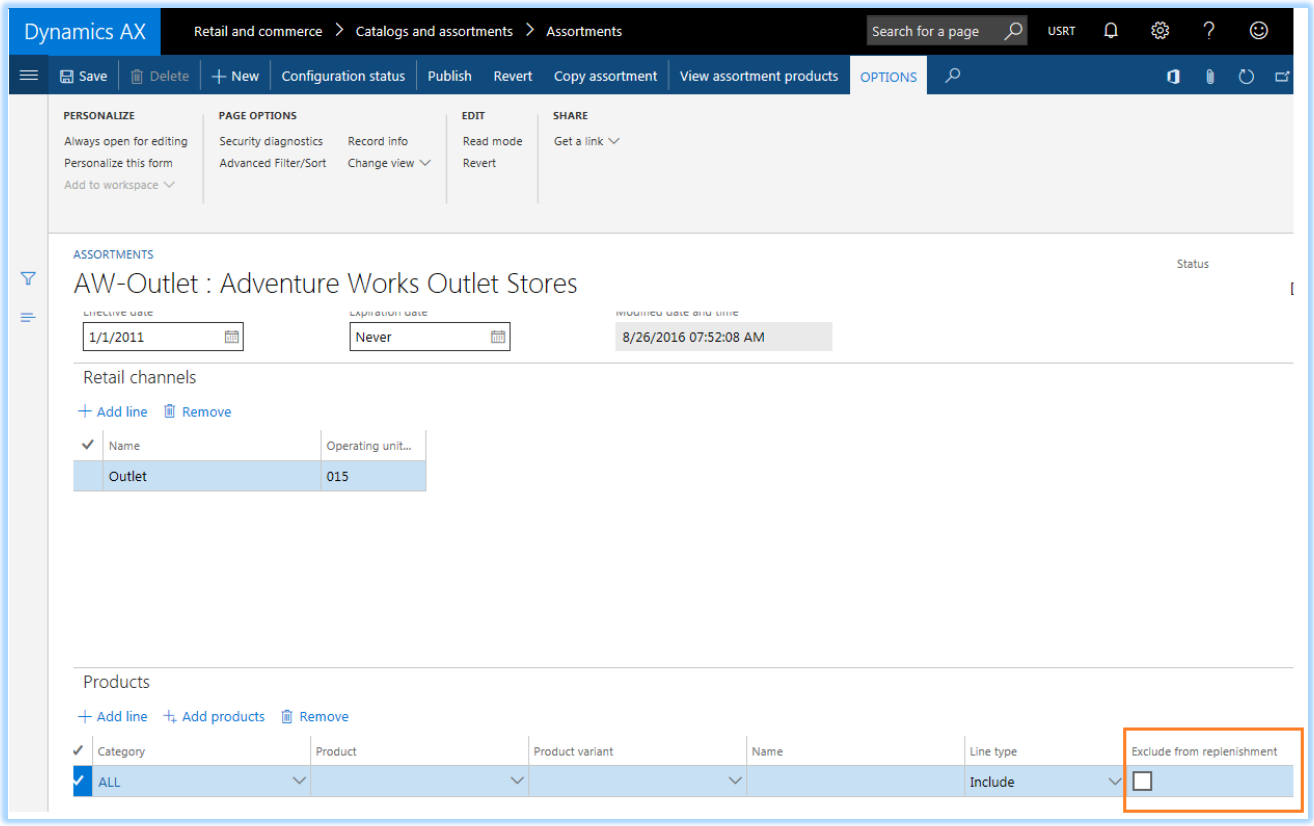
Note: For more details about Item Topology calculation, refer section: 5.5.7

©2018 Avanade Inc. All Rights Reserved.

5.4.6 Enabling 'Exclude from Replenishment check box' on Product categories during Assortment creation.

a) A new checkbox 'Exclude from Replenishment' has been provided on Assortment form to exclude the items/products categories from Replenishment order process.

b) If the Store manager want to block any product or group of products from the advanced store replenishment order generation process. He can enable this 'Exclude from Replenishment" in Assortment form.

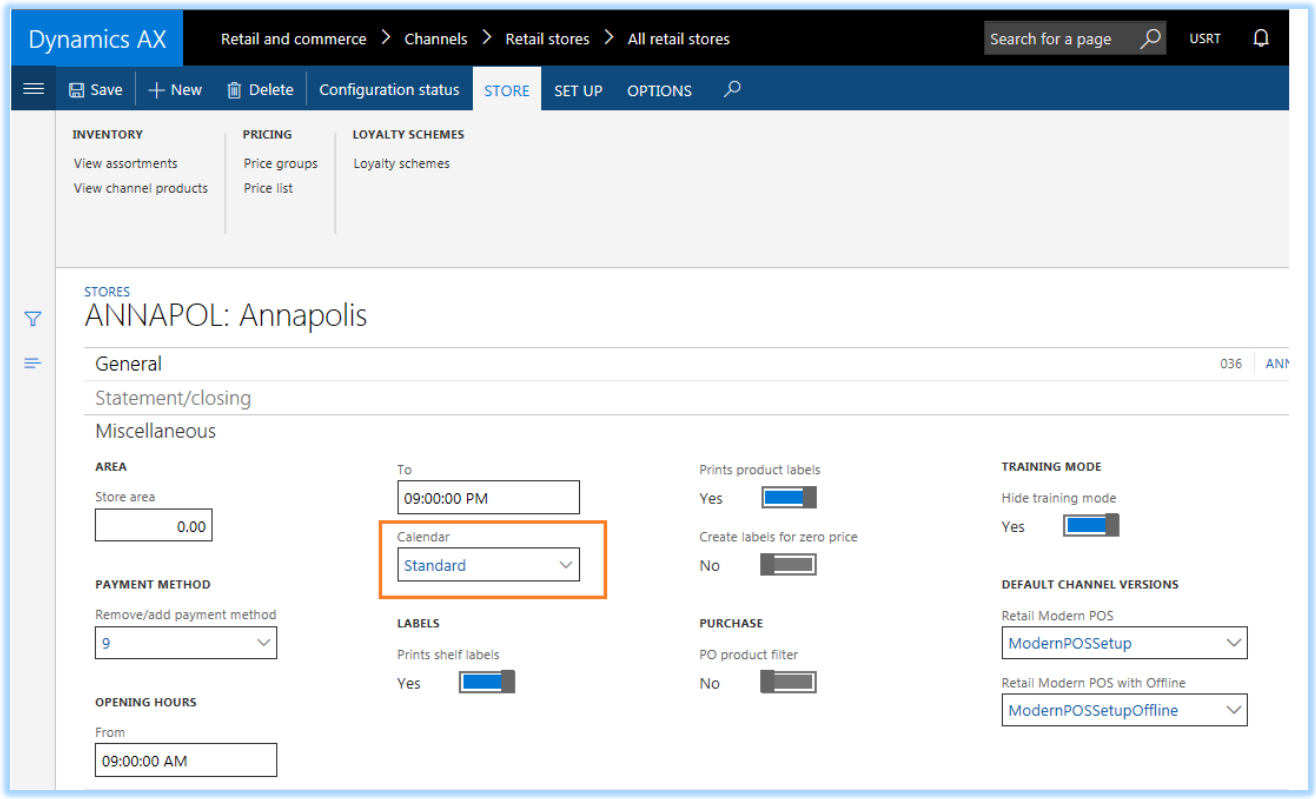


Path: Retail and commerce -> Catalogs and assortments -> Assortment

avanade
©2018 Avanade Inc. All Rights Reserved.

5.4.7 Attaching Store Calendar to Retail Store

a) New option 'Calendar' has provided on Retail stores form→ miscellaneous fast tab to attach Store Calendar to Retail Store. This is an important setup to link the store calendar to Retail store.
b) The User should create the store calendars in Calendars form (Path: Organization Administration→ Calendars→ Calendars form).
c) The User can create Store calendar specific to one Retail store or same calendar can be used for all stores, and Store calendar are creating based on location, seasonality, Store open days/Closing and etc.
d) The System will consider 'Store calendar' Open days and closing days, while calculating Corrected Average sales (CAS), coefficients like day of week(CSS), Seasonal (CES), weekly trend(CTSA) etc.



Path: Retail and commerce→ Channels→ Retail stores→ All retail stores

©2018 Avanade Inc. All Rights Reserved.

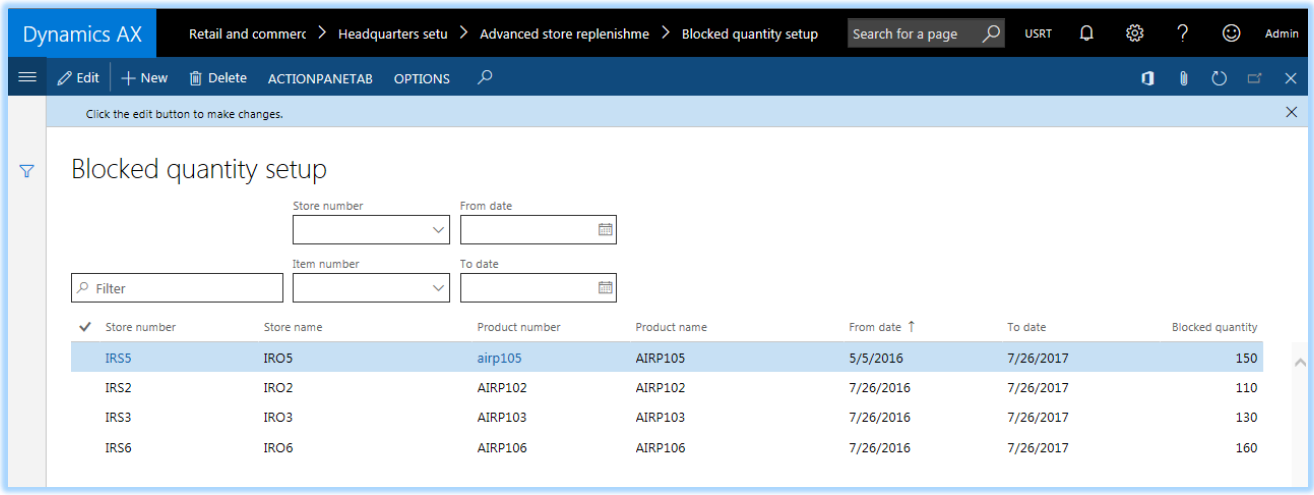
5.4.8 Blocked quantity setup

Blocked Quantity is an additional sales quantity on which the order is calculated, that under special circumstances should be taken into account at the moment of supplying the item.

If the record is created in blocked quantity form with specified period (i.e. Start date and End date), then the system should add to the sales forecasted quantity calculated by the system, while generating replenishment order to arrive the final suggested Order quantity, before procuring the goods.

Key points:

a) Define the blocked quantity for the Item and Store combination
b) There will be one valid record should be existing for specified period.
c) The System will add this blocked quantity to sales forecasted quantity till the period exist, while generating replenishment order.

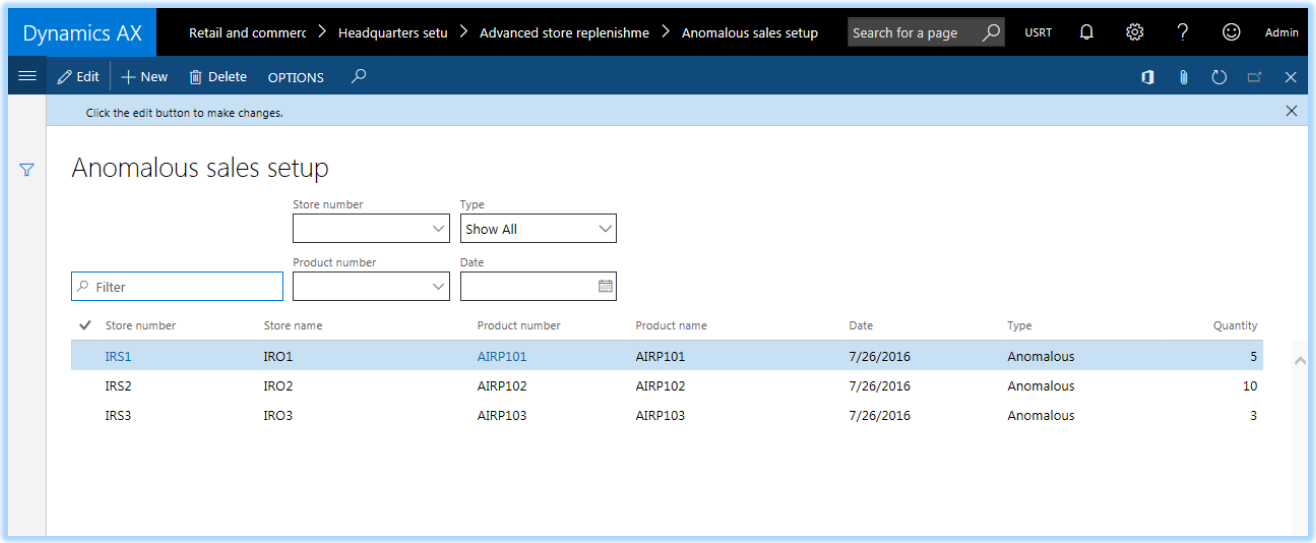


Path: Retail and commerce-> Headquarters setup -> Advanced store replenishment -> Blocked quantity setup

avanade
©2018 Avanade Inc. All Rights Reserved.

5.4.9 Anomalous sales setup form

a) The User can create 2 types of records in the Anomalous sales setup form as below.
   ➔ Anomalous
   ➔ Stock Out
b) Create Anomalous sales records per item- Store –date combination manually.
c) But Stock out records can be created manually and can be created using batch process also from the following Path: Retail and commerce➔ Advanced store replenishment ➔ Periodic ➔ Identify Item Stock out batch process also.



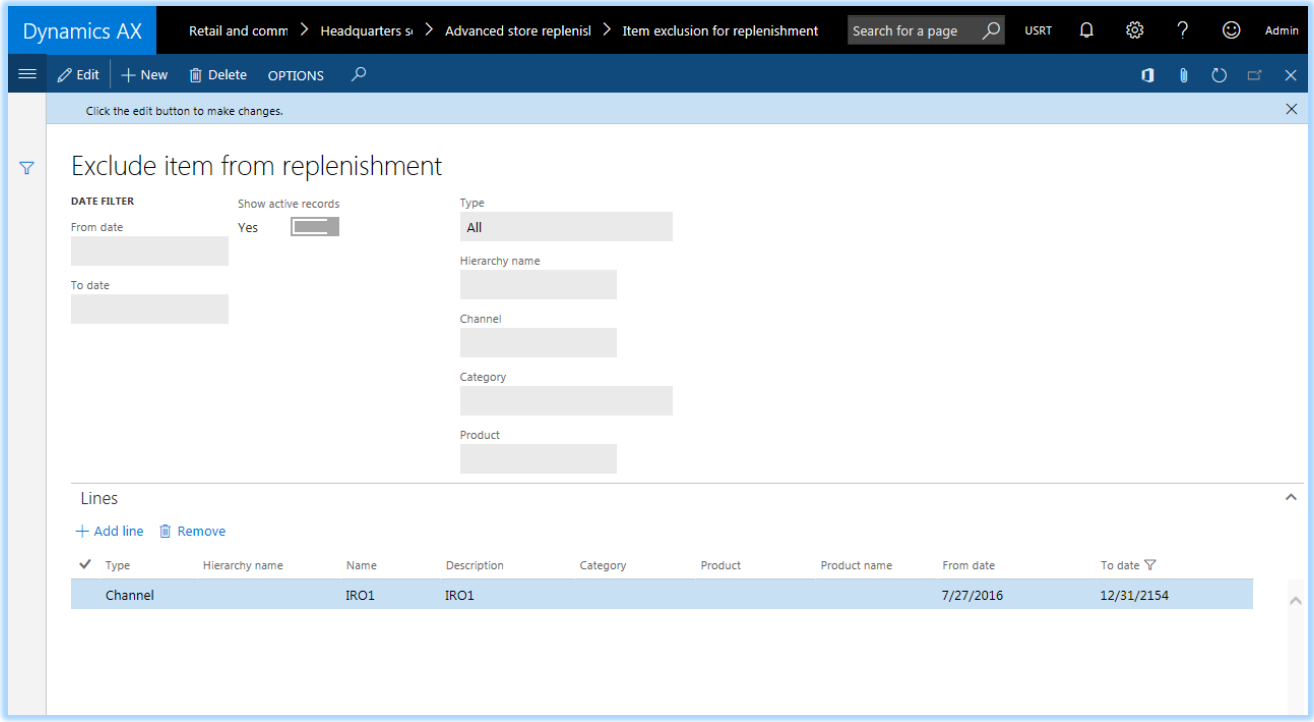
Path: Retail and commerce -> Headquarters setup -> Advanced store replenishment -> Anomalous sales setup

©2018 Avanade Inc. All Rights Reserved.

5.4.10 Item exclusion for Replenishment

a) Create a record in "Item exclusion from Replenishment' form to exclude the items/products categories/whole store products from Replenishment order process.
b) The user can create records in Items exclusion from replenishment form using the below combinations

- ➔ Replenishment hierarchy (Group of stores)
- ➔ Store
- ➔ Store- Category
- ➔ Store-Category-Products



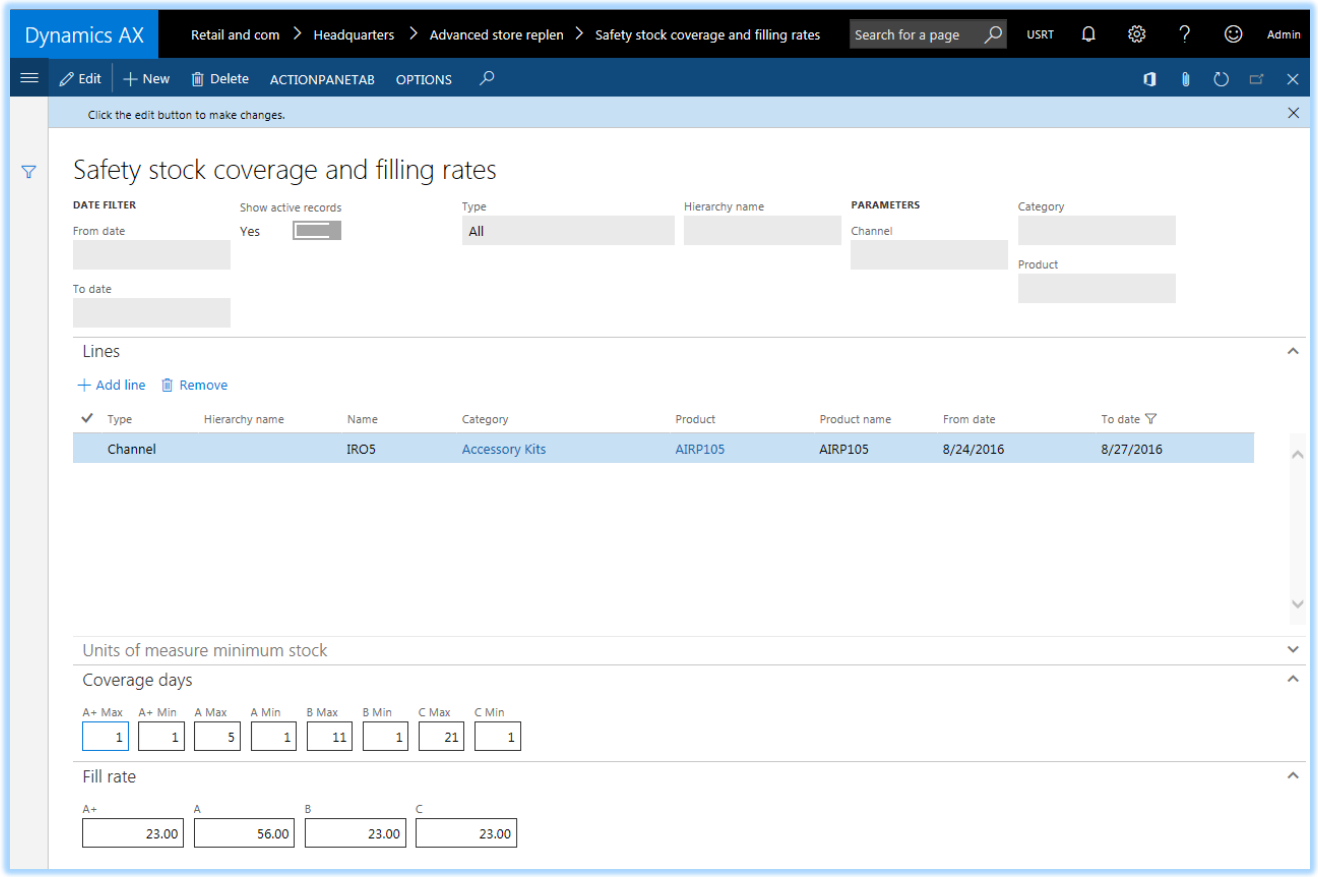
Path: Retail and commerce -> Headquarters setup -> Advanced store replenishment → Item exclusion from replenishment

©2018 Avanade Inc. All Rights Reserved.

