



SIMS



**Validating
Memberships
Using
DBDiagnose**

applicable to 7.118 onwards

Mini Guide

Revision History

Version	Change Description	Date
7.118 - 1.0	Initial release.	06/03/2009
7.118 - 1.1	Updated to new template.	30/04/2012
7.118 - 1.2	Rebranding of front cover.	22/07/2014
7.118 - 1.3	Contact information updated.	22/04/2021
7.118 - 1.4	Contact information updated.	14/12/2021

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Doc Ref: ValMem7118/HBK/141221/FT

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Introduction

The checking and enforcement of group membership validation rules had previously been performed by running the **Tools | Validate Memberships** routine or the **Database Diagnostics** routine through **Tools | System Diagnostics | Database Diagnostics**. It was also possible to check and enforce group memberships through the schools **Promotion** routine, **Routines | School | Promotion**.

The actual checks and validation rules have now been significantly improved to address some commonly reported issues. Some of the checks that are carried out have directly replaced some of the checks that were previously initiated when running the Database Diagnostics routine.

Improvements Made to the Validate Memberships Routines

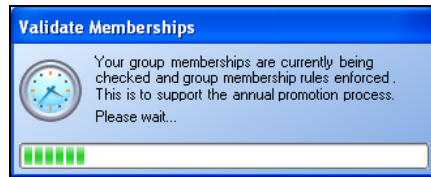
The revised routine now only runs when changes have been made to group memberships or other data that affects the group membership rules within SIMS.

This means that once an element of data has been checked and validated by the system once, the system will recognise this and will not re-check the same element of data when the routine is run again. If, however, the element of data has changed since the routine was last run then the data will be checked again as new data. This change greatly optimizes the speed and significantly reduces the time that it takes for the Validate Memberships routine to run.

The first time that the improved routine is run, it will still take some time to complete but on subsequent occasions, the speed of the revised routine is noticeably faster.

01 | Running the Optimised Validate Memberships Routine

In SIMS, select **Tools | Validate Memberships** to run the validation process.



The **Validate Memberships** routine checks any changes that have been made to group memberships or other data that affects the group membership rules within SIMS. When the routine has finished checking the database, a list of all the anomalies that have been corrected automatically or a list detailing warnings that require manual intervention, can be viewed using DBDiagnose.

The **Validate Memberships** routine checks any changes that have been made to group memberships or other data that affects the group membership rules within SIMS. When the routine has finished checking the database, a list of all the anomalies that have been corrected automatically or a list detailing warnings that require manual intervention, can be viewed using DBDiagnose.

Using DBDiagnose and Viewing the Report Outputs

To provide a visible log of the errors identified and the corrections that have been applied to the database, `DBDiagnose.exe` and two pre-defined SQL scripts are available. The pre-defined SQL scripts are called:

`VALIDATION_FIXES_REPORT_CONCISE.SQL` and
`VALIDATION_WARNINGS_REPORT.SQL`.

These reports are installed automatically to the SIMS folder, typically located in `C:\Program Files\SIMS\SIMS .net` with their associated `.signature` files.

Validation Fixes Report Concise

This report details all fixes that have been corrected automatically by the system. For example, Fred Scott may have two registration group/class memberships on the same day. The Validate Memberships routine applies the rules to decide which of the two group memberships should be kept and which should be discarded. Fixes that have been applied will always be displayed in the report output, warnings will not.



More Information:

Table of Validation Fixes on page 5

Validation Warnings Report

This report provides warnings in cases where a problem has been detected but manual intervention is required to address it. This report is a useful resource for solving potential group membership problems in the school before referring to the Service Desk for additional support.



