

# Installation Instructions

for Solutions Plus Systems



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# Contents

Document Modification Record .....	1
Date .....	1
Introduction .....	2
Overview .....	2
Who This Manual Is For .....	2
If You Need More Help .....	2
Disclaimer .....	2
Support Resources .....	2
Maternity Plus .....	2
Gynaecology Plus .....	2
Anaesthesia Plus .....	3
Surgery Plus .....	3
Support Services Plus .....	3
Architecture .....	4
Single-PC Environment .....	4
Peer-to-Peer PC Environment .....	4
Multi-PC, Dedicated Server Environment .....	5
Start Application .Net Executable .....	6
Software Release Methodology .....	8
Overview .....	8
Prerequisites .....	8
Minimum System Requirements .....	8
Installation Process .....	8
Server .....	8
Client PC .....	11
Administration Client .....	12
Test System .....	12
Backups .....	12
MS Access Runtime .....	13
ActiveX Controls .....	13
LDAP and Windows Authentication .....	13
Concerto .....	13
Remote Support .....	14
UAT .....	14
Initialising the SQL Database .....	14
Specific OS Considerations .....	14
Citrix .....	14
Key Points for Citrix: Citrix 4.5 .....	14
Troubleshooting .....	15
Terminal Services .....	15
HL7 Interface .....	16
Laboratory and Scan Results .....	16
Setting up MsgMgr.exe. ....	16
Setting up HL7Processor.exe .....	18
Setting up Socket_C.exe. ....	19
Gynaecology Plus .....	20
PAS Interface .....	20
Patient Fields .....	20
GP or Referrer Fields .....	21
Colposcope Viewer Software .....	21
Colposcope Viewer Architecture .....	21
Colposcope Interfaces .....	24
Olympus Colposcopes .....	24

Current Olympus Colposcopes tested with Image Viewer .....	24
Leisegang Colposcopes.....	24
Carl Zeiss Colposcopes.....	24
EasyCAP USB Ulead configuration.....	25
Product purchase .....	30
Surgery Plus.....	31
Special Considerations .....	31
Maternity Plus.....	31
Special Considerations .....	31
Maternity Provider Plus .....	31
Special Considerations .....	31
Maternity Plus Mobile.....	31
Pre-requisites .....	31
Installation Process .....	32
Anaesthesia Plus .....	37
Special Considerations .....	37
Support Services Plus .....	37
Special Considerations .....	37
Upgrades .....	37
New Versions.....	37
Software Key .....	37
Troubleshooting .....	38

## Document Modification Record

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6/5/11	1.03	Kevin	Amendments to configuration files for Image Viewer.
10/5/11	1.04	Jonathan	Enhanced explanation of importance of SQL Server collation sequence.
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18/5/11	1.06	Kevin	Update <i>Carl Zeiss Colposcopes</i>
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1/11/11	1.18	Kevin	Installation Process \ Server update text
11/1/12	1.19	Jonathan	Updated installation instructions for terminal services.
17/2/12	1.20	Jonathan	Changed references from XXXrun.vbs to SPLStart.exe.

## Introduction

### Overview

This manual describes the generic process involved in the installation of systems developed by Solutions Plus. Where there are instructions that apply only to one system and not to the others these are identified in the Specific Considerations Section.

### Who This Manual Is For

This manual is intended for organisations using their own technical resources to install systems developed by Solutions Plus Limited. This manual is not intended for organisations that do not have IT resource. Experience installing software in a Windows Server and SQL Server environment is required.

### If You Need More Help

If, after having read this entire set of instructions, you have any questions, concerns or suggestions associated with this installation, please contact Solutions Plus on +649 486 6262 or via the appropriate Support Resource contact listed below. We would be happy to answer any questions you may have.

### Disclaimer

The information in this guide may change without notice. This guide has been prepared with our best understanding of the various environments where Solutions Plus systems have been installed. This guide is continually updated based on feedback from the installation experiences of our clients. However Solutions Plus assumes no responsibility for any errors or omissions which may appear in this guide. It is the responsibility of the client to test the software in their own specific environment to ensure adequate performance and reliability of the system being installed.

This manual is intended to be used with the latest releases of our software. If you are installing an older release of a Solutions Plus system then some parts of the manual may not be exactly applicable. If you are concerned this may be the case then a Solutions Plus representative can supply you with an older copy of the installation guide to assist.

### Support Resources

The following are useful references for additional sources of information.

Troubleshooting: <http://www.solutionsplus.co.nz/clientsupporttroubleshoot.html>

### Maternity Plus

Ann Henriques (Maternity Plus Product Manager)

Email: [ann@solutionsplus.co.nz](mailto:ann@solutionsplus.co.nz)

Phone: 09 921 6265

Office: 09 486 6262

Website (Upgrades): <http://www.solutionsplus.co.nz/secure/MAT/MAT.html>

### Gynaecology Plus

Kevin Davidson (Gynaecology Plus Product Manager)

Email: [kevin@solutionsplus.co.nz](mailto:kevin@solutionsplus.co.nz)

Phone: 09 921 6266

Office: 09 486 6262

Website (Upgrades): <http://www.solutionsplus.co.nz/secure/GYN/GYN.html>

### **Anaesthesia Plus**

Jonathan Parminter (Anaesthesia Plus Product Manager)

Email: [jonathan@solutionsplus.co.nz](mailto:jonathan@solutionsplus.co.nz)

Phone: 09 921 6268

Office: 09 486 6262

Website (Upgrades): <http://www.solutionsplus.co.nz/secure/ANE/ANE.html>

### **Surgery Plus**

Kevin Davidson (Surgery Plus Product Manager)

Email: [kevin@solutionsplus.co.nz](mailto:kevin@solutionsplus.co.nz)

Phone: 09 921 6266

Office: 09 486 6262

Website (Upgrades): <http://www.solutionsplus.co.nz/secure/SGN/SGN.html>

### **Support Services Plus**

Jonathan Parminter (Support Services Plus Product Manager)

Email: [jonathan@solutionsplus.co.nz](mailto:jonathan@solutionsplus.co.nz)

Phone: 09 921 6268

Office: 09 486 6262

Website (Upgrades): <http://www.solutionsplus.co.nz/secure/SSP/SSP.html>

## Architecture

Solutions Plus packages are based on a two-tier, client server architecture. There are 2 core components to Solutions Plus packages:

Application	XXXapp11.mde
SQL Server Database	XXXdata.mdf

Throughout this document XXX represents the 3 letter code assigned to the system you are installing as follows:

MAT: Maternity Plus  
SGN: Surgery Plus  
GYN: Gynaecology Plus  
ANE: Anaesthesia Plus  
SSP: Support Services Plus

For example the core components of Maternity Plus are:

Application	MATapp11.mde
SQL Server database	MATdata.mdf

Below are diagrams illustrating this architecture in a single PC; a multi-PC peer-to-peer; and a multi-PC dedicated server environments.

### Single-PC Environment

PC (Client and Server)



Application	SQL Server Database
XXXapp.mde	XXXdata.mdf

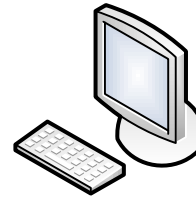
### Peer-to-Peer PC Environment

PC (Client and Server)



Application	SQL Server Database
XXXapp.mde	XXXdata.mdf

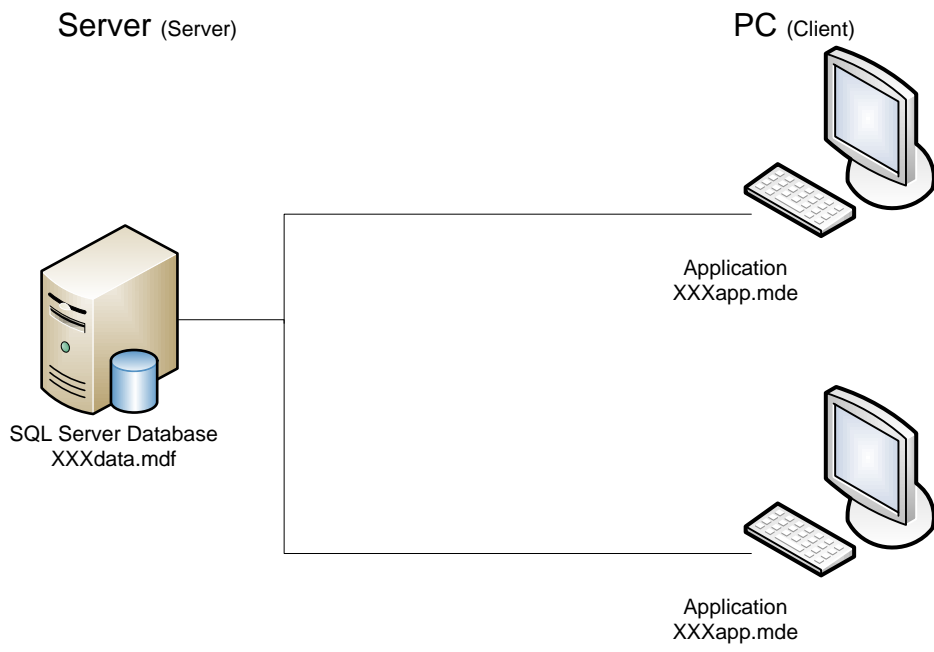
PC (Client)



Application
XXXapp.mde



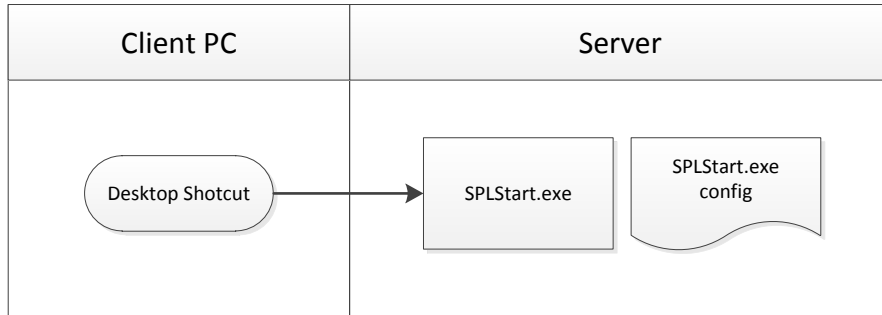
## Multi-PC, Dedicated Server Environment