5.4.11 Safety stock coverage and filling rates form

a) The user must create the records in safety stock coverage and filling rates form, before calculating Safety stock
b) The user can create records in using the following combinations
   ➔ Replenishment hierarchy (Group of stores)
   ➔ Store
   ➔ Store- Category
   ➔ Store-Category-Products
c) All the fields in Safety stock coverage and filling rates are mandatory, the user must set values in all fields like Units, Maximum coverage days, Minimum coverage days (A+,A,B,C), Filling rates to calculate the safety stock
d) Shelf capacity value should be defined at product level

Path: Product information management→ Products→Released products form→ Advanced store replenishment fast tab→ Shelf capacity



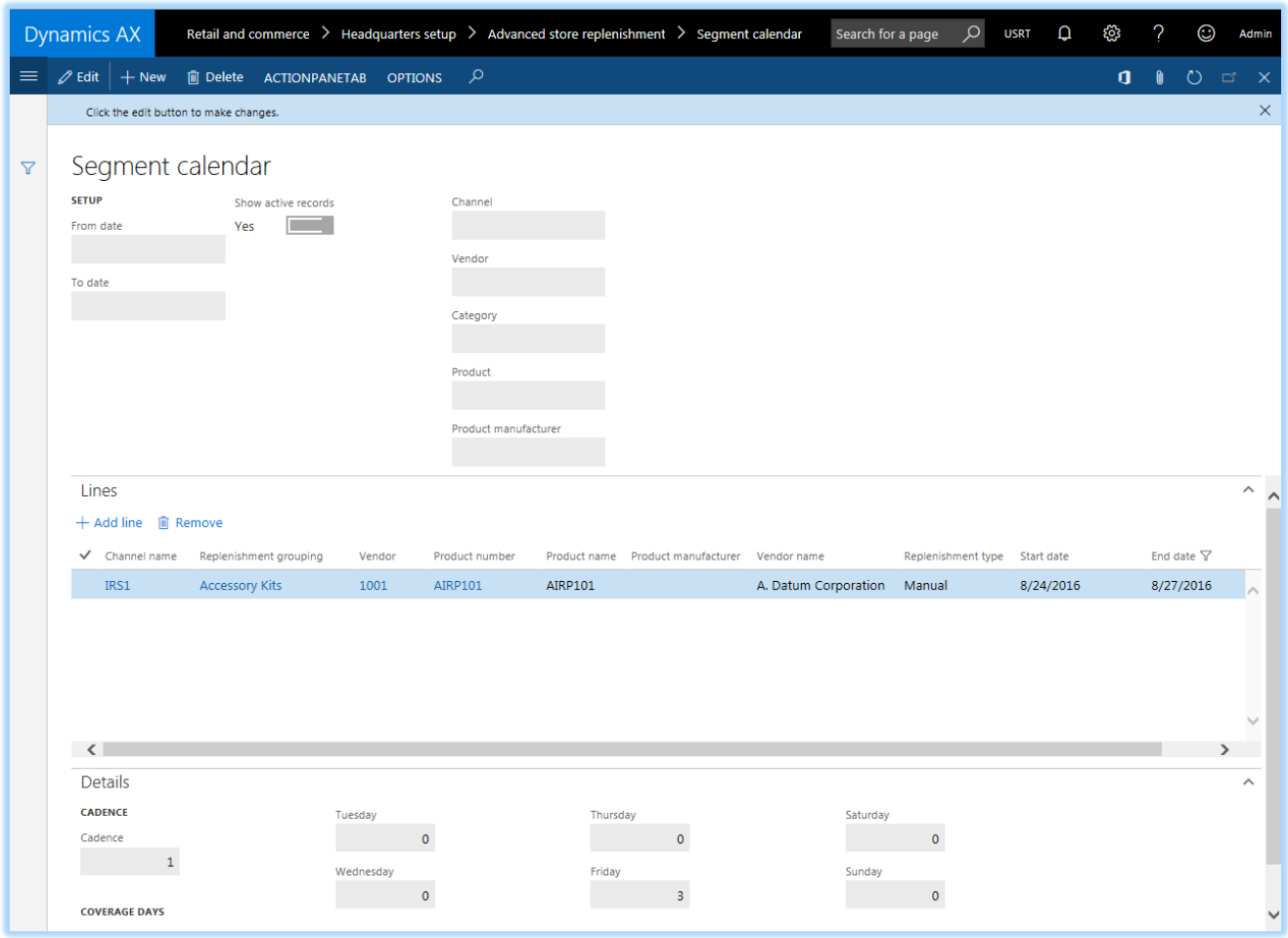
Path: Retail and commerce -> Headquarters setup -> Advanced store replenishment -> Safety stock coverage and filling rates

avanade
©2018 Avanade Inc. All Rights Reserved.

5.4.12 Segment Calendar

Navigate to the path

Retail and commerce -> Headquarters setup -> Advanced store replenishment -> Segment calendar



a) Generally, Segment form maintains the Vendors/ Suppliers goods delivery schedule information
b) The segments/calendar can be entered/edited manually
c) The Segment information will be maintained in the following combinations.
   - ➔ Per Store- Vendor- Manufacturer
   - ➔ Per Store-Vendor-Replenishment group(category)- Manufacturer
   - ➔ Per Store-Vendor-Replenishment group(category)- Manufacturer- Product
   - ➔ Per Store- Vendor
   - ➔ Per Store-Vendor-Replenishment group(category)
   - ➔ Per Store-Vendor-Replenishment group(category)- Product

d) The segments define the order day and delay in the delivery that the supplier has. With these parameters, it is possible to calculate when a created order will be received in a particular date (delay) and when the next order will be made (order days)

avanade
©2018 Avanade Inc. All Rights Reserved.

e) the provisioning period of each segment should be calculated based on the (P1-> R2-1) (i.e. Provisioning period should the delay/Delivery time between First order day and Second delivery day)

- ➔ P1 : First order day
- ➔ R1: First Delivery day
- ➔ P2: 2nd Order day
- ➔ R2: 2nd Delivery Day

f) Order day (P1) should be included in Provisioning period, while calculating provisioning period days

g) The System will calculate and arrive the Sales forecasting Quantity based provisioning period of the segment. This Provisioning period (Delivery information) is very important/crucial to calculate forecast quantity based on (P1-> R2-1) per Vendor Segment.

h) The System will calculate the Sales forecasting Quantity per each day for entire provisioning period of the segment, using the CADENCE functionality.

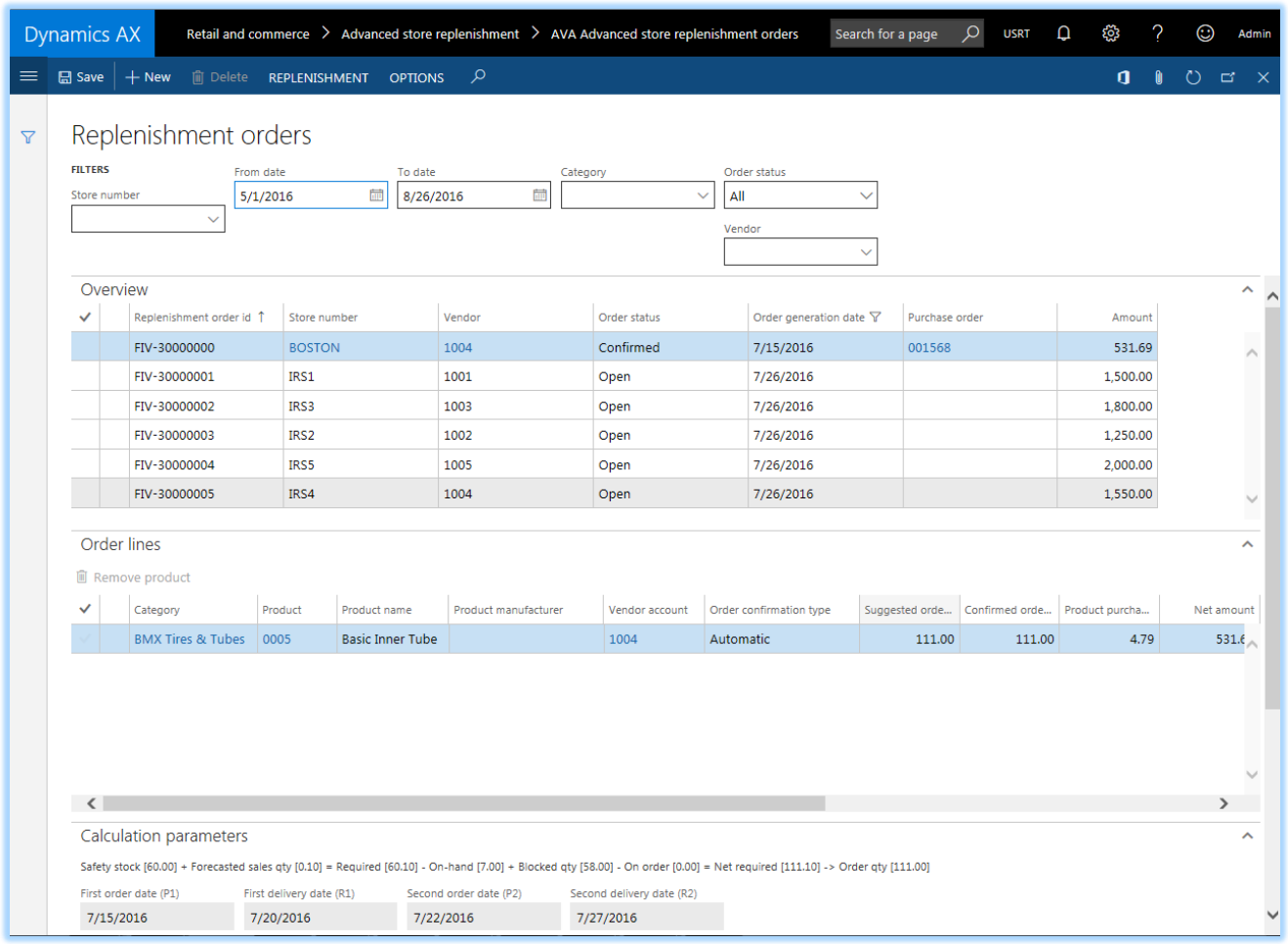
i) The system must consider order CADENCE, which allows orders cycles larger than weekly. It means:

- ➔ If cadence is 1, then, the order will be every week.
- ➔ If cadence is 2, then, the order will be each two weeks.
- ➔ If cadence is 3, then, the order will be each three weeks.
- ➔ If cadence is 4, then, the order will be each four weeks (monthly)

j) Provisioning Period Coverage lines in Replenishment order form, after sales forecasting quantity calculation per store-Vendor- Item.

k) Coverage lines should not be created, If the Store is closed/ Declared as ' Holiday'

©2018 Avanade Inc. All Rights Reserved.



5.4.13 Setting up Nominal quantity and shelf capacity for all products on Released products list page.

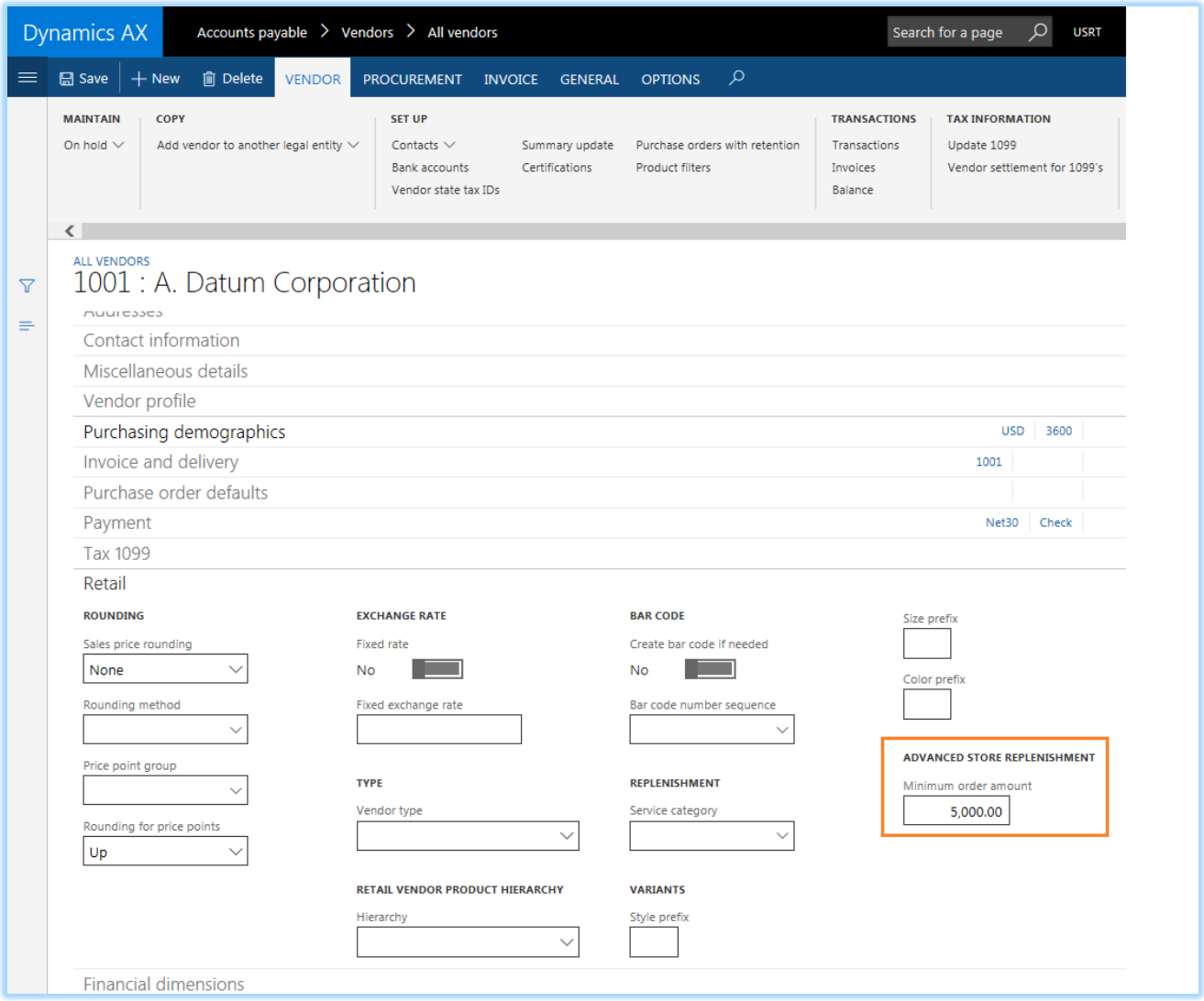
a) Nominal Quantity: This functionality Allows quantities of different UOM to be summed based on the same nominal quantity. Currently, the Nominal quantity factor should be considered in Corrected average, Weekly trend, Item topology, Seasonal coefficient, day of week coefficient calculations.
b) The System set default value for "Nominal quantity factor' as: 1. however the user can set any value in Nominal quantity factor field apart from '0.
c) Set field 'Shelf capacity' per Store-item, which will used for 'Safety stock' calculation.

Path: Product information management→ Products→Released products → Advanced store replenishment fast tab→ Shelf capacity and Nominal Quantity factor.

avanade
©2018 Avanade Inc. All Rights Reserved.

5.4.14 Setting up Vendors Minimum Order limit

a) Define the 'Minimum Order limit' threshold for every Vendor/Supplier to validate the Vendor order limit with Replenishment order amount.
b) The system will validate the "Vendor minimum order limit' conditions, while creating Replenishment orders and purchase orders per store- vendor.



Path: Accounts Payable→ Vendors→ All Vendors→ Retail fast tab

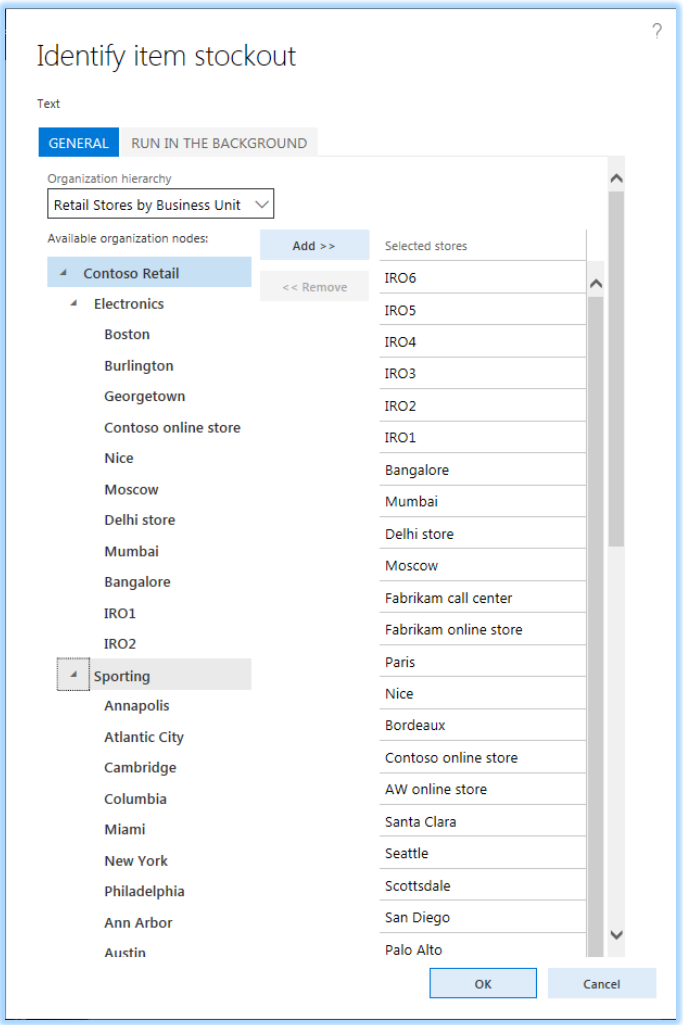
avanade
©2018 Avanade Inc. All Rights Reserved.

5.4.15 Identify Item Stock out days

A separate batch process for checking current on hand daily and create a record in the anomalous form for that day. For identifying the stock out the store must be open and the item should be out of stock. The On hand of Item should be <= 0 (Less than or Equal). Batch job needs to have store option.

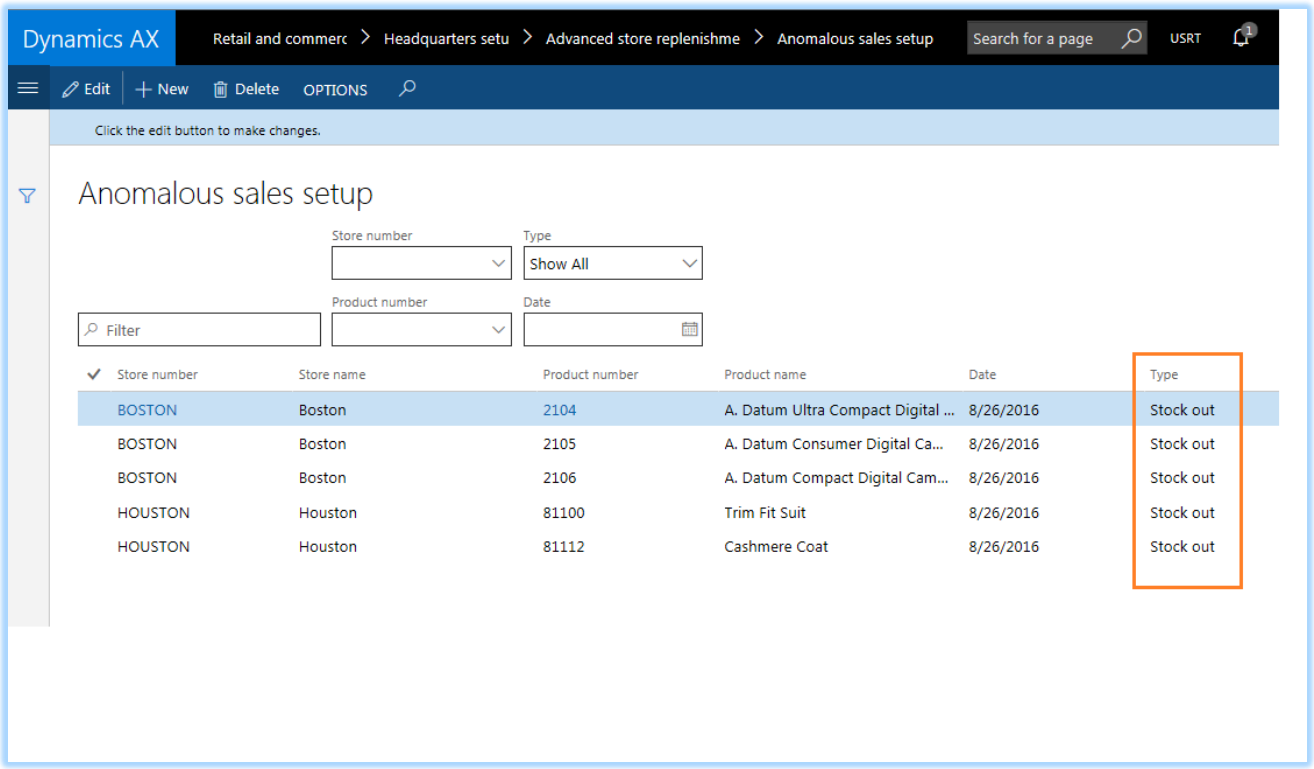
Identify Stock out batch process should be run daily, in order to generate stock out transactions. And the User can create stock out records manually also in the Anomalous sales setup form.

a) Navigate to the path: Retail and commerce→ AVA Advanced store replenishment→Periodic→ Identify item stock out
b) Select the stores from Available Organization nodes section, Move to Selected stores section
c) Click on "Ok"



d) Observe, new stock out records are creating in Anomalous sales setup form with type 'Stock out'

©2018 Avanade Inc. All Rights Reserved.



e) This Identify stock out batch process job should run daily, in order to find stock out days per item and stores.

