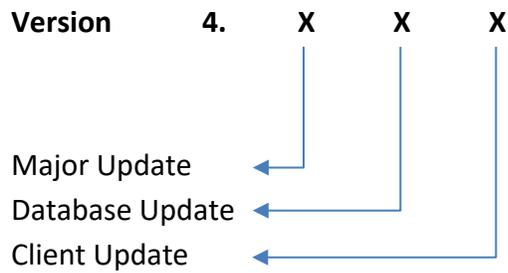


AccuWin Pro upgrade instructions

These instructions will allow you to upgrade your AccuWin Pro 4 installation to the latest version. Full instructions are available online at www.suntechmed.com.

NOTE: version numbers with increased Database and Major updates require the AccuWin database to be updated prior to clients. Follow included instructions.

For client updates only, these instructions are not required: simply uninstall the previous client and reinstall the latest version.



New Installation Instructions are part of the Oscar 2 quick start guide (82-0403-00)

Contents

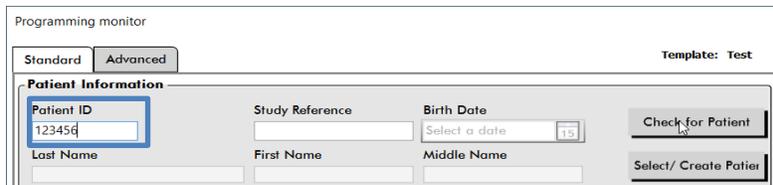
Release Notes 4.0.4.230	3
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Release Notes 4.0.4.230

Note: This release contains updates to the user interface and patient database. Consult release notes carefully before updating AccuWin to the newest version.

Patient ID Search

Search is now possible directly from the Programming window. Enter a Patient ID and press *Check for Patient* to search for an existing patient in the database.



Programming monitor

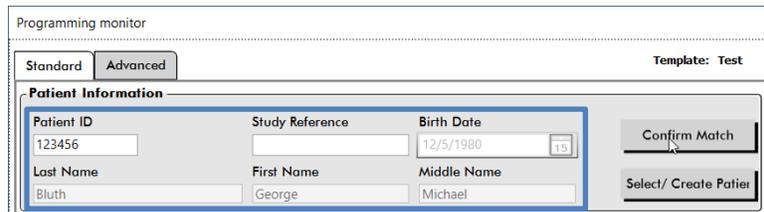
Standard Advanced Template: Test

Patient Information

Patient ID: 123456 Study Reference: Birth Date: Select a date [15] Check for Patient

Last Name: First Name: Middle Name: Select/ Create Patient

Patient information will be loaded into the window if the patient exists. Check loaded patient information and press *Confirm Match* to continue.



Programming monitor

Standard Advanced Template: Test

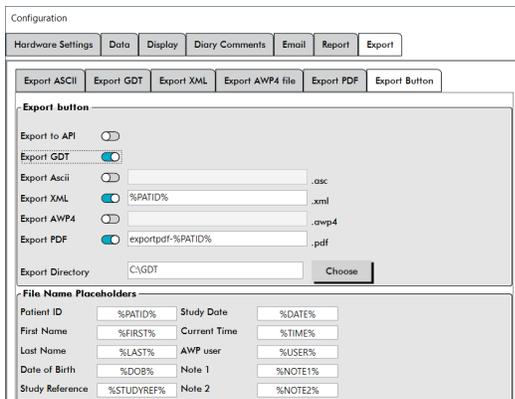
Patient Information

Patient ID: 123456 Study Reference: Birth Date: 12/5/1980 Confirm Match

Last Name: Bluth First Name: George Middle Name: Michael Select/ Create Patient

Export Button

AccuWin now supports automated export with just one button click.