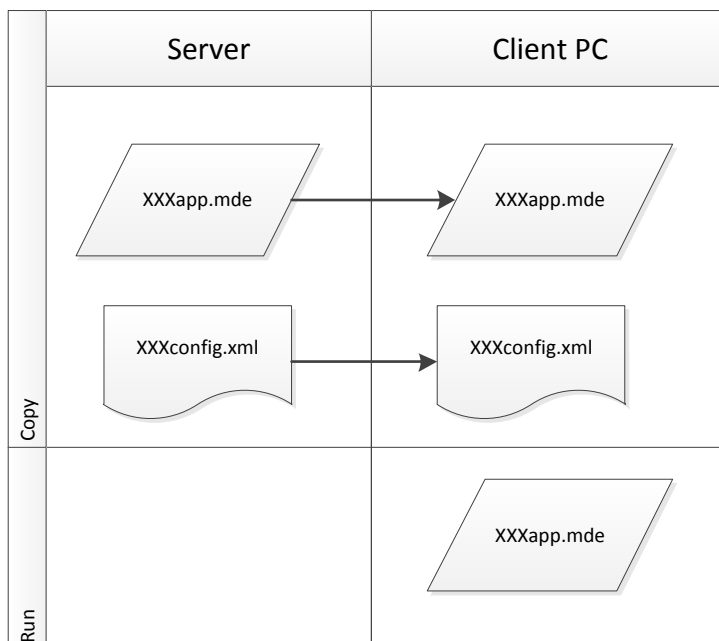
## Start Application .Net Executable

If using Terminal Services please refer to the Specific OS Considerations > Terminal Services section later in this manual. The Start Application Executable is not currently used in this environment.

The application shortcut on each client PC runs an executable (SPLStart.exe) located on the Server in the Solution\Resources folder.



The executable manages replacement of the MS Access application on each client PC so that the latest copy of the application is run at all times. A replacement is copied to the user's PC when new versions are available and also periodically to increase performance and reliability.



The executable has an associated configuration file (SPLStart.exe.config) that requires editing of parameters to match your environment. Open this file using Notepad.exe.

```
<applicationSettings>
  <SPLStart.My.MySettings>
    <setting name="localSolutionsPlusPath" serializeAs="String">
      <value>c:\</value>
    </setting>
    <setting name="serverSolutionsPlusPath" serializeAs="String">
      <value>x:\</value>
    </setting>
  </SPLStart.My.MySettings>
</applicationSettings>
```

```

<setting name="MSAccess2003Path" serializeAs="String">
  <value>c:\Program Files\Microsoft Office\OFFICE11\MSAccess.exe</value>
</setting>
<setting name="debugOn" serializeAs="String">
  <value>False</value>
</setting>
<setting name="terminalService" serializeAs="String">
  <value>False</value>
</setting>
<setting name="terminalServiceLocalSolutionsPlusPath" serializeAs="String">
  <value>X:\USERS\WshNetwork.UserName\</value>
</setting>
<setting name="splStandards" serializeAs="String">
  <value>3</value>
</setting>
<setting name="systemFileExtension" serializeAs="String">
  <value>mde</value>
</setting>
<setting name="splStartConfigVersion" serializeAs="String">
  <value>n.n</value>
</setting>
</SPLStart.My.MySettings>
</applicationSettings>

```

Should you need to change the defaults, edit the highlighted area (bolded black) between the <value> and </value> tags.

<localSolutionsPlusPath>

This is the root drive on the user's PC. For most instances this is c:\.

<serverSolutionsPlusPath>

This is the root drive on the server that contains the latest version of the application. For a single PC setup this is c:\.

<MSAccess2003Path>

This is the path for Microsoft Access version 2003. For most instances this is c:\Program Files\Microsoft Office\OFFICE11\MSAccess.exe.

<terminalService>

Set to TRUE when running on Terminal Services.

<terminalServiceLocalSolutionsPlusPath>

This is the root path for users on Terminal Services. Note the segment WshNetwork.UserName should not be changed; unless you are not including the user's windows logon name in the path.

## Software Release Methodology

### Overview

All systems are managed using a Beta and Production release methodology. Most clients will install the latest build of the current Production release. In a few cases a client will install a Beta release in order to test/implement functionality that has been developed since the last Production release. The format of the release number is as follows:

r.rr.b (e.g. 6.24.23)

Where r.rr is the major release number and bb is the build. In the example this is build 23 of release 6.24.

New production releases are created approximately every 6-9 months, however the actual timing can sometimes be shorter or longer depending on the implementation schedules of new clients requiring new features etc.

We require that all clients upgrade to the latest production release and build of the system at least every 18 months. This ensures that the support quality and cost for all clients are minimised and all clients are taking advantage of the latest developments in the system. For detailed information on how to upgrade please refer to the Upgrades section later in this document.

### Prerequisites

#### Minimum System Requirements

The current minimum system requirements are available from:  
<http://www.solutionsplus.co.nz/clientsupportminreq.html>.

### Installation Process

The Solutions Plus Application setup program performs most of the initial installation process. This is available from  
<http://www.solutionsplus.co.nz/downloads/solutionsetup.html>.

For client PCs other than windows workstations (such as terminal services and citrix) the setup steps must be tailored to suit the organisation's particular environment.

The steps are itemised below to give you a complete overview of system setup requirements for both the server and each client. Complete all Server setup steps successfully before commencing the Client setup steps.

#### Server

The following steps apply to the Server/PC on which the SQL Server database is being installed.

1. Install an instance of SQL Server 2005 (or later) named *Solution*. We recommend when installing SQL server on a network, this should be completed by a SQL server administrator.  
Make sure the server instance collation is "Latin1\_General\_CI\_AS" For more information, please refer to <http://msdn.microsoft.com/en-us/library/ms143508.aspx>

If the server instance collation does not match our specified collation sequence there may be no immediately apparent issues. However, Solutions Plus software is only tested in environments with this specified collation sequence and is only warranted in this environment.

2. In the SQL instance named *Solution*, create an empty SQL database named *XXXdata*.
3. Restore the central database (XXXdata) from the backup that you can download from your package web site. You will be notified the address, user name and password for the package web site. When restoring a database change the file locations from the source file location to your network location (default for your location is c:\solution\data) and select *overwrite*.
4. Repeat steps 2 and 3, above for any additional database(s) required for this installation. For **Gynaecology Plus** and **Support Services Plus** the additional databases are *SPLHealthRef* and *SPLPostCode*. For **Surgery Plus** the additional database is *ImageViewer*.
5. Users must then be granted admin permission for each database.
6. You will have been notified of a secure web address, including user name and password, for downloads related to your package. This web site will be used for downloading the following software: a copy of the client application (XXXapp.exe), a copy of the application configuration file (XXXconfig.exe). These should all be unzipped into ...\\solution\install on the server. The Solutions Plus start application executable (SPLStart.exe) should be unzipped into ...\\solution\resources on the server.
7. Create a shortcut to SPLStart.exe that is copied to each user's desktop. Edit the Properties of this shortcut to append to the Target, single space and then the system code within double quotes. For example,  
S:\Solution\Resources\SPLStart.exe "XXX"
8. Edit the tags in the XXXconfig.xml file (using Notepad) if required.

```
<system>
  <configFile>
    <version>n.nn</version>
  </configFile>
  <app>
    <clientCode></clientCode>
    <systemCode>XXX</systemCode>
    <appName>XXXapp11.mde</appName>
    <appAuthenticationMode>Logon</appAuthenticationMode>
    <backupLocation>c:\Solution\backup</backupLocation>
    <openToDatabaseWindow>FALSE</openToDatabaseWindow>
    <liveData>TRUE</liveData>
    <debugLog>FALSE</debugLog>
    <logLocation>C:\solution\App_logs</logLocation>
  </app>
  <modules>
    <mnuVersionBuild>1.0.0</mnuVersionBuild>
    <drsVersionBuild>1.0.0</drsVersionBuild>
    <crsVersionBuild>1.0.0</crsVersionBuild>
    <supVersionBuild>1.0.0</supVersionBuild>
    <appVersionBuild>1.0.0</appVersionBuild>
  </modules>
  <executables>
    <executablesLocation>C:\Solution\Resources</executablesLocation>
  </executables>
  <sqlServer>
    <database>XXXdata</database>
    <databaseLocation>\\server\Solution\Data</databaseLocation>
```

```

<databaseBackupLocation>\\server\solution\backup\</databaseBackupLocation>
  <serverInstance>server\Solution</serverInstance>
  <sqlAuthenticationMode>windows</sqlAuthenticationMode>
  <UID></UID>
  <PWD></PWD>
  <allowBackupOfDatabase>TRUE</allowBackupOfDatabase>
</sqlServer>
<updates>
  <runDBUpdates>TRUE</runDBUpdates>
  <autoUpdates>TRUE</autoUpdates>
  <appUpdatesLocation>\\server\Solution\Install\</appUpdatesLocation>
  <sqlUpdatesLocation>\\server\Solution\Install\</sqlUpdatesLocation>
  <resourceLocation>c:\solution\Resources\</resourceLocation>
  <resetSqlViewIndex>FALSE</resetSqlViewIndex>
</updates>
<maintenance>
  <appVersion>1.01</appVersion>
  <appBuild>0</appBuild>
  <frequency>daily</frequency>
  <maxSizeGB>1</maxSizeGB>
  <sizeGrowthPercent>10</sizeGrowthPercent>
  <dateCopied>8/2/2008</dateCopied>
  <timeCopied>11:10</timeCopied>
</maintenance>
</system>

```

Should you need to change the defaults, edit the highlighted area (bolded black) between the tags.