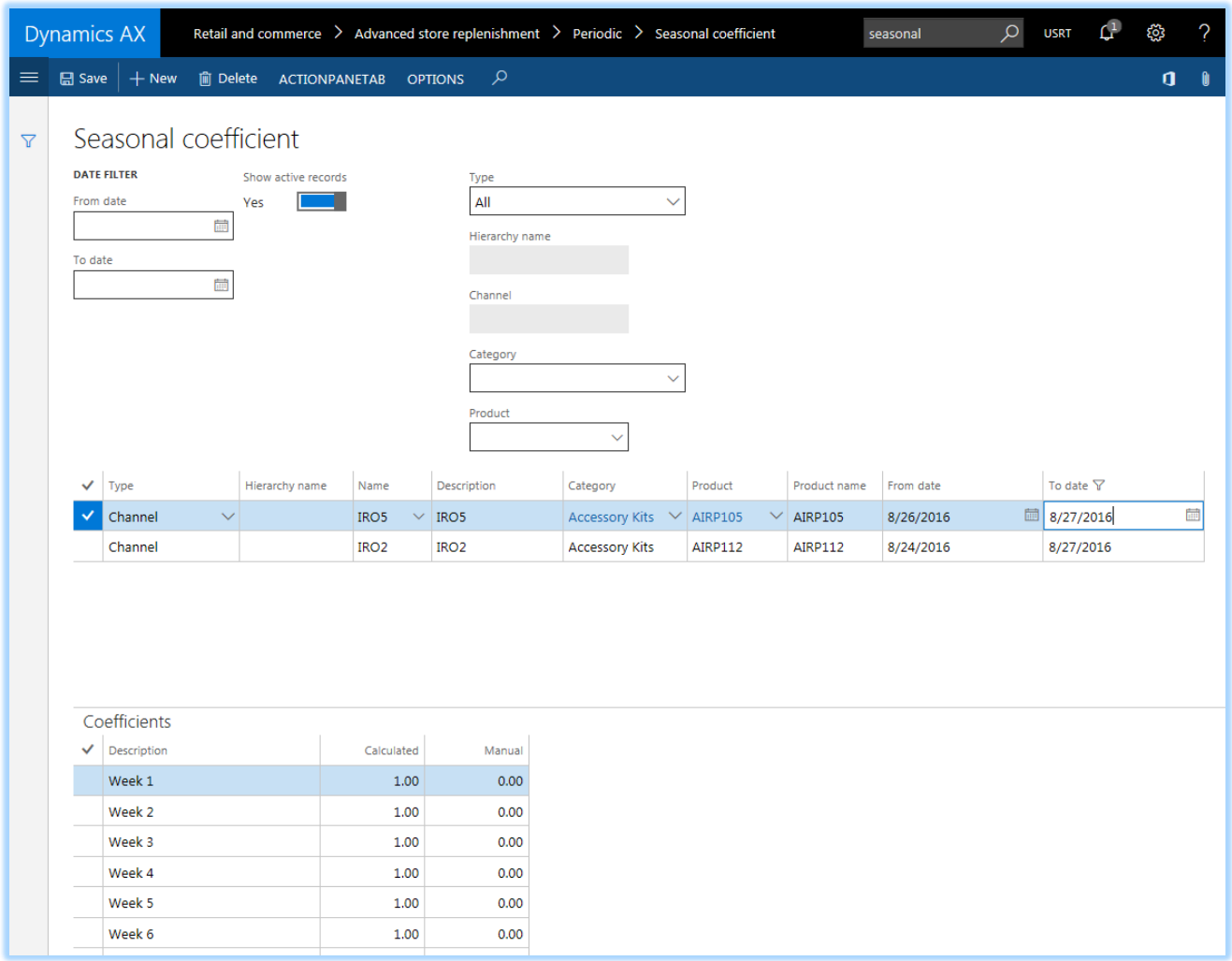
avanade
©2018 Avanade Inc. All Rights Reserved.

5.5 Coefficients & Other calculations

After the initial setup we must calculate the coefficients

5.5.1 Seasonal coefficient calculation

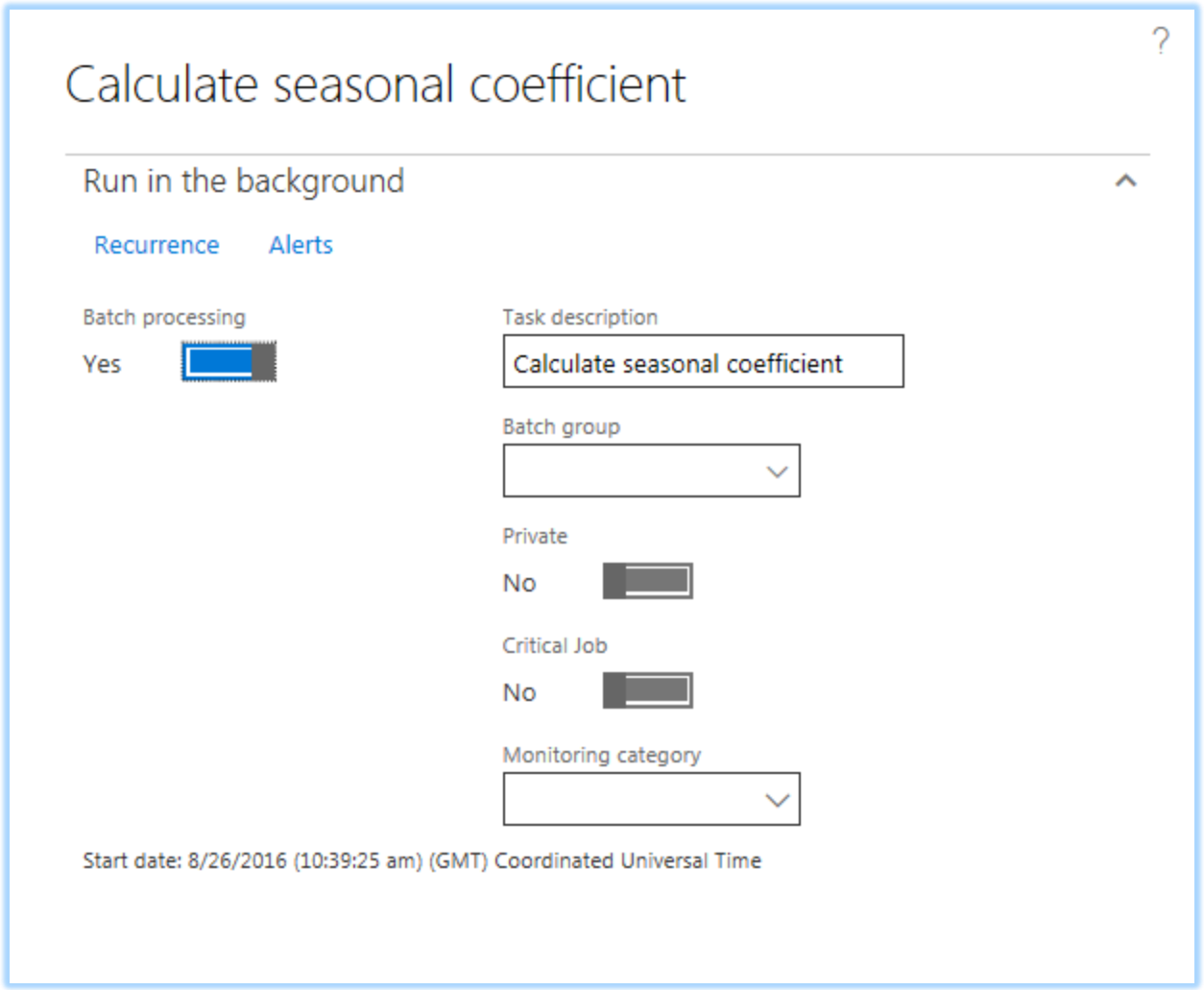
a) Define the profiles in Seasonal coefficient form as per below screen shot per Store-Replenishment group-product combinations.



Path: Retail -> AVA Advanced store replenishment -> Periodic -> Seasonal coefficient

b) The system will update the Seasonal Coefficient value as 1.00 by default in calculated field. and Manual field as "0.00"
c) Click on "Calculate" button.
d) New calculate form is opened

©2018 Avanade Inc. All Rights Reserved.

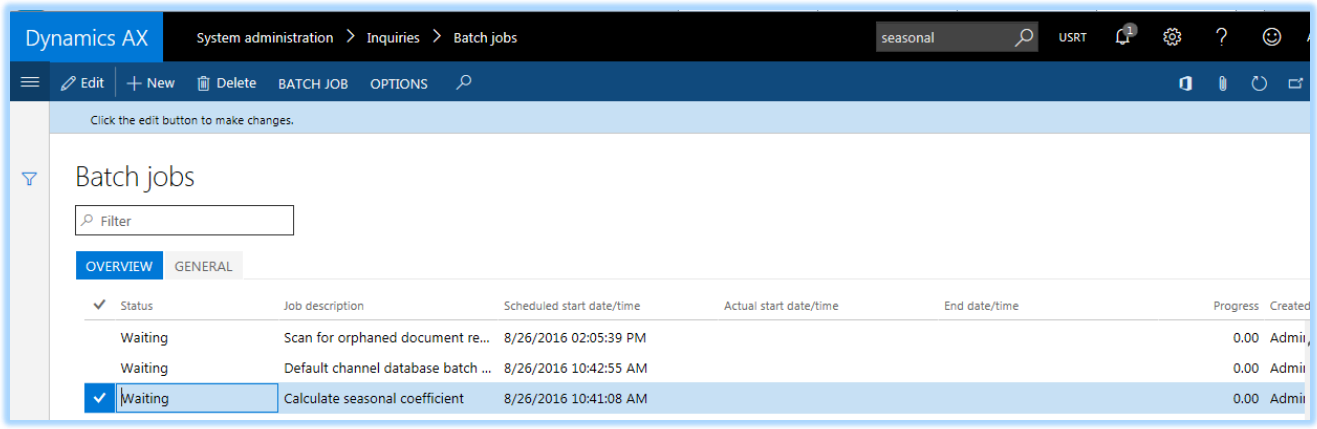


e) The user can calculate Seasonal coefficient, manually and also through batch process.

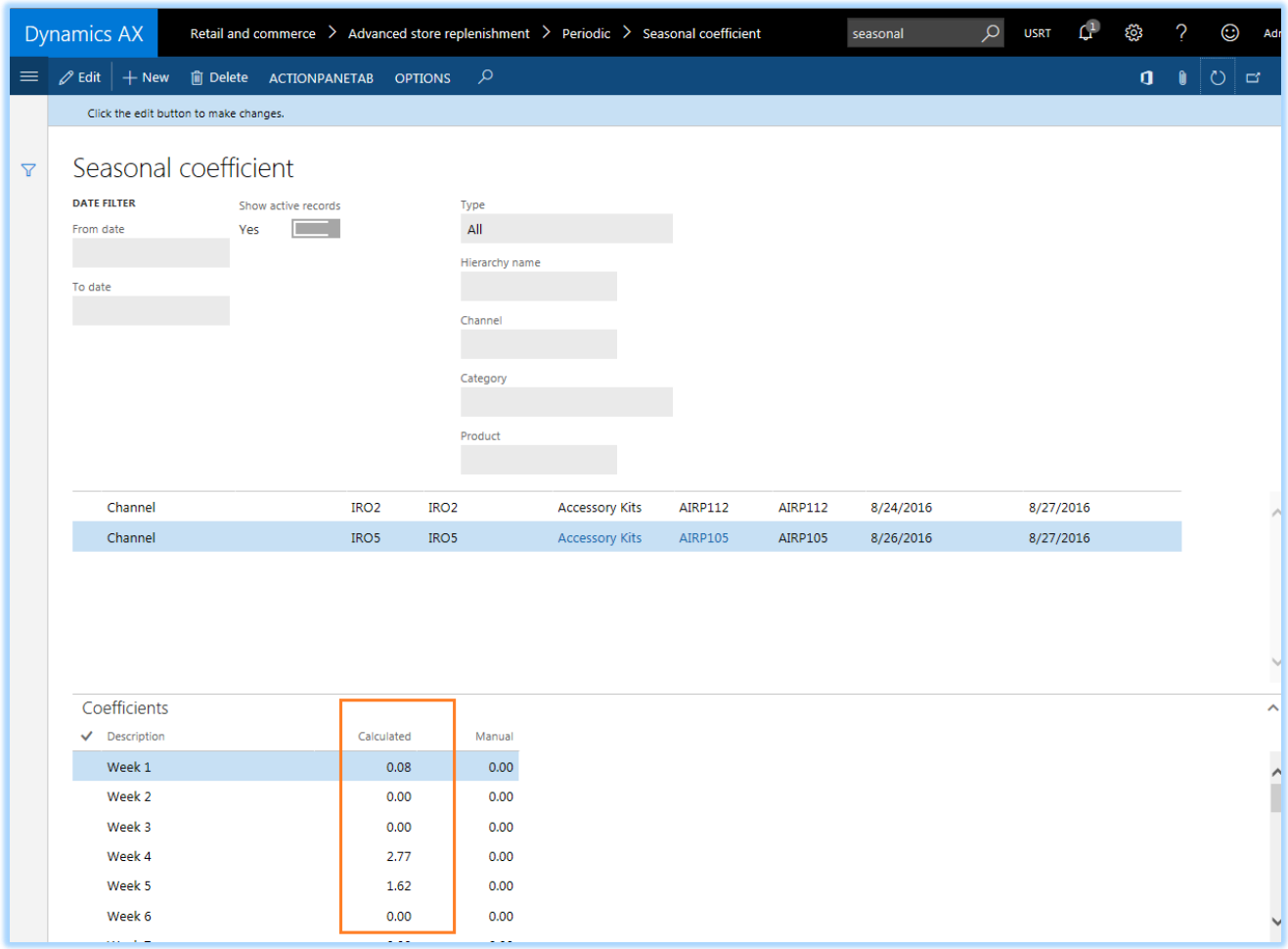
Note:-If the user wants to calculate Seasonal coefficient value, manually they can uncheck the 'batch processing' check box.

f) Batch process status of the selected record can be verified in Batch process form (Path: System administration/Inquiries/Batch jobs).

avanade
©2018 Avanade Inc. All Rights Reserved.



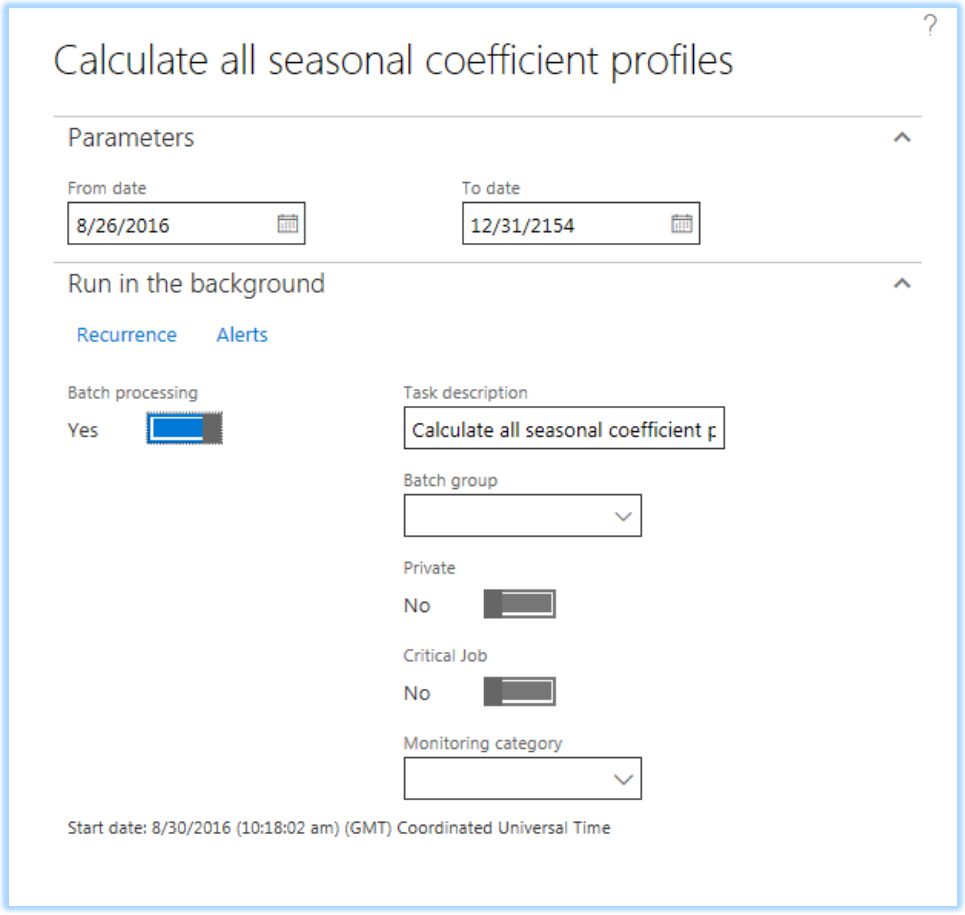
g) Once the batch process is completed, the system will update the seasonal coefficient (CES) values in 53 respective weeks' fields.



h) All the active profiles in Seasonal coefficient form can be calculated both manually by selecting all profiles and click on "Calculate" button OR Through the batch process also from the following path:

avanade
©2018 Avanade Inc. All Rights Reserved.

Retail and commerce → AVA Advanced store replenishment → Periodic→ Calculate all Day of coefficient profiles periodic batch process form.

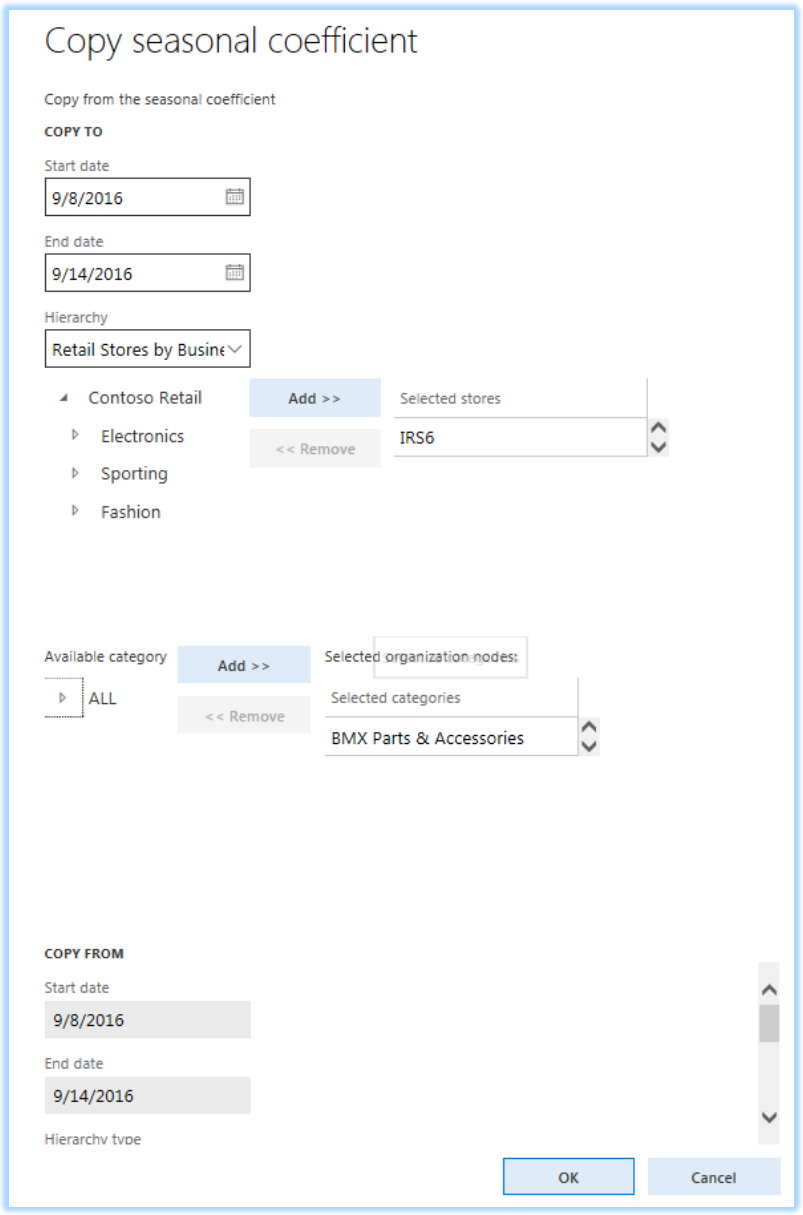


i) The user can calculate all the created profiles in Seasonal coefficient at a time by selecting all profiles.
j) Coefficient Calculated: - It will be the value calculated by the system. The field will not be editable
k) Manual (Coefficient Override): - The value by default is 0. The field will be editable. The validation will be the same as nowadays are in the current "Coefficient value
l) The system will use the value of the "Coefficient calculated", unless the user has introduced a value on the column "Coefficient Override"
m) If the user setup any value (>.0.01) in 'Manual' field. The system should consider value in 'Manual' field during Forecast quantity calculation.
n) Negative coefficient value is not allowed in Seasonal coefficient form (i.e. The system is not allowed to set –value in 'Manual' field
o) Copy function: Using Copy option, the user can create new profiles and copy all the selected from Source profiles to newly create profiles.