Configuration

Hardware Settings Data Display Diary Comments Email Report Export

Export ASCII Export GDT Export XML Export AWP4 file Export PDF Export Button

Export button

Export to API:

Export GDT:

Export Ascii: .asc

Export XML: %PATID% .xml

Export AWP4: .awp4

Export PDF: exportpdf-%PATID% .pdf

Export Directory: C:\GDT Choose

File Name Placeholders

Patient ID	%PATID%	Study Date	%DATE%
First Name	%FIRST%	Current Time	%TIME%
Last Name	%LAST%	AWP user	%USER%
Date of Birth	%DOB%	Note 1	%NOTE1%
Study Reference	%STUDYREF%	Note 2	%NOTE2%

Set up the export button in the settings to configure automatic export of PDF reports and other export methods.

Select an export file name and folder. Placeholders can be used to include patient and study specific variables.

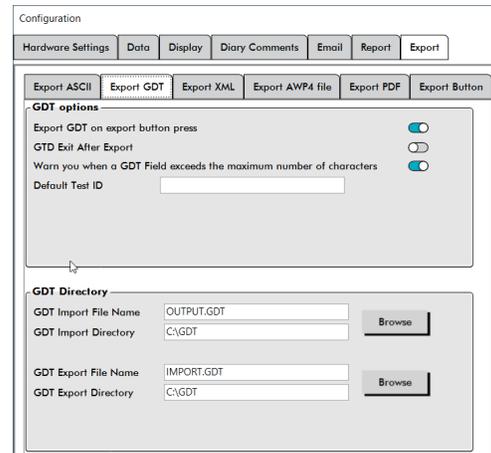


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GDT v2.1

AccuWin Pro now supports GDT v2.1. Messages 6302, 6310 and 6311 are supported.

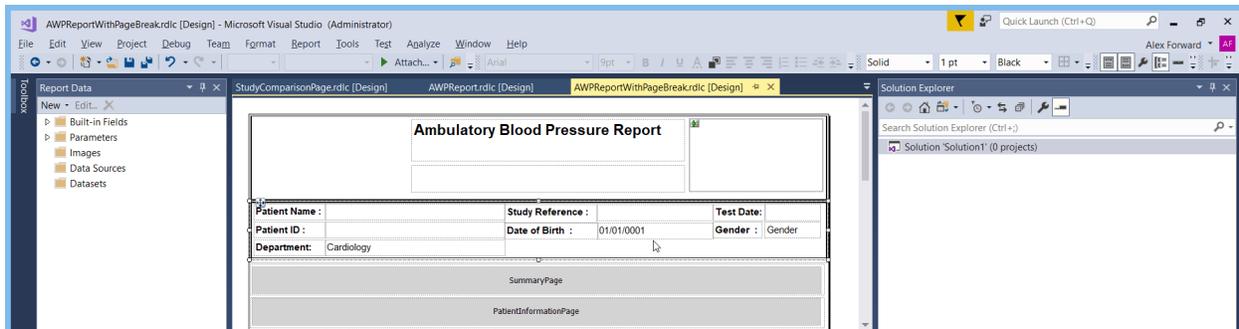
Import and Export Directories can be selected in the settings.



Report Customization

Report templates can now be edited via Visual Studio with Report Viewer. Add XML tags to add patient and study specific fields to report pages.

NOTE: Report template changes should be validated before use to ensure data display is correct.



Additional Updates

- **Patient ID** is now enforced as a unique **identifier**. During upgrade, Patients with matching Patient IDs will be appended with a counter.
- **Report Viewer 2010** updated with Report Viewer 2016. Redistributable installer has been removed.

- **New Data Mismatch Window** to allow users to confirm correct data when there is a mismatch between imported and database patient information.
- **New Study Reference Field** to support searching for accession or order numbers.
- **Date of Birth** added to Programming window.

Additional Updates

- **Patient ID** is now enforced as a unique **identifier**. During upgrade, Patients with matching Patient IDs will be appended with a counter.
- **Additional default groups:**
 - **All** – All patients in the database
 - **Studies** – Patients with at least one study
 - **Worklist** – Patients with at least one order

Release Notes: 4.0.3.183

FIPS encryption support

Application now uses FIPS compliant algorithms for encryption across the application

Scheduled measurements

Scheduled measurements are now displayed in monitor configuration and report. Users are prompted when they are about to start a study without any measurement intervals set.

