



SAS® Intelligent Clustering for Retail 4.2

Release Notes for Hot Fix 1

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SAS® Intelligent Clustering for Retail 4.2: Release Notes for Hot Fix 1

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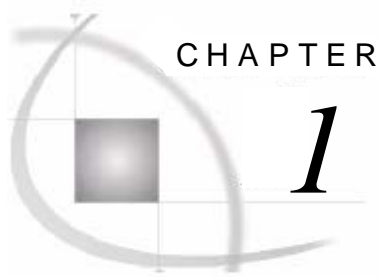
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CHAPTER

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Introduction

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1.1 Overview of the Solution

SAS Intelligent Clustering for Retail addresses business areas in retail. It satisfies the needs of merchandise planners in terms of generating and maintaining store clusters.

The solution provides analytical intelligence to the statistically segmented stores based on similar selling patterns of merchandise as well as demographic and product attributes. The solution also generates cluster profiles to analyze and correlate selling market with each cluster. This helps in maintaining appropriate product assortment with regard to each market cluster.

1.1.1 Purpose of This Document

This document provides guidance to use Hot Fix 1 for SAS Intelligent Clustering for Retail 4.2. It lists new features and enhancements done to the solution, defects handled in the hot fix release, known issues in this release, and the document updates for Hot Fix 1.

1.1.2 Audience

This document is intended for business domain experts, business consultants, data architects, analysts, consultants, instructors, testers, subject matter experts in the service provider's project team.

It is recommended that business analysts, analyst, and project managers in the customer's project team also read this document.



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2.1 Overview

This chapter gives details of the errors that are fixed and the enhancements done in Hot Fix 1 of SAS Intelligent Clustering for Retail. It also lists the known issues for this hot fix release of the solution.

2.2 Defects Fixed in Hot Fix 1

The following defects have been fixed in the Hot Fix 1 of the SAS Intelligent Clustering for Retail.

1. In Demographic Profile reports, the text on the left pane is not in sync with the charts on the right pane.
2. The font size of the attribute names in box plots is very small.
3. Product profile chart does not display text if the sales value is insignificant.
4. The errors in the user interface (UI) messages repeat thrice.
5. Single quotation mark in cluster name.
6. Attribute fails if name includes 'IC' letters in it – AUTOSEGMENTATION.
7. Maximum number of attributes in report criteria parameters in jobparam. String size maxed out on a DATA step.

8. IC and DFR error handling not compatible if both installed.
9. In the demographic profile of Summary and Detail reports, the categorical attributes percent relates to the entire population (all stores). It does not relate to the individual cluster.

2.3 Enhancements

The following enhancements are done in the Hot Fix 1 of SAS Intelligent Clustering for Retail.

2.3.1 New Auto-Segmentation Method: CumPct

A new auto-segmentation method, CumPct has been added to the solution. This method can be used to create clusters that are based on defined cumulative percentage of sales.

2.3.2 Hierarchical Auto-Segmentation

The Hot Fix 1 of SAS Intelligent Clustering for Retail supports Hierarchical Auto-Segmentation.

2.3.3 Calculated Analysis of KPIs

The Hot Fix 1 of SAS Intelligent Clustering for Retail supports calculated analysis of the KPIs. Simple calculations such as addition, subtraction, division, and multiplication can be performed across multiple source history, plan, or forecast KPIs to form a single KPI. Aggregated or group calculations such as average, maximum, and minimum are not supported.

2.3.4 Extract Data Based on Flexible Time-Frame

The solution can now also extract the LLY (Last-to-Last Year) data along with LY (Last Year) and TY (This Year) data. The global parameter, `ic_time_version` allows LY (last year), LLY (last-to-last year), and TY (this year) historical data.

2.3.5 Configurable Cluster Set Names

This Hot Fix 1 release of the solution enables the user to configure the cluster set names based on job, merchandise, location, and/or time IDs and names. Data dictionary (`Data/staged/TestDataDictionary.txt`) and worksheet naming definition file (`Data/staged/Worksheet_Naming_Def.csv`) are provided that enables substituting long cluster names with their abbreviations to minimize the length of cluster sets names.

2.3.6 Purge Cluster Set Function

The solution allows purging the cluster sets that were created through SAS Intelligent Clustering for Retail in a batch request.

2.3.7 New Attribute Significance Report

Demographic Store Count by Attribute report is replaced by Attribute Significance report.

2.3.8 Pie Chart for Product Attributes Report

The Product Attribute report that was represented by a bar chart earlier is now represented by a pie chart.

2.3.9 Unassigned Store Reports

The system can produce an Unassigned Stores report for the stores that are not assigned to any cluster.

2.3.10 New Demographic Summary Report

In Demographic Summary report, the index value is calculated by subtracting 100 from the index. If this value is negative it is displayed in round braces in the Demographic Summary report.

2.3.11 Demographic Attributes by Cluster

In this Hot Fix 1 release, the confidence percentage of an individual cluster in the Demographic Pie Chart and in Summary Report is calculated on the cluster and not on the whole population.

2.3.12 Formatted Cluster Names

The cluster names in the reports are now displayed using space instead of ‘_’ between the attributes. This makes the cluster names more readable.

2.3.13 Methods of Clustering: User Specified Parameters

For `Optimal = 0` (set to Off) the system can now generate the cluster sets with Maximum Clusters and Minimum Number of Stores per Cluster.

2.3.14 Changes in jobparam Data set

The new job parameters added to the `jobparam` table are:

- ☐ `ic_kpi_calc_n`
- ☐ `ic_optimize`
- ☐ `ic_time_version`
- ☐ `ma_max_rsubmit`
- ☐ `ic_autoseg_tree`

The following parameters are removed from the `jobparam` table:

- ☐ `ic_locale`
- ☐ `output_format_type`

2.3.15 Configurable Messages and Report Labels

The solution now supports messages and labels in different locales. See *Modifying and Configuring the SMD File in SAS Intelligent Clustering for Retail Hot Fix 1: Installation Guide* for details.

2.4 Known Issues

Known issues in the Hot Fix 1 of SAS Intelligent Clustering for Retail are listed here.

1. For a single job request, intelligent clustering method (IC) does not work with the KPIs whose `crit_type` is either Hist or Plan or Fcast.
2. Profiling attribute name cannot be more than 20 characters long.
3. Product Weightage and related reports are applicable only to the categorical product attributes and numerical product attributes having lookup.