p) **Copy function:** Using Copy option, the user can create new profiles and copy all the selected from Source profiles to newly create profiles.
d) Select Profile
e) Click on 'Copy' function

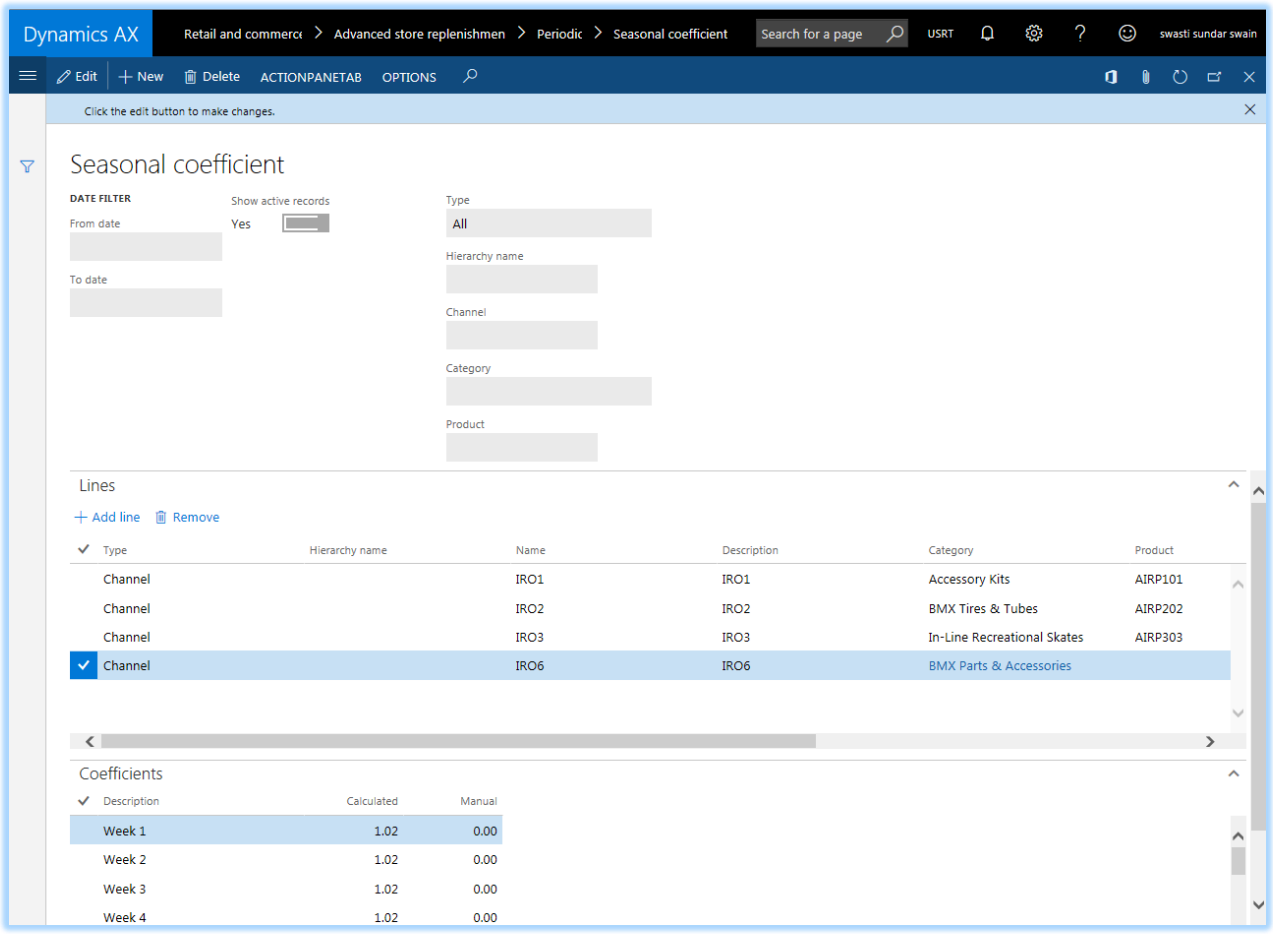
avanade
©2018 Avanade Inc. All Rights Reserved.

f) Copy Seasonal coefficient form is opened



g) Select the Store from Stores Hierarchy and move to Selected stores section as per above screenshot
h) Select category and move to selected category section as per screenshot.
i) Click on 'Ok' button
j) A new profile should be created
k) Remaining values like Start date, End date, and Coefficient values of 53 weeks are copied from source profile to newly created profile.

avanade
©2018 Avanade Inc. All Rights Reserved.

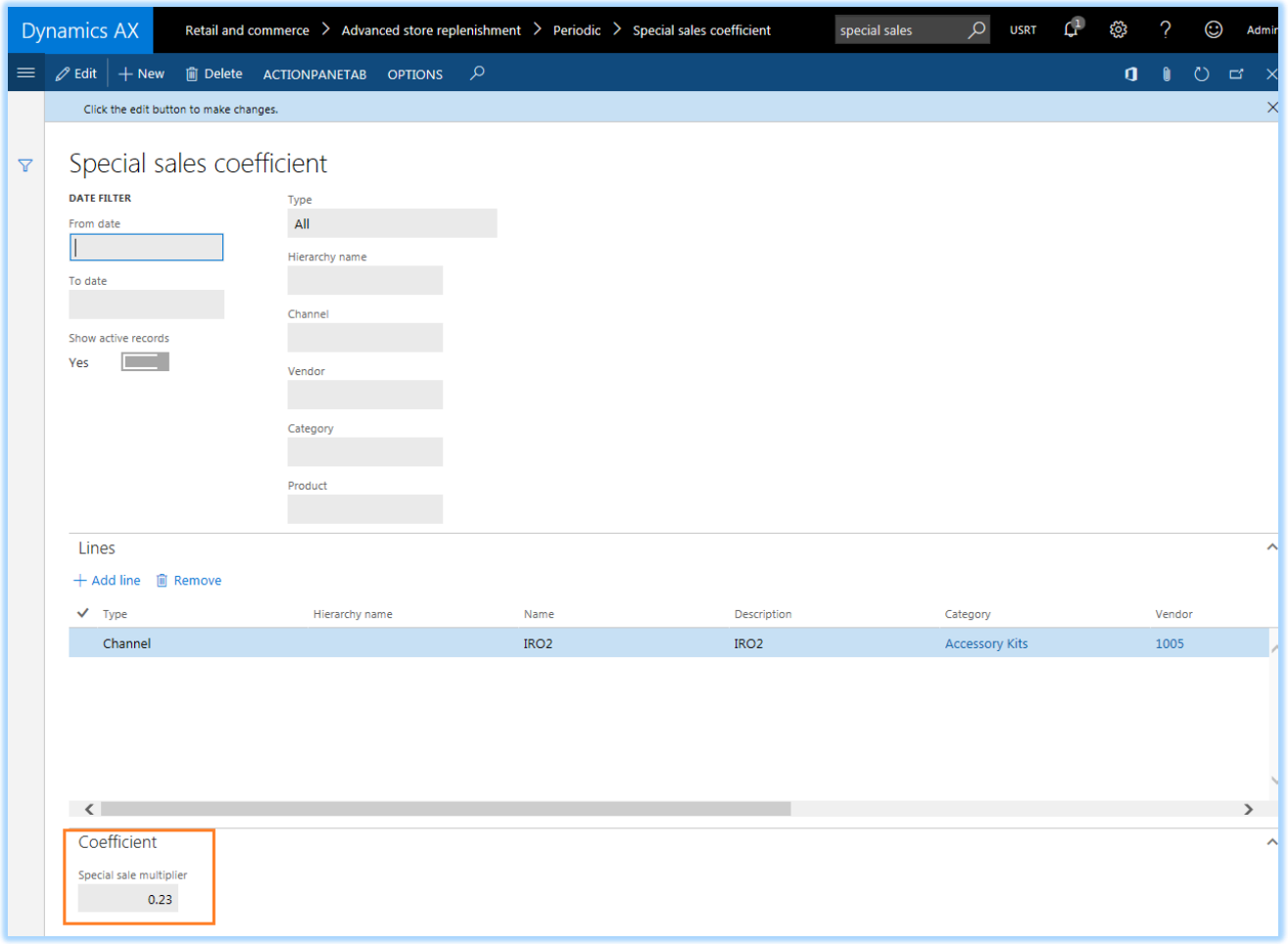


q) **Edi in Excel:** Using Edit in excel option, the user can create new profiles, edit & modify any fields in existing profiles and will update these details on Seasonal coefficient form through ' Publish' option.

5.5.2 Special sales coefficient setup and calculation

a) Define the profile in Special sale coefficient form
b) The User can define profiles in the following combinations
   - ➔ Replenishment Hierarchy (Group of Stores)
   - ➔ Channel(Store)- Vendor
   - ➔ Channel(Store)- Vendor-Replenishment group
   - ➔ Channel(Store)- Vendor-Replenishment group- Product
   - ➔ Channel(Store)- Replenishment group
   - ➔ Channel(Store)- Replenishment group- Product
c) Setup the value in "Special sales multiplier" field to consider the Sales coefficient value in Sales forecasting quantity calculation.
d) Negative value (<=0) is allowed to set in "Special sales multiplier" field.

avanade
©2018 Avanade Inc. All Rights Reserved.

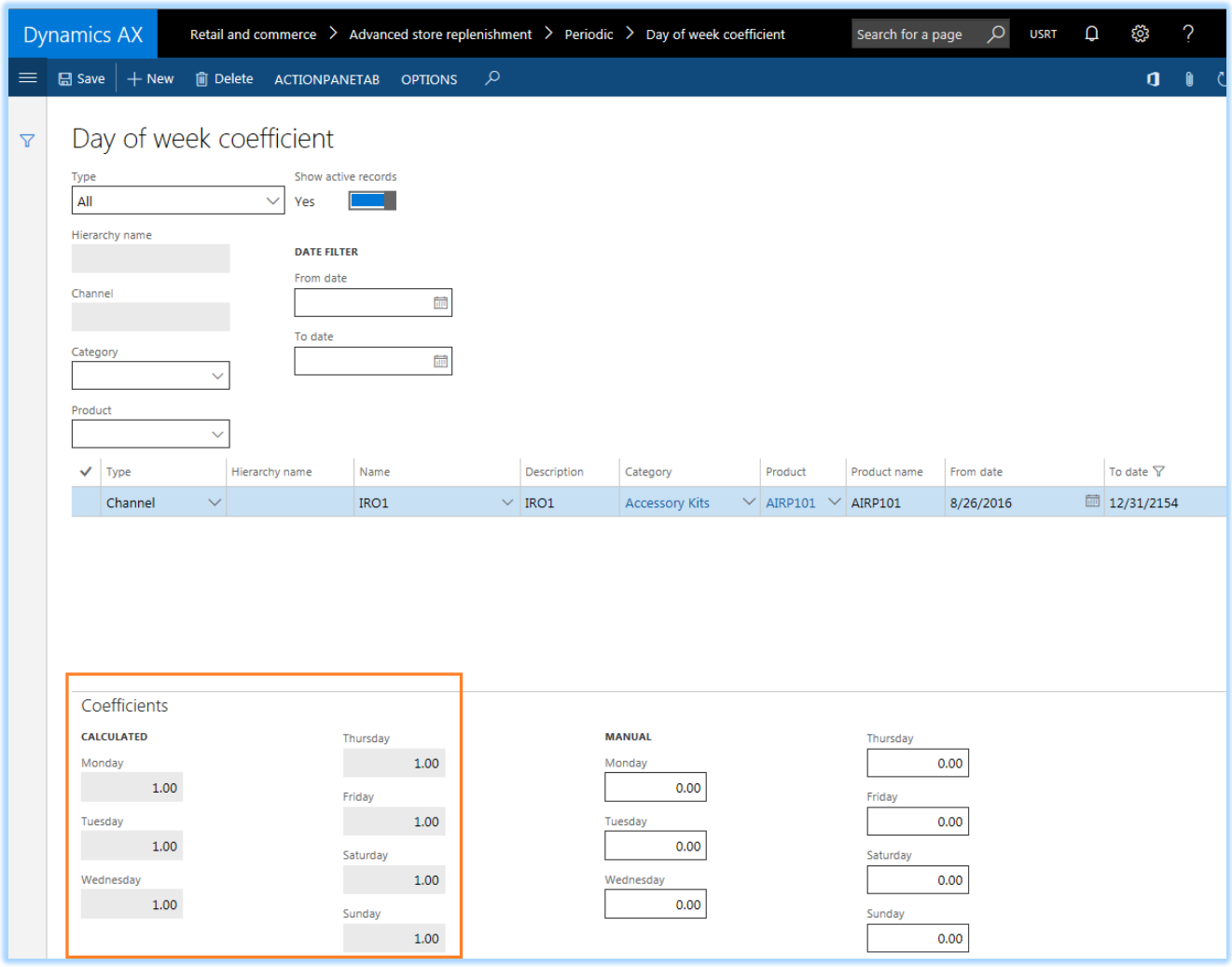


Path: Retail -> AVA Advanced store replenishment ->Periodic -> Special sales coefficient

©2018 Avanade Inc. All Rights Reserved.

5.5.3 Day of week coefficient calculation

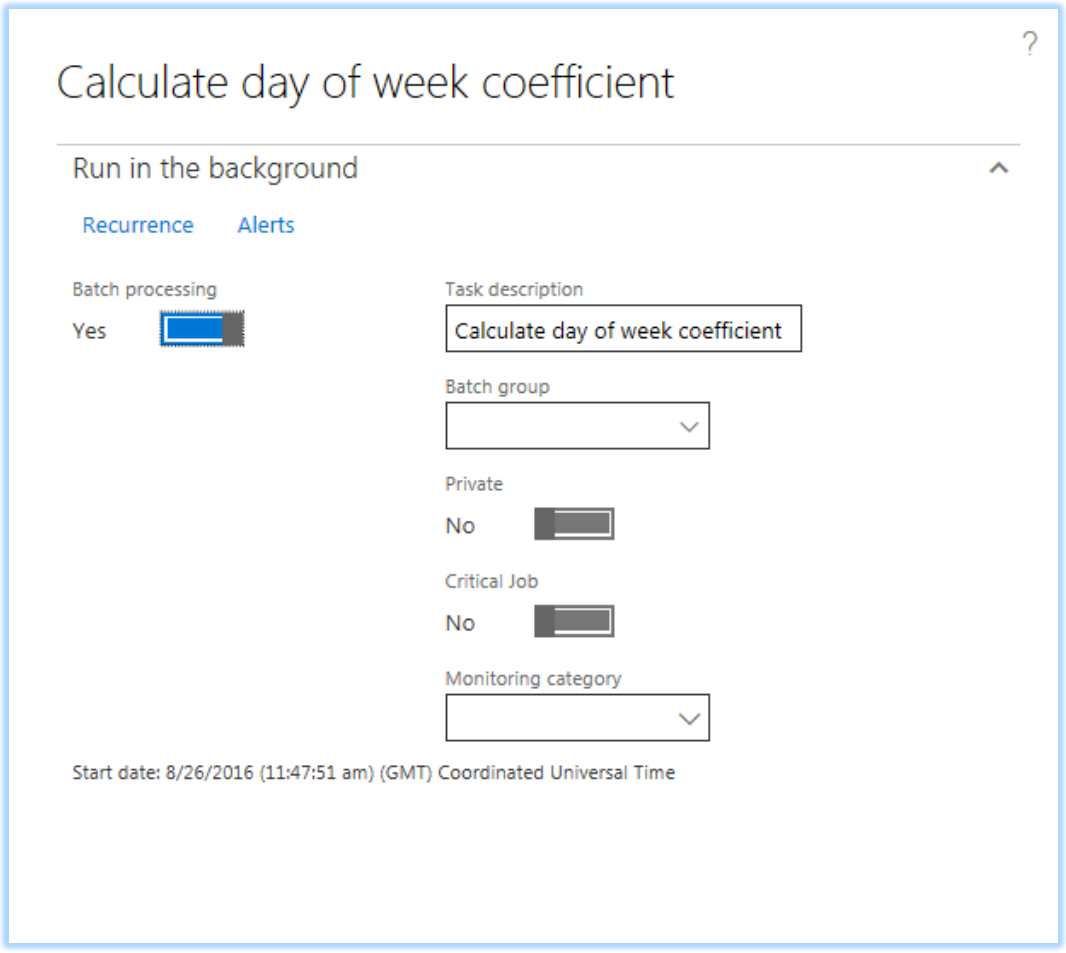
a) Define the profiles in Day of week coefficient form as per below screen shot



Path: Retail -> AVA Advanced store replenishment -> Periodic -> Day of week coefficient

b) The system will update the Day of week coefficient value as 1.00 by default in calculated field. and Manual field as "0.00"
c) Click on "Calculate" button.
d) New calculate form is opened

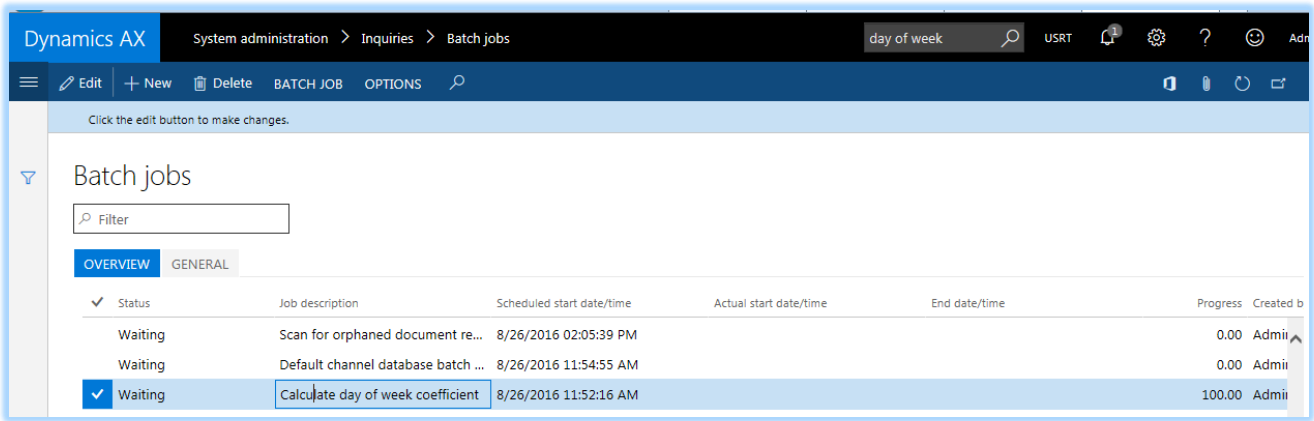
avanade
©2018 Avanade Inc. All Rights Reserved.



e) The user can calculate Day of week coefficient, manually and through batch process also.

