

CareMonkey and SAS2000 Integration

Updated 14th October 2015

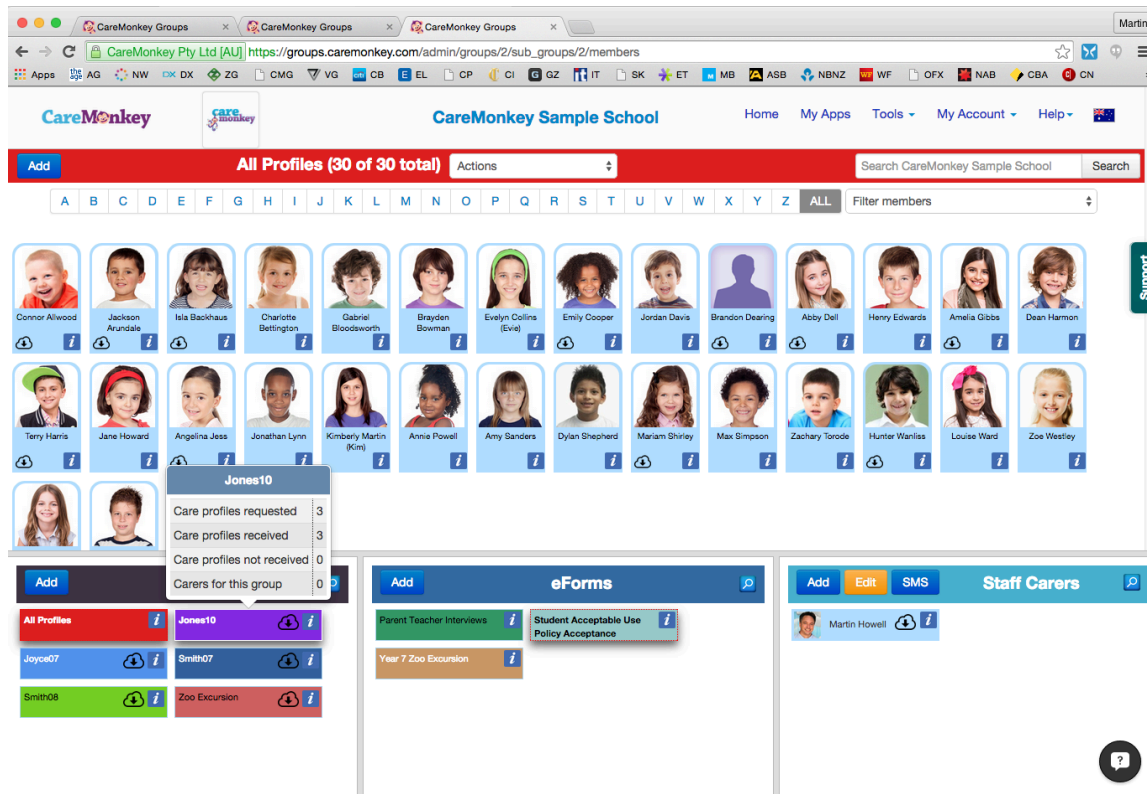
CareMonkey has developed a solution to synchronise data with Human Edge SAS2000 providing many productivity benefits for our mutual customers. CareMonkey can now be run by a school using SAS2000 in 3 different ways:

- **Stand-alone mode** - as a stand-alone system with manual synchronisation
- **One-way synchronisation** - automatically synchronising students, school photographs, groups and staff members
- **Two-way synchronisation** - automatically synchronising students, school photographs, groups and staff members and writing back medical data collected by CareMonkey into SAS2000

In the image below, students, groups (classes) and staff carers with the 'cloud icon' have been synchronised from SAS2000 and appear in CareMonkey automatically. When using the two-way synchronisation, medical information from CareMonkey is also automatically written into SAS for these students.

Administrators can still create custom groups, student and staff profile requests manually and have them live alongside the synchronised items.

Screenshot: Students, groups and staff coming directly from SAS2000



Importing Student Details

Manual Process

In order to add student details in CareMonkey in stand-alone mode, administrators are required to export student data captured in SAS2000 into a spreadsheet. This spreadsheet requires fields such as a student ID, student name, parent email, parent mobile, and any groups to which the student belongs (such as Class). These details are uploaded manually into CareMonkey by an administrator.

CareMonkey SAS2000 Integration

The CareMonkey SAS2000 integration automatically syncs student details from SAS2000 into the CareMonkey database.

Administrators have the ability to select or deselect students entered into the CareMonkey system from SAS2000.

New students (and groups) appear automatically in CareMonkey and are automatically archived.

IT Manager information

This level of integration has no impact on contents of the SAS2000 database as it only reads information via executing SQL queries.