4. On executing the solution on UNIX platform, following error might appear in the terminal: *"ERROR: Device ACTIVEX cannot be used--please enter device name"*. However, it will not affect the graphs in reports.
5. If single cluster is created by the system then Profile report shows only name and the dimension report.
6. If a worksheet contains all non-comp stores (Store_Status=0 for all stores), then the system shows an error.
7. User might get lesser number of clusters than specified due to the minimum number of stores per cluster constraint when Optimal is set to 'On'.
8. Unassigned stores cannot be imported back to Merchandise Planning. User can use New Store Resolution feature to assign location attributes to stores.
9. In some instances, auto-segmentation methods might give inaccurate break point values and the maximum value of KPIs.
10. The solution does not support attribute with alternate lookup when Time Set is used.



CHAPTER

3

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3.1 Updates

This chapter gives the changes that are required to be made in the *SAS Intelligent Clustering for Retail: User's Guide*.

For installation instructions of this hot fix, see *SAS Intelligent Clustering for Retail Hot Fix 1: Installation Guide*.

3.1.1 SAS Intelligent Clustering for Retail: User's Guide

The following changes are effective in the User's Guide for SAS Intelligent Clustering for Retail. These changes are due to the enhancements and modifications done to the solution for Hot Fix 1 release.

3.1.1.1 New Auto-Segmentation Method: CumPct

Reference

Chapter 5: Automated Segmentation

Section 5.3: Data Preparation for Automated Segmentation

Addition: A new auto-segmentation method, CumPct, is added in Hot Fix 1 of SAS Intelligent Clustering for Retail. CumPct method is in addition to the existing methods for auto-segmentation namely, Even, PCTAVG, User Defined, and CAT method. These methods are documented in the *SAS Intelligent Clustering for Retail: User's Guide* and CumPct Method should be read after section 5.3.4 CAT (Categorical) Method. This section should be considered as section 5.3.5 in the User's Guide.

CumPct Method

This method works on the numerical attributes in auto-segmentation method. In this method, cumulative percentage of the attributes is compared with the user-specified percentage and an appropriate cluster is assigned to the store.

The following steps summarize the method that is used to calculate CumPct:

1. Attribute is sorted in decreasing order and cumulative percentage is calculated.
2. CumPct is calculated by using formula, $(100 - \text{Cumulative Percentage})$.
3. Finally, cluster names are formed by comparing calculated $(100 - \text{Cumulative Percentage})$ and the user-specified percentage.

For example, in the table below AAAA is the top 10% selling cluster and F is the bottom 2%.

Table 1. User-Defined Percentage

Cluster Name	CumPct Sales	Sequence
AAAA	90	1
AAA	82	2
AA	65	3
A	45	4
B	33	5
C	21	6
D	16	7
E	6	8
F	2	9

The example below shows the sales data for 15 stores. Cumulative sale is calculated along with its cumulative percentage. $(100 - \text{Cumulative Percentage})$ is calculated and then compared against the table above to determine the cluster membership for each store. For example, for store ID 1018, $(100 - \text{Cumulative Percentage}) = 46.96\%$ and therefore, it falls in Cluster A that has the range of 45% to 64.99%.

Table 2. Resultant Data Set: CumPct

lid_4	Sales	Cumulative Sales	Cumulative Percentage	100 - Cumulative Percentage	sales_grp_nm
1023	44700.02	44700.02	8.19%	91.81%	AAAA
1027	43594.83	88294.85	16.17%	83.83%	AAA
1025	41734.98	130029.8	23.81%	76.19%	AA
1014	40258.81	170288.6	31.19%	68.81%	AA
1017	40210.45	210499.1	38.55%	61.45%	A
1032	39841.39	250340.5	45.85%	54.15%	A
1018	39270.62	289611.1	53.04%	46.96%	A
1033	39255.74	328866.8	60.23%	39.77%	B
1013	38668.73	367535.6	67.31%	32.69%	C
1021	38345.68	405881.3	74.33%	25.67%	C
1011	38342.61	444223.9	81.35%	18.65%	D
1020	34219.22	478443.1	87.62%	12.38%	E

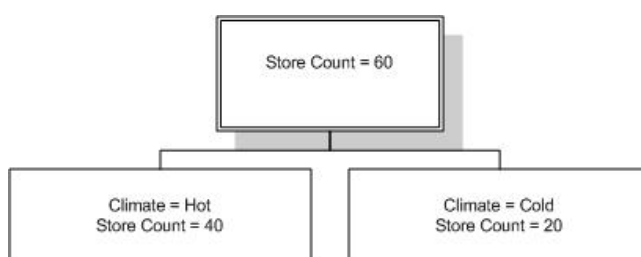
lid_4	Sales	Cumulative Sales	Cumulative Percentage	100 - Cumulative Percentage	sales_grp_nm
1026	33949.14	512392.2	93.84%	6.16%	E
1016	33644.12	546036.3	100.00%	0.00%	F

3.1.1.2 Hierarchical Auto-Segmentation

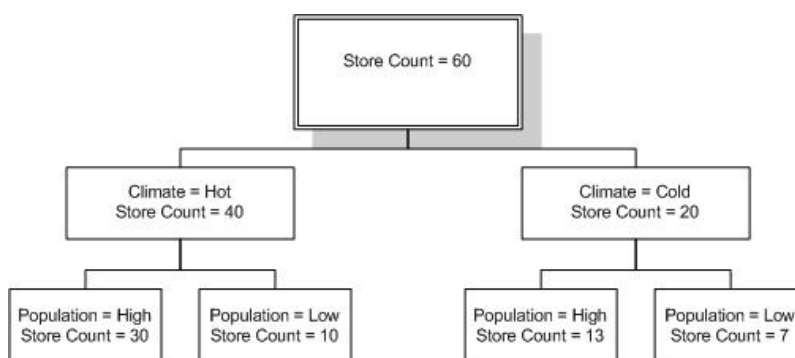
Addition: The Hot Fix 1 of SAS Intelligent Clustering for Retail supports Hierarchical Auto-Segmentation. In Hierarchical Auto-Segmentation, the segmentation of the stores is done sequentially with respect to the given attributes. The order of the attributes plays a key role in the hierarchical auto-segmentation. The parameter, `ic_criteria_n` is used to specify the order of the attributes. The first segmentation of the stores is done on the first attribute that is specified in the parameter `ic_criteria_n`. The second segmentation is done on the results of the first segmentation and third segmentation is based on the results of the second segmentation. Similarly, the subsequent segmentations are done on the results of the previous segmentation. If parameter `ic_criteria_n` contains IC, intelligent clustering is executed first and the results are used for the next attribute segmentation.