<clientCode>

You will be notified if this is a required setting for your installation. Otherwise leave blank.

<systemCode>

You will be given a system code. Typically this is 3 characters. Replace all instances of XXX within this configuration file with this same system code.

<database>

The default sql database name is XXXdata.

<databaseLocation>

This is the database file location on the server and is relative to SQL Server. That is, when using SQL Management Studio, this file location is available. The default sql database location is within the application file structure. This makes managing backups and support significantly easier when this convention is adhered to.

<databaseBackupLocation>

This is the database backup file location on the server and is relative to SQL Server. That is, when using SQL Management Studio, this file location is available.

<serverInstance>

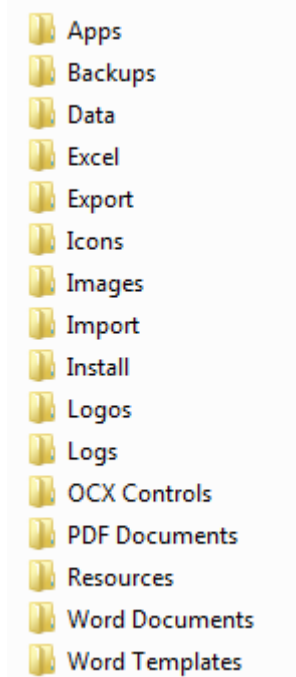
This is the sql server instance set up on SQL server. The default sql server instance is named, *solution*. This makes support significantly easier when this convention is adhered to.

## Client PC

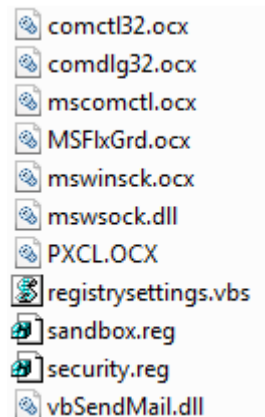
The following steps apply to each client PC on which the Application is being installed.

1. Run the setup program that you can download from <http://www.solutionsplus.co.nz/downloads/SolutionsPlusSetup.html>. There are two download options, both the same except one includes download of an installable Access 2003 runtime for use where the client PC does not have Access 2003 already installed. These setup msi files perform the following steps.

- Creates the following application folder structure under c:\.



- Changes Microsoft Access security settings in the registry to:  
[HKEY\_LOCAL\_MACHINE\SOFTWARE\Microsoft\Office\11.0\Access\Security]  
"Level"=dword:00000001  
[HKEY\_LOCAL\_MACHINE\SOFTWARE\Microsoft\Jet\4.0\Engines]  
"SandBoxMode"=dword:00000002
- Downloads and installs mousehook.dll to C:\Solution\Apps.
- Downloads the following resources to C:\Solution\OCX Controls.



- Downloads and installs 2 fonts, Serifa Black BT (SERIFAK.TTF) and Square 721 (SQR721N.TTF).
  - Downloads the Solutions Plus application icon.
2. If you do not have a fully licensed copy of Microsoft Access 2003 on a Client PC you can install a free runtime version. The Solutions Plus setup program includes an option for Microsoft Access 2003 Runtime version. If you selected this option, the Microsoft Access 2003 Runtime setup files were copied to c:\solution\ocx controls\. You need to run this setup file from this location. If you did not select this option or manually setting up a PC you can download a runtime version from <http://www.solutionsplus.co.nz/downloads/access2003Runtime.html>
  3. Download and install an ftp utility from <http://www.solutionsplus.co.nz/downloads/chilkatFTP.html>.
  4. Download and install our free PDF printer (Bullzip PDF) from <http://www.solutionsplus.co.nz/downloads/bullZipPDF.html>.
  5. Create a shortcut on each client PC to open SPLStart.exe in \\Server\solution\resources.
  6. Setup is now complete.

### Administration Client

The following steps apply to the PC(s) chosen to perform management functions including upgrading the software.

1. Complete the setup steps for a Client PC.
2. Download and install a utility to facilitate software updates from <http://www.solutionsplus.co.nz/downloads/SplDBUpgrader.html>

### Test System

To create a Test system you must repeat steps 1 through 9 for setting up a Server and steps 1 through 6 for setting up a Client PC. The difference is that instead of creating the files above as XXXfilename.suffix you create them as XXX**Test**filename.suffix.

e.g. XXXdata becomes XXX**Test**data – The data file.

XXXapp.mde becomes XXX**Test**app.mde – The front end application file.

XXXconfig.xml becomes XXX**Test**config.xml – The front end config file.

This will enable the System Administrator to copy over the live data into the test system with minimal effort. The user can then run the live and test systems on their Client PCs at the same time to compare and test modifications.

### Backups

Solutions Plus' applications provide a simple backup function under *Menus and Security > SQL Server Backup*,

This is most suitable for use in implementations where there may be no internal IT support and/or where there is no formal backup strategy already in place. This function performs a SQL backup of the SQL Server database to a predefined location.

If you already have a backup strategy for SQL Server databases then this function should be excluded from the access rights of all user groups. Refer to the User Access Security section of this document.

### MS Access Runtime

The following steps apply to installing MS Access Runtime on a Client PC.

1. Use My Computer to open the folder C:\Solution\OCX Controls\Access runtime.
2. Run SETUP.EXE.
3. At the Customer Information step enter your name and click Next.
4. At the Choose setup type step select Typical and then click Install.

### ActiveX Controls

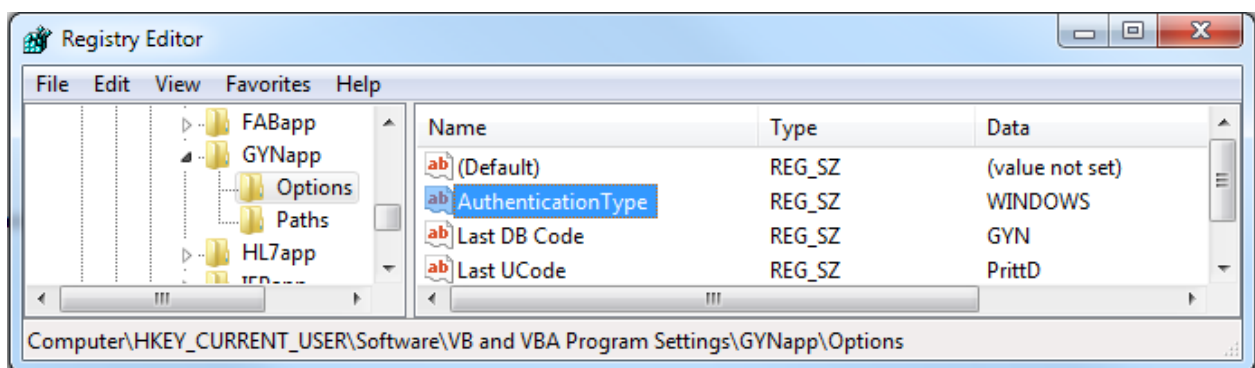
Some applications (for example ANE and SGN) require additional steps to install ActiveX Controls required to run the software.

1. Complete step for of the standard setup steps (step 1 of a Client PC installation, above) to install ActiveX controls.
2. On the Client PC:  
Start (or Start > Run for PC's prior to Windows 7) regsvr32 "c:\Solution\OCX Controls\msflxgrd.ocx"  
Start regsvr32 "c:\Solution\OCX Controls\mscomctl.ocx".

### LDAP and Windows Authentication

To enable users to log on automatically and bypass the logon form complete the following steps on each Client.

1. Run *regedit*.
2. Under HKEY\_CURRENT\_USER, select *Software*, then *VB and VBA Program Settings*.
3. Find the *XXXapp* key.
4. Set the value *authenticationType* from *LOGON* to *WINDOWS*.
5. In the database *XXXapp.mdf*, the user logon must have a corresponding entry in the *UCode* field.



### Concerto

System must be setup to use Windows Authentication.

The call to SPLStart.exe must use the following syntax

"System code" [space] "Form name" [space] "Unique record id"

For example

```
I:\Solution\Resources\SPLStart.exe "GYN" "Colp" "ABN6509"
```

## Remote Support

Solutions Plus currently uses Remote Assist to connect directly to a Client's PC to assist with support, or to enable a copy of the client's data to be obtained. The Remote Assist client software can be downloaded from <http://www.solutionsplus.co.nz/downloads/remoteAssist.html> . Further information can be found on the Remote Assist website <http://ra.net.nz> . Solutions Plus will provide the account number and password at install time. If the client chooses to their own preferred software to enable Solutions Plus to connect to their server/PC's, then any time required by Solutions Plus for initial setup and resolution of issues occurring during its use will be chargeable to the client.

## UAT

### Initialising the SQL Database

When you purchase your software you will be provided with a blank database that contains only those records that are required to set the system up initially. On one or more occasions following this you may want to remove all entered test data from your SQL back-end database. Examples of this could be prior to performing each UAT cycle, and to ready your SQL back-end database for go-live. There is a standard routine for performing this process.