Bug fixes and minor enhancements

Release Notes: 4.0.3.162

SQL Server Support

AccuWin Pro 4 now supports pre-installed SQL Servers from SQL Server 2008 R2 to SQL Server 2016.

SQL Server installer bundle

The AccuWin Pro 4 installer now comes bundled with either SQL Server 2016 (For Windows 8.1 and 10 64 bit systems) or SQL Server 2014 (For Windows 7 and 32 bit systems).

SQL Server Authentication

Windows Authentication is now supported in AccuWin Pro 4.

Database Encryption

AccuWin Pro 4 now supports Always Encrypted for database security in SQL Server 2016. See full notes on page 12. For SQL Servers prior to SQL Server 2016, AccuWin Pro will use a fixed encryption key.

.awp File Import and Export

AccuWin Pro 4 now supports exporting .awp files and importing folders containing .awp files.

Non-Central Blood Pressure Reports

Reports that do not include Central Blood Pressure readings will no longer show the Central Blood Pressure Statistics page.

Custom encryption for file export

Users now have the ability to assign a custom secure encryption key during file export.

Oscar 2 Classic support

Oscar 2 Classic (Model 222) is now supported in AccuWin Pro 4

Upgrade Instructions

Instructions are provided below to upgrade the client to the latest version. These instructions can be used to upgrade AccuWin Pro versions after 4.0.1 for versions prior to this, contact SunTech for upgrade instructions.

Standard – Client and database upgrade

Existing installations of AccuWin Pro 4 use SQL Server 2008 R2. The standard upgrade process will not change the SQL Server version. See instructions below for updating the SQL Server version.

IMPORTANT: For installations of AccuWin Pro 4 with multiple clients, the server hosting the AccuWin Pro database should be upgraded first.

IMPORTANT: After the server has been upgraded, clients will be non-operable until they are also upgraded.

1. Backup the AccuWin Pro Database

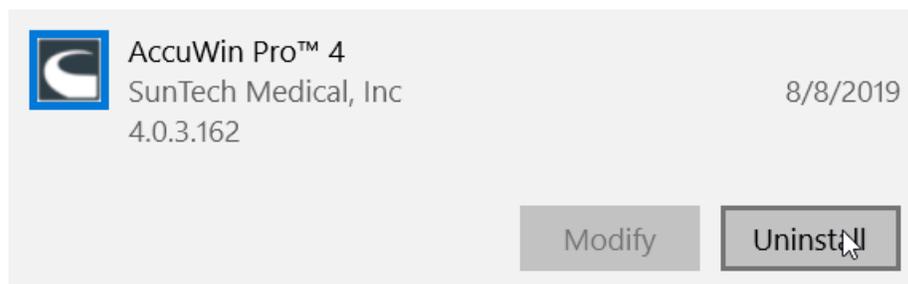
- a. Locate the AccuWin Pro install directory (this is usually C:\Program Files (x86)\SunTech Medical, Inc\AccuWin Pro™ 4)
- b. Double click on the application *SunTech.AWP.AccuWinProUtilities.exe*
- c. Press *Backup* in the AccuWin Pro utilities

NOTE: There are two similar named files. Check that you are using the **Application** and not the **XML Configuration File**

 SunTech.AWP.AccuWinPro.exe.config	6/21/2019 3:01 PM	XML Configuration File	1 KB
 SunTech.AWP.AccuWinProUtilities.exe	7/23/2019 4:28 PM	Application	27 KB
 SunTech.AWP.AccuWinProUtilities.exe.config	4/17/2019 9:02 AM	XML Configuration File	2 KB

2. Uninstall the current AccuWin Pro version

- a. Press the windows key and type *Remove Program* to bring up the Windows removal tool.
- b. Click on *Add or remove programs*
- c. Select the AccuWin Pro 4 instance and click on *Uninstall*



3. Install the latest version of AccuWin Pro

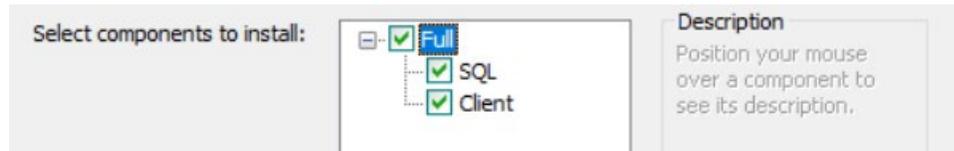
- a. Locate the installer and double-click to start the installation process

NOTE: Use *SQL2016* for upgrades on 64 bit Windows 8.1 or Windows 10 systems or *SQL2014* for Windows 7 or any 32 bit system.