For example, for a worksheet with 60 stores and `ic_criteria_1` = Climate, Population, and HH_age.

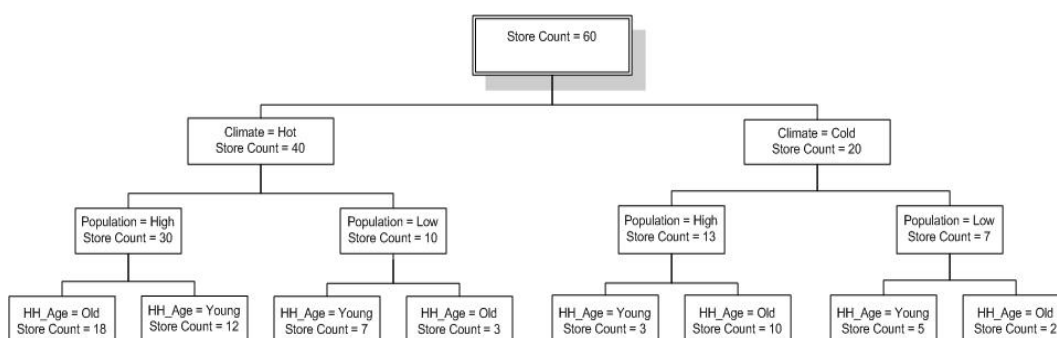
In this case, the sixty stores are first segmented on the first criteria, Climate.



For second criteria Population, the input comes from the first criteria, Climate.



Finally, the third criteria HH_Age take the input from the first and second criteria that is, Climate and Population respectively.



Note: The above example takes only two categories of each attribute. However, attributes can take any number of categories.

3.1.1.3 Calculated Analysis KPI

Reference

Chapter 4: Data Management for Intelligent Clustering

Section 4.2.1: Extracting Source Data (ic_extract_[projid])

Addition: The following content should be read after section **4.2.1 Extracting Source Data** (ic_extract_[projid]) in *SAS Intelligent Clustering for Retail: User's Guide*.

Calculation of KPI feature enables the creation of a calculated field as input to IC statistical clustering process. For example, input field to IC = Regular Sales + Promotion.

Simple calculations such as addition, subtraction, multiplication, and division can be performed. Calculations are configurable and a new jobparam parameter ic_kpiset_n is provided to define the calculation(s). Only field names must be given for this parameter, table names are not required.

In case there is a single KPI, ic_kpi_calc_n must have the name of the KPI as shown in the example.

The following example shows the calculations with the corresponding metadata fields that need to be set to support the calculation.

Calculation	ic_kpiset_n	ic_kpi_calc_n (calculation can contain only the fields that are specified in ic_kpiset_n)
All regular and promotional sales = (net sales units - units clearance)	mfinc.Posit_mvmt, mfinc.posit_mvmt_clrnc	posit_mvmt - posit_mvmt_clrnc
Gross Profit \$AP	mfinc.posit_sales, mfinc.Posit_cost	posit_sales - posit_cost
Net Sale Item	mfinc.net_sale_item	net_sale_item

Note: In the Hot Fix 1 of SAS Intelligent Clustering for Retail, the source table and field for auto-segmentation KPIs whose crit_type is either hist or plan or fcast is taken from ic_kpiset_n field in jobparam. For the remaining KPIs, the source table and field is taken from the criteria table (stage.criteria).

3.1.1.4 Extract Data Based on Flexible Time-Frame

Reference

Chapter 4: Data Management for Intelligent Clustering

Section 4.2.1: Extracting Source Data (ic_extract_[projid]): Time Dimension

Addition: The following content should be read after section **4.2.1 Time Dimension** in the *SAS Intelligent Clustering for Retail: User's Guide*.

The new parameter, ic_time_version allows extraction of historical data. The options are TY (this Year), LY (last year), LLY (last-to-last year), TY_LY (this year and last year), and LY_LLY (last year and last-to-last year).

Note: TY_LY or LY_LLY do not run with Optimize, irrespective of the value given by the user.

For example, assuming that Wk4, Wk5, and Wk6 have LLY data but LY data is unavailable.

For ic_time_version = LY

Wk1	Wk2	Wk3	Wk4	Wk5	Wk6
LY	LY	LY			

No history is extracted for weeks 4, 5, and 6. However, it can be made available using LLY for analysis.

For `ic_time_version = LLY`

Wk1	Wk2	Wk3	Wk4	Wk5	Wk6
LLY	LLY	LLY	LLY	LLY	LLY

The value of the parameter `loaded_flag = 1` indicates that LY data is available for that time period.

The system extracts LLY and LY data as input to IC. However, when there is not enough LY data available to cover LY planning period, the `loaded_flag` is set to '0'. In such cases, LLY time periods fills the missing values.

For `ic_time_version = LY_LLY`

Wk1	Wk2	Wk3	Wk4	Wk5	Wk6
LY	LY	LY	LLY	LLY	LLY

Similarly, if `ic_time_version = TY` and TY history is not available then no data is extracted for TY.

Wk1	Wk2	Wk3	Wk4	Wk5	Wk6
TY	TY	TY			

If `ic_time_version = TY_LY` and history is not available for TY then LY data is extracted.

Wk1	Wk2	Wk3	Wk4	Wk5	Wk6
TY	TY	TY	LY	LY	LY

Note: For the KPIs whose `crit_type` is either `plan` or `fcst`, only TY (this year) data is extracted. All other related options are ignored.

3.1.1.5 Configurable Cluster Set Names

Reference

Chapter 7: IC Export and Import

Section 7.1: Overview

Addition: The following content is added to the content in section 7.1 *Overview* in *SAS Intelligent Clustering for Retail: User's Guide*.