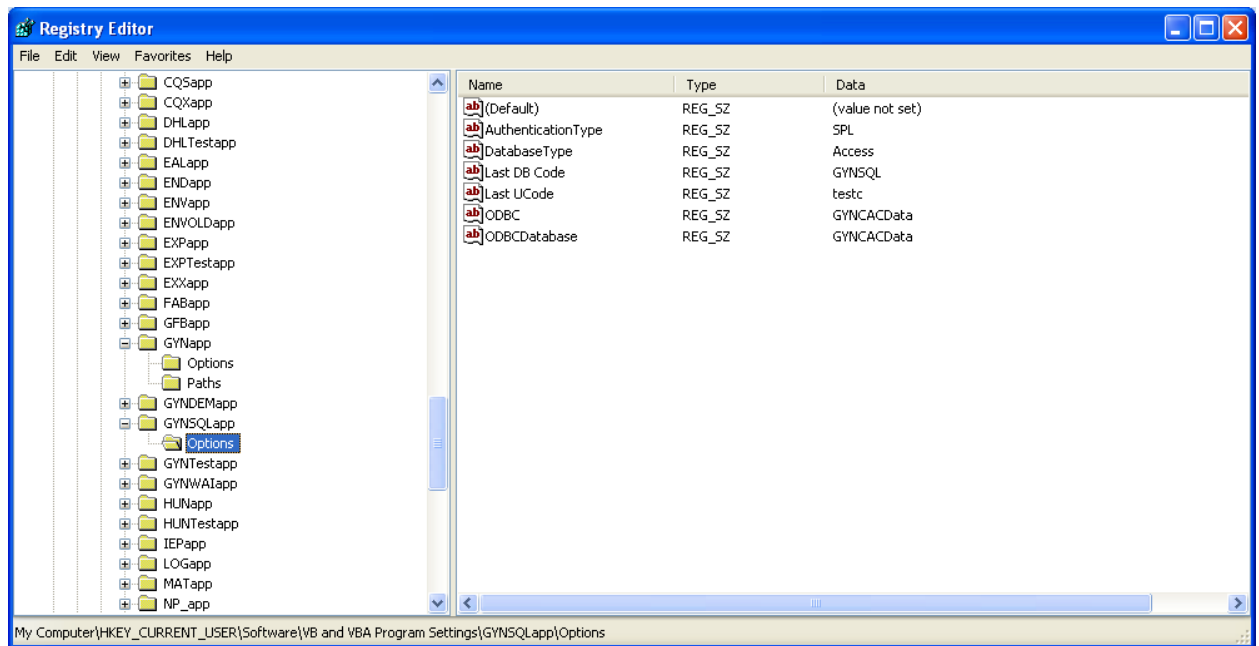
## Specific OS Considerations

### Citrix

#### Key Points for Citrix: Citrix 4.5

- Citrix needs each user to have own profile (for example, home folder).
- Copy XXXapp.mde and XXXconfig.xml and any files in the apps folder to each user's (home) folder.
- Install the executable in Citrix using *Install Mode* in the users HOME drive. For example. H: or U: maps to <\\server\x\user\solution\app>
- *Publish it* from the HOME drive.
- The icon can be copied to each user's desktop through *Group policies*.

- The application creates registry entries. These need to be created for each user. This is usually done in the users' logon script.



## Troubleshooting

If Microsoft Access fails or, user logs on and gets pulled back to the last function a user was running, the process may still be running on the server and has not been closed properly.

Open the Task Manager on the Citrix server and kill the offending process.

## Terminal Services

If Terminal Services is in use, then the database will be located on a file server on the network.

1. Ensure MS Access is installed in Terminal Services *Install Mode* and is available to all users.
  - Ensure that each user will have a copy of XXXapp.mde.
  - Create a folder under the server's C: drive named, C:\USERS.
  - Create a sub folder under the C: drive for each user and use the same drive letter for all users to map to their sub folder. For example UserName (\\server\users)(H:)
  - Create a *Solution* folder.
2. As in the client pc setup (above), you must also run Run the setup program that you can download from <http://www.solutionsplus.co.nz/downloads/SolutionsPlusSetup.html>.
3. Create a shortcut on each client PC to open the SPLStart.exe in \\Server\solution\Resources.
4. Setup is now complete.

## HL7 Interface

Several Solutions Plus applications are Healthlink-enabled, in that they can create and/or process standard Health Level 7 (HL7) format files, which are encrypted and transferred via a secure Healthlink interface. Laboratory and Scan Results, MOH Section 88 Claims and RSD format referral files are amongst the files sent and/or received through an HL7 .Net interface.

### Laboratory and Scan Results

Lab San results are imported and acknowledgements sent in HL7 version 2.1 format.

The following are prerequisites:

- Microsoft.NET\Framework\v2.0 or higher.

The following applications/files are required:

- The application front-end (e.g. MATapp.mde, SGNapp.mde).
- The SQL Server data files (e.g. MATdata.mdf/ldf, SGNdata.mdf/ldf)
- The application config file (e.g. MATconfig.xml, SGNconfig.xml)
- The run application executable SolutionsPlus.exe
- The windows service MsgMgr.exe
- The installation files InstallMsgMgr.bat and UninstallMsgMgr.bat
- The vb.net application HL7Processor.exe
- The Healthlink 6 application.

It is assumed that the application front-end, the application config file and SQL Server data file have already been set up in accordance with Solutions Plus standards.

### Setting up MsgMgr.exe.

This can be installed to run either on a local machine or on a server.

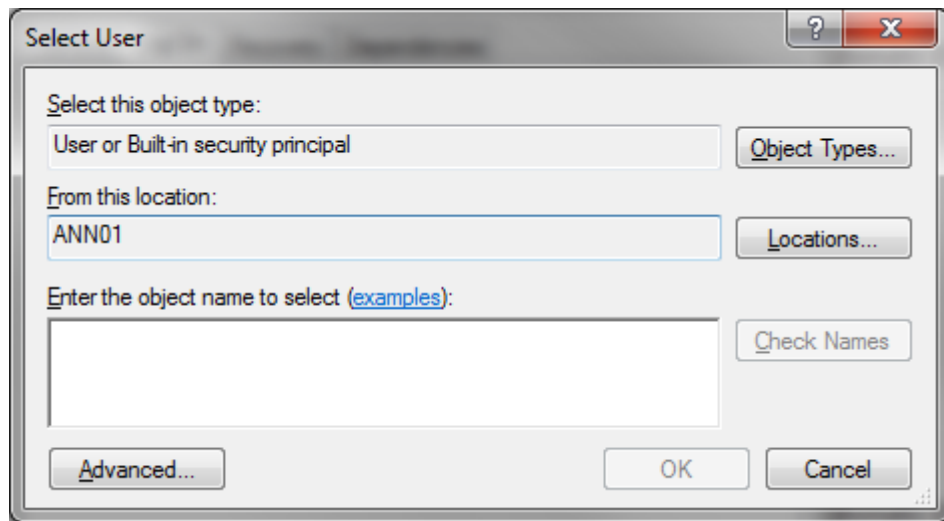
1. Copy the MsgMgr files into the standard location, as set up in the application config file (e.g. RootDrive:\RootFolder\Solutions Plus\MsgMgr
2. Edit the config file MsgMgr.exe.config with the correct database connection string and the LabPath (default is 'C:\HLink\HL7\_In\Lab')
3. Edit the files InstallMsgMgr.bat and UninstallMsgMgr.bat so they look at the location of the exe file, e.g.:

```
cd C:\WINDOWS\Microsoft.NET\Framework\v2.0.50727
InstallUtil "C:\Program Files\Solutions Plus\MsgMgr\MsgMgr.exe"
```

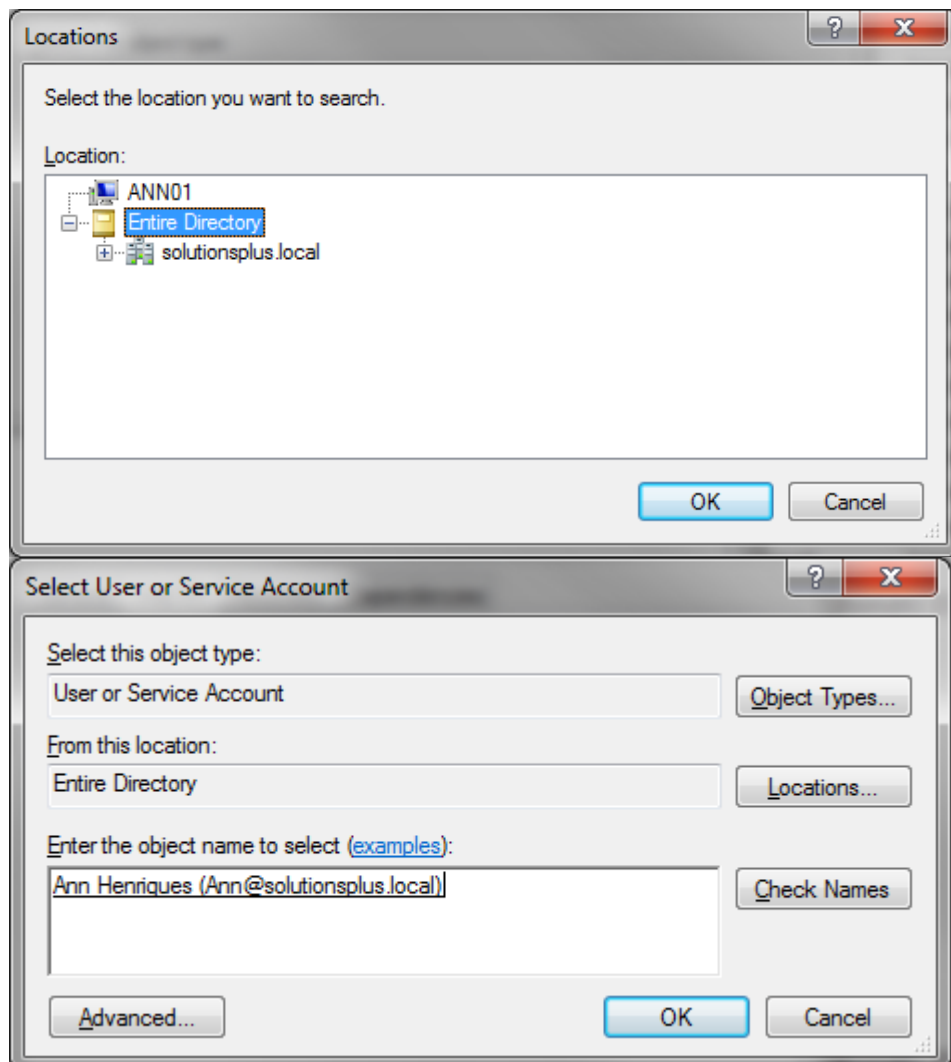
and run InstallMsgMgr.bat. Check that the service is installed and can be started and set it to run automatically. Other properties of the service may need to be set depending on whether the SQL database is on the local machine or on a network. If local, no changes should need to be made. For a network service do the following:

