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Part 1: Instructions for Hot Fix 52WA02 on WINDOWS

The hot fix package downloaded is a self extracting executable named 52wa02wn.exe.

IMPORTANT NOTE(S):

1. You must have SAS Web Analytics 5.2 installed on your system before applying this hot fix.

2. The hotfix must be installed using the same userid who performed the initial SAS 9.1.3 installation.

3. You must have Administrator Privileges on your CLIENT or SERVER machine.

4. All currently active SAS sessions, daemons, spawners and servers must be terminated before applying this hot fix.

To install this hotfix

1. Since it will be needed later in the installation of this hot fix, Ant 1.6 must be available on your system. If you do not have Ant installed, you can download and install Ant 1.6 from

    http://ant.apache.org/

You can execute the following command to ensure Ant is available:

    ant -version

NOTE: The JAVA_HOME variable has to be set for the ant script to work.

2. Launch 52wa02wn.exe. This installer can be launched on any machine, and will extract two individual installers into C:\52wa02.

Each individual hot fix installer then needs to be copied to the appropriate machine where the components to be updated are installed.

The two individual installers extracted are:

52weba02wn.exe
contains SAS Web Analytics 5.2 server-side updates

52webdataanlyt02wn.exe
contains SAS Web Analytics 5.2 Java middleware updates

3. Use the instructions below to update the individual components that are applicable to your implementation.

Installing 52weba02wn.exe

1. Launch 52weba02wn.exe. This will initiate the installation wizard, which will guide you through the setup process. The setup process will install the updated SAS macros and datasets to the SAS Web Analytics 5.2 server.

The files installed include:

!SASROOT\weba\sasmacro\waconvrt.sas
!SASROOT\weba\sasmacro\waetl.sas
!SASROOT\weba\sasmacro\waseganl.sas
!SASROOT\weba\sasmacro\wautils.sas
!SASROOT\weba\sasmacro\wadashdp.sas
!SASROOT\weba\sasmacro\wascordp.sas
!SASROOT\weba\sasmacro\waadmsum.sas
!SASROOT\weba\sasmacro\wasummry.sas
!SASROOT\weba\sasmacro\wapath.sas
!SASROOT\weba\sasmacro\wapathdp.sas
!SASROOT\weba\sasmacro\wasumtst.sas

!SASROOT\weba\sashelp\waconfig.sas7bdat
!SASROOT\weba\sashelp\waconfig.sas7bndx

Any of these files that already exist on your system will be backed up with a .000 extension. You may remove these back up files if you choose to do so.

2. Verify that the following folders are updated:

!SASROOT\weba\sasmacro
!SASROOT\weba\sashelp

11 updated files should be copied to the sasmacro folder.
2 updated files should be copied to the sashelp.

Installing 52webdataanlyt02wn.exe

1. Since it will be needed later in the installation of this hot fix, Ant 1.6 must be available on your system. If you do not have Ant installed, you can download and install Ant 1.6 from

    http://ant.apache.org/

You can execute the following command to ensure Ant is available:

    ant -version

NOTE: The JAVA_HOME variable has to be set for the ant script to work.

2. Launch the executable, which will initiate a Java install wizard and will guide you through the extraction of the updated components.

3. To verify the installation of the hot fix confirm that the file(s) in the location(s) below have been updated to the level indicated by the date provided:

    <sashome>\SASWebAnalytics\5.2\SASWebAnalytics\WEB-INF\lib\webanalytics.jar
    Date: 09/21/06 (EST)

4. Configure SAS Web Analytics

Execute the ant script webdataanlyt_hf.xml as described below.

    $> cd <ant_install_dir>\bin

    $> ant -f <sashome>\SASWebAnalytics\5.2\Config\webdataanlyt_hf.xml -Dconfig.dir=< configdir > -Dinstall.loc=< sas_home > -Dtemp.dir=< temp_location >

where

< configdir > is the path to the Configuration Directory; this is the directory that contains the Lev1\web\webapps directory

< sas_home > is the path to where all SAS products are installed; this is the directory that contains the SASWebAnalytics\5.2 directory

< temp_location > is a path to a temporary directory for temp files

For example:

    ant -f \usr\local\SAS913\SASWebAnalytics\5.2\Config\webdataanlyt_hf.xml -Dconfig.dir=\usr\local\SAS913\ConfigDir -Dinstall.loc=\usr\local\SAS913 -Dtemp.dir=\tmp\saswork

To confirm that the ant command successfully completed, verify that the datetime stamp on the SASWebAnalytics.war file in Lev1\web\webapps corresponds to the date/time when the command was executed.