The cluster set names can be configured. The same name is used for the cluster set and IC report folder name. User can also use time, merchandise user ID, or names as well as add the label-text such as 'AP' and modify the order of the output variables.

The system allows to fill-in a configuration file and a flat-file format that defines the order of fields and any static text element.

For example:

❑ AP SP10 Knit Shorts – 1004

Where, AP is static text, SP10 is time set name, Knit Shorts is merchandise root member name, and 1004 is the worksheet ID.

Here is the sample naming convention table.

Column	Valid Values
1 – Type	STATIC: Static string such as AP or SPACE FIELD: Field from input sources (see below) VARIABLE: SAS variable name from the calling program

Column	Valid Values
2 – Field or string	STATIC=String FIELD= [select from pre-defined names below] ORIGINAL_NAME: Original name of base worksheet FROM_LOC_ID: From location ID. FROM_LOC_LEVEL: From location level. TO_LOC_LEVEL: To location level. FROM_LOC_NAME: From location name. TO_LOC_NAME: To location name. FROM_MERCH_ID: From merchandise ID. FROM_MERCH_LEVEL: From merchandise level. TO_MERCH_LEVEL: To merchandise level. FROM_MERCH_NAME: From merchandise name. TO_MERCH_NAME: To merchandise name FROM_TIME_ID: From time ID. FROM_TIME_LEVEL: From time level. TO_TIME_LEVEL: To time level. FROM_TIME_NAME: From time name. TO_TIME_NAME: To time name. PLANTYPE: Plan type. PLANTYPE_ABBREV: Two character conversion of Plantype definition. PLAN_COUNT: May not be populated if worksheet has not been opened. CMAST_USERID: merch_from_level merchandise user ID. CMAST_NAME: merch_from_level merchandise name. CMAST_ID: merch_from_level merchandise cmastr table ID.
3 – Field Length	STATIC=0 FIELD: set for max length
4 – Case	Used with FIELD type only. UPPER: All uppercase LOWER: All lowercase PROPER: First character capitalization DEFAULT: Original case
5 – Compress	N or Y: use compression dictionary on FIELD
6 – Default value	Text to use if FIELD = NULL

Here is the example layout (**Data/staged/Worksheet_Naming_Def.csv**).

FIELD	PLANTYPE_ABBREV	2	UPPER	N	Unknown Plantype
STATIC	SPACE	1	DEFAULT		
FIELD	FROM_TIME_NAME	15	UPPER	N	No Time Found
STATIC	SPACE	1	DEFAULT		
FIELD	FROM_MERCH_NAME	35	UPPER	Y	No Merch Found

STATIC	SPACE	1	DEFAULT		
FIELD	FROM_LOC_NAME	20	UPPER	Y	No Loc Found
STATIC	SPACE	1	DEFAULT		
VARIABLE	TESTMACVAR	10	UPPER	N	Nice Try

3.1.1.6 Purge Cluster Set Function

Addition: The following function has been added in the Hot Fix 1 of SAS Intelligent Clustering for Retail.

The Purge Cluster stored procedure allows purging of the cluster sets that were created through SAS Intelligent Clustering for Retail but are no longer being used by a worksheet. The purge function deletes all the cluster sets that are currently not assigned to any worksheet (plan or PA) and meet the date criteria. Clusters sets that are created in Micromarketing, SAS Intelligent Clustering for Retail, or both can be purged.

Purge Function Call

Purge is a stored procedure and must be called through SQL either manually or through a scheduled process. The format of the call is:

Execute `p_purge_ic_cluster` (Param1, Param2, Param3);

For example,

- ☐ Execute `p_purge_ic_cluster` (3, 'RP', 'ALL');

Purges all IC and Micromarketing cluster sets that are older than three days and are not assigned to the worksheets.

- ☐ Execute `p_purge_ic_cluster` (0, 'R', 'IC');

Creates a report that contains all the IC cluster sets to be purged.

- ☐ Execute `p_purge_ic_cluster` (0, 'P', 'IC');

Purges all the IC cluster sets to be purged.

Param1

Type: Number

This parameter sets the number of days. Only those clusters that were created Param1 number of days before the current date are purged.

For example, if this parameter is set to '2' then only those clusters that were created two days before the current date are eligible to be purged.

Param2

Type: Character

Possible Values: 'R', 'P', 'RP' where,

- R: Creates a report but do not purge. Reporting table is `Maxdata.purge_cluster_log`.

The column, `purge_code` is set to '1' to indicate that the cluster set is to be purged. Conversely, the value of `purge_code` is set to '0' if the cluster set is not to be purged. To use this feature the value of `purge_code` is set and the call is re-executed using the 'P' option. (See below.)

- P: Purges from a previously created report.

The change in the value of `purge_code` in the report table is used to determine the cluster sets that are to be purged. The Purge function does not purge a cluster set if it is causing data issues in the database. Therefore, a cluster set that has `purge_code`

manually set from ‘0’ to ‘1’ is not deleted if that cluster set is being used by a plan worksheet or a process template.

- RP: Creates a report as well as purges the cluster sets.

Param3

Type: Character

Possible Values: ‘IC’, ‘MM’, ‘ALL’ where,

- IC: Purges the cluster sets that were created through Intelligent Clustering method.
- MM: Purges the cluster sets that were created through Micromarketing.
- ALL: Purges all the cluster sets.

3.1.1.7 New Attribute Significance Report

Reference

Chapter 8: Reporting Usage

Section 8.3: Demographic Profile

Addition: The following content should be read with section 8.3 *Demographic Profile* in *SAS Intelligent Clustering for Retail: User’s Guide*.

Attribute Significance report is added in place of Demographic Store Count by Attribute report. The new report gives the attribute and its significance with respect to each cluster.

