How to setup views or stored procedures for use with the ClockWork Data Sync

The ClockWork DataSync pulls student data in from an external source. It is a one-way sync that is meant to be used to provide access to student data and course registrations contained in the school's main database system. One of the methods of setting up the Data Sync is to provide read-only views or stored procedures that ClockWork can access when it needs to lookup data for a particular student. For stored procedures ClockWork would pass the student number as the only parameter.

Identify what data fields are required

The minimum data fields required for the data sync to function are student number, first name, and last name. The disability department will decide which additional fields they may require for normal operation and reporting. The first step in the process is for the disability department to indicate which fields they require, and for the IT/Registrar department to indicate which of those fields requested are available.

The following fields are commonly used by most schools (required fields are marked with *):

- student number *
- net id (the username the student uses to login to the web modules)
- first name *
- middle name
- last name *
- birthdate
- gender
- phone number (home)
- phone number (cell)
- email address
- permanent address (address, city, postal, province/state, country)
- local address (address, city, postal, province)
- Emergency contact name
- Emergency contact phone
- GPA
- Expected graduation date
- Academic Information (session, program, faculty, level, full-time/part-time)

The names of columns and data types are not important to the ClockWork scripts, so providing native column names and data types from the school's system is acceptable.

Create one or more stored procedures or views to access the required information

For Oracle databases, stored procedures will execute quicker than views and are the preferred option. One view or stored procedure is the standard method used, but any number of views or stored procedures can be created in order to provide the required information outlined in the previous step. One of the views or stored procedures must contain the following minimum fields: student number, first name, last name. All other views or stored procedures must contain the student number. The view(s) or stored procedure(s) must be accessible to the machine that is running the ClockWork scripts that run nightly to perform the sync functionality (see below).

Create a view or stored procedure to provide student's course registrations

The preferred method is to provide a single view or stored procedure. ClockWork will query the view or stored procedure using the student number. Multiple views or stored procedures can be provided if necessary. The following minimum information is required:

- Student number
- Course start date
- Course end date
- Term
- Subject
- Course code
- Section
- Instructor id / username
- Instructor name
- Instructor email

The following information is optional and preferred if possible:

- Campus
- Timetable
  - Day of week
  - Start time
  - End time
  - Location
- Final exam date
- Final exam start time
- Final exam end time
- Final exam location

The names of columns and data types are not important to the ClockWork scripts, so providing native column names and data types from the school's system is acceptable.

Create a stored procedure to authenticate a student as a note-taker

If your university or college has purchased the online note-taking module, it is a requirement that a third stored procedure is provided. ClockWork will query the stored procedure using the student's username (net id) .The procedure should return the student number. If you are using a view this is not required. The following minimum information is required:

- Student number
- Username (net id)

Provide TechnoPro a summary of views/stored procedures

The next step will be for TechnoPro to create the scripts required to pull in the information and test. In order to do this a summary of what has been made available is required. The summary should provide a list of all views/stored procedures that are available, along with what parameters are expected, and what data fields and data types are available in each view/stored procedure. TechnoPro will require access to the server that will be running the scripts (see below) in order to setup and test the views/stored procedures. This can be accomplished through a phone session using remote desktop sharing software that TechnoPro will provide.

Staff will test the functionality

After the system has been setup and tested, the staff in the disability department will be provided instructions on how to use the system and will perform final testing to ensure that all systems are functional and that all expected data is present.

Setting up the nightly sync scripts

The system requires a nightly sync to run. The nightly sync will access the views/stored procedures for each active student in ClockWork (not all students in the school) to see if any information in ClockWork needs to be updated. The scripts can run from any machine but are normally run from a server. This can be the same machine that runs the ClockWork web application or the Sql Server database. TechnoPro will setup the nightly scripts; the following outlines the basic steps:

- A Windows Task will be created that will run a "ClockWork Job". The task will be configured to run off-hours
- The appropriate scripts will be configured to run as part of the ClockWork Job