5. Re-deploy the war file generated

Copy the war file

< configdir >\Lev1\web\webapps\SASWebAnalytics.war

to your web application server and deploy it in the server.

Re-start the Application Server.

Part 2: Use of Summarization Filters

A re-engineered Summary Engine is one of the features of the Web Analytics v5.2 HotFix. This re-engineering was needed because the following 6 large (up to 1024 bytes) text fields could cause the %WaETL macro to fail:

- FIRST_REQUESTED_FILE
- REQUESTED_FILE
- REFERRER
- REFERRER_DOMAIN
- SEARCH_TERM
- VISITOR_ID

The re-engineered process now uses small 32-byte token fields instead of the large text fields as PROC Summary CLASS variables. This change makes it much less likely that an ETL will fail because of a PROC Summary step, but it also means that some summarization filters that used to work may need to be changed.

Summarization filters are optional WHERE statements in the WAADMSUM metadata that control which observations get output to a summarization data set. Summarization filters that do not involve the six large text fields in the above list do not need to be changed for the v5.2 HotFix. Summarization filters that do involve those six fields may need to be changed. The %WaConvrt macro (section II_S) evaluates the WAADMSUM summarization filters and creates a message that indicates whether they need to be changed.

If a summarization filter is based on an equality test (for example, **where=(referrer_domain eq 'www.google.com ')** or **where=(referrer_domain in ('www.google.com', 'www.google.co.uk', 'www.google.co.sa '))**), no change is necessary in order for the filter to continue to work with the Web Analytics v5.2 HotFix. Also, no change is necessary for filters based on an inequality test (for example, **where=(referrer_domain ne 'www.google.com ')**or **where=(referrer_domain not in ('www.google.com', 'www.google.co.uk', 'www.google.co.sa '))**).

If a summarization filter is based on a relational test (for example, **where=(referrer_domain gt 'www.google.com ')**) or is based on a sub-string test (for example, **where=(index(referrer_domain,'www.google.com ') = 0)**), it will need to be changed to function properly in the HotFix for v5.2. The following steps describe the type of changes that you can make so that you still get the proper results in v5.2 HotFix summarizations.

Example:

Suppose that you have an existing pre_v5.2 HotFix Web mart that has the following summarization filter for the Referrer Domain summarization:

where=(index(referrer_domain,'www.google.com ') = 0)

Step 1: Insert an indicator field that contains the result of the current test.

Between the %edataetl(program=load) step and the %waetl step, add a new field to the weblog_detail_1 data set with a DATA Step similar to the following:

```
data detail.weblog_detail_1;
   set detail.weblog_detail_1;
   if index(lowcase(referrer_domain),'www.google.com') then
      ref_dom_sw=1;
   else
      ref_dom_sw=0;
run;
```

Note that the LOWCASE function is used to make sure that there are no case-related errors in assigning a value to the REF_DOM_SW indicator.

Step 2: Modify the Summarization's WaAdmSum metadata.

In the Web Analytics Administrator, under the Summaries tab, select Referrer Domain, click on Modify, and make the following changes to the Referrer Domain summarization:

a) change the Run Summary in ETL? setting to No (this will keep your currently
defined Referrer Domain summarization from running; you will need to define a completely new one because some of the metadata values that you need to change cannot be modified for an existing summarization. You can delete this summarization instead of marking it not to run during ETL, if you prefer.)

b) Create a new Referrer Domain summarization that is a copy of the current Referrer summarization except for the following changes:

- in the Output Data Set Where Statement field, enter **where=(ref_dom_sw =0)** instead of **where=(index(referrer_domain,'www.google.com ') = 0)**
- in both Output Data Set Options fields, enter **keep= date referrer_domain_token page_count session_count _type_ ref_dom_sw**
- add **ref_dom_sw** to the field for the ID Variables List
- add **day,week,month,qtr,year** to the field for the ID Variables Summary Levels

Step 3: Modify the Web Mart's Configuration settings to place the REF_DOM_SW variable in the SESSION data sets.

In the Web Analytics Administrator, under the Data tab, modify the **wab_first_sess_vars** ("Comma-delimited list of SESSION vars with first.session_id values." -- row #27) parameter to include the REF_DOM_COMDIRECT field. If there are already values in this parameter, be sure to separate this addition from the other values with a comma (,).