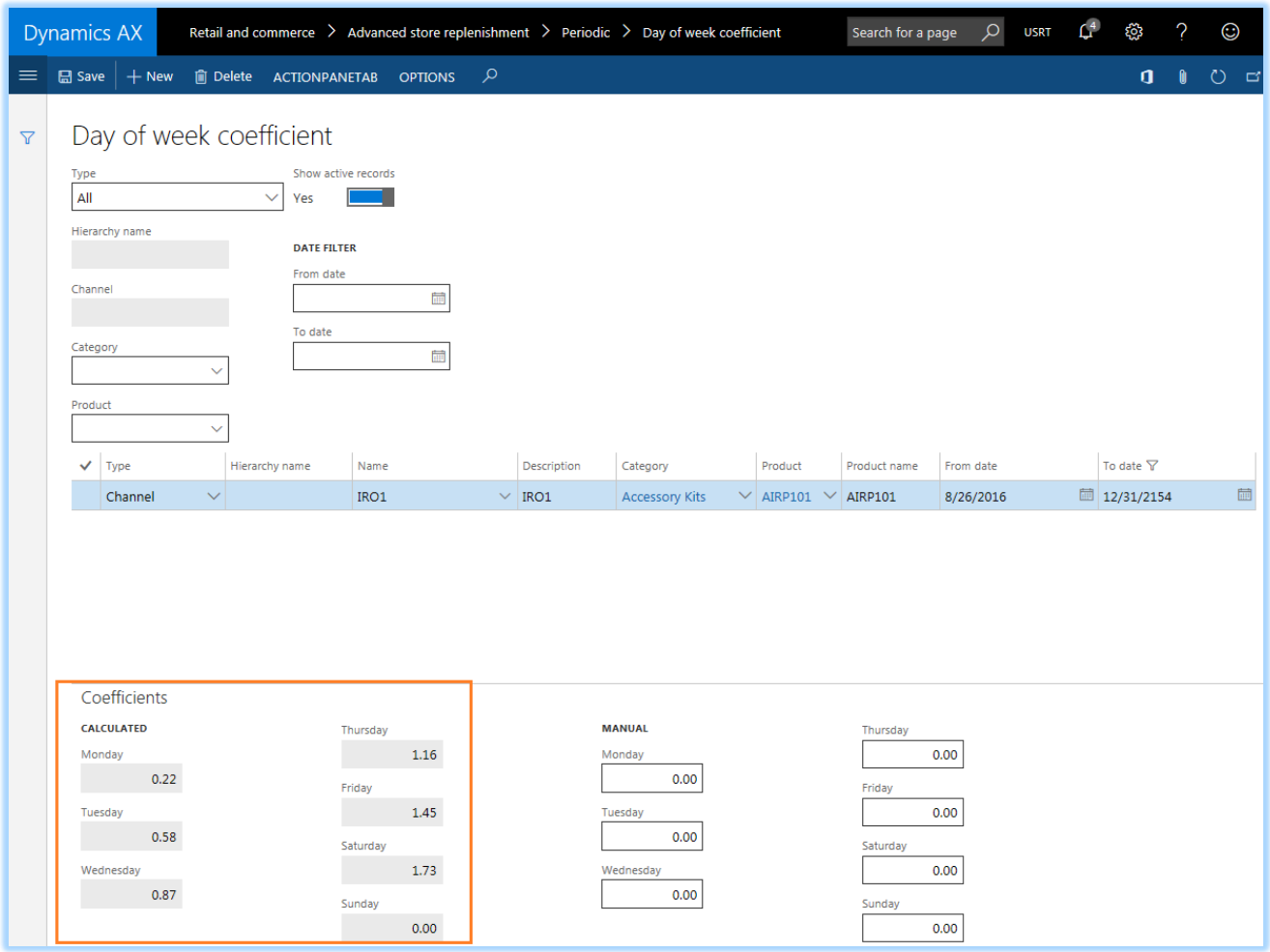
Note:-If the user wants to calculate Day of week coefficient value, manually. He can uncheck the 'batch processing' check box.

f) Batch process status of the selected record can be verified in Batch process form (Path: System administration/ Inquiries/Batch jobs).



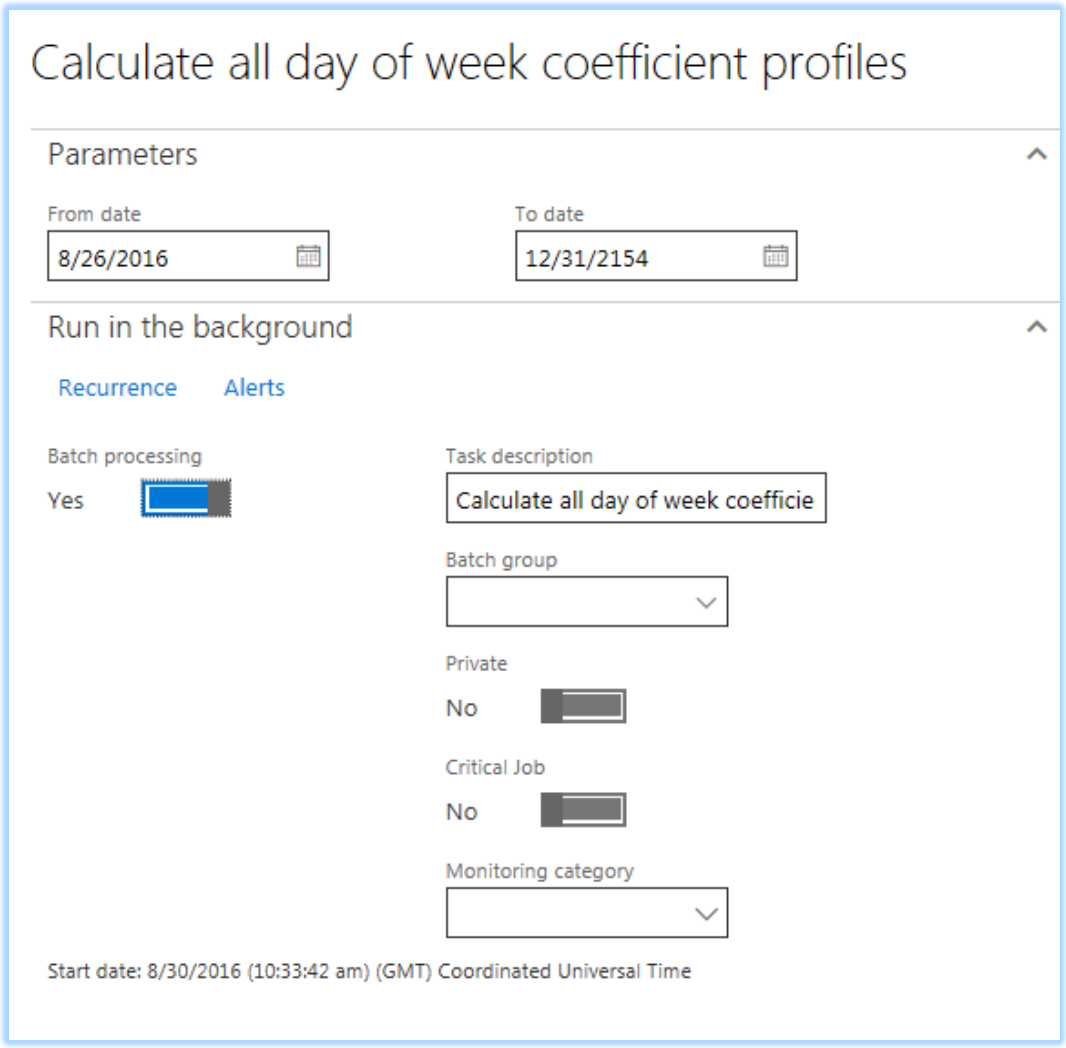
avanade
©2018 Avanade Inc. All Rights Reserved.

g) Once the batch process is completed, the system will update the Day of week coefficient value (CSS) in weeks days 'Calculated' fields as below.



h) All the active profiles in Day of week Coefficient form can calculate both manually by selecting all profiles and click on "Calculate" button OR through batch process also from the following path: Retail→AVA Advanced store replenishment→ Periodic→ Calculate all Day of coefficient profiles periodic batch process form).

©2018 Avanade Inc. All Rights Reserved.



i) The user can calculate all the created profiles in Day of week coefficient at a time by selecting all profiles.
j) Coefficient calculated: - It will be the value calculated by the system. The field will not be editable
k) Manual (Coefficient Override): - The value by default is 0. The field will be editable. The validation will be the same as nowadays are in the current "Coefficient value.
l) **Day of week Coefficient (CSS):** The system will consider the stores sales based on Store calendar open days and calculate the CSS accordingly. CSS value should be updated as 0.00, if that store closed on particular day.
m) The system will use the value of the "Coefficient calculated", unless the user has introduced a value on the column "Coefficient Override"
n) If the user setup any value (>=0.01) in 'Manual' field. The system should consider value in 'Manual' field during Forecast quantity calculation.
o) Negative coefficient value is not allowed in Seasonal coefficient form (i.e. The system is not allowed to set –value in 'Manual' field
p) Copy function: Using Copy option, the user can create new profiles and copy all the selected from Source profiles to newly create profiles.

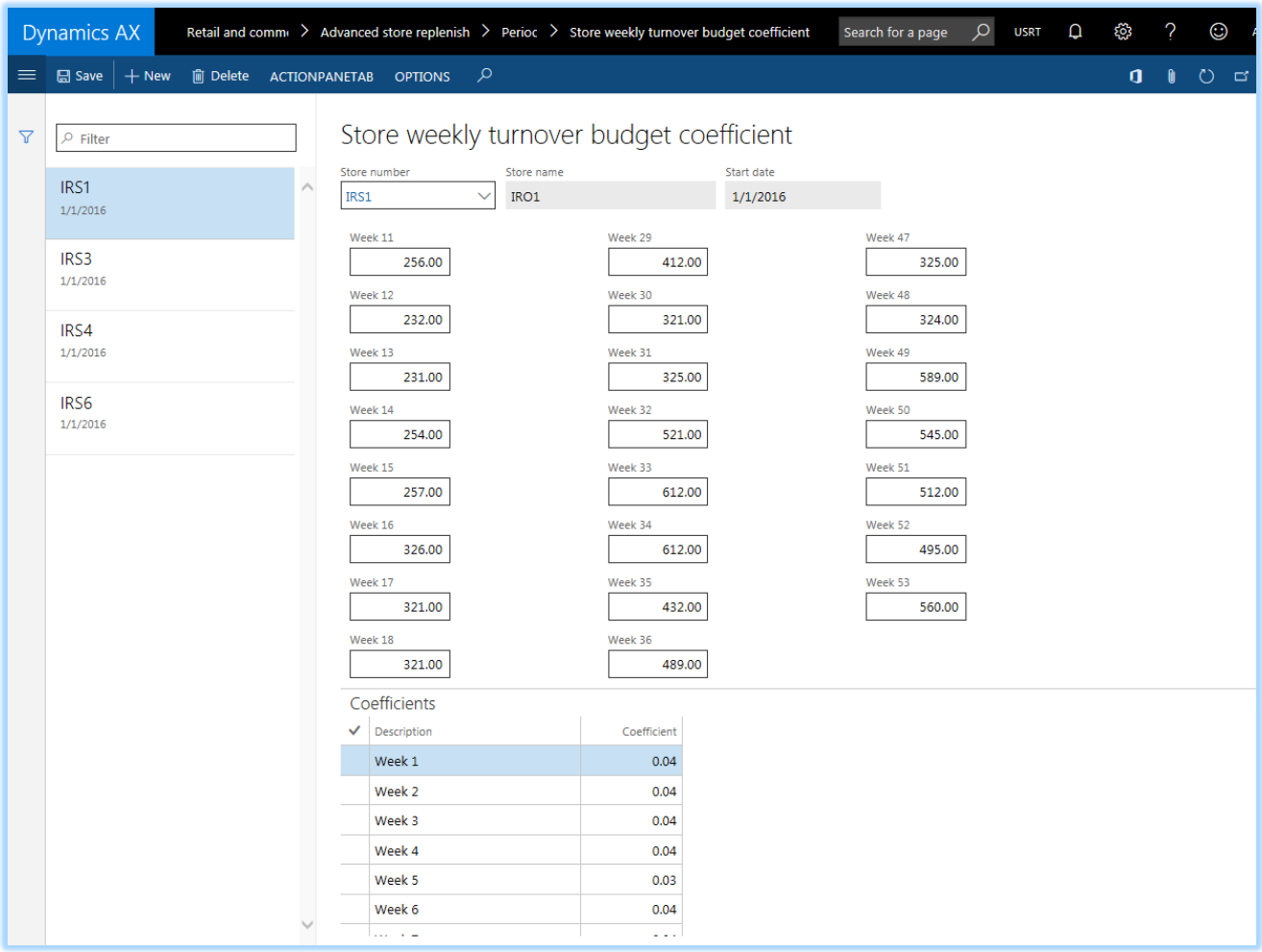
©2018 Avanade Inc. All Rights Reserved.

5.5.4 Store weekly turnover budget coefficient

Navigate to the path

Retail -> AVA Advanced store replenishment -> Periodic -> Store weekly turnover budget coefficient

Define the profile and calculate



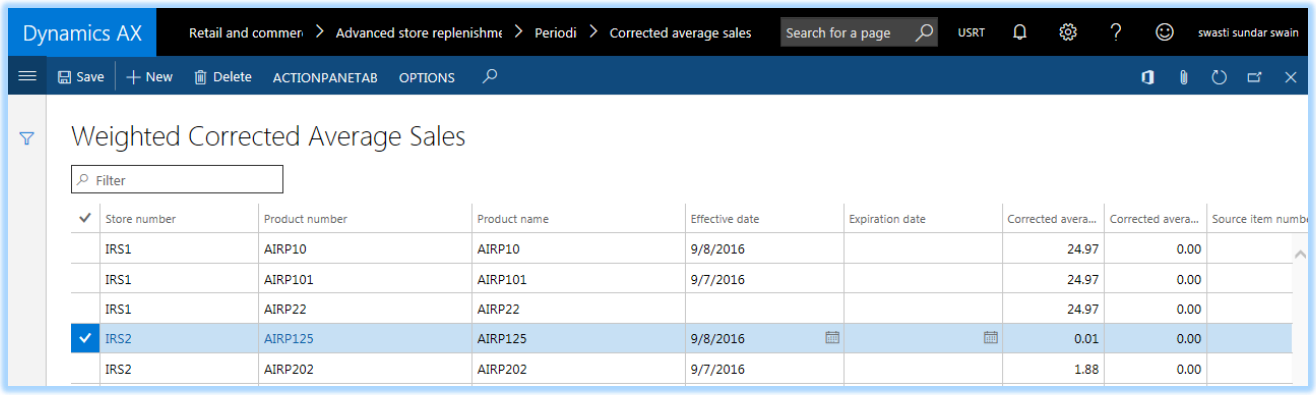
©2018 Avanade Inc. All Rights Reserved.

5.5.5 Corrected average sales Calculation

Navigate to the path

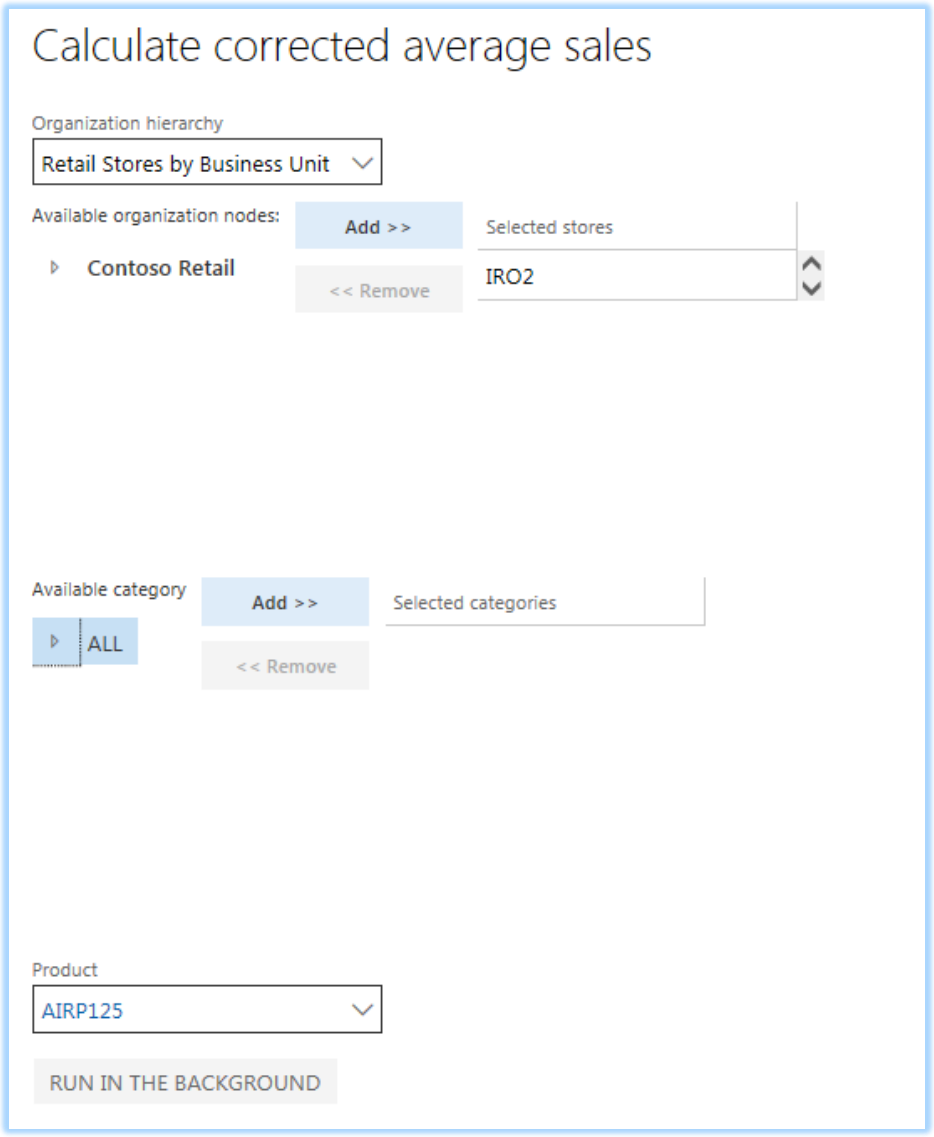
Retail -> AVA Advanced store replenishment -> Periodic -> Corrected average sales

Define the profile and calculate



a) The User can create Corrected Average sales records manually, using 'New' action button and set the CAS value.
b) The user can also calculate CAS by clicking "Calculate corrected Average sales" button and through batch process.
c) Click on 'Calculate Corrected Average sales' button
d) New form 'Calculate corrected average sales' is opened

avanade
©2018 Avanade Inc. All Rights Reserved.



e) Select the Stores and Retail product categories in the selected 'Stores & Category sections for which CAS needs to calculate

f) Click on "OK' button to calculate CAS for selected stores

q) Once the batch process is completed, the system will create records in Corrected Average sales form for all Selected Stores/Category products and update CAS value in Corrected average sales field.

r) The system will calculate the Corrected average sales value of item based fast week sales transactions history and number of weeks defined in Retail parameters form.

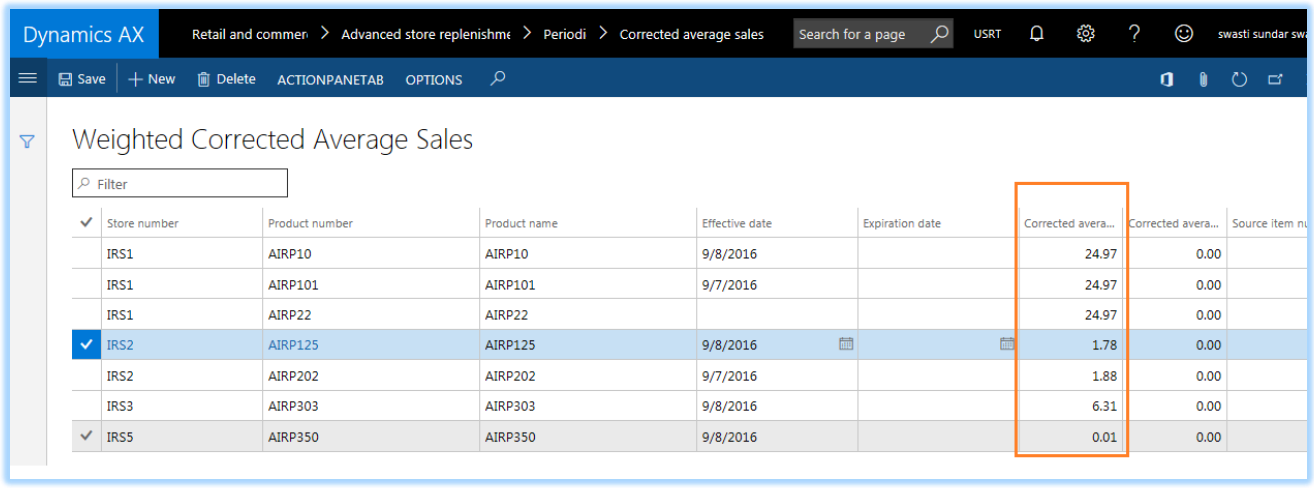
s) The system will update corrected average sales value as 0.01 for those items doesn't have sales history. For remaining items, corrected average value should be updated based on fast week sales history.