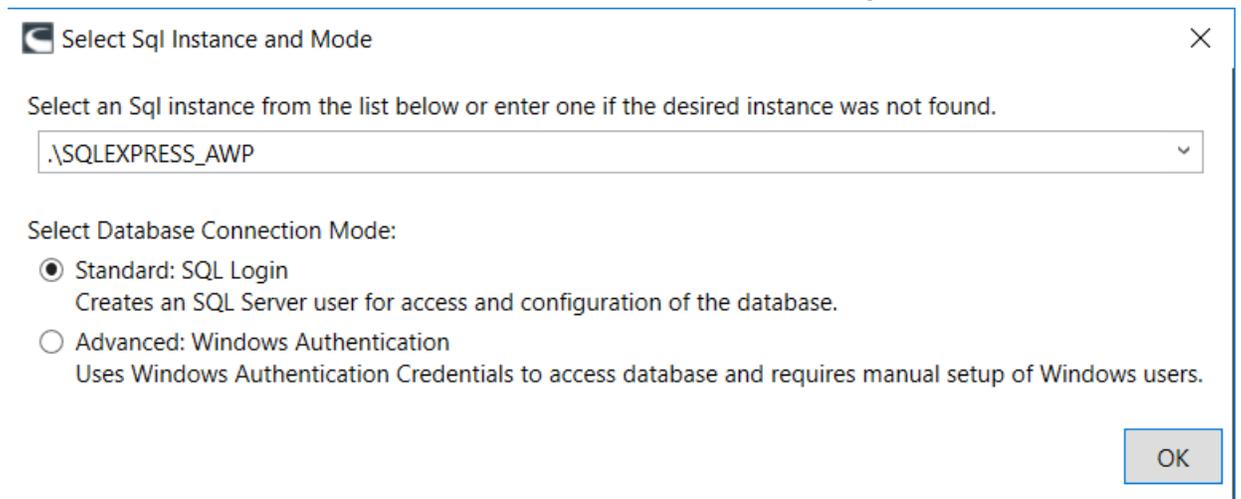
 AccuWinPro4-4.0.3.162-SQL2016.exe	7/30/2019 4:11 PM	Application	535,346 KB
 AccuWinPro4-4.0.3.162-SQL2014.exe	7/30/2019 4:09 PM	Application	459,295 KB
 AccuWinPro4-4.0.3.162-Client.exe	7/30/2019 3:55 PM	Application	88,330 KB

NOTE: The installation requires .NET 4.6 and may prompt you to upgrade your system. If the .NET installation fails to complete, reboot your system and restart the installation. You may need to do this several times.

- b. Select installation components. SQL upgrade is required only once per database.
 - i. During upgrade of the server, or if this is the only AccuWin Pro 4 instance: Select the *Full* installation.
 - ii. For subsequent clients, select the *Client* component only.



- c. When prompted, choose the SQL Server to connect to and the *Database Connection Mode*
 - i. The correct server will typically be: `.\SQLEXPRESS_AWP` for a single terminal AccuWin Pro installation or `COMPUTER_NAME\SQLEXPRESS_AWP` where `COMPUTER_NAME` is the server hosting the SQL Server for multiple terminal access.
 - ii. For Database Connection Mode, select *Standard: SQL Login*