More Information:

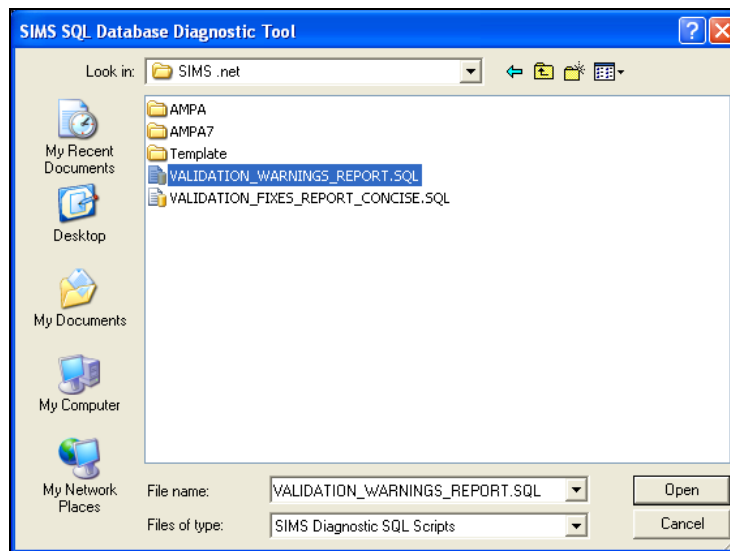
Table of Validation Warnings on page 10

Running DBDiagnose

1. Navigate to the stored location of the `DBDiagnose.exe`, e.g. `C:\Program Files\SIMS\SIMS .net`.
2. Double-click the `DBDiagnose.exe` to open the **SIMS SQL Database Diagnostic Tool**.
3. In the **Database Information** panel, enter the **Server Name** and the **Database Name**, e.g. `XP4542\SIMS` and `GreenAbbey`.
4. Specify the **Authentication** method by selecting the appropriate radio button. If the **SQL Server** radio button is selected, the **SIMS User Name** and **SIMS Password** fields will be activated.

The SIMS system has been enhanced to provide the SIMS System Manager with the opportunity to change the way SIMS is accessed, using Windows® Authentication. Please refer to the *Managing SIMS Users, Groups and Databases* handbook for detailed instructions regarding the enhancements to authentication.

5. Complete the **SIMS User Name** and **SIMS Password** fields, where applicable.
6. Click the **Add** button in the **SIMS SQL Diagnostic File Location** panel to display the **Windows Open** dialog.
7. Navigate to the location of the stored SQL scripts for validating memberships, e.g. `C:\Program Files\SIMS\SIMS .net`.