Previous report: Demographic Profile: Store Count by Attribute Report

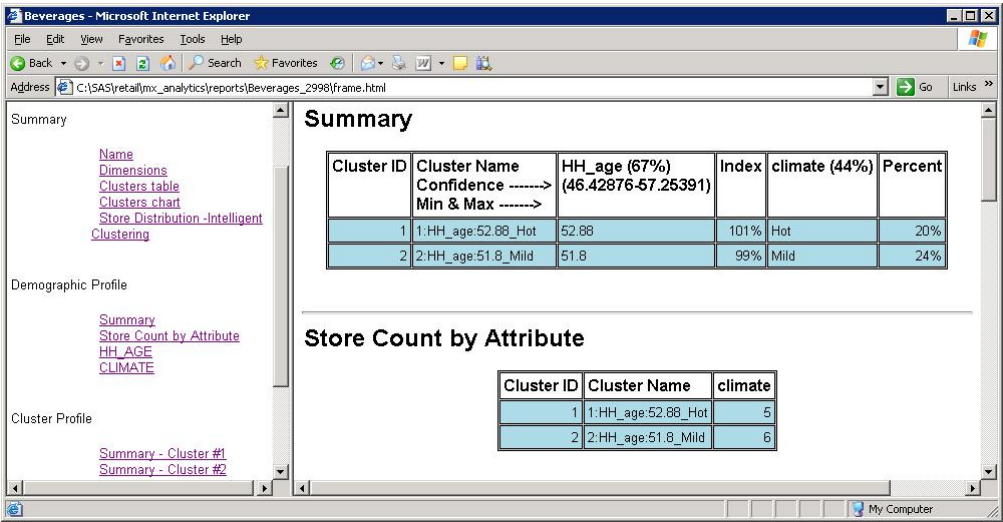


Figure 1. Old Demographic Profile: Store Count by Attribute Report

New Report: Demographic Profile: Attribute Significance Report

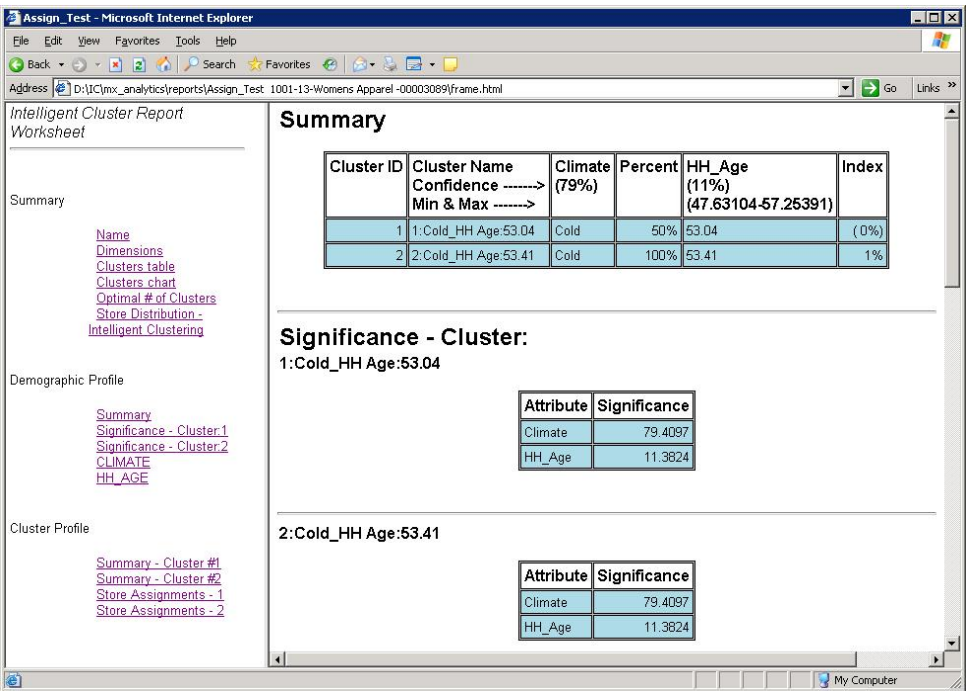


Figure 2. New Demographic Profile: Attribute Significance Report

3.1.1.8 Pie Chart for Product Attributes Report

Reference

Chapter 8: Reporting Usage

Section 8.4: Product Profile

Addition: The bar chart for Product Profile is replaced by the pie chart in the section 8.4 *Product Profile* in *SAS Intelligent Clustering for Retail: User's Guide*.