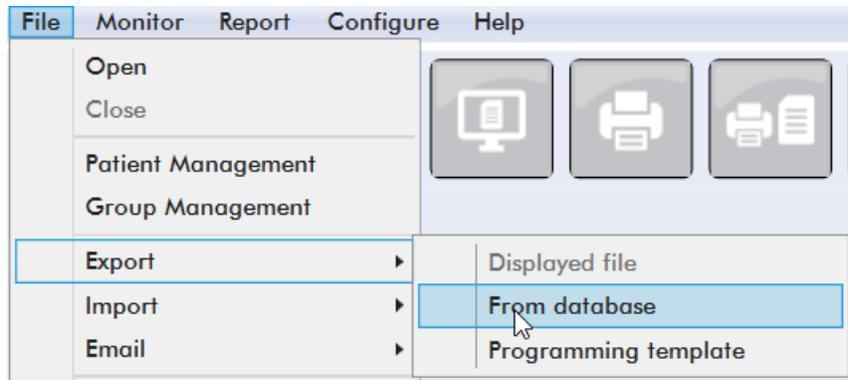
4. The upgrade is now complete

Advanced - Upgrading SQL Server version

These instructions are for upgrading the SQL Server version from 2008 R2 to a newer version.

1. Complete the standard upgrade to 4.0.3.X before performing an SQL Server version upgrade.
2. Backup the patient database using step 1 of the standard upgrade above.
3. Export all patients to .awp file using the AccuWin Pro menu

- a. Open AccuWin Pro 4 and navigate to File -> Export -> From database

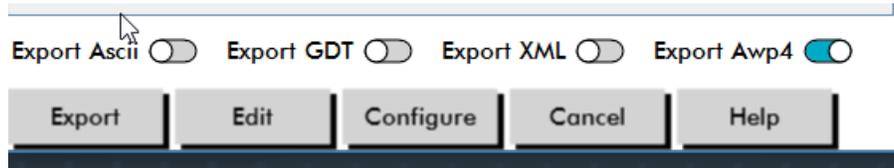


- b. Select all studies using the Patient Selection Slider

NOTE: Ensure that All studies is selected on the left hand side navigation menu to ensure all patients are exported.

Export- Choose study(s)				
	<input checked="" type="checkbox"/>	Patient ID	Patient Name	Studies
All	<input checked="" type="checkbox"/>	74654-24hr	Sample 1 With CBP Data	1
Unassigned	<input type="checkbox"/>	74642-D	Sample 2 Hypertensive Data	1
Groups	<input type="checkbox"/>	003-00-0000	Sample 3 Study Comparison	2

- c. Select the Export Awp4 option.



IMPORTANT: To avoid loss of patient data, ensure the .awp files are exported to a safe place and if a custom encryption key is used, that it is recorded. This operation may take some time if there are many patients in the database.

4. Uninstall AccuWin Pro 4 and the current SQL Server version

- a. Press the windows key and type *Remove Program* to bring up the Windows removal tool.
- b. Click on *Add or remove programs*
- c. Select the *AccuWin Pro 4* instance and click on *Uninstall*
- d. Complete the Uninstall wizard
- e. Select the *SQL Server 2008 R2* instance and click on *Uninstall*
- f. Follow the SQL Server Uninstall wizard to complete the uninstall process
- g. Restart the computer

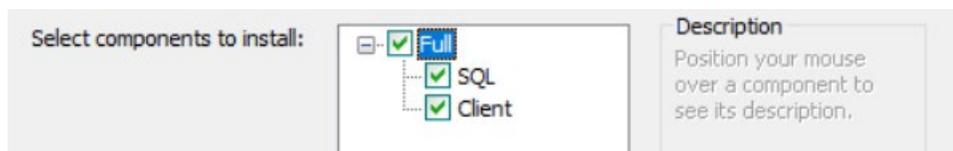
5. Install AccuWin Pro 4 with SQL Server

- a. Locate the installer and double-click to start the installation process

 AccuWinPro4-4.0.3.162-SQL2016.exe	7/30/2019 4:11 PM	Application	535,346 KB
 AccuWinPro4-4.0.3.162-SQL2014.exe	7/30/2019 4:09 PM	Application	459,295 KB
 AccuWinPro4-4.0.3.162-Client.exe	7/30/2019 3:55 PM	Application	88,330 KB

NOTE: Use SQL2016 for upgrades on 64 bit Windows 8.1 or Windows 10 systems or SQL2014 for Windows 7 or any 32 bit system.