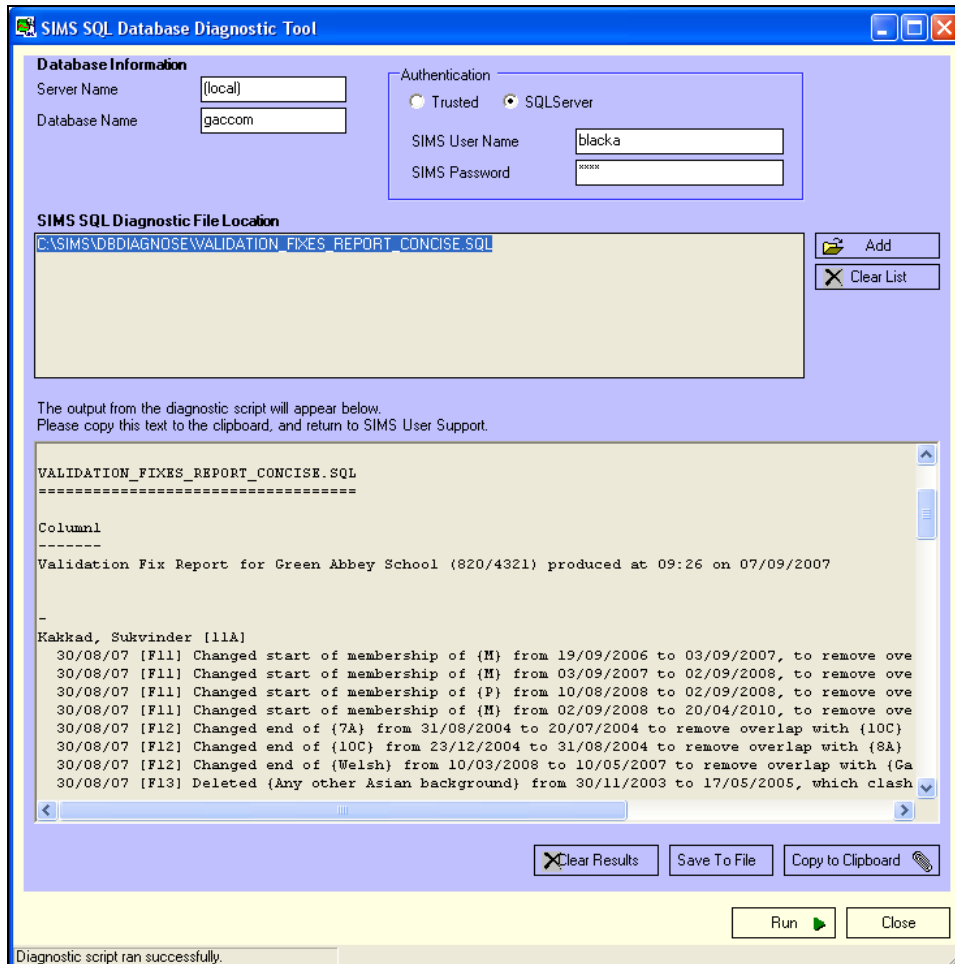


8. Highlight the name of the required SQL script and click the **Open** button to copy the details of the script into the **SIMS SQL Diagnostic File Location** panel. It is possible to select and run more than one SQL script at a time. If an incorrect file name has been selected, click the **Clear List** button to remove the file.
9. When you have selected the required SQL script(s), click the **Run** button at the bottom of the page.

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As the script checks the data, any anomalies or warnings that are identified, depending which of the two SQL scripts is being run, will be listed in the bottom panel of the **SIMS SQL Database Diagnostic Tool** page.

When the script has finished checking the data, a message is displayed in the bottom left-hand side of the page advising that the **Diagnostic script ran successfully**.



10. Click the **Save to File** button to display the **Save Diagnostic Results** dialog.
11. Navigate to a suitable storage location and identify the **File name** with today's date for ease of identification. The results will be stored as a .LOG file and can be viewed using Microsoft® Notepad or an alternative text editor.
12. Alternatively, click the **Copy to Clipboard** button, open a suitable programme such as Notepad or WordPad and paste the results into an active session for viewing.
13. If you wish to run another script, click the **Clear Results** button and resume the instructions from Step 6 onwards.
14. Click the **Close** button to close the **SIMS SQL Database Diagnostic Tool** page.

Understanding the Hierarchy of Existing Memberships

A number of group types within SIMS are categorised as 'ASF (Allow Simultaneous = False)'. This means that at any given time, an individual should only belong to one group of this type. For example, Year Groups, National Curriculum Year Groups and Registration Groups/Classes are all examples of groups categorised by this type and it is very unlikely that a pupil/student would belong to more than one Year Group or Registration Group/Class during the same time period.

Where the revised validation routine identifies that there is a clash of two ASF group type memberships, a set of specific rules have been defined to determine which of the two group memberships should give way to the other. The membership that will **not** give way is known as the primary or dominant membership and the membership that **will** give way, is known as the secondary or recessive membership.

The following set of rules will be used to decide which group membership should take precedence in the event of a clash:

- If one group membership is still active and the other group membership is inactive, the active membership will take precedence over the inactive membership.
- If one group is the promotion path for the other group then the group that the other group is promoted to will take precedence.
- If groups are of type Year, Year Taught In or Registration Group/Class and the membership spans more than 370 days (longer than an academic year) and the other membership is for a shorter time period, the membership with the shorter span will take precedence.
- If one group membership extends beyond the other and groups are not of type Year, Year Taught In or Registration Group/Class then the group membership with the longer span will take precedence.
- If two group memberships start at different times then the group membership with the later start date will take precedence.
- The membership of the most recently created group will take precedence.

The rules have been carefully selected after studying many situations where the ASF rule has been broken, to produce the most likely intended result. All data corrections are logged, and the user should inspect the logs and make any further changes that are considered necessary.

Table of Validation Fixes

The checks and fixes listed below refer to a single individual at a given time.

Fix Number	Check Carried Out	Fix
F01	A pupil/student has an Admission Number of ' ', '0' or one ending with five zeroes.	The Admission Number will be set to {null}. This may be subject to change by Fix No. F03.