Formula to calculate Corrected Average Sales:

l) **Sales to accumulate (Corrected sales history)** = Day's sales / Seasonal Coefficient / Store Budget Coefficient * week's weight factor

m) Weighted Average = Sum of Corrected History / Sum of Weights

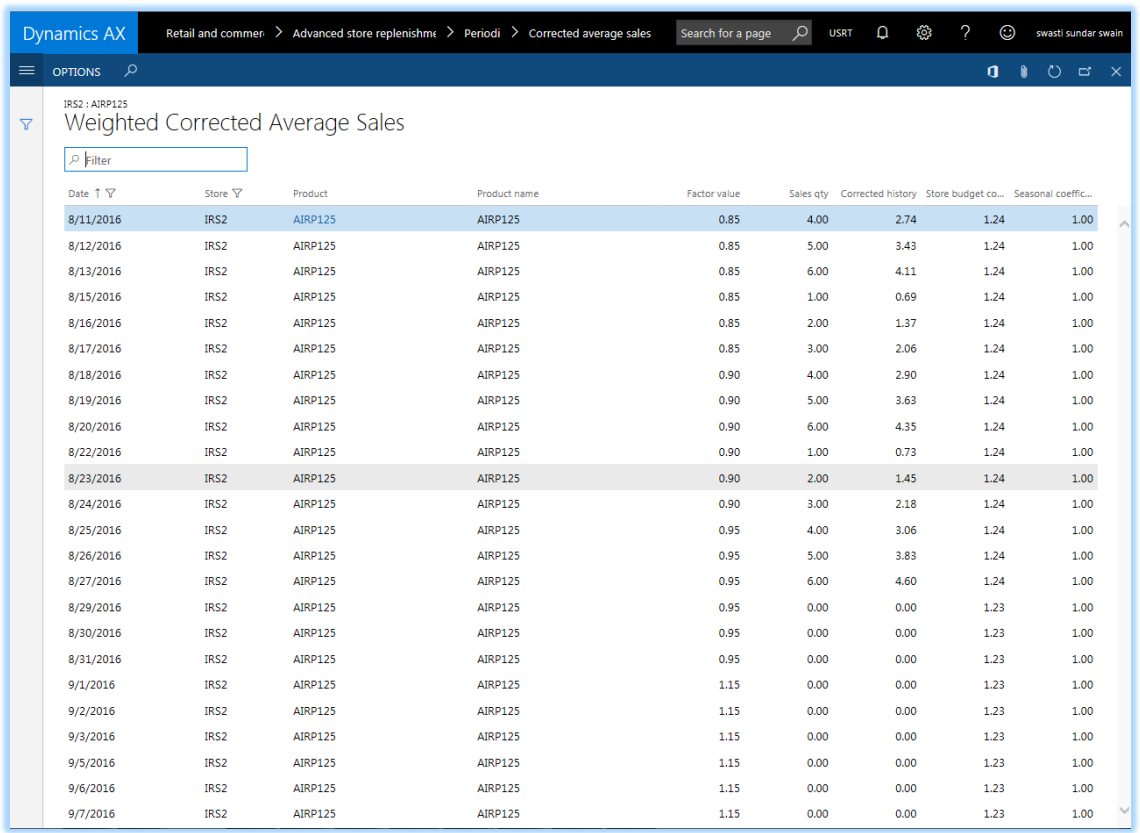
©2018 Avanade Inc. All Rights Reserved.



g) Click on 'View corrected average sales' option

h) A new form "View corrected average sales' is opened with list of sales transaction history details of item and Store for defined period based on Retail parameter setup.(Path : Retail→ Setup→ Parameters→ Advanced store replenishment fast tab(i.e. Weeks for calculating Corrected average sales field).

i) **CAS Calculation:** The system will consider and create the sales lines on the View corrected Average sales form, based on Store calendar open days and calculate the CAS accordingly. Sales lines will not be created for Store calendar closed days.



avanade

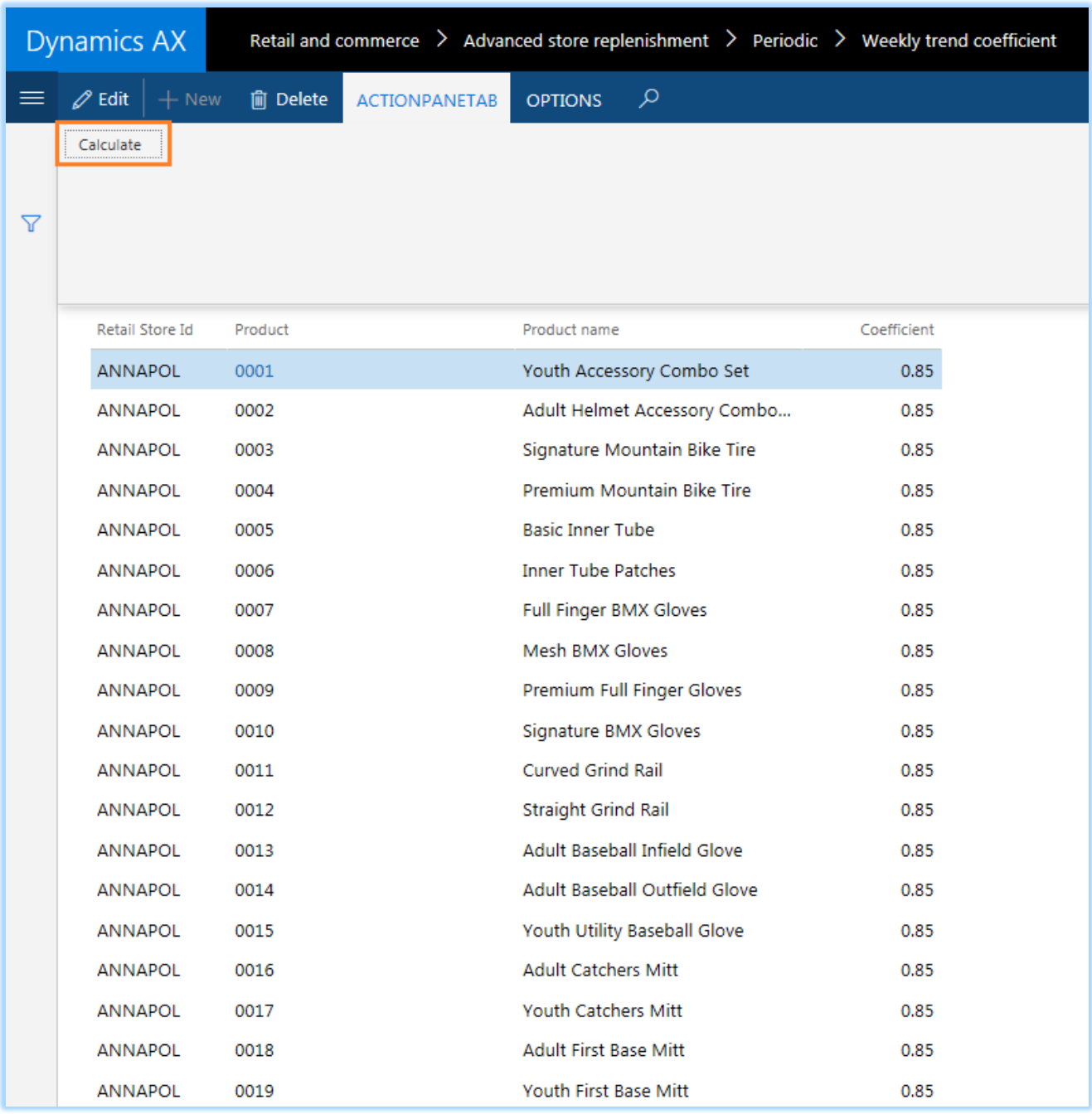
©2018 Avanade Inc. All Rights Reserved.

5.5.6 Weekly trend coefficient Calculation

Navigate to the path

Retail -> AVA Advanced store replenishment -> Periodic -> Weekly trend coefficient

a) Calculate the Weekly trend coefficient



Retail Store Id	Product	Product name	Coefficient
ANNAPOL	0001	Youth Accessory Combo Set	0.85
ANNAPOL	0002	Adult Helmet Accessory Combo...	0.85
ANNAPOL	0003	Signature Mountain Bike Tire	0.85
ANNAPOL	0004	Premium Mountain Bike Tire	0.85
ANNAPOL	0005	Basic Inner Tube	0.85
ANNAPOL	0006	Inner Tube Patches	0.85
ANNAPOL	0007	Full Finger BMX Gloves	0.85
ANNAPOL	0008	Mesh BMX Gloves	0.85
ANNAPOL	0009	Premium Full Finger Gloves	0.85
ANNAPOL	0010	Signature BMX Gloves	0.85
ANNAPOL	0011	Curved Grind Rail	0.85
ANNAPOL	0012	Straight Grind Rail	0.85
ANNAPOL	0013	Adult Baseball Infield Glove	0.85
ANNAPOL	0014	Adult Baseball Outfield Glove	0.85
ANNAPOL	0015	Youth Utility Baseball Glove	0.85
ANNAPOL	0016	Adult Catchers Mitt	0.85
ANNAPOL	0017	Youth Catchers Mitt	0.85
ANNAPOL	0018	Adult First Base Mitt	0.85
ANNAPOL	0019	Youth First Base Mitt	0.85

b) New form 'Calculate Weekly trend coefficient' is opened
c) Click on "OK' button

avanade
©2018 Avanade Inc. All Rights Reserved.

d) Observe, the batch process is completed
e) Verify, Weekly trend coefficient values records are created and updated per Store-Item.
f) **CTSA Calculation:** The system will consider and create the sales lines on the View corrected Average sales form, based on Store calendar open days and calculate the CTSA accordingly. Sales lines will not be created for Store calendar closed days

5.5.7 Calculate Item topology

Calculating Item Topology is a significant process and first step in the Safety stock calculation. The Store manager/User must run this Item topology calculation process before Safety stock calculation, in order to consider the appropriate safety stock coverage and filling rate values like Minimum and Maximum coverage days (A+, A, B and C) and Shelf capacity, Shelf filing rates ((A+, A, B and C) and Minimum stock etc. during Safety stock calculations.

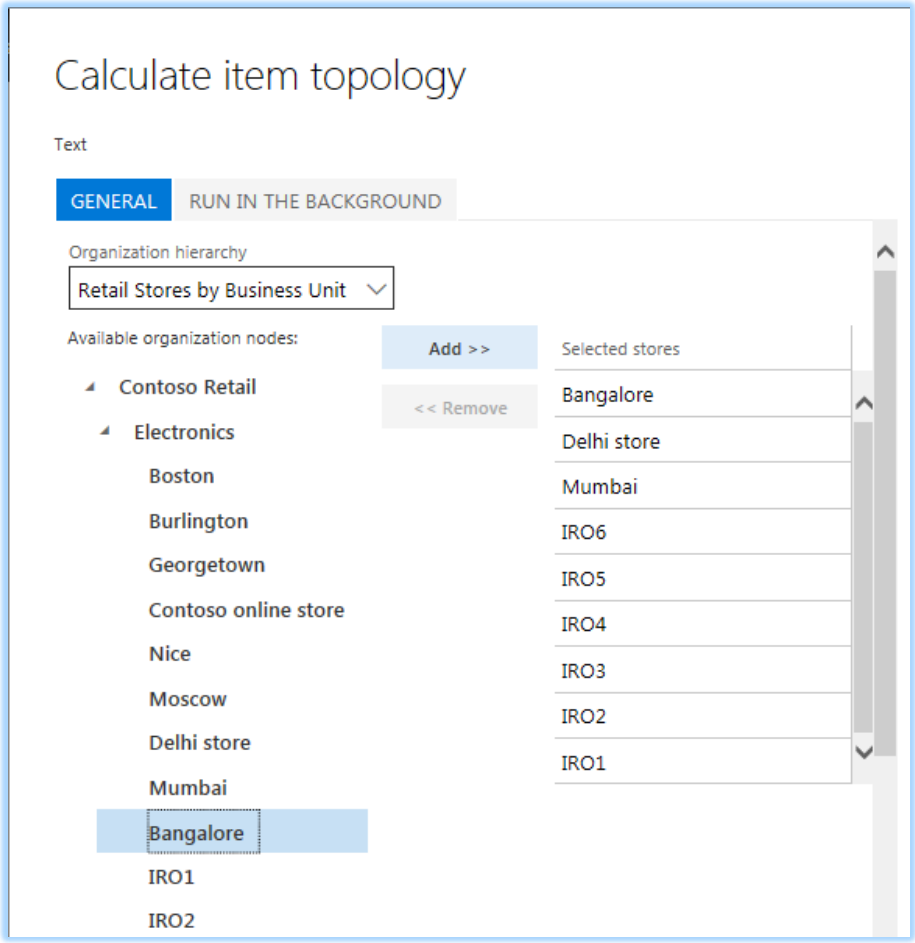
a) Item Topology values will be maintained at Products level.
b) Before calculating Item topology, the system will default 'Item topology' as 'None'. Same came can be found at Item level (Path: Product information management→ Products→ Released products → Advanced Store replenishment fast tab).

a) Navigate to the path:

Retail→ AVA Advanced store replenishment→ Periodic→ Calculate item topology periodic batch process form

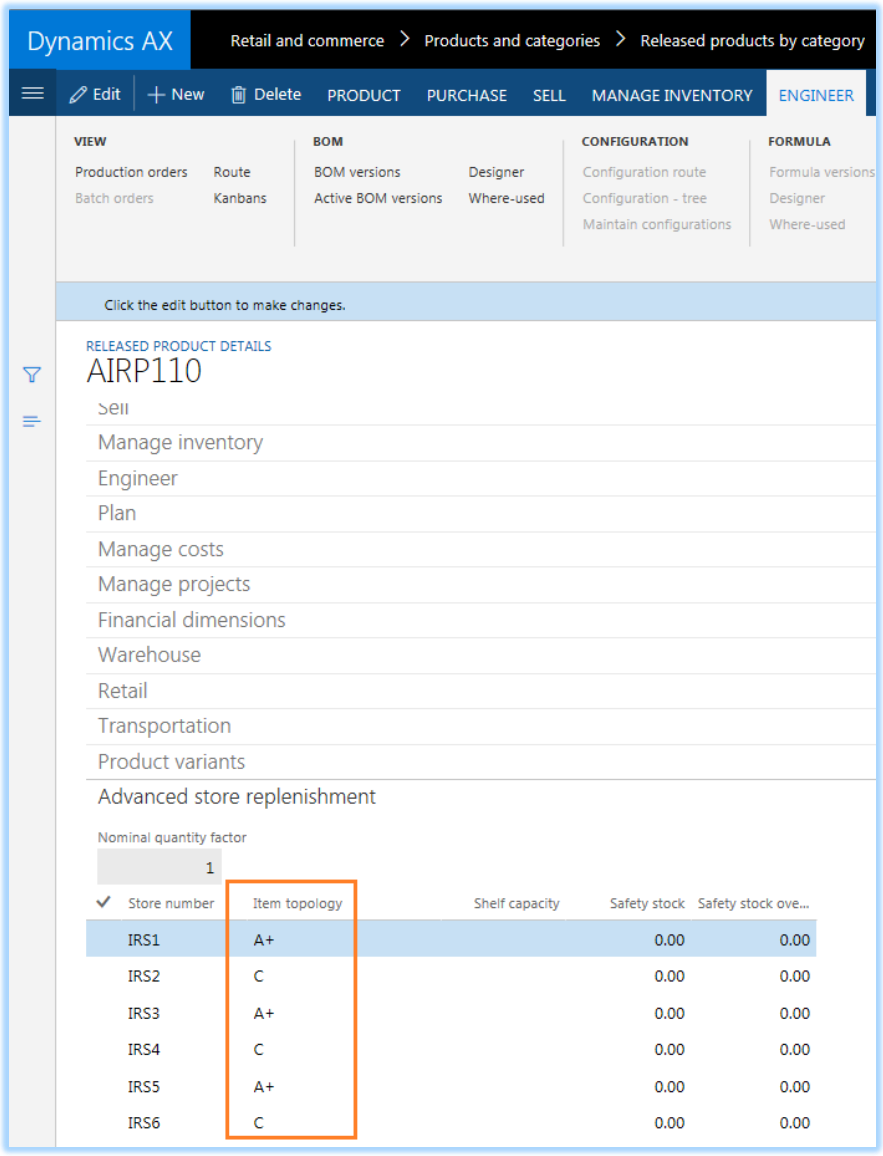
b) Select the Store from Available Organization nodes and move to selected Store section
c) Click on "OK" button,
d) Then the system will calculate Item topology for all selected stores available products (i.e. Retail/Common/Retail channels/Retail stores/View channel products) and update the item topology based on item's fast weeks sales transaction history
e) The system will consider previous 28 days sales transaction history to calculate the Item Topology from the day calculating.
f) The System will update Item topology as A+, A, B and C against the items/Stores combination as per Item/Product category/Stores sales averages.
g) If the item doesn't have sales history in last 28 days, the system will update the Item topology as 'A' by default against the Item/ store.

©2018 Avanade Inc. All Rights Reserved.



©2018 Avanade Inc. All Rights Reserved.

h) Item topology is updated after calculating 'Item topology'



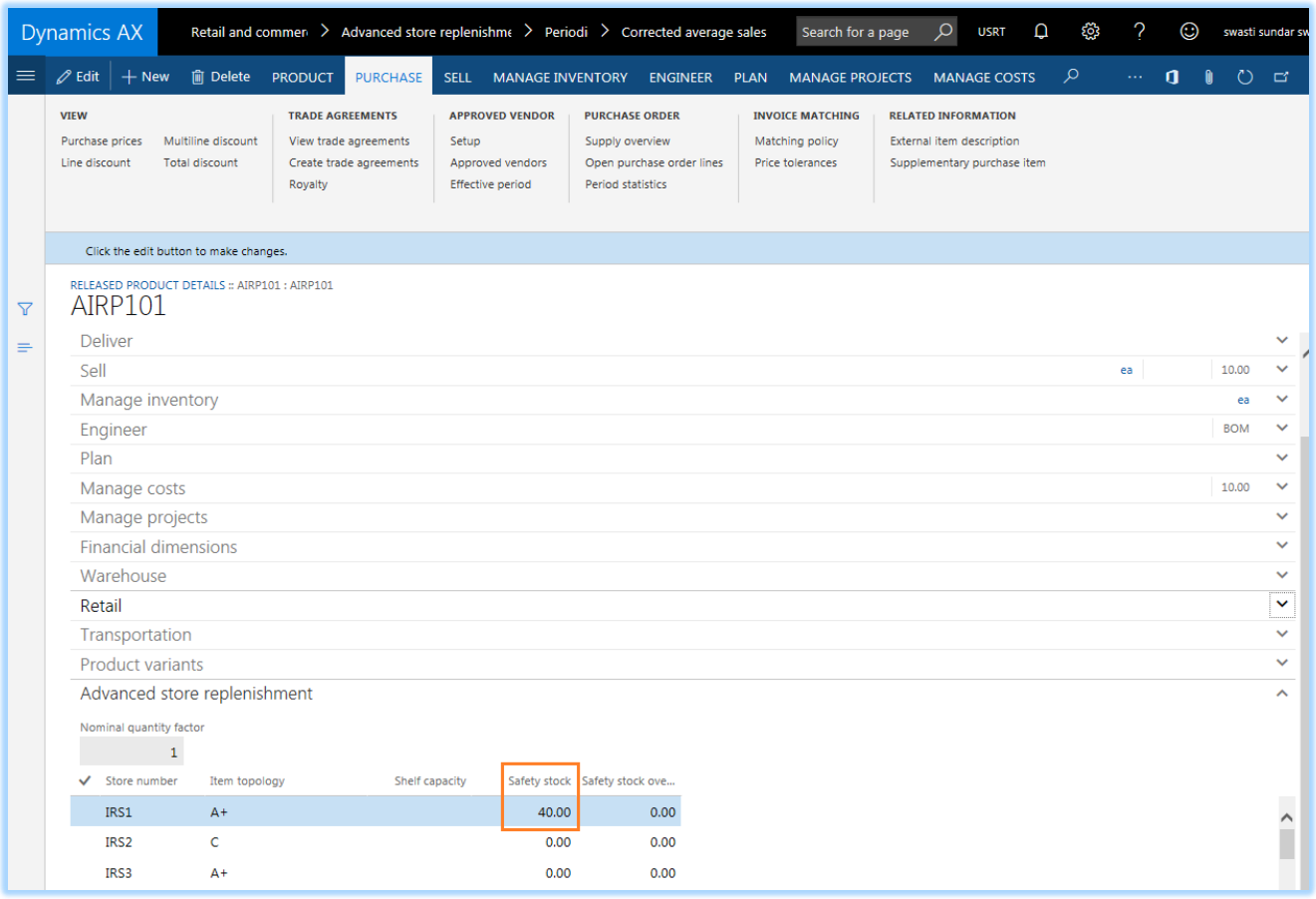
©2018 Avanade Inc. All Rights Reserved.

5.5.8 Safety stock calculation

The Safety stock is automatically calculated by the system *during Replenishment order generation* and safety stock should be as the highest value selected among the following three parameters:

a) Quantity of Implementation
b) Corrected Average sales
c) Minimum stock

The user can review the calculated Safety stock at the product level in the following path: Product information management→Products→ Released products→ Advanced store replenishment fast tab.



a) The user can set safety stock manually also using 'Safety stock Override' field on the Released products page.
b) Safety stock field not editable
c) The system will consider value in 'Safety stock Override' field as Final Safety stock' value for forecast quantity calculation, if the values are exist in both 'Safety stock' and 'safety stock Override' fields.
d) The value in 'Safety stock Override' field should be >=1.00 to consider as final safety stock value
e) If ''Safety stock Override' field is blank, the system will consider value in 'Safety stock' field

avanade
©2018 Avanade Inc. All Rights Reserved.