- b. Select the *Full* installation.





- c. Follow the prompts to complete the installation
- d. If installing SQL Server 2016, see below notes on using encryption certificates.

6. Load .awp files into AccuWin Pro 4

- a. Open AccuWin Pro 4 and navigate to File -> Import -> Patient Study
- b. Browse to the folder or .awp files and select for import.
- c. For each patient, select the new patient option

7. Upgrade is now complete

SQL Server 2016 Always Encrypted

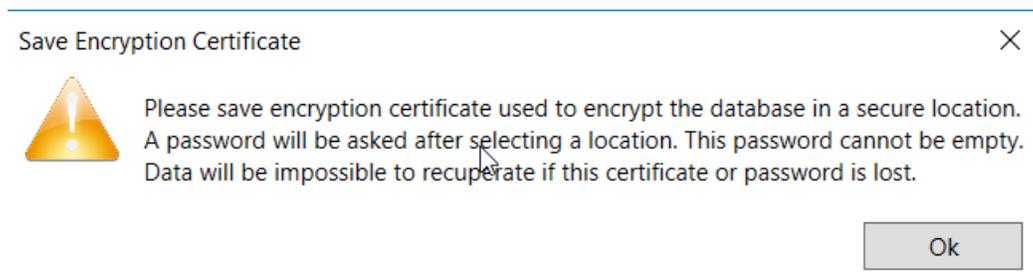
AccuWin Pro 4 will utilize Microsoft Always Encrypted for ePHI stored in the database and client communication when available on Microsoft SQL Server 2016 and above. AccuWin Pro 4 uses Windows Certificates to manage communication of encryption key. For SQL Server versions prior to 2016, AccuWin Pro will use an internal fixed encryption key. The encryption will occur automatically, however, there are some changes to application behavior.

IMPORTANT: Particular attention should be paid to the backup instructions below to ensure no loss of data.

Installation

Server Installation

During the installation process, you will be prompted to save a certificate and provide a password for encryption. This certificate should be kept secure and will be required for client installations.



Client Installation

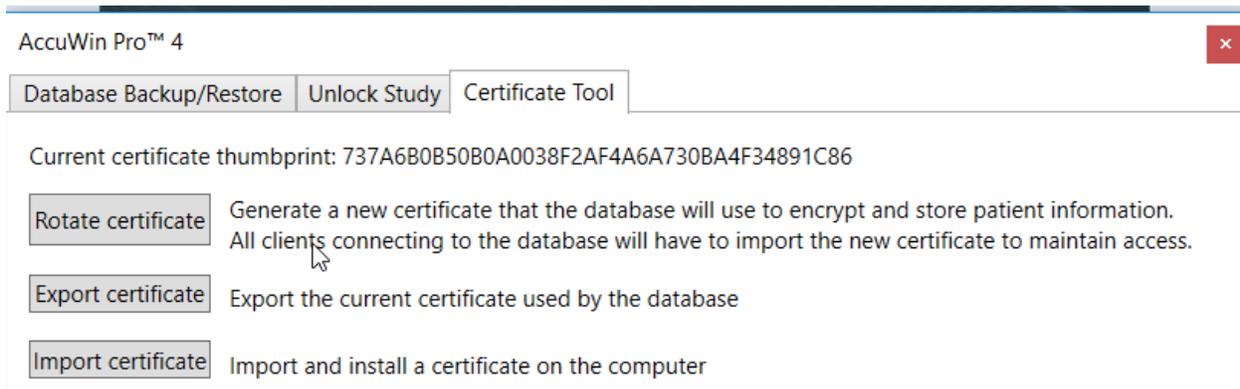
During client installation, you will be prompted to provide a certificate, which is provided during the Server installation. You can also export a certificate at any time using the AccuWin Pro 4 utilities application on the server (see instructions below).