01 | Running the Optimised Validate Memberships Routine

Fix Number	Check Carried Out	Fix
F02	A pupil/student has two School History records with different, non-null Admission Numbers.	The later Admission Number will be changed to the earlier Admission Number.
F03	A pupil/student has two School History records, one with a non-null Admission Number and the other with a null Admission Number.	The null Admission Number is changed to equal the non-null Admission Number.
F04	A pupil/student has a School History record with a date range that is completely covered by another School History record.	The subsumed School History record will be deleted.
F05	A pupil/student has two School History records for their current school that overlap.	The two records are merged into a single record which spans the combined date range.
F06	A person has a membership that ends before it starts.	The membership will be deleted.
F07	A person has a membership that starts at a time other than midnight.	The start time will be changed to midnight.
F08	A person has a membership with an end time that is not set to a minute before midnight.	The end time will be changed to 23.59.
F09	A person has a group membership with a date range that is completely covered by another membership of the same group.	The subsumed membership record will be deleted.
F10	A person has two memberships of the same group that either overlap or have a gap of one minute between them, e.g. contiguous memberships.	The two memberships will be merged into a single membership that spans the combined date range.
F12	A person has two memberships of groups of the same type with the ASF property and the secondary membership starts before the primary membership and ends during it.	The end date of the secondary group membership will be moved back to a minute before the start date of the primary membership.
F13	A person has two memberships of groups of the same type with the ASF property and the secondary membership occurs completely within the time period of the primary membership.	The secondary membership will be deleted.

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Fix Number	Check Carried Out	Fix
F14	A person has two memberships of the same type of group with the ASF property and the primary membership occurs completely within the time period of the secondary membership.	The part of the secondary membership that correlates with the primary membership will be removed. This will result in three individual memberships being recorded.
F15	A pupil/student has a membership of an ORO (on-roll only) type group that ends before the first Date of Arrival (DOA) or starts after the latest Date of Leaving (DOL).	The membership will be deleted because the pupil/student was not technically on-roll at any point during the time period.
F16	A pupil/student has a membership of an ORO type group that starts before the first Date of Arrival (DOA).	The start date of the membership will be changed to the first DOA.
F17	A pupil/student has a membership of an ORO type group that ends after the last DOL.	The end date of the membership will be changed to the latest DOL.
F18	A pupil/student has a membership of an ORO type group that spans two successive School History records.	A section of the membership is removed to represent the period when the pupil/student was not on-roll. This will result in two separate, shorter memberships.
F19	A pupil/student has a membership of an Academic Year Bound (AYB) type group that extends beyond the end date of the academic year.	The end date of the membership will be changed to the academic year end date.
F20	A pupil/student or ex-student has a gap of more than 100 days between successive NC Year group memberships and was on-roll during the gap period. The gap period starts before 30 days from now.	The gap is closed by advancing the end date of the earlier membership.
F21	A pupil/student or ex-student has a gap of up to 100 days between successive Year Group memberships and was on-roll during the gap period. The gap period starts before 30 days from now.	The gap is closed by advancing the end date of the earlier membership.
F22	A pupil/student or ex-student has a gap of up to 100 days between successive Registration Group memberships and was on-roll during the gap period which lies entirely within one academic year. The gap period starts before 30 days from now.	The gap is closed by advancing the end date of the earlier membership.