1. Right-click on the service and select 'properties'
2. Click on the log-in tab and click 'This Account'

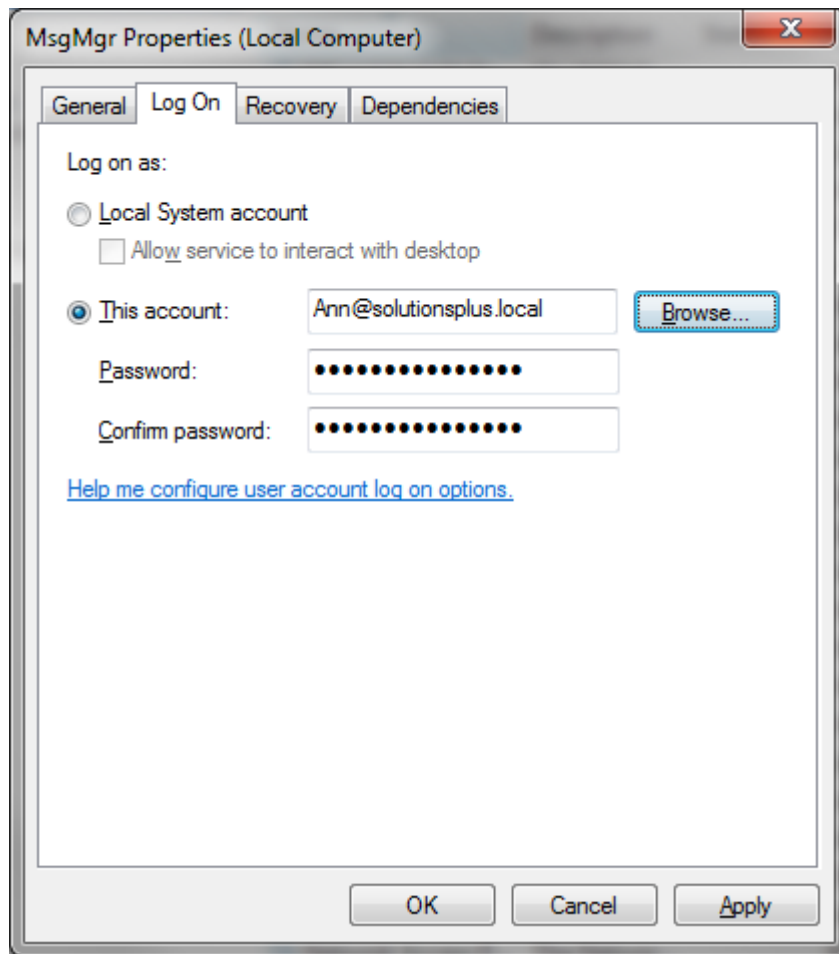
3. Browse to find the user's account on the network



4. Click on locations to find the network



5. Enter the user's network password



6. Stop and re-start the service.

### Setting up HL7Processor.exe

1. Copy the HL7Processor files into the standard location, as set up in the application config file (e.g. RootDrive:\RootFolder\Solutions Plus\HL7
2. Edit the config file HL7Processor.exe.config with the correct database connection string, with the OutDirectoryLAB and InDirectoryLAB locations (default is 'C:\HLink\HL7\_In\Lab') and with the user's EDI account name, supplied by Healthlink. Nothing else should need to be modified.

These messages we develop for G+ are:

#### Referral

- REF I12 – Referral Insert

#### Outpatient

- SIU S12 – New Outpatient Booking - Appointment insert
- SIU S13 – Reschedule Outpatient Booking - Appointment reschedule
- SIU S14 – Outpatient Booking Update - Appointment update
- SIU S15 – Outpatient Booking Cancellation - Appointment cancel
- SIU S17 – Outpatient Booking Deletion - Appointment delete

#### Patient

- ADT A31 – Update Patient/Client Information - Demographic update

The messages we develop for M+ are:

#### Inpatient

- ADT A01 – Inpatient Admission Insert
- ADT A02 – Inpatient Transfer Insert
- ADT A03 – Discharge Insert
- ADT A08 – Update Inpatient Preadmission
- ADT A11 – Delete Admission
- ADT A12 – Delete Inpatient Transfer
- ADT A13 – Delete Inpatient Discharge
- ADT A16 – Inpatient Pending Discharge Insert

#### Patient

- ADT A31 – Update Patient/Client Information - Demographic update
- ADT A34 – Merge Patient Information
- ADT A19 – Patient Query Definition
- ADR A19 – Patient Query Response

#### System

- MFN M02 – Professional Carer Update

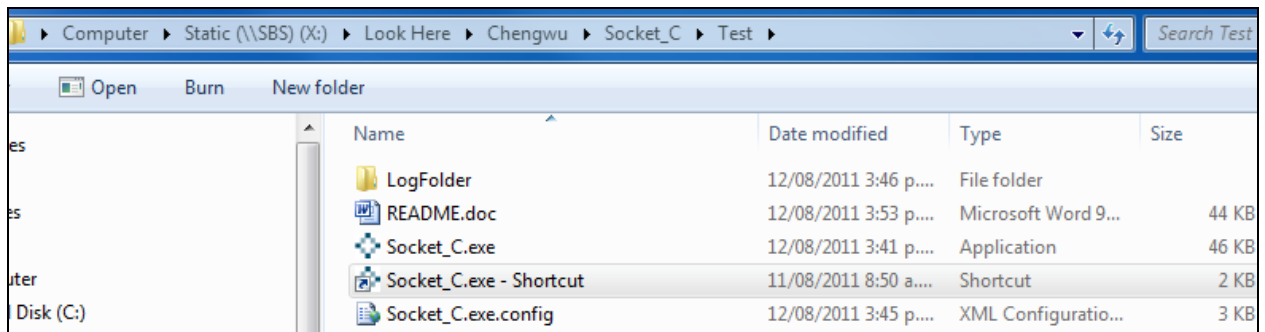
### **Setting up Socket\_C.exe.**

This console application can be executed run in DOS command line and other applications. It sends a HL7 query message with NHINumber to a designated TCP/IP port. The returning HL7 message will be handled by MsgMgr windows service, which processes the response HL7 message.

Example below shows running it by passing parameter **xxxxxxx** (NHI number).

**"X:\Socket\_C\Test\Socket\_C.exe" xxxxxxx**

You can double click [**Socket\_C.exe – Shortcut**] to send message to remote server



### 3. Configuration

Assign relevant key to **Socket\_C.exe.config**.

Server ID	where the HL7 message will be sent to
Port No	the port number of the HI7 listener
Log file	storing sending event in the log file

```

<applicationSettings>
  <Socket_C.My.MySettings>
    <setting name="ServerIP" serializeAs="String">
      <value>10.0.0.81</value>
    </setting>
    <setting name="PortNo" serializeAs="String">
      <value>22000</value>
    </setting>
    <setting name="LogFolder" serializeAs="String">
      <value>X:\Look Here\Chengwu\Socket_C\Test\LogFolder</value>
    </setting>
  </Socket_C.My.MySettings>
</applicationSettings>

```

## Gynaecology Plus

### PAS Interface

If your PAS is a SQL View that is located on a different server then the following registry keys need to be entered.

- ExternalDBName1
- ExternalDBType1

These are the PAS Fields that will need to be provided from your PAS

### Patient Fields

PATIENT\_NHI  
 PATIENT\_FAMILYNAME  
 PATIENT\_FIRSTNAME  
 PATIENT\_ADDR\_1  
 PATIENT\_ADDR\_2  
 PATIENT\_ADDR\_3  
 PATIENT\_ADDR\_4  
 PATIENT\_POSTCODE  
 PATIENT\_PH\_NO  
 PATIENT\_DOB