Step 4: Avoid collisions with the legacy summarizations in the \Data\Summary directory.

In the \Data\Summary directory, re-name the **referrer_domain_day, referrer_domain_week, referrer_domain_month, referrer_domain_qtr, referrer_domain_year** data sets so that the new referrer_domain summarizations are not confused with the old ones. You can delete these legacy data sets instead of re-naming them, if you prefer.

Part 3: %waconvrt Instructions

```
/*-------------------------------------------------------------------------

The %WaConvrt (Web Analytics CONVeRT) macro allows you to convert a Web
Analytics Web mart to the v5.2 HotFix standard.

You can run the %WaConvrt macro two ways:

   1) in Diagnose mode to assess a Web mart and create a report that
      -  identifies changes that %WaConvrt will make when it is run in
         Update mode
      -  lists changes that you will have to make manually

   2) in Update mode to convert a Web mart and create a report that
      -  identifies changes that %WaConvrt has made
      -  lists changes that you will have to make manually


The %WaConvrt Macro: Syntax
   %WaConvrt(SWAMART=path to the Web marts root,
             TEMP_STORE=path to the Web marts Worklib directory,
             MODE=DIAGNOSE | UPDATE
            );

The %WaConvrt Macro: Details
   SWAMART=path to the Web marts root
      specifies the fully qualified path to the Web marts root

   TEMP_STORE=path to the Worklib directory
      (optional) specifies the fully qualified path to the Web marts root
      if this parameter is omitted or left blank, the %WaConvrt macro creates
      a default Worklib directory as a sub-directory of WORK

   MODE=DIAGNOSE | UPDATE
      specifies whether %WaConvrt should DIAGNOSE (create a report of what
      changes will be made to bring a Web mart into compliance with the v5.2
      HotFix) or UPDATE (actually make the changes to the designated Web mart)
      If this parameter is omitted, the default (DIAGNOSE) operation is done.
      To actually convert the designated Web mart, you must specify
      MODE=UPDATE


The %WaConvrt Macro: Notes
   The %WaConvrt macro performs error checking on the arguments that you
   specify and writes error messages in the log if it detects any problems.
   The format for these messages is as follows:

         ERROR: (WACONVRT) hh:mm:ss (text of message)

   where hh:mm:ss is the time when the %WaConvrt macro ran.  The text of the
   message indicates the type of problem that the %WaConvrt macro detected.
   If the text inside the parentheses is not "WACONVRT," then it will be the
   name of a module that %WaConvrt has called and means that the error
   occurred in the called module, not in %WaConvrt.
```

The %WaConvrt macro creates a report that summarizes its activities.

When MODE=DIAGNOSE, the report indicates what changes the %WaConvrt macro will need to make to bring the designated Web mart into compliance with the v5.2 HotFix standard. These changes can be made by re-submitting the %WaConvrt macro with MODE=UPDATE.

When MODE=UPDATE, the report lists all the Web mart features that the %WaConvrt macro assessed and indicates if %WaConvrt was able to update them or if %WaConvrt detected a problem with the feature that will need to be addressed manually.

NOTE: you do not need to first run the %WaConvrt macro with MODE=DIAGNOSE. However, if you do run the %WaConvrt macro with MODE=DIAGNOSE, you will be able to quickly discover whether the %WaConvrt macro can automatically update your Web mart so that it is compliant with the v5.2 HotFix or whether you will need to make manual changes as well. Running the %WaConvrt macro with MODE=UPDATE can provide you with the same information, but will take much longer because of the additional processing needed to perform the actual updates.

The %WaConvrt Macro: Examples

Example1.

```
%waconvrt(swamart=D:\swa\TestMart
         );
```

Create the diagnostic v5.2 HotFix report for the Web mart whose root directory is at D:\swa\TestMart. Use the default location for WORKLIB.

Example2.

```
%waconvrt(swamart=D:\swa\TestMart
         ,temp_store=D:\swa\TestMart\TempStore
         );
```

Create the diagnostic v5.2 HotFix report for the Web mart whose root directory is at D:\swa\TestMart. Use the D:\swa\TestMart\TempStore directory for WORKLIB (this will make the temporary work data sets available after the SAS session in which the %WaConvrt macro was submitted has ended).