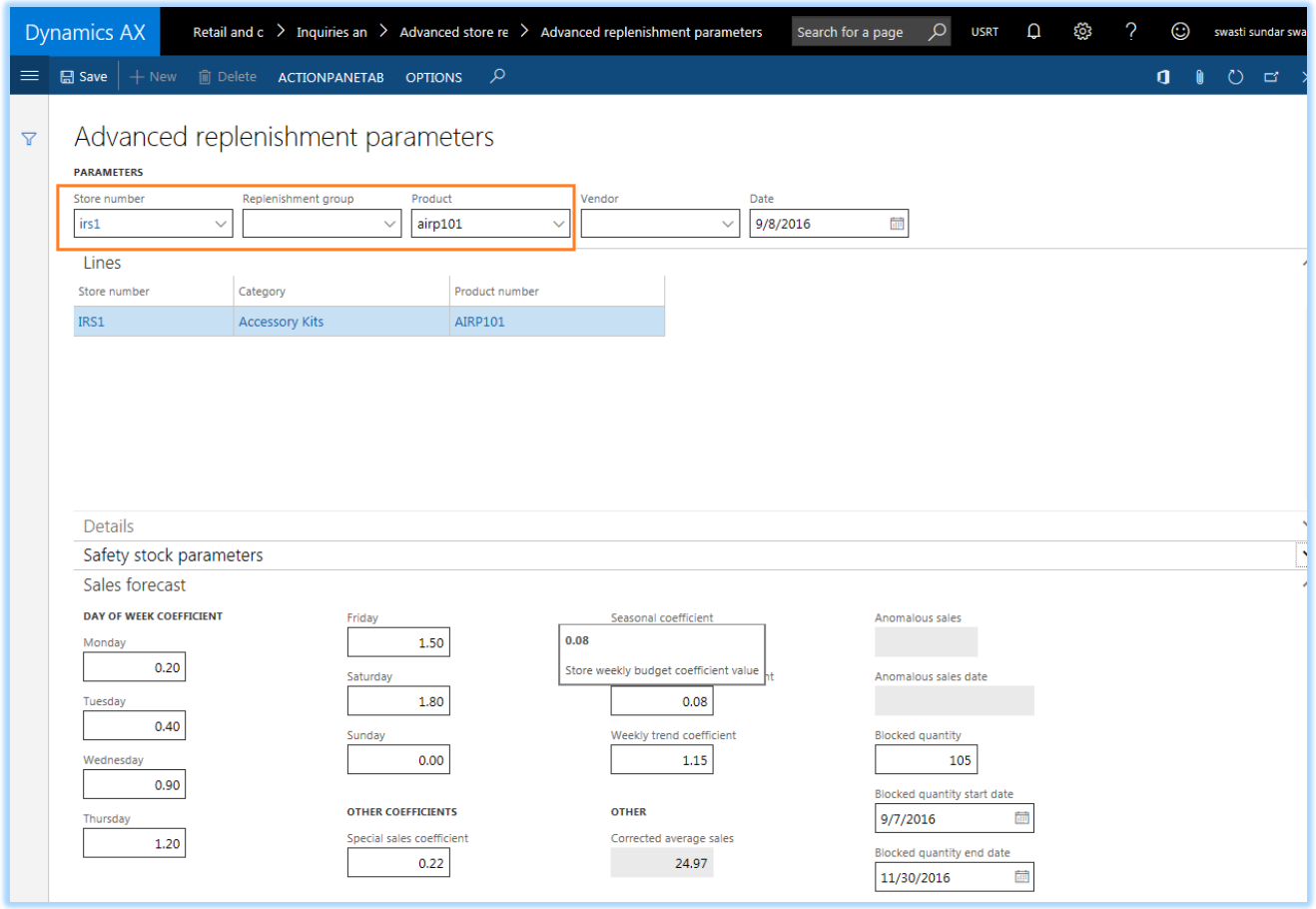
5.6 Advanced store replenishment- Inquires

5.6.1 Advanced replenishment parameters

Navigate to the path

Retail -> Inquiries -> Advanced store replenishment -> Advanced replenishment parameters

a) This form is useful to review the coefficient and other values Select the record and view the coefficient and other values.
b) The user will review and edit all the coefficient values, CAS, Safety stock, Minimum stock, Shelf capacity, Blocked quantity and item Topology etc. in Advanced replenishment parameters form
c) The fields are editable in this form only, if the selected item record exist on the respective coefficients, or Safety stock filling rates form at product level.



©2018 Avanade Inc. All Rights Reserved.

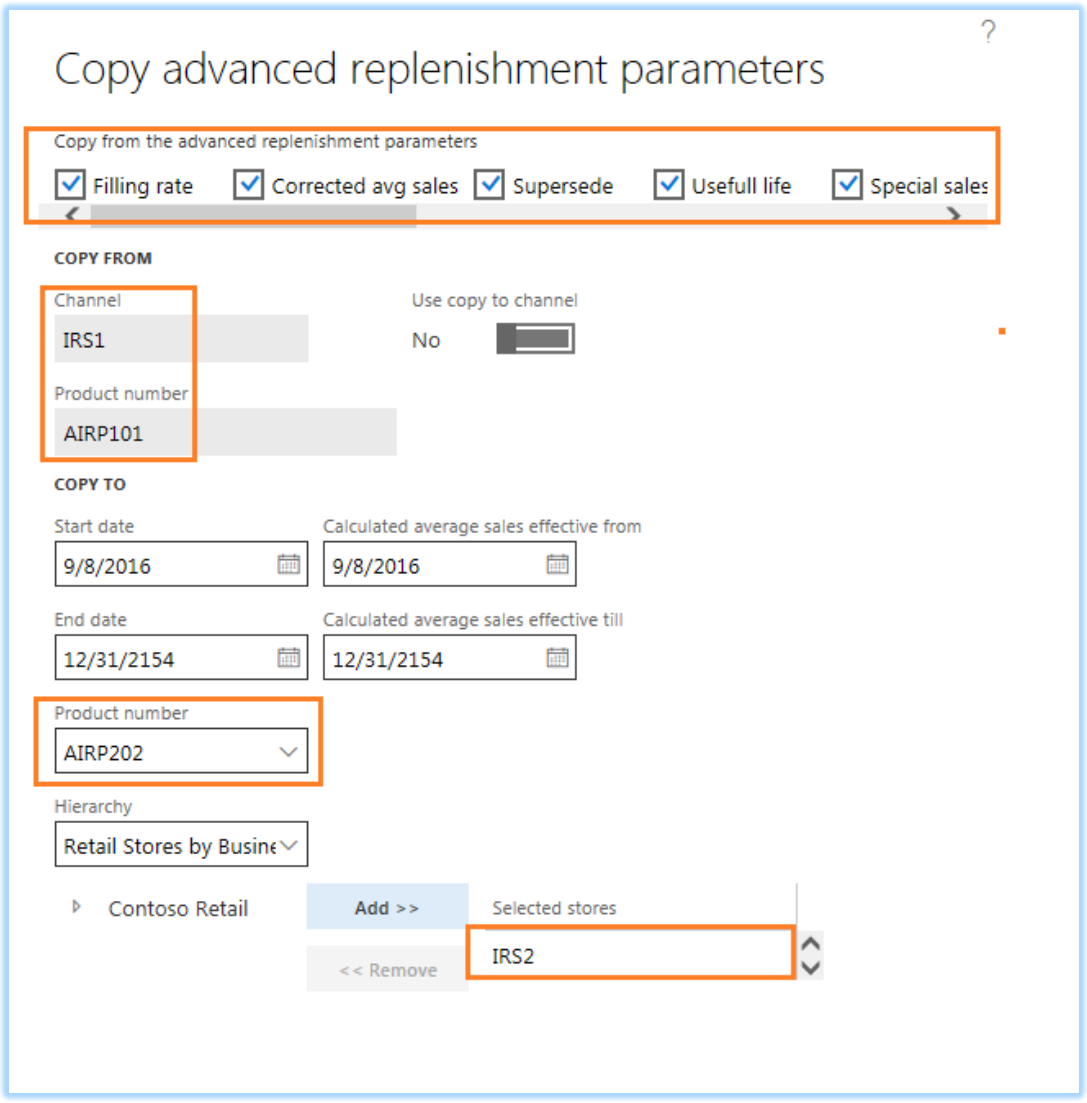
5.6.2 Initialization data

This form is useful for copying the record along with its coefficient and other values from Source Store/Source Product to Destination Store and Product.

a) Navigate to the path

Retail -> Inquiries and reports -> Advanced store replenishment -> Advanced replenishment parameters

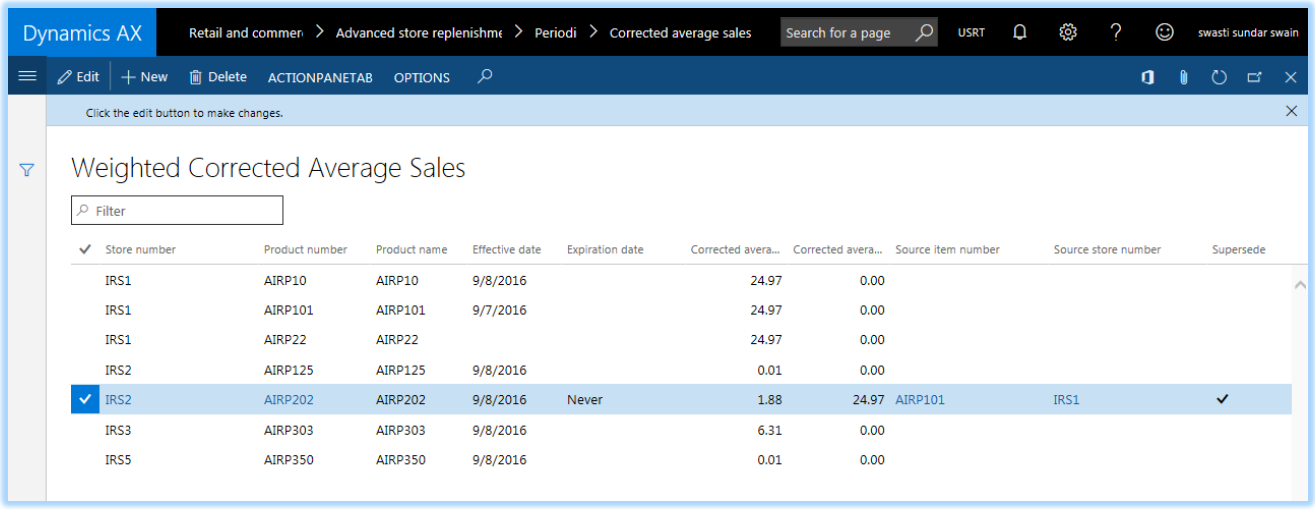
b) Select the record and click on initialization data
c) New form 'Copy advanced replenishment parameters form is opened as below



d) Observe, Source store and Source product are updated on Copy from section as per above screen shot.
e) Select "Destination Product" in Product number field
f) Select list stores in Selected stores section

©2018 Avanade Inc. All Rights Reserved.

g) Define copy period range (Start date and End date)
h) Enable check boxes for All the product attributes as per above screen shot
i) Click on "OK" button
j) The System should create records for all product attributes in the following forms, if the Source product/Source Store record is exist @ Product level only (i.e. Store-Replenishment group-Product combination).
   - ➔ Special sales coefficient form
   - ➔ Days of week coefficient form
   - ➔ Seasonal coefficient form
   - ➔ Anomalous sales setup form
   - ➔ Blocked Quantity form
k) For Corrected Average Sales attributes, the system should create for Destination product/Store using Source product/Source Stores CAS value in Corrected average sales form.



l) Other Product attributes like Corrected Average, Shelf capacity, useful life, against the destination product/Store.

©2018 Avanade Inc. All Rights Reserved.

5.6.3 Sales history and forecasting information

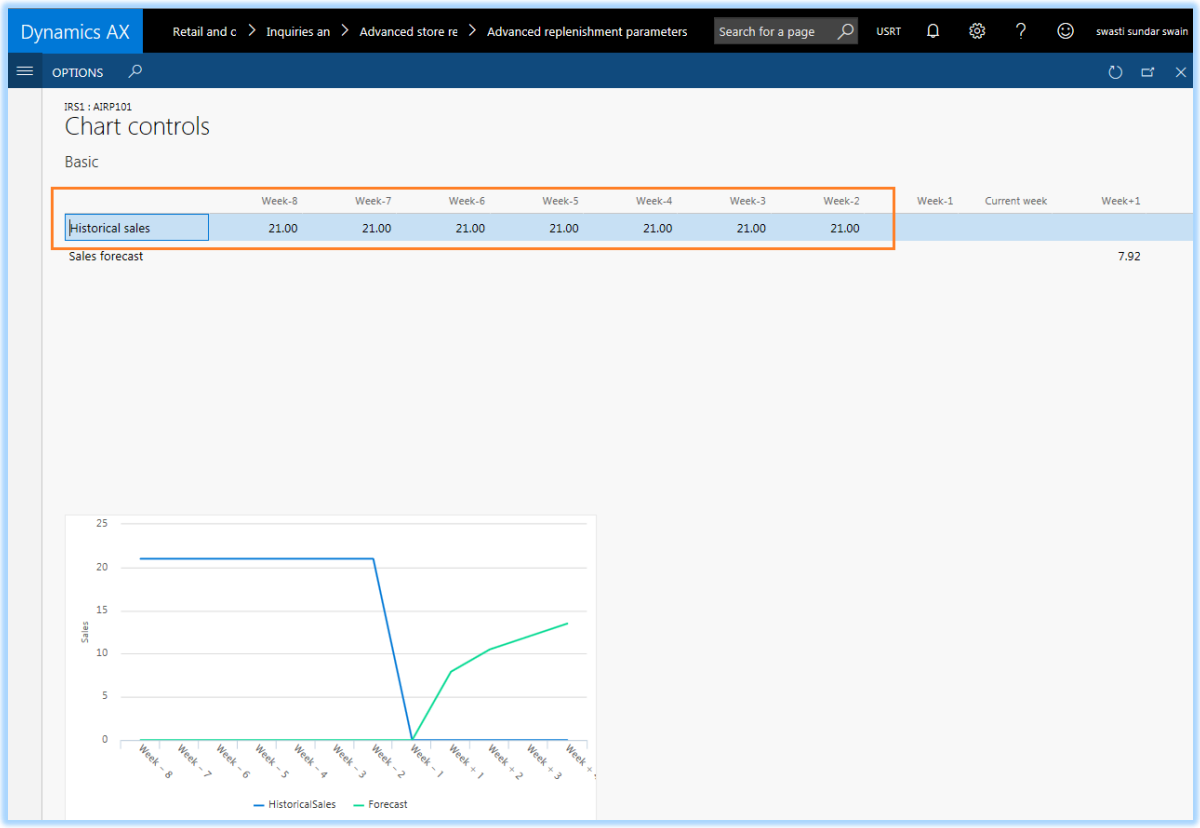
This form displays Historical sales information of last 8 weeks along with Current week and also display the project sales forecast quantity for future weeks (4) for selected product and store.

a) Navigate to the path

Retail -> Inquiries and reports-> Advanced store replenishment -> Advanced replenishment parameters

b) Select the record and click on 'Sales information'

c) New form 'Historical sales and sales forecast' opened as below



©2018 Avanade Inc. All Rights Reserved.

5.7 Order generation

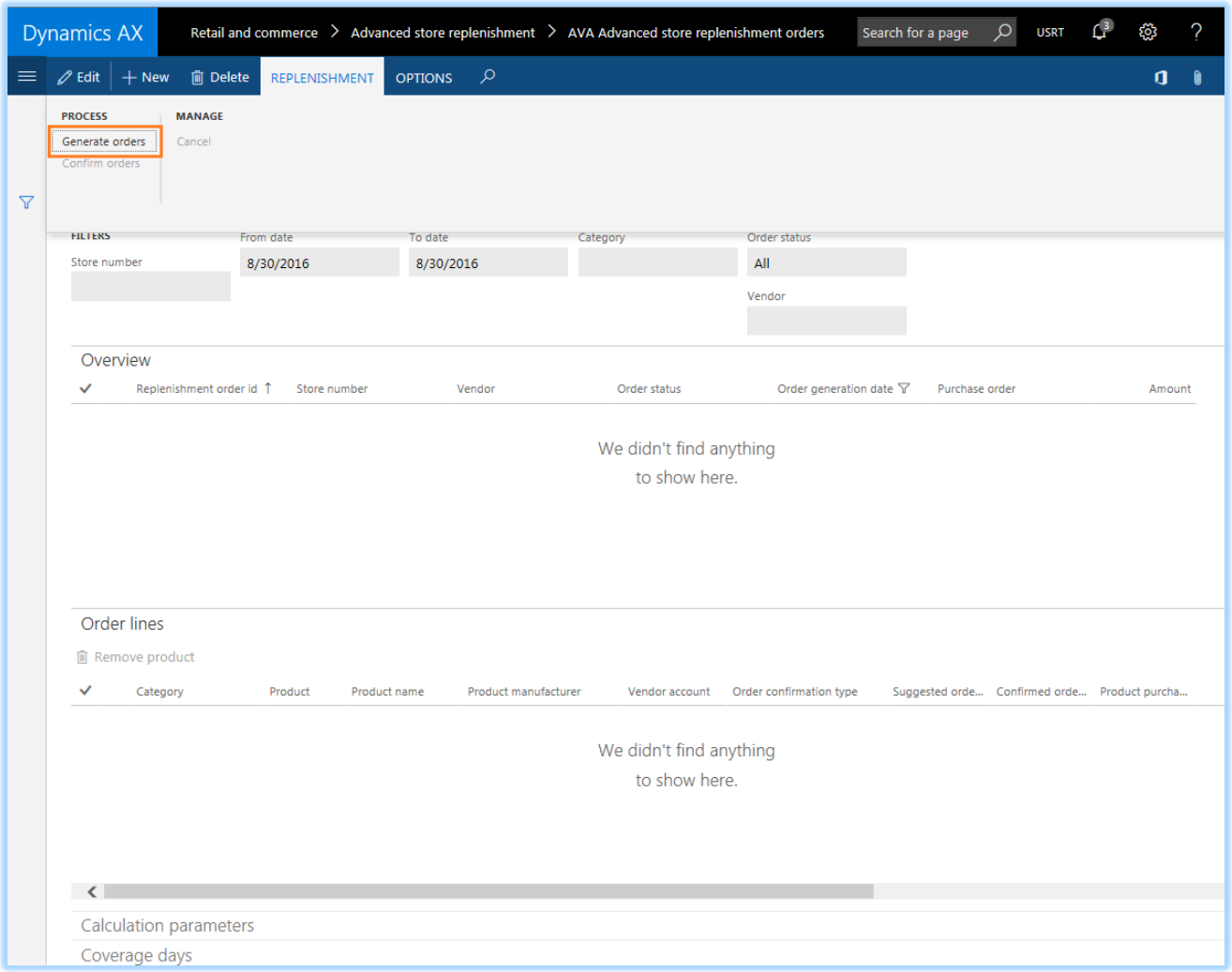
5.7.1 Advanced store replenishment orders

This form is useful for generating and confirming orders

Navigate to the path

Retail -> Common -> AVA Advanced store replenishment -> AVA Advanced store replenishment orders

a) Click on generate orders to create new orders and click on confirm orders to confirm the automatic orders



b) Click on 'Generate Orders' option

c) New process form 'Generate Orders' is opened

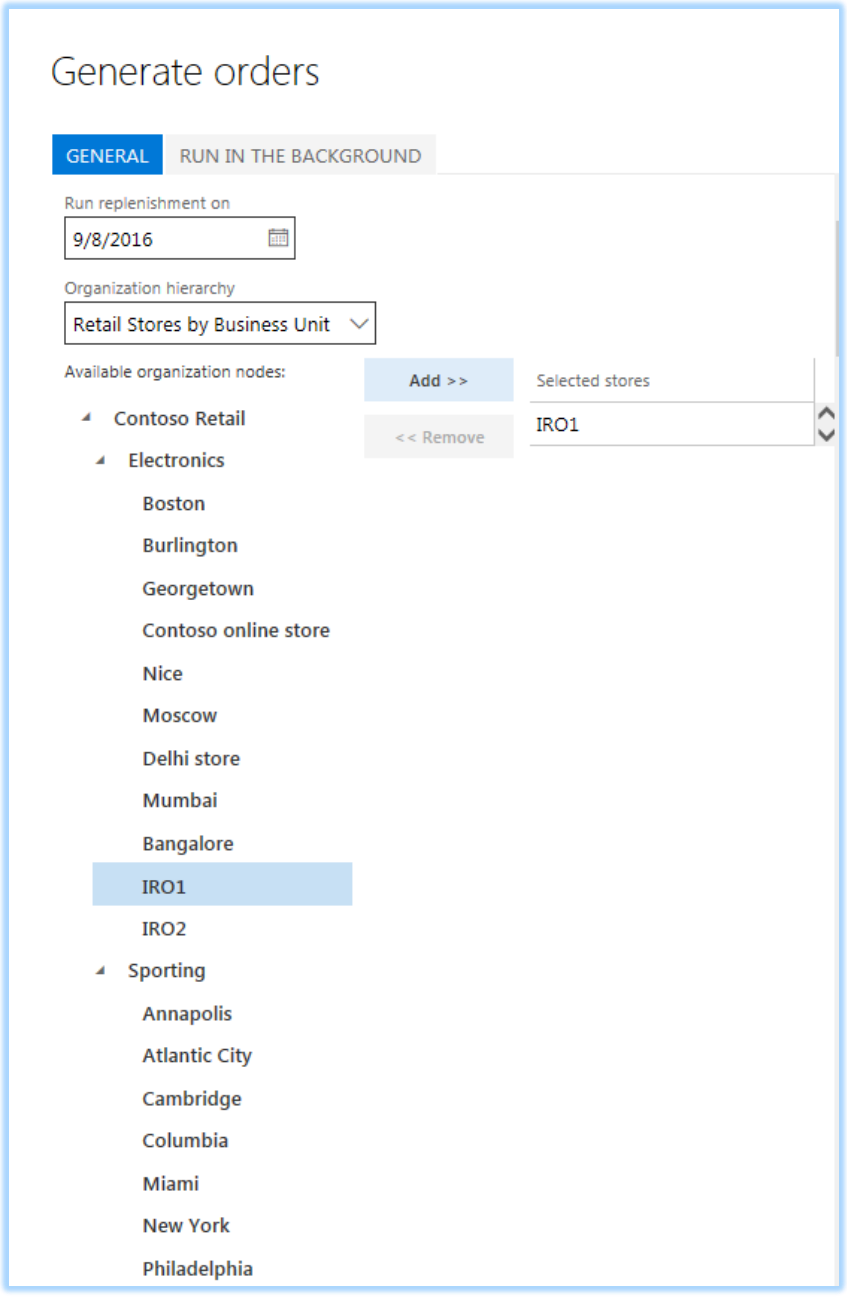
©2018 Avanade Inc. All Rights Reserved.