PATIENT\_GENDER  
PATIENT\_ETHNIC\_GROUP

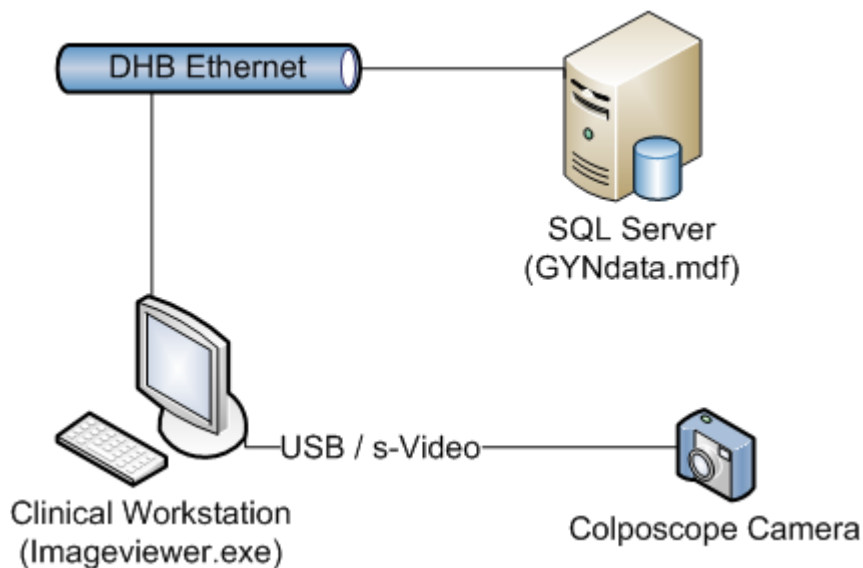
### GP or Referrer Fields

GP\_ALPHACODE  
GP\_FAMILYNAME  
GP\_FIRSTNAME  
GP\_ADDR\_1  
GP\_ADDR\_2  
GP\_ADDR\_3  
GP\_ADDR\_4  
GP\_PH\_NO

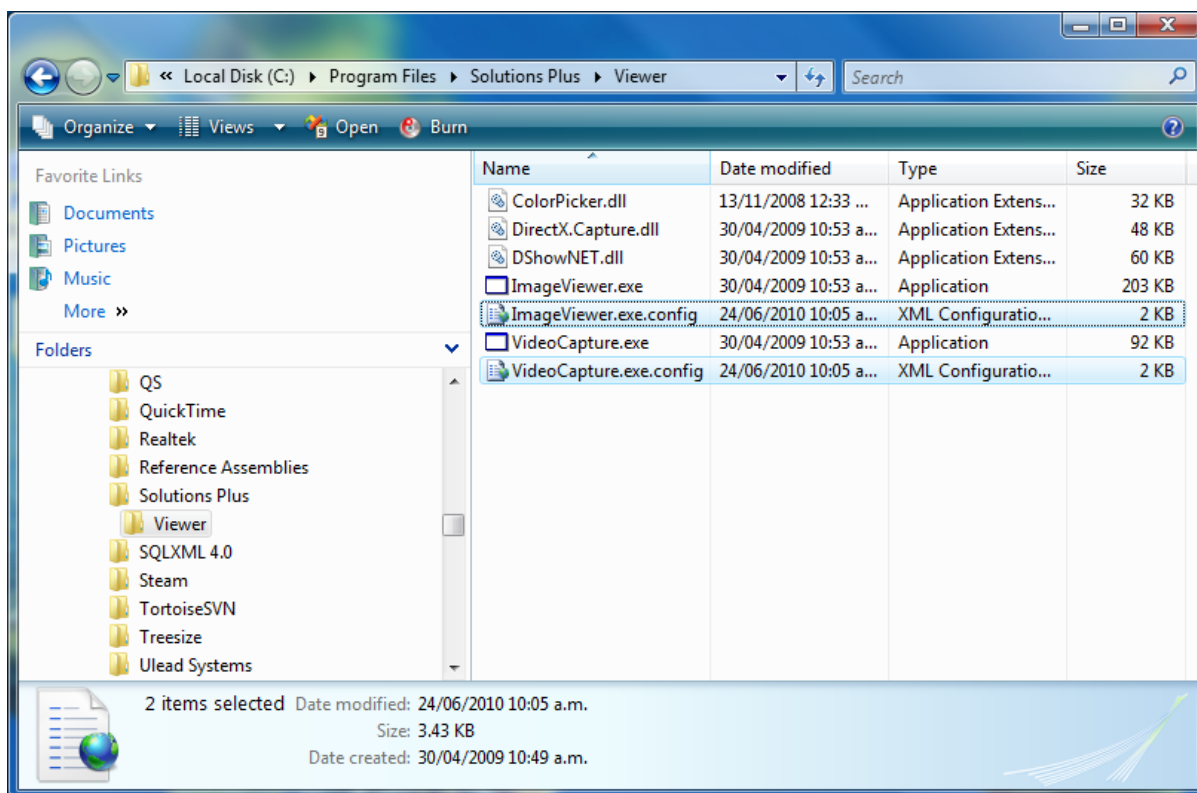
### Colposcope Viewer Software

The software that captures the images from a colposcope and imports them directly into the GYNdata database is installed by the Viewer.msi installation file. A link to this web page and file will be supplied by your product manager. This software requires the .NET 3.5 Framework to be installed on the PC/laptop. This software needs to be installed on all PC's/Laptops that are required to have access to the images. Your Colposcope will then need to connect to the pc in the examination room. This is done by one of the Colposcope Interfaces listed below. We always recommend that you test any colposcopes with our software before purchase.

### Colposcope Viewer Architecture



The Viewer.msi installs itself by default to C:\Program Files\Solutions Plus\Viewer. This can only be changed if you are using G+ version 5.10 or later. Please note that if you are using Citrix you will most likely need G+ version 5.10 or later.



To finalise the installation you will need to configure the ImageViewer.exe.config and the VideoCapture.exe.config files to point to where the GYNdata database is located on your network.

#### ImageViewer.exe.config

```
<appSettings>
  <add key="SQLConnectionString" value="Data
Source=ML350SERVER\development;Initial Catalog=GYNdata;Integrated Security=True"
/>
  <add key="Timeout" value="300" /><!--Time in seconds-->
  <add key="ImageLocation" value="c:\solution\images" />
  <add key="ClientSettingsProvider.ServiceUri" value="" />
  <add key="CameraResolutionX" value="720"/>
  <add key="CameraResolutionY" value="486"/>
  <add key="VideoCapture" value="C:\Program Files\Solutions
Plus\Viewer\VideoCapture.exe"/>
</appSettings>
```

#### VideoCapture.exe.config

```
<appSettings>
  <add key="SQLConnectionString" value="Data
Source=ML350SERVER\Development;Initial Catalog=GYNdata;Integrated Security=True"
/>
  <add key="Timeout" value="300" /><!--Time in seconds-->
  <add key="CameraResolutionX" value="720"/>
  <add key="CameraResolutionY" value="486"/>
</appSettings>
```

The information highlighted (bolded black) above are the values you are likely to change.

For a more in depth explanation here is what each Key is used for:

ImageViewer.exe.config / VideoCapture.exe.config

`<SQLConnectionString>`

This is a reference to the SQL Server Instance and the Database where (tblImage) is located. `Data Source`=The SQL Server Instance, `Initial Catalog`=The Database name.

`<TimeOut>`

This is the time in seconds that the application will close itself once it has been left idle

`<ClientSettingsProvider.ServiceUri>`

This can be ignored

`<CameraResolutionX>`

The Horizontal resolution

`<CameraResolutionY>`

The Vertical resolution

`<VideoCapture>`

The Location of the Video Capture executable

Below is a list of the available resolutions. Some may not work with specific cameras. We recommend you use 720x486.

160x120

176x144

320x240

352x288

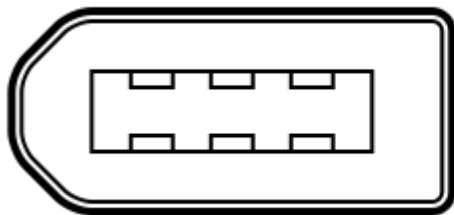
640x480

720x486

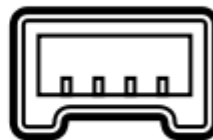
## Colposcope Interfaces

### Olympus Colposcopes

Most Olympus colposcopes connect to a PC/laptop using the firewire IEEE 1394 interface. Older models (e.g.OTV-SC) have an s-video out which can be converted to a USB via the EasyCAP USB converter mentioned below. You will need a cable that matches the connector type on your PC/laptop. The standard PC connector is a 6 pin plug whereas the standard laptop connector is a 4 pin plug. Firewire does have a distance limit of 4.5m. This can be overcome by using repeater hubs. You may link up to 16 repeater hubs together.



6 Pin Plug



4 Pin Plug

Olympus colposcope cameras have a 6 pin plug. Therefore, for a PC/laptop with a 6 pin plug you will need a 6 pin male – 6 pin male firewire cable of sufficient length. For a PC/laptop with a 4 pin plug you will need a 6 pin male – 4 pin male firewire cable. Citrix cannot currently interface from a firewire port to their client software. This means that a local copy of Gynaecology Plus must be installed on the PC/laptop that connects to the colposcope.

Olympus recommended installing *Windows Live Movie Maker 2011* to ensure that their camera is configured for Windows correctly. This should be done as a first step if any troubleshooting is required.

### Current Olympus Colposcopes tested with Image Viewer

OTV-SP1 (3 Chip), OTV-S7 (1 Chip), OTV-SC (via EasyCAP USB converter)

### Leisegang Colposcopes

3MVW-USB

Leisegang colposcopes connect to a PC/laptop using the USB interface. You will need a male – male USB cable of sufficient length.

You will need to ensure the latest Leisegang software drivers have been installed. Citrix can interface from a USB connection to their client software. You will need to discuss with Citrix if your version is compatible.

### Carl Zeiss Colposcopes

150FC with a Medilive Primo 1 chip camera.

OPMI 1-FC. Toshiba 3CCD Camera Head Model no: JK-TU63H. Toshiba Camera Control Unit Model No:IK-TU61

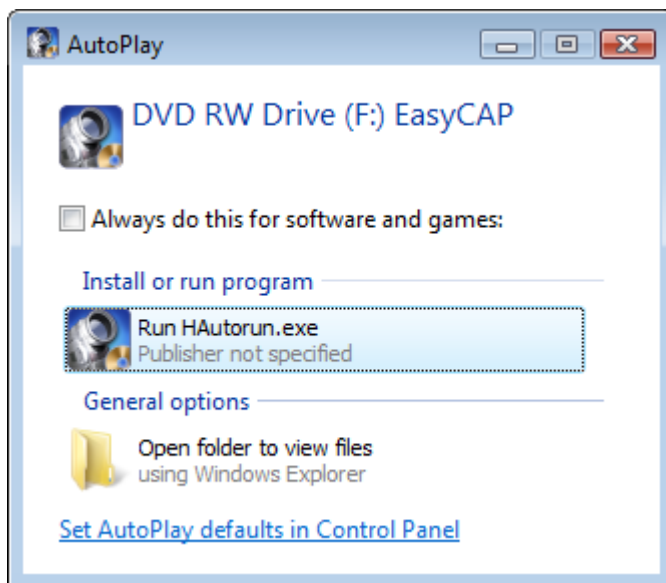
OPMI Plus. Toshiba 3CCD Camera Head Camera (PAL). Toshiba Camera Control unit Model No:IK-TU48P.

Carl Zeiss colposcopes connect to a PC/laptop using the s-video interface. Very few PC/laptops include an s-video in port as standard (although many do include an s-video out port). In the absence of an s-video in port you will need an s-video to USB converter. We have tested the Carl Zeiss colposcope with the EasyCap converter. Citrix can interface from a USB connection to their client software. You will need to discuss with Citrix if your version is compatible.