Example3.

```
%waconvrt(swamart=D:\swa\TestMart
         ,temp_store=D:\swa\TestMart\TempStore
         ,mode=diagnose
         );
```

Create the diagnostic v5.2 HotFix report for the Web mart whose root directory is at D:\swa\TestMart\TestMart. Use the D:\swa\TestMart\TempStore directory for WORKLIB (this will make the temporary work data sets available after the SAS session in which the %WaConvrt macro was submitted has ended). This is the same as Example 2, except that here the MODE is explicitly set to DIAGNOSE (in Example 2, it is implicitly set to DIAGNOSE, the default).

Example4.

```
%waconvrt(swamart=D:\swa\TestMart
         ,temp_store=D:\swa\TestMart\TempStore
         ,mode=update
         );
```

Try to make all the changes necessary to convert the designated Web mart to the state of the v5.2 HotFix. Use the D:\swa\TestMart\TempStore directory for WORKLIB (this will make the temporary work data sets available after the SAS session in which the %WaConvrt macro was submitted has ended). NOTE: if the %WaConvrt macro could not make a required change to the designated Web mart, it will present an ERROR: message in its summary report that indicates the update will need to be made manually.

Part 4: %wasumtst macro

When the Web Analytics v5.2 HotFix re-engineered the Summary Engine, corresponding changes to the %wasumtst utility macro were not made. This means that the %wasumtst macro will no longer work in the post-HotFix implementation of Web Analytics (it places the _TOKEN field, not its corresponding text string, in the SUMMARY library data set).

Workarounds:
The %wasumtst macro was designed to serve two purposes:

1) run a test summarization outside %WaETL to determine if it is correctly defined in the WAADMSUM metadata;
2) backload a new summarizations outside %WaETL so that it can contain information from previous ETLs.

The post-HotFix workaround for both of these purposes requires that you have a playpen copy of your Web mart. To create this playpen copy, follow these steps:

- copy your production Web mart to a playpen so that it has a completely independent directory structure
- use the Web Analytics Administrator to create a copy of the production Web mart; modify the information in this copy so that it points to your playpen; save the Web mart definition to register the playpen copy of your production Web mart

For the workaround for Purpose #1, follow these additional steps:

- delete the contents of the following directories for the playpen Web mart:
  - \data\dated
  - \data\detail
- delete any versions of the test summarization from the playpen's \data\summary directory (NOTE: this step will be necessary only if you are repeating these steps to make adjustments to the test summarization)
- use the Web Analytics Administrator to define a test summarization in your playpen (make sure that you select 'Yes' in response to 'Run Summary in ETL?'); either delete all other summarizations or change their 'Run Summary in ETL?' settings to 'No' (this will allow your ETL to run more quickly because the only summarization that you will be creating will be the one you are testing). Hint: you can save even more time in your ETL if you use the %WaETL option, *wapathdp_sw=N*.
- make sure that the playpen's \e-data-etl\detail directory contains a WEBLOG_DETAIL_1 data set that is suitable for the test summarization
- run the %WaETL macro in the playpen
- review the SUMMARY data sets created by the test summarization
- repeat the previous Purpose #1 steps until the SUMMARY data sets created by the test summarization are what you need them to be
- use the Web Analytics Administrator to define the test summarization in your production Web mart

For the workaround for Purpose #2, follow these additional steps:

- delete the contents of the following directories for the playpen Web mart:
  - \data\dated
  - \data\detail
- delete any versions of the new summarization from the playpen's \data\summary directory
- use the Web Analytics Administrator to make sure that the new summarization is properly defined in your playpen (make sure that you select 'Yes' in response to 'Run Summary in ETL?'); either delete all other summarizations or change their 'Run Summary in ETL?' settings to 'No' (this will allow your ETL to run more quickly because the only summarization that you will be creating will be the new one you are backloading). Hint: you can save even more time in your ETL if you use the %WaETL option, *wapathdp_sw=N*.
- repeat the following steps for all the dates you want to backload for the new summarization:
  - make sure that the playpen's \e-data-etl\detail directory contains the appropriate WEBLOG_DETAIL_1 data set
  - run the %WaETL macro in the playpen
  - review the SUMMARY data sets created by the new summarization
- use the Web Analytics Administrator to make sure that the new summarization is properly defined in your production Web mart.
- copy the new summarizations from the playpen's \data\summary directory to the production Web mart's \data\summary directory.

If you do run %wasumtst in the post HotFix environment:
If this happens, you will need to remove the summarizations that %wasumtst created in the Web mart's \data\summary directory. Otherwise, subsequent ETLs will fail because the version of the summarization in the Web mart's \data\summary directory will not match the summarization that is created during the ETL.