Certificate Management

Certificates are managed in the AccuWin Pro 4 utilities application located in the AccuWinPro 4 user directory, usually C:\Program Files (x86)\SunTech Medical\AccuWin Pro 4

*NOTE: There are two similar named files. Check that you are using the **Application** and not the **XML Configuration File***

 SunTech.AWP.AccuWinPro.exe.config	6/21/2019 3:07 PM	XML Configuration File	1 KB
 SunTech.AWP.AccuWinProUtilities.exe	7/23/2019 4:28 PM	Application	27 KB
 SunTech.AWP.AccuWinProUtilities.exe.config	4/17/2019 9:02 AM	XML Configuration File	2 KB



Exporting a certificate

A certificate can be exported at any time using AccuWin Pro Utilities from the server or from a client with Windows Authentication to access the database. A password will be required to encrypt the certificate

Importing a certificate

All clients will need a copy of the encryption certificate installed in order to access the database. A certificate can be imported at any time using AccuWin Pro Utilities on the client. The password used to encrypt the certificate will be required to import the certificate.

Certificate Rotation

Certificate Rotation is the process of changing the encryption key used to store patient health information in the database. Certificate Rotation should be started on the computer hosting the AccuWin Pro 4 database.

IMPORTANT: Once certificate rotation is started, clients will become inaccessible until the new certificate is imported.

Certificate Rotation Process

1. On the computer containing the AccuWin Pro database, open AccuWin Pro Utilities and Press *Rotate Certificate*.
2. Press *Export Certificate* to enter a password and save the certificate to disk.
3. Transfer the certificate file to client computer

4. Open AccuWin Pro utilities on the client computer
5. Press *Import Certificate* and navigate to the certificate file
6. Import the file and enter the password.
7. Repeat for all client computers

Database Backup

Database backups now include the certificate in use at the time of backup. A password is required for encrypting the certificate when creating a backup and for decrypting the certificate when restoring a backup.

IMPORTANT: Ensure the password used to encrypt the backup certificate is kept secure and safe. The backup cannot be restored without the correct password.

AccuWin Pro™ 4 ×

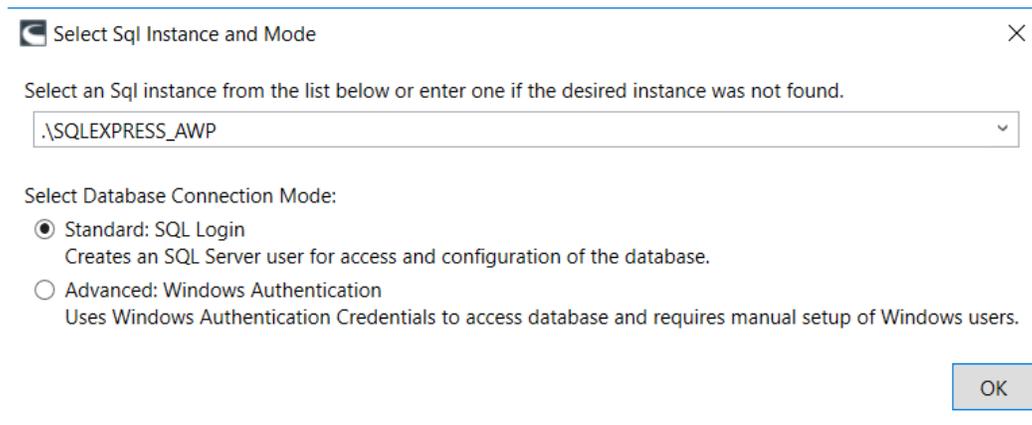
Database Backup/Restore Unlock Study Certificate Tool

Database

Backup Restore

Windows Authentication

AccuWin Pro 4 now supports Windows Authentication for managing database access. The database communication mode is chosen during the installation process.



Managing Windows Authentication

All Windows users will need to be manually given access to read and write the AccuWin Pro 4 databases.

Standard User Access

Standard users should be given the following access privileges

Database	Access Type
AWP	db_reader, db_writer
AWP_sys	db_reader

Administrator User Access

Standard users should be given the following access privileges:

Database	Access Type
AWP	db_reader, db_writer, backup_operator, db_owner
AWP_sys	db_reader, db_writer backup_operator, db_owner