### EasyCAP USB Ulead configuration

If you are using the EasyCAP software you will first need to configure the USB Drivers and install the Video Studio software. Please note that if you are using a Laptop with a built-in webcam that some additional configuration may be required to disable this camera.

Insert the installation CD and run through the wizard.



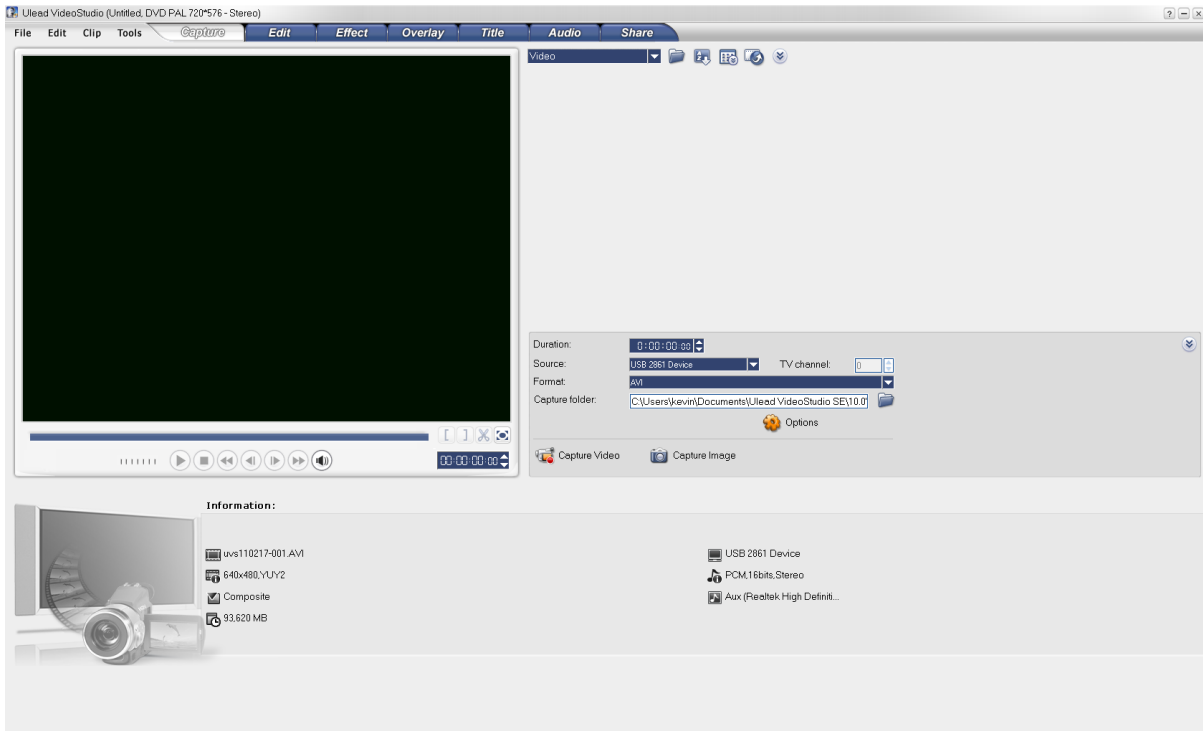
Run *Install Driver* and *Install Video Studio*.



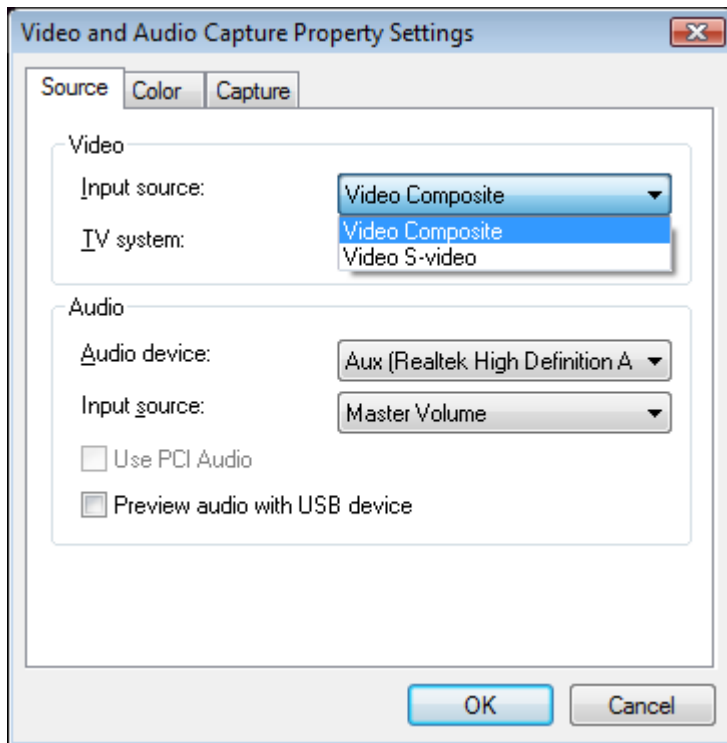
After running through the wizard with accepting all defaults open the ULead software and select VideoStudio Editor.



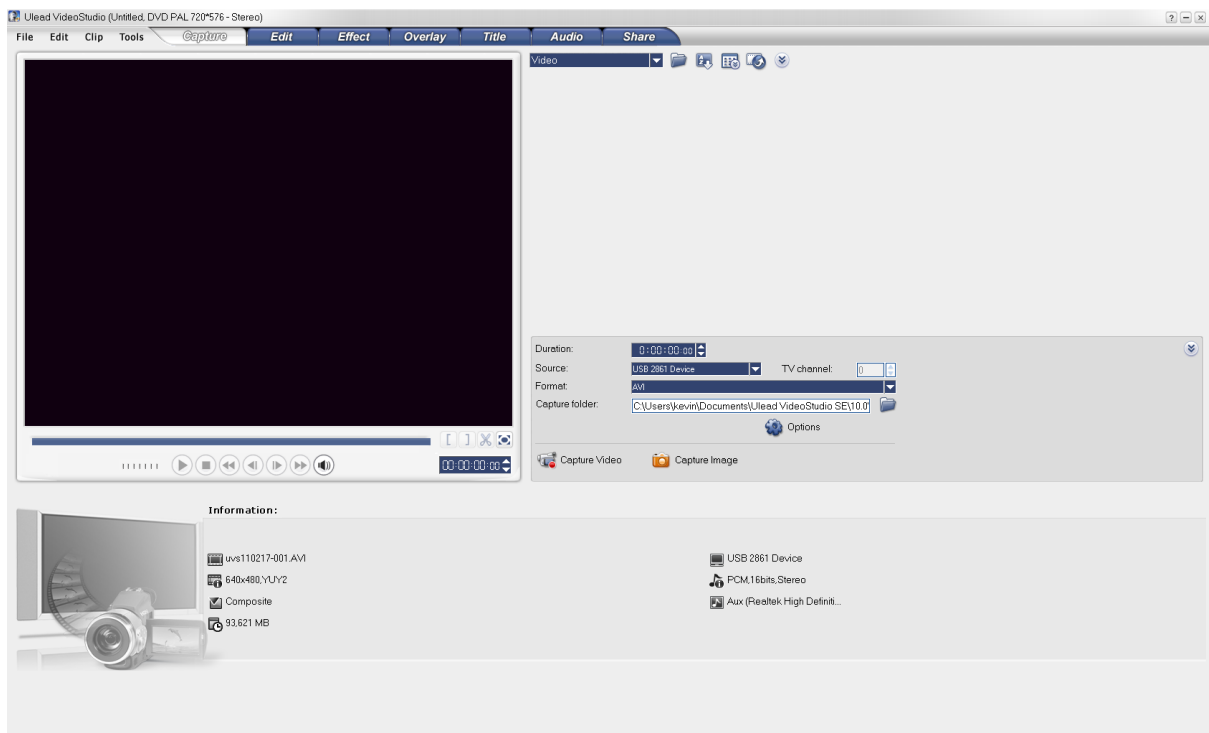
Then navigate to the *Capture Tab*.



Ensure that the camera is on and plugged in to the USB. Select the Options\Video and Audio Capture Property Settings...



If you are using RGB then select Video Composite. Then test capturing video and a still shot by pressing *Capture Video* and *Capture Image*.



## Colposcope Viewer Software Troubleshooting

Issue: Image Viewer loads, but when the capture button is pressed it fails with a similar message below.