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Fix Number	Check Carried Out	Fix
F23	A pupil/student or ex-student has a gap of up to 100 days between successive Year Taught In group memberships and was on-roll during the gap period. The gap period starts before 30 days from now.	The gap will be closed by advancing the end date of the earlier Year Taught In membership to the first academic year end date that falls within the gap. The second membership will start immediately after this date.
F24	A pupil/student or ex-student has a gap of up to 100 days between successive Year Group memberships and was on-roll during the gap period which does not lie entirely within one academic year. The gap period starts before 30 days from now.	The gap will be closed by advancing the end date of the earlier Year Group membership to the first academic year end date that falls within the gap. The second membership will start immediately after this date.
F25	A pupil/student or ex-student has a gap of up to 100 days between successive Registration Group/Class memberships and was on-roll during the gap period which does not lie entirely within one academic year. The gap period starts before 30 days from now.	The gap will be closed by advancing the end date of the earlier Registration Group/Class membership to the first academic year end date that falls within the gap. The second membership will start immediately after this date.
F26	A pupil/student or ex-student has a gap of up to 100 days between the first DOA and first membership of a NC Year Group and the first membership started less than 400 days ago and the pupil/student was on-roll during the gap period.	The gap will be closed by moving the start date of the first NC Year group membership back so that it corresponds with the first DOA.
F27	A pupil/student or ex-student has a gap of up to 100 days between first DOA and first membership of a Year Group and the first membership started less than 400 days ago and the pupil/student was on-roll during the gap period.	The gap will be closed by moving the start date of the first NC Year Group membership back so that it corresponds with the first DOA.
F28	A pupil/student or ex-student has a gap of up to 100 days between first DOA and first membership of a Registration Group/Class and the first membership started less than 400 days ago and the pupil/student was on-roll during the gap period.	The gap will be closed by moving the start date of the first Registration Group/Class membership back so that it corresponds with the first DOA.
F29	Overlapping records are detected for Registration Group/Class memberships for the same group and room.	The records will be merged and the reduction in the number of records is logged.

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Fix Number	Check Carried Out	Fix
F30	Overlapping records are detected for Group Supervisor memberships for the same supervisor, group and supervisor title.	The records will be merged and the reduction in the number of records is logged.
F31	Overlapping records are detected for Sub Group memberships for the same parent and child group and type code.	The records will be merged and the reduction in the number of records is logged.
F32	A Registration Group/Class has current members and a current supervisor but the supervisor has left the school.	The Supervision record is terminated at the date of leaving or removed completely if it began after the supervisor's date of leaving.
F33	A course other than a Pastoral Overview has current members and a current supervisor but the supervisor has left the school.	The Supervision record is terminated at the date of leaving or removed completely if it began after the supervisor's date of leaving.
F34	A pupil/student who was never on-roll and has no pending applications other than rejected or withdrawn class memberships.	The memberships will be deleted.
F35	A pupil/student who was never on-roll and has no pending applications other than rejected or withdrawn curriculum group memberships.	The memberships will be deleted.
F36	An ex-student who has Registration Group/Class memberships which extend beyond their DOL and has no outstanding applications to join the school.	The class memberships are terminated at the latest DOL or deleted if this would result in a membership which ended before it started.
F37	An ex-student who has curriculum memberships which extend beyond their DOL and has no outstanding applications to join the school.	The curriculum memberships are terminated at the latest DOL or deleted if this would result in a membership which ended before it started.

Table of Validation Warnings

Any conflicts that are identified will be ignored by the validation routine if they are more than 400 days old, e.g. if the conflict ceased to be an issue over 400 days ago. If an individual has had no active memberships for a period of 400 days from the date of first running the routine, the routine will not check any details for that person.

The following warnings will be displayed in the `VALIDATION_WARNINGS_REPORT.SQL`. This report will be produced when the Validate Memberships routine is run through the **Tools | Validate Memberships** routine in SIMS.

Warning Code	Description of Warning
W01	A pupil/student has a gap of more than 100 days between successive Year Taught In Group memberships and was on-roll during the period of the gap. The gap starts before 30 days from now.
W02	A pupil/student has a gap of more than 100 days between successive Year Group memberships and was on-roll during the period of the gap. The gap starts before 30 days from now.
W03	A pupil/student has a gap of more than 100 days between successive Registration Group/Class memberships and was on-roll during the period of the gap. The gap starts before 30 days from now.
W04	A pupil/student has no Year Taught In group memberships.
W05	A pupil/student has no Year Group memberships.
W06	A pupil/student has no Registration Group/Class memberships.
W07	A pupil/student has no Year Taught In group membership over a date range when they were on-roll.
W08	A pupil/student has no Year Group membership over a date range when they were on-roll.
W09	A pupil/student has no Registration Group/Class membership over a date range when they were on-roll.
W10	Main Class Supervisor is not an Assignable Person.
W11	Main Course Supervisor is not an Assignable Person.
W12	A Registration Group/Class has current members but no current supervisor.
W13	A course has current members but no current supervisor.
W14	A Registration Group/Class has a current supervisor but no current members.
W15	A course has a current supervisor but no current members.