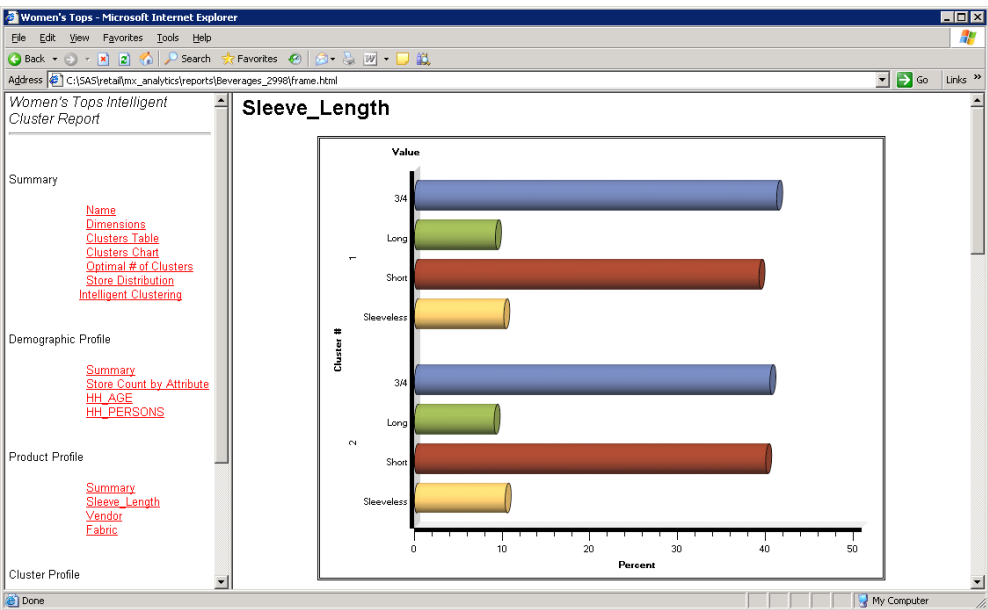


Figure 3. Old Profile Report with Bar Chart

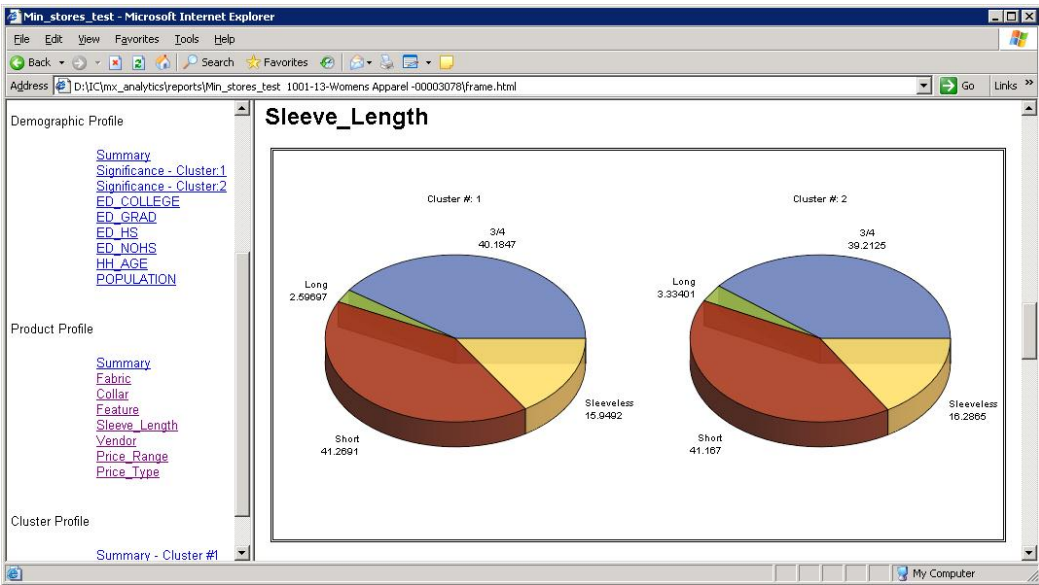


Figure 4. New Profile Report with Pie Chart

3.1.1.9 Unassigned Store Report

Reference

Chapter 8: Reporting Usage

Section 8.5: Cluster Profile

Addition: The following content should be read with 8.5 *Cluster Profile* in *SAS Intelligent Clustering for Retail: User's Guide*.

System produces Unassigned Store report for the stores that have not been assigned to any cluster. This is the only report that shows unassigned stores.

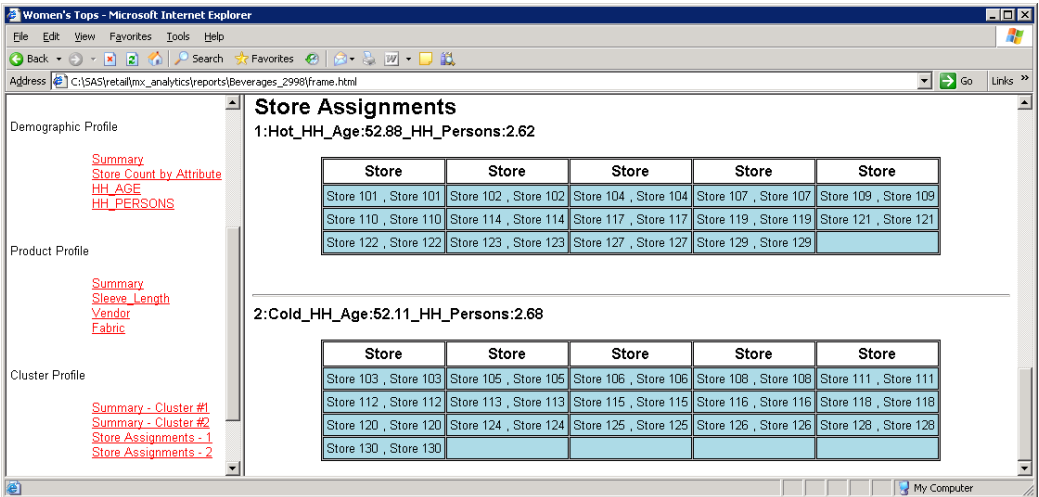


Figure 5. Old Store Assignments Report

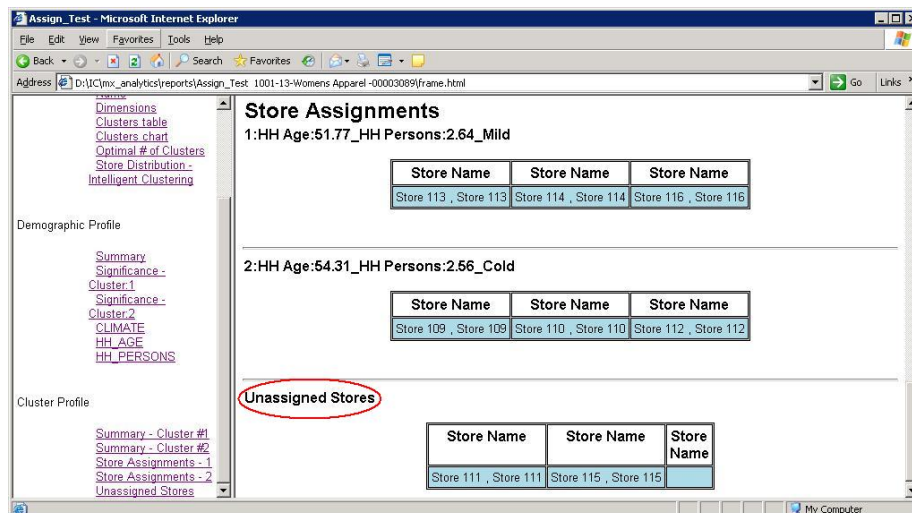


Figure 6. New Store Assignments Report Showing Unassigned Stores

3.1.1.10 New Demographic Summary Report

Reference

Chapter 8: Reporting Usage

Section 8.3: Demographic Profile

Addition: The following content should be read in 8.3 *Demographic Profile* in *SAS Intelligent Clustering for Retail: User's Guide*.

In the previous release, the index was calculated in percentage. The index is now calculated by subtracting 100 from the index value. If it is a negative value, it is displayed in round braces as shown in the figure below.