Screenshot: Students imported directly from SAS2000

The screenshot shows the CareMonkey admin interface for 'CareMonkey Sample School'. The browser address bar displays the URL: https://groups.caremonkey.com/admin/groups/2/syncs/external_members. The interface includes a 'Sync menu' on the left with options: 'Select Students (13)', 'Select Groups (137)', 'Select Staff (25)', 'Configure Options', 'View Sync Logs', and 'Sync Now'. The main content area is titled 'Profile request sync details' and contains the following text: 'SAS2000 Students that are synchronised with CareMonkey (indicated by a tick). The words "match found" indicates that there currently exists a profile request with the same student ID that is not linked to SAS.' Below this text is a search bar and a table of students. Each student entry includes a blue checkmark, a profile picture, the student's name, and their ID number. The students listed are: Jackson Arundale (2679), Isla Backhaus (2680), Brayden Bowman (2683), Dean Harmon (2691), Terry Harris (2692), Angelina Jess (2694), Jonathan Lynn (2695), Kimberly Martin (2696), Amy Sanders (2697), Mariam Shirley (2699), Max Simpson (2700), Zachary Torode (2701), and Hunter Wanliss (2702). An 'Update' button is located at the bottom right of the student list.

Check	Student Name (ID)	Check	Student Name (ID)	Check	Student Name (ID)
☒	Jackson Arundale (2679)	☒	Isla Backhaus (2680)	☒	Brayden Bowman (2683)
☒	Dean Harmon (2691)	☒	Terry Harris (2692)	☒	Angelina Jess (2694)
☒	Jonathan Lynn (2695)	☒	Kimberly Martin (2696)	☒	Amy Sanders (2697)
☒	Mariam Shirley (2699)	☒	Max Simpson (2700)	☒	Zachary Torode (2701)
☒	Hunter Wanliss (2702)				

Importing School Photographs

Manual Process

In stand-alone mode school photographs of students must be manually copied into CareMonkey by the administrator using the Tools/Profile Photos menu item.

CareMonkey SAS2000 Integration

The CareMonkey SAS2000 integration automatically syncs school photographs from SAS2000 into the CareMonkey database.

IT Manager information

The integration has no impact on the SAS2000 database. It executes read SQL queries only to obtain the path to the student photo then attempts to read off the file system using the supplied file path.

Managing Groups (Classes)

Manual Process

In stand-alone mode groups are created when importing the student spreadsheet and other groups that already exist in SAS2000 are manually created by an administrator.

CareMonkey SAS2000 Integration

The CareMonkey SAS2000 integration automatically syncs groups from SAS2000 into the CareMonkey database.

Administrators have the ability to select or deselect groups entered into the CareMonkey system from SAS2000.

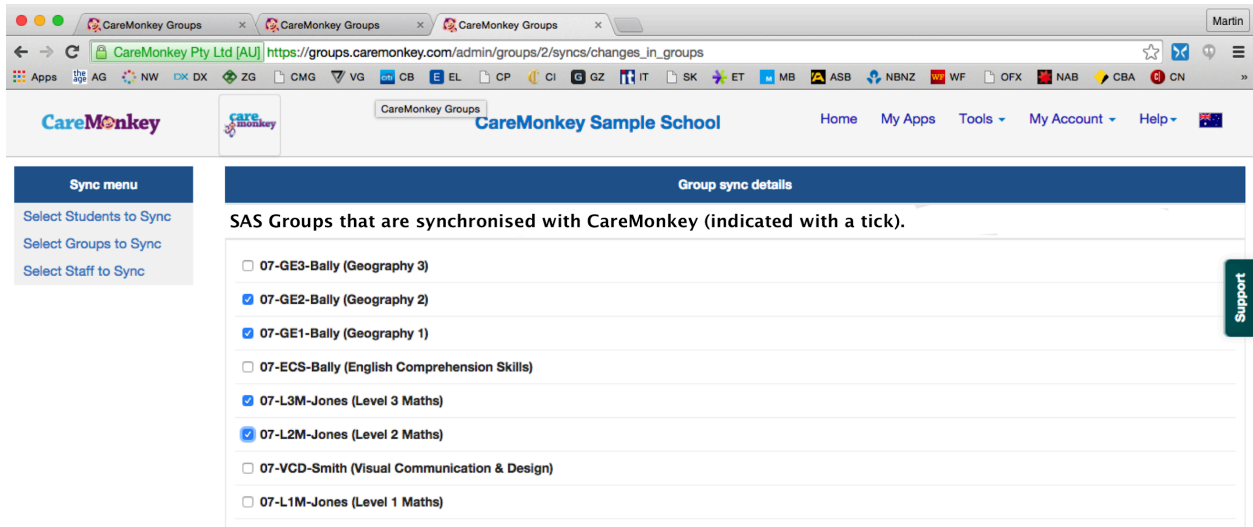
Administrators still have the ability to easily add custom groups directly in the CareMonkey system.