d) Select list of Stores and related product categories (scroll right to select the category) in selected stores and categories section to generate Replenishment orders per Store-Vendor-Replenishment types.

e) The User can generate replenishment Order per Store-vendor-Replenishment type for Current date and future date also by setting 'Run Replenishment on'' option

f) For Instance: If the User set as "Run Replenishment on" : 9/18/2015, then the system will generate replenishment order on 18th September'2015

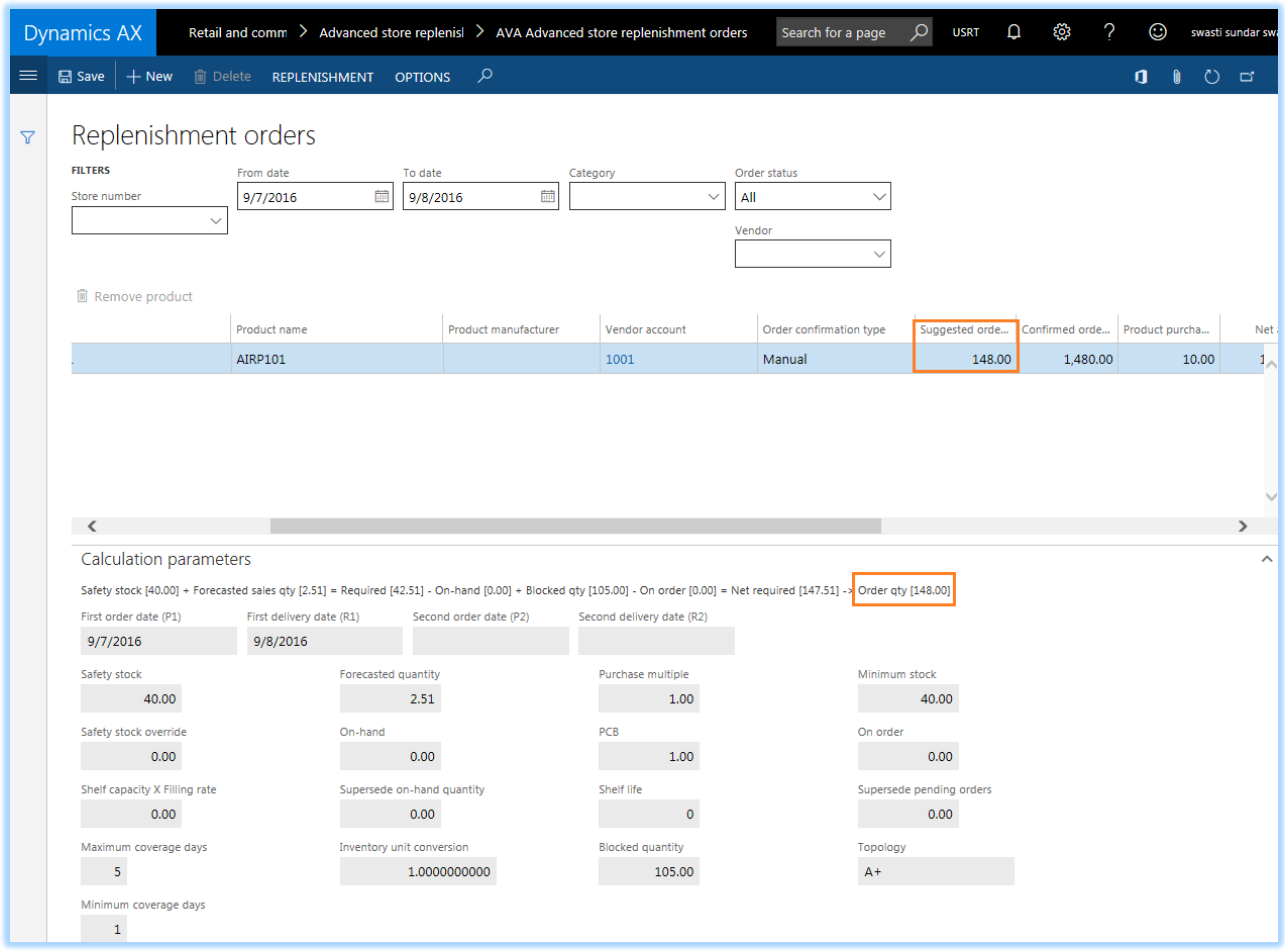
g) If the User set as "Run Replenishment on": 16/9/2015, (i.e. Current session date) then the system will generate replenishment order on 16th September'2015 as below.



h) Click on "OK"

avanade
©2018 Avanade Inc. All Rights Reserved.

i) Replenishment order should be created as per Store-Vendor-Replenishment types.



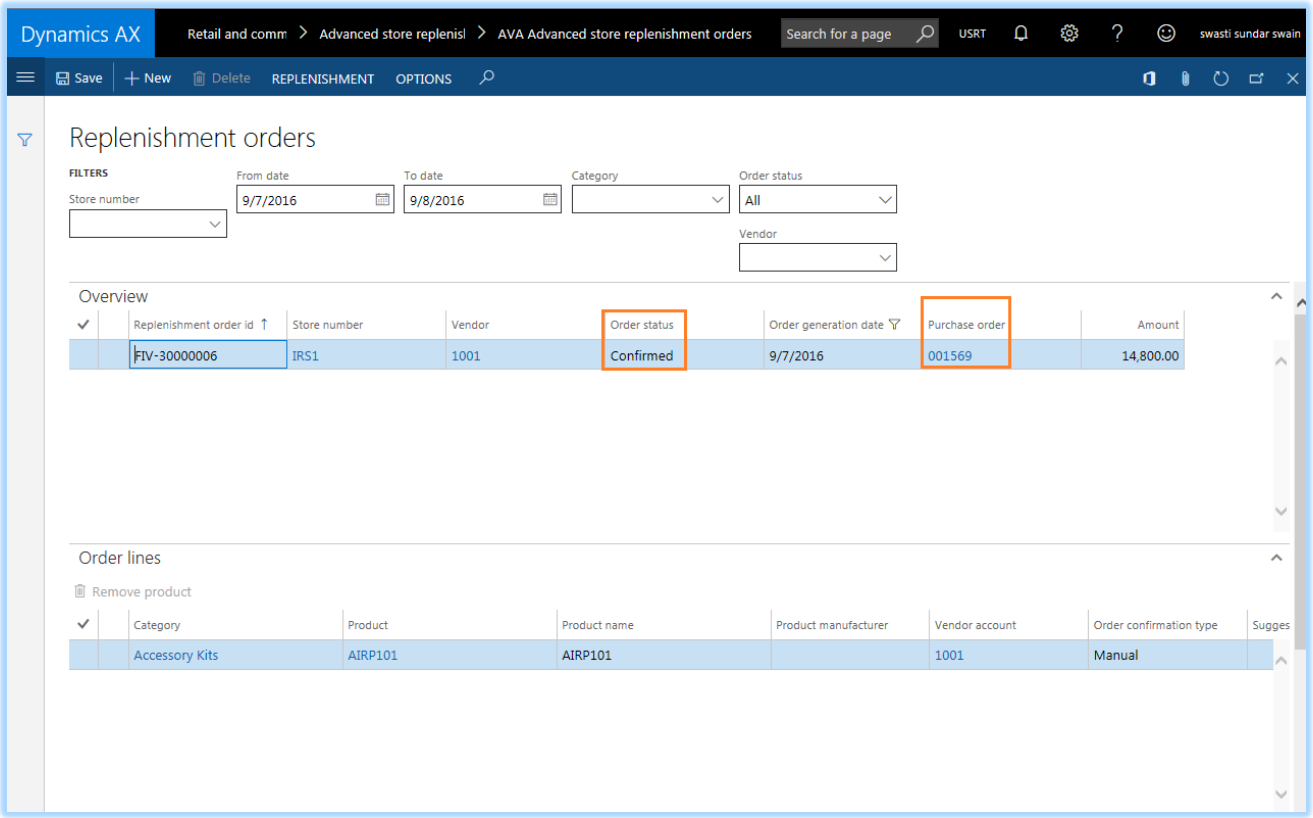
j) The user can generate the Replenishment orders in 3 Types.

- **Automatic: -** Replenishment order crated and confirmed automatically/ PO should be created automatically, none of the fields are editable
- **Confirmation: -** Replenishment Order should be created automatically in Open status and confirmed Order quantity is editable. The user should manually confirm the replenishment order, in order to crate PO
- **Manual:** - Replenishment Order should be created automatically in Open status and confirmed Order quantity is editable. The user should manually confirm the replenishment order, in order to crate PO

i) Click on 'Confirm order' button to create the Purchase order

j) Observe, the Replenishment order gets confirmed, and Purchase order is created against the Order.

avanade
©2018 Avanade Inc. All Rights Reserved.



k) Verify, the created purchase order in the following path (Accounts Payable/Purchase orders/All Purchase orders).

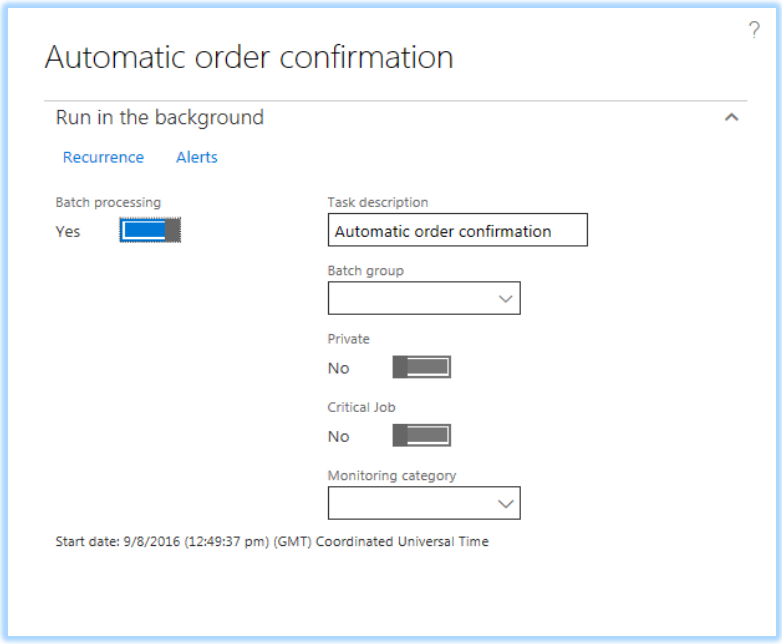
avanade
©2018 Avanade Inc. All Rights Reserved.

5.7.2 Automatic order confirmation

Navigate to the path

Retail -> AVA Advanced store replenishment -> Periodic -> Automatic order confirmation

a) Run the batch to confirm all the Replenishment type 'Confirmation' orders



b) The system will create purchase orders for replenishment type' confirmed orders' once batch process is completed

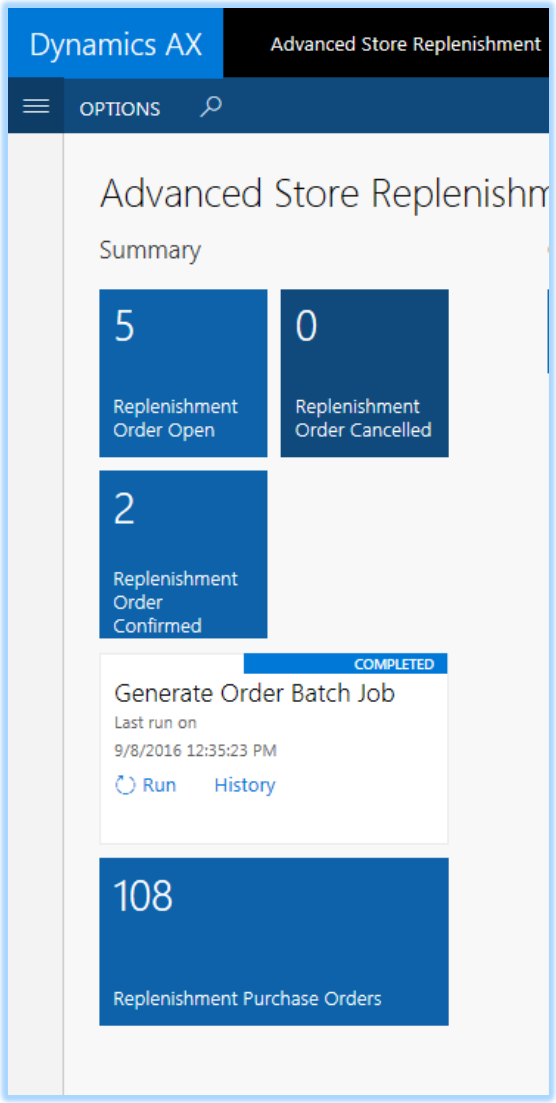
c) The system should allow to confirm Replenishment type' Confirmation' orders, if the Order generation date < Confirmation date.

avanade
©2018 Avanade Inc. All Rights Reserved.

5.8 Advance store replenishment workspace

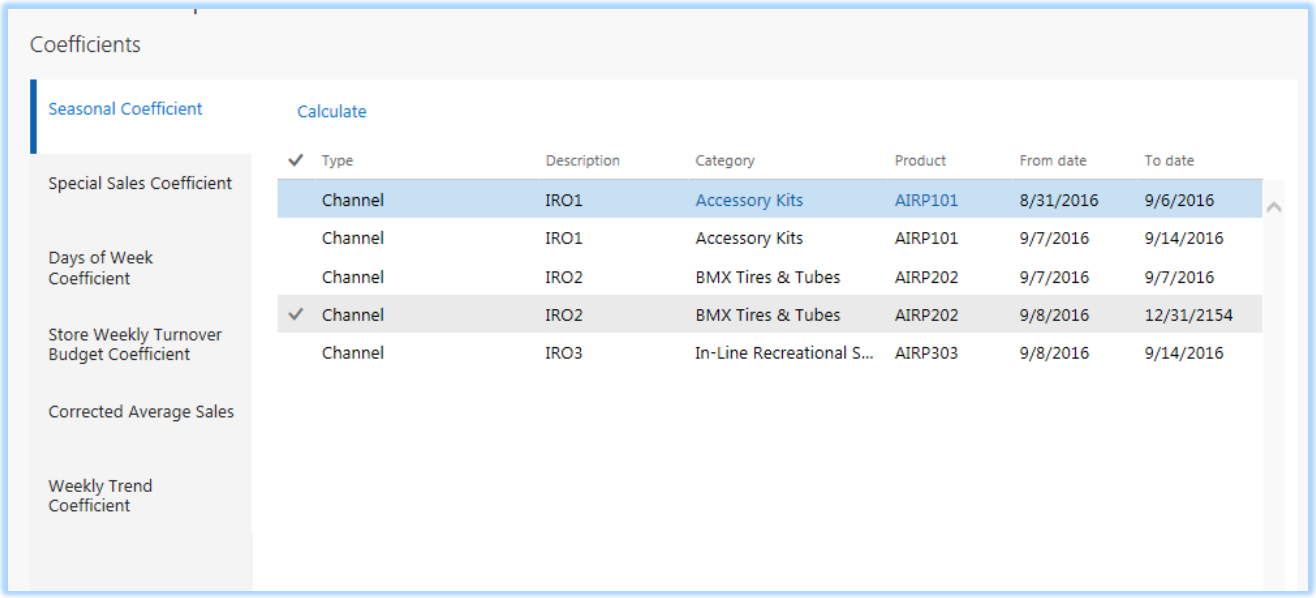
Advanced store replenishment workspace is intended to provide a one-page overview of the replenishment related activities. From Advanced store replenishment workspace users can start the most typical task directly from workspace and can view different coefficient related information. Users can directly go the needed links for different replenishment related setups.

5.8.1 Summary section

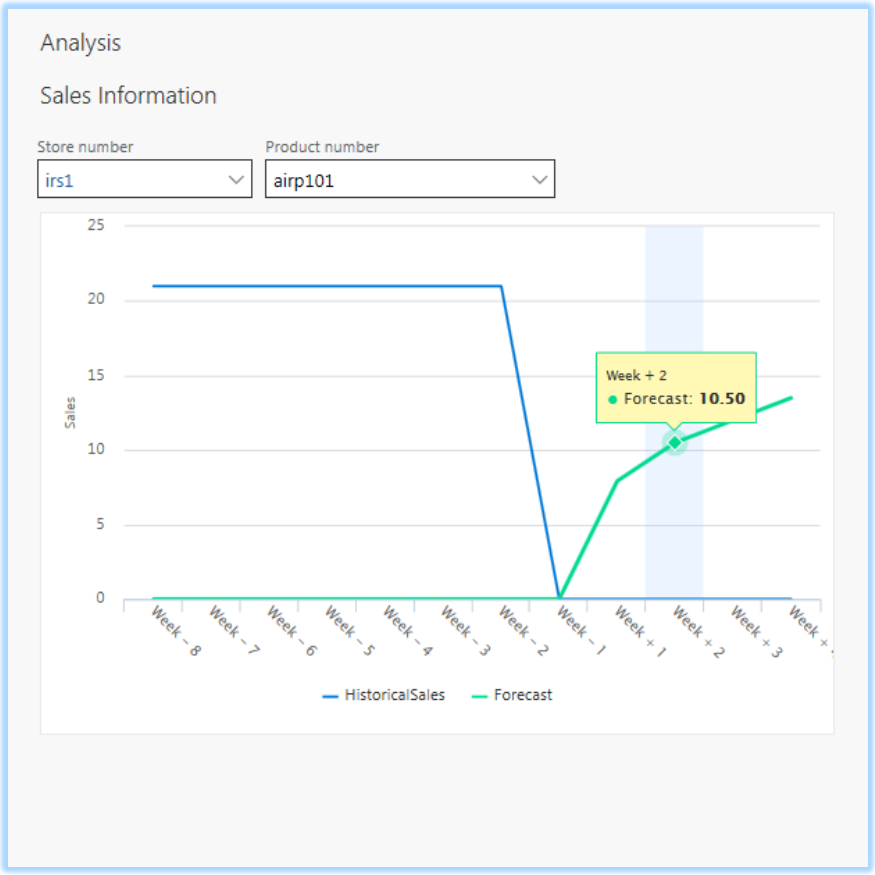


©2018 Avanade Inc. All Rights Reserved.

5.8.2 Coefficient section

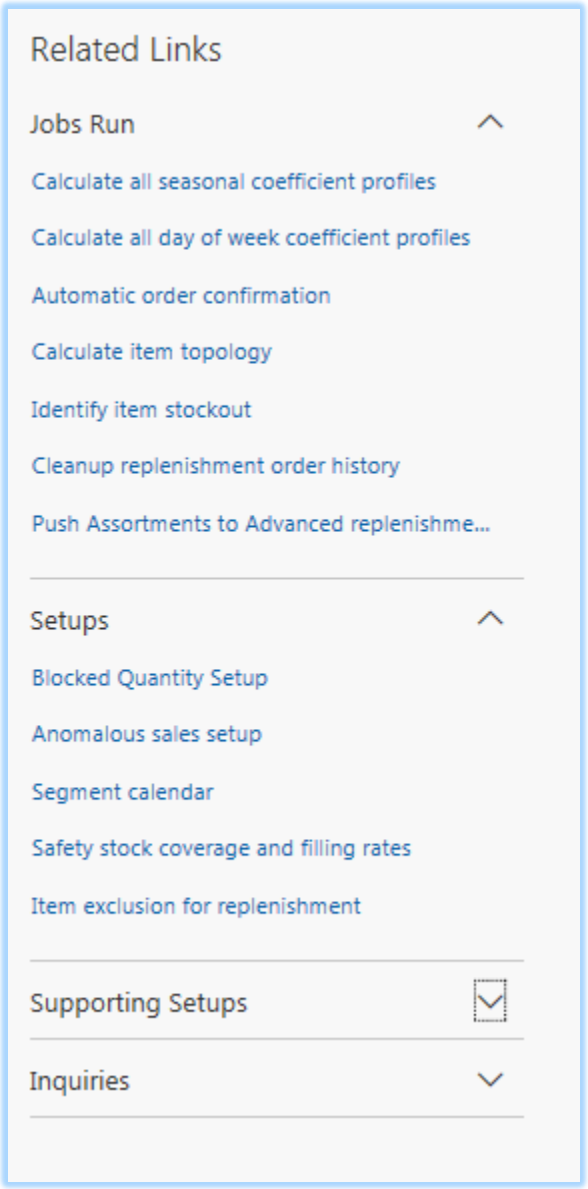


5.8.3 Analysis section



©2018 Avanade Inc. All Rights Reserved.

5.8.4 Related links



©2018 Avanade Inc. All Rights Reserved.