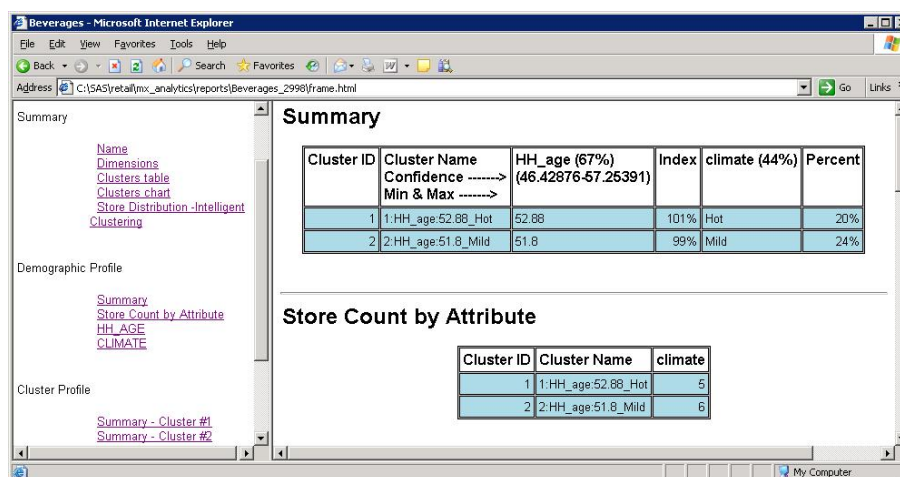


Figure 7. Old Demographic Summary Report

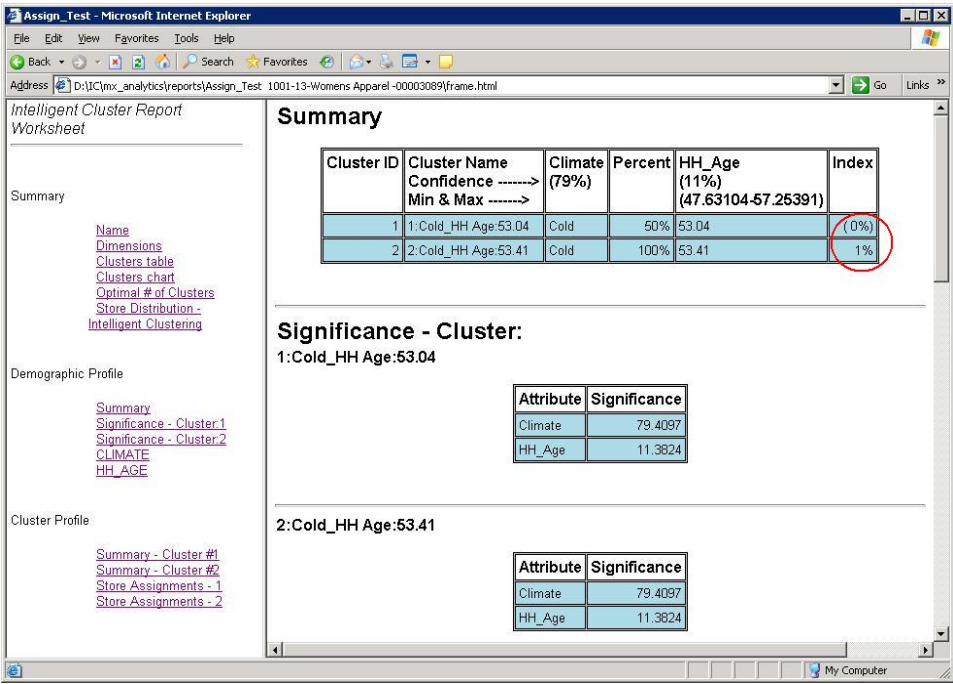


Figure 8. New Demographic Summary Report showing New Index Values

3.1.1.11 Demographic Attributes by Cluster

Reference

Chapter 8: Reporting Usage

Section 8.3: Demographic Profile

Addition: The following content should be read with section 8.3 *Demographic Profile* in *SAS Intelligent Clustering for Retail: User's Guide*.

Confidence percentage of the individual cluster in the demographic pie chart and in the summary report was calculated on the whole population in the previous release. This was documented as a Known Issue in the *SAS Intelligent Clustering for Retail: Release Notes* of the previous release. In this Hot Fix 1 release, the confidence percentage of an individual cluster in the Demographic Pie Chart and Summary report is calculated on the cluster.