IT Manager information

The integration has no impact on the contents of the SAS2000 database. It executes read SQL queries only.

Screen shot: Groups imported directly from SAS2000

The image below shows how administrators can select the desired groups from SAS2000 to be synchronised with CareMonkey. Group data has been queried from SAS2000 directly.



Staff Details

Manual Process

In standalone mode, it is a manual process to add staff details. This involves a manually exporting staff details into a spreadsheet and uploading this information into the CareMonkey system.

CareMonkey SAS2000 Integration

The CareMonkey SAS2000 integration automatically syncs staff details from SAS2000 into the CareMonkey database.

Administrators have the ability to select or deselect staff entered into the CareMonkey system from SAS2000.

Administrators have the ability to assign staff to their respective groups so that staff can view the groups and associated students on their mobile devices (even when offline).

IT Manager information

The integration has no impact on the contents of the SAS2000 database. It executes read SQL queries only.

Medical Data

Manual Process

CareMonkey's focus is to collect very rich medical data that can be used in an emergency. In stand-alone mode this vital information is either accessed solely from CareMonkey or copied manually from CareMonkey and pasted into SAS2000. CareMonkey has provided Sync Reports to highlight any new data provided by parents, but administrators are still required to manually copy this information into SAS2000 to keep the SAS2000 database up to date.

CareMonkey SAS2000 Integration

The CareMonkey SAS2000 integration automatically copies medical data that has been entered by parents into CareMonkey into the SAS2000 database. CareMonkey becomes the data entry point for parents to keep medical data up to date in SAS2000.

IT Manager information

The integration executes insert/update SQL statements on the SAS2000 database and replaces existing data in the associated medical fields. Using the --debug flag on the CareMonkey synchronisation tool you can see the exact SQL statements that are being run on the SAS2000 database (eg by running: C:\caremonkey\caremonkey_sync.exe --sync --debug).

CareMonkey ensures minimal impact on the SAS2000 database as it is configured to only have read/write access to certain tables and columns - specifically for the medical data. In addition, SAS2000 has excellent built-in integrity mechanisms ensuring integrity of new data and rows in the database.

The CareMonkey integration solution recognises the version of the SAS2000 system it is syncing with. If the version number changes unexpectedly the integration automatically stops and alerts

the CareMonkey administrator and also the CareMonkey development and support teams. This ensures no unexpected results will occur due to unexpected changes in the SAS2000 system.

Note: Once activated - the CareMonkey integration will overwrite existing medical information with new information supplied by parents. It will not overwrite or remove any other student information that CareMonkey has not collected.

Appendix: System requirements

SAS2000 integration works by the user installing an application on one of their servers that has access to the internet (groups.caremonkey.com via TCP port 443) and TCP access to the SQL server hosting the SAS2000 database.

The application, caremonkey_sync.exe needs to be installed in the folder C:\CareMonkey.

During install, it is setup as a Windows service and, by default, runs every 2 hours to synchronise one-way or two-way data.

The application requires minimal resources to run and has been tested on Windows Server 2008R2 and 2012R2.

Logs

By default, CareMonkey_sync generates logs in the C:\CareMonkey folder and uploads these to the caremonkey server after every synchronisation. These are available to administrators via the Tools/SAS2000 Options menu item.

Table Access

For one-way and two-way synchronisation between CareMonkey and SAS2000, the following read/write permissions are needed. If you only wish to use one-way synchronisation then the write access is not needed.

Access Type	Tables
Read Only Access	dbo.Student dbo.StudentContact dbo.Contact dbo.Class dbo. NoteGroup Person.Staff

Read and Write Access	Person.Medical dbo.Notes
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Rows in the Notes table are updated within SAS using the following general style.

```

IF EXISTS (SELECT * from dbo.Notes WHERE Subject = <Subject> AND SourceID IN (SELECT ID
FROM Student WHERE Code = <StudentID>) AND CreatedBy = 'CareMonkey')
    BEGIN
        UPDATE dbo.Notes SET
            Subject = <Subject>, Notes = <Notes>, NoteGroupId = (SELECT ID FROM
            dbo.NoteGroup WHERE Code = 'MEDICAL'), Priority = <Priority>
            WHERE Subject = <Subject> AND SourceID IN (SELECT ID FROM Student
            WHERE Code = <StudentID> ) AND (Notes <> Notes OR Priority <> Priority)
    END
ELSE
    BEGIN
        INSERT INTO dbo.Notes (SourceID, Subject, Notes, NoteGroupId, SourceType,
        Priority, CreatedBy)
        VALUES ((SELECT ID FROM Student WHERE Code = <StudentID>), <Subject> ,
        <Notes>, (SELECT ID FROM dbo.NoteGroup WHERE Code = 'MEDICAL'), 'S',
        <Priority> , 'CareMonkey');
    END;

```

This ensures that rows will only be written when data needs to be changed and will be ignored otherwise. Notes that are not created by CareMonkey will also not be changed.