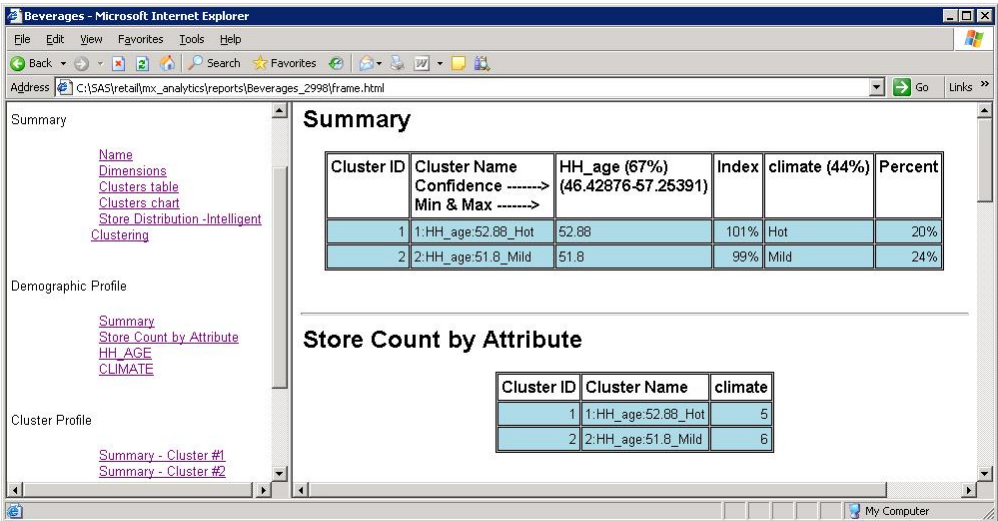


Figure 9. Old Demographic Summary Report

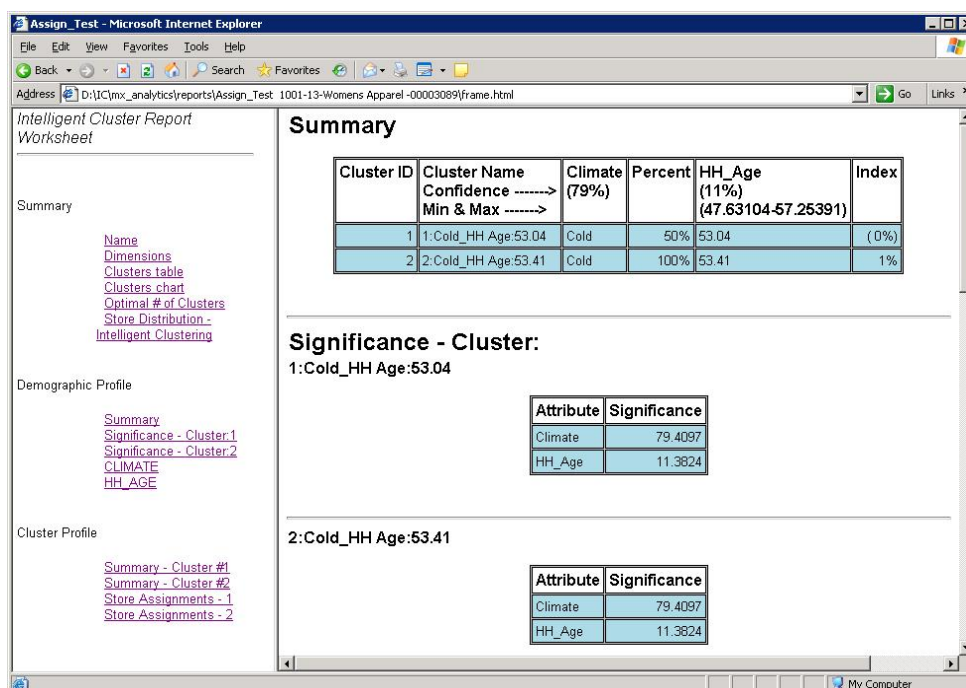


Figure 10. New Demographic Summary Report

3.1.1.12 Formatted Cluster Names

Reference

Chapter 6: Analytical Usage

Section 6.5: Naming the Clusters

Addition: The following content should be read in addition to section 6.5 *Naming the Clusters* in the *SAS Intelligent Clustering for Retail: User's Guide*.

The cluster names in the reports are displayed using space instead of '_' between the attributes thereby making them easier to read. For example:

Pervious Cluster Name: 1:Ed_hs:1934.2_Ed_nohs:430.6_Population:9886.2

Current Cluster Name: 1:Ed hs:1934.2_Ed nohs:430.6_Population:9886.2

3.1.1.13 Changes in jobparam Data Set

Reference

Appendix 1 in User's Guide: 1.1 Jobparam Table

Addition: The following new job parameters added to the jobparam data set.

Table 3. New Job Parameters Added in jobparam Data Set

Type	Name	Description	Default Value
IC	ic_time_version	Sets the extract data option. Possible values are: TY, LY, LLY, TY_LY, and LY_LLY.	LY_LLY
IC	ic_kpi_calc_n	Calculates the demand value. Only field name must be used in the calculation. For example, posit_mvmt - posit_mvmt_clrnc. If there is no calculation, field ic_kpi_calc_n must contain at least one field.	net_sales_items- SALES_ITEMS_ 3

Type	Name	Description	Default Value
		Note: Calculation can contain only those fields that are specified in corresponding field, <code>ic_kpiset_n</code> .	
IC	<code>ic_optimize</code>	Optimize the data extraction.	1
IC	<code>ic_autoseg_tree</code>	0=Hierarchical Auto-Segmentation is Off. 1=Hierarchical Auto-Segmentation is 'On'.	0
MA	<code>ma_max_rsubmit</code>	Maximum submit sessions.	6

Note: For Auto-Segmentation, KPIs that define the fields to be extracted from Merchandise Planning data mart for Volume_Hist, Volume_Plan, or Volume_Forecast are now the `ic_kpiset_n` and `ic_kpi_calc_n` fields instead of the table/field columns within the criteria table (`stage.criteria`).

Note: `ic_optimized` is set to 'Off' (`ic_optimized=0`) in the following cases:

1. `sell_thru` is set 'On'
2. `ic_time_version`=TY_LY or LY_LLY
3. time set is used

Note: The history is extracted from TY for the KPI whose `crit_type` is either Hist or Plan or Fcast.

The following job parameters are removed from the `jobparam` data set.

Table 4. Job Parameters Removed from `jobparam` Data Set

Type	Name
IC	<code>ic_locale</code>
MA	<code>output_format_type</code>

3.1.1.14 New Store Resolution

Addition: The following content is added in the *SAS Intelligent Clustering for Retail: User's Guide*.

When Statistical Clustering method is used with parameter 'IC', new stores can be resolved either by:

- ☐ acts-like store substitution, or
- ☐ by statistical algorithm that sets like-cluster for a new store based on the new store's similarity to the stores in that cluster. Here, Similarity is defined by the set of store demographic attributes.

Stores that are not resolved by these approaches or that do not have any history are placed in an unassigned cluster.

Store Status Determination

The stores are classified as Comp (comparative) and Non-Comp (new) based on the following criteria.

Parameter	Description
<code>ic_store_stat_method=1</code>	For each store within the extract data time frame, a store is Comp if maximum of

Parameter	Description
	<code>Maxdata.loc_attr.loc_attr_flag > 0</code> .
<code>ic_store_stat_method=2</code>	For each store within the extract data time frame, a store is Comp if maximum of <code>Maxdata.loc_time_2d.lt_comp_store_count > 0</code> .
<code>ic_store_stat_method=3</code>	All stores are Comp stores by default. Use this method if no other Comp data is available.

Note: A store that does not have history during extract, automatically takes the status of Non-Comp. If a Non-Comp store is processed through IC and like-history is assigned to it then the status of Non-Comp store is changed to Comp store.

Store History Substitution

This method can be used by setting parameters `ic_wf_new_store = 0` and `ic_wf_newloc = 1`. In addition, acts-like stores must be assigned within Merchandise Planning for this function to work. Specifically, for each new store the `lv4loc.acts_like` field must have `lv4loc_id` store system ID. This ID is set from the Merchandise Planning worksheet interface. This approach provides acts-like history to the new store from the assigned acts-like store before clustering occurs.

Statistical New Store Resolution

This method can be used by setting parameter `ic_wf_new_store = 2` and `ic_wf_newloc = 0`. For more details see 6.3 *New Store Assignment* in *SAS Intelligent Clustering for Retail: User's Guide*.