Rows in the Person.Medical table are updated by first checking for changes to data. If any are found, the sync will create a copy of the existing data and set the archived flag to '1', before inserting a new row with updated data , and the archived flag set to '0'. All data that is not changed by CareMonkey will be copied into the new record.

```

IF EXISTS (SELECT * FROM Person.Medical WHERE PersonID IN (SELECT PersonID FROM
Student WHERE Code = <StudentID>) AND Archived = '0' AND (Field1 <> <Field1> OR Field2 <>
<Field2>.....)
    BEGIN
        INSERT INTO Person.Medical ( Archived, Doctor, DoctorPhone.....)
        SELECT 1, Doctor, DoctorPhone..... FROM Person.Medical WHERE (PersonID IN (SELECT
        PersonID FROM Student WHERE Code = <StudentID>) AND Archived = '0')
    END

```


Appendix: SAS2000 Field Mapping to CareMonkey for two-way synchronisation

Below is partial information for the mapping of fields from CareMonkey to SAS.

Medical Contacts

SAS provides fields for Medical Doctor and Dentist for each student. CareMonkey copies these details into the Person.Medical table against these students. At present, we copy the most useful phone number into this table - mobile number if available, otherwise the work number of the doctor or dentist.

Emergency Contacts

Emergency Contacts are populated into the SAS database by way of a Note against a student. The note will always have the subject of "CareMonkey Emergency Contact" and the note field will contain the contacts name, phone number and relationship.

CareMonkey does not alter the already entered contacts for a student.

Swimming Abilities

In CareMonkey, the parent has the choice of four options when it comes to swimming ability. As with Emergency Contacts, these details are added to student records as additional Notes.

General Medical Details

The following fields are copied from CareMonkey and will overwrite any already entered information for that student in your SAS database:

Person.Medical SAS2000 Column	CareMonkey information/Field
Ambulance	has_ambulance_cover
AmbulanceNumber	ambulance_cover_number

Medicare	medicare_number
MedicareRef	medicare_position_number
MedicareExpiryDate	medicare_expiry_date
LastTetanus	last_tetanus_date
CarryEpiPen	epipen_required_for_anaphylaxis
EpiPenExpiryDate	epipen_expiry_date

Medical Conditions

CareMonkey maps the following medical conditions into SAS2000:

Code	Description
ANAPHYLAXIS	Allergies (anaphylactic)
ALLERGIES	Allergies (non-anaphylactic)
ANOREXIA	Anorexia/Eating Disorders
ASTHMA	Asthma
BLACKOUTS	Blackouts/Dizziness/Fainting
BLOODDISORDERS	Bleeding Disorder
DIABETES	Diabetes
DIET	Dietary Requirements
SKINCOMPLAINTS	Eczema/Skin Condition
EPILEPSY	Epilepsy/Fits of any type
HEARING	Hearing Impairment
HEARTCONDITION	Heart Condition
JOINTS	Joint/Muscle/Bone Problems

MIGRAINE	Migraines
PHOBIA	Phobia
SLEEPWALKING	Sleep Walking
EYES	Sight Impairment
TRAVELSICKNESS	Travel Sickness
MENTALHEALTH	Mental Health Issue

For each medical condition entered by the parent, CareMonkey enters a corresponding medical condition in the SAS2000 system. Some of these conditions have corresponding fields in the Person.Medical table such as Asthma and Anaphylaxis, these are copied across along with a Notes entry detailing all the specifics entered by the parent.

For medical conditions not directly recognised in SAS, CareMonkey enters all the details as a Notes entry against the student.

If other medical conditions have been entered into SAS, CareMonkey will not remove or alter these so long as there is not a corresponding CareMonkey medical condition.

Every time that CareMonkey updates the Student.Medical table, an archived record is created with the old information so that an accurate history of changes is stored in the database. This is inline with what Human Edge maintains with SAS2000.

Appendix: Changelog

V2.0.90

- Improved logic when retrieving the phone number of spouse. This brings it into the same logic as retrieving the email address
- Retrieving contact data for forwards compatibility to upcoming “select contact” functionality

V2.0.95

- Changed logic to improve retrieval of students and fix an issue where some students were not being picked up

V2.0.96

- TLS 1.2 Support

V2.0.99

- Further TLS 1.2 Support

V2.0.100

- Better handling of timeouts in relation to photo uploads