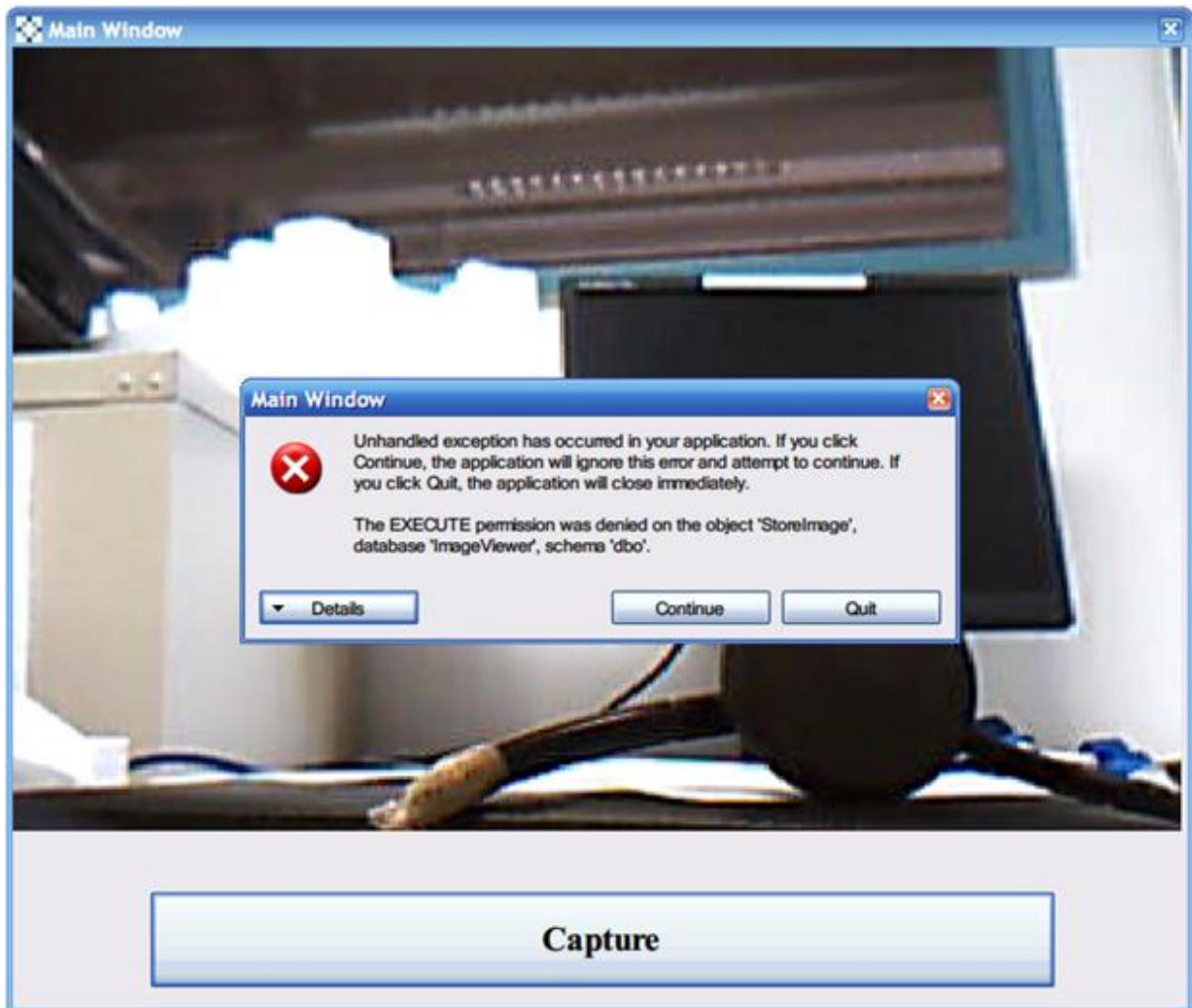


Resolution: We have found that the 3<sup>rd</sup> party Pedal Software is sometimes not reliably installed with some versions of Windows XP. To correct this situation, reinitialize the PC with your standard client and reinstall our software.

Also check that you have set the following key in the ImageViewer.exe.config file.

```
<add key="VideoCapture" value="C:\Program Files\Solutions Plus\Viewer\VideoCapture.exe"/>
```

Issue: Image Viewer loads, but when the capture button is pressed it fails with a similar message below.



Resolution: Ensure that the User or Group has dbowner permissions on the GYNdata database to execute the StoreImage Stored Procedure.

Product review:

<http://gadizmo.com/easycap-usb-review.php>

## Product purchase

EasyCAP USB

[http://www.usbfever.com/index\\_eproduct\\_view.php?products\\_id=218](http://www.usbfever.com/index_eproduct_view.php?products_id=218)

Delcom Pedal

At this present time we only support **903600 – 5M (G.II)**. You can purchase this pedal from the link below.

<http://www.delcomproducts.com/productdetails.asp?PartNumber=903600-5M>

## **Surgery Plus**

### **Special Considerations**

Requires another SQL database named, *ImageViewer*. Refer to the Server Installation steps.  
Also requires the installation of msflxgrd.ocx and mscomctl.ocx ActiveX Controls.

## **Maternity Plus**

### **Special Considerations**

In order to run the GROW Chart function and the WHA Benchmarking report within Maternity Plus the user must have a registered version of Microsoft Office Excel installed on their machine.

GROW chart - an Excel spreadsheet 'MaternityPlus Grow.xls' is required. The current version of this spreadsheet can be found in R:\Resources\MAT and it is available for download from the site <http://www.solutionsplus.co.nz/secure/MAT/MAT942.html>. The default location on the client site is C:\Solution\Resources or the path specified within the <resourceLocation> tab of the Maternity Plus config file.

WHA Benchmarking report – Only a DHB would run this report, which requires a spreadsheet 'WHA\_Maternity\_Indicators.xls' to run. The current version of this spreadsheet can be found in R:\Resources\MAT. For non-DHB users it is not necessary to install this spreadsheet.

## **Maternity Provider Plus**

### **Special Considerations**

None.

## **Maternity Plus Mobile**

### **Pre-requisites**

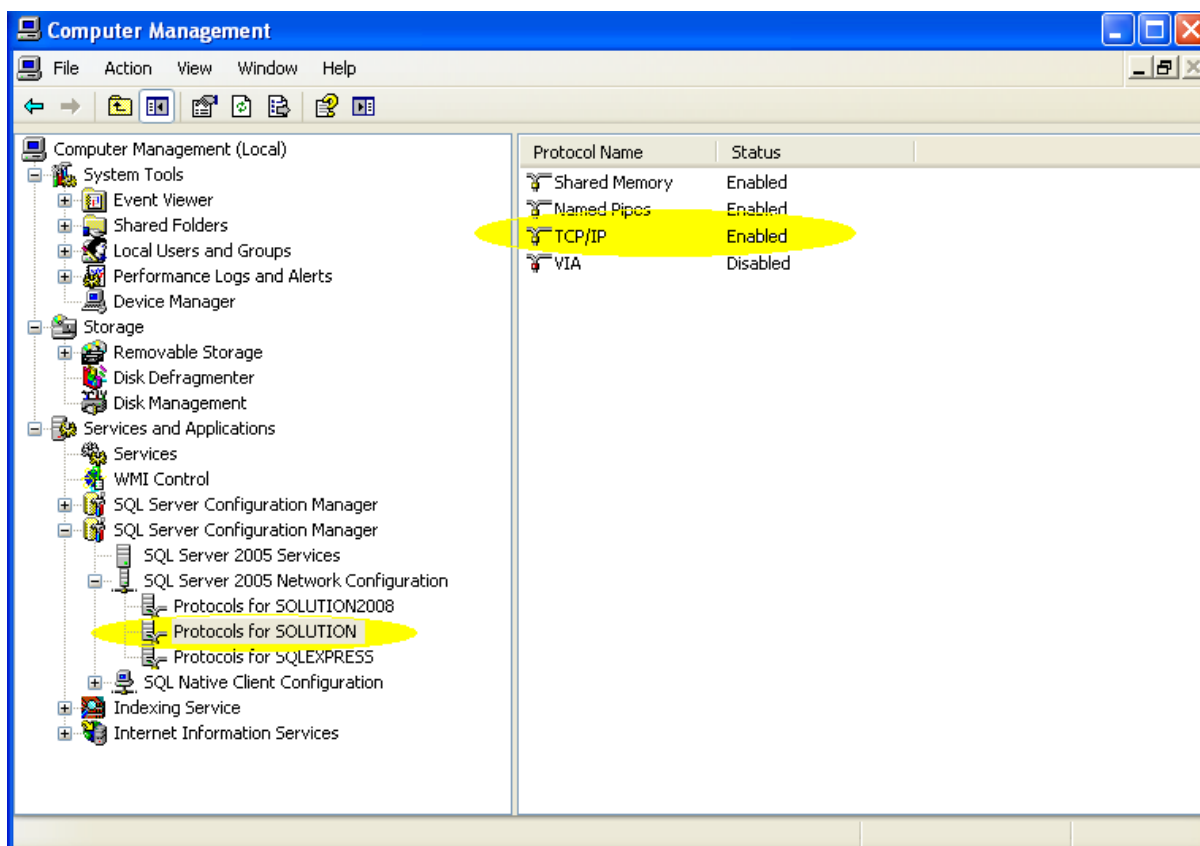
Requires Windows Classic (PDA) or Windows Professional (Phone) device (touch screen with stylus) running Windows Mobile 6.1 or higher. Will not work with Windows Standard. Phone requires 80Mb free memory or storage card. The PC based Maternity Plus database must be SQL version.

It is unknown if Windows Mobile Device Centre 6.1 (Vista and higher) or Microsoft Active Sync 4.5 need to also be installed to allow the device to communicate with the PC. Download from Microsoft & install.

Suitable Devices:

[http://help.solutionsplus.co.nz/MAT/mat\\_MaternityPlusMobile.html](http://help.solutionsplus.co.nz/MAT/mat_MaternityPlusMobile.html)

Check SQL Configuration Manager > SQL Server 2005 Network Configuration > Protocols for Solution has TCP/IP Enabled and IP addresses are set to 1433



Check PC **firewall** allows port **1433**.

NB Windows 7: Firewall > Advanced Settings > New Rule > right click New Rule > Create New Rule. Name it SQL Port 1433

Create a Mixed Mode SQL account using SQL Management Studio for user **phone**, password **phone** and ensure password change settings or turned off. NB SA passwords in vogue 2009-2010: 50luti0n5plu5 or 50luTi0n5+, r3mot3

Configure User Mapping for user phone has public and dbOwner for MATdata

Prove you can log in to SQL as the Phone user and open Caregiver table.

### Installation Process

Copy the 3 installer files from R:\MAT\ MaternityPlusMobile 2.3 to a temporary directory on phone. (2 steps is easiest – transfer files to client PC then manually copy and paste to the phone). Suggest save in My Documents > Personal on phone or else a temporary directory on the phone's storage card.

Instruct end user to navigate using the stylus from the Windows Icon (top left corner > All Programs > File Explorer ... My Documents > Personal

(You may need to instruct the user to use the Up option in bottom left corner of phone window to navigate back to the top menu first. Toggle between My Device and Storage card depending on where you put the files).

Press and launch the Maternity Plus Mobile Installer.CAB file (41.7 KB). Install to phone or storage card – depending on space. Acknowledge the uncertified vendor message.

Once installed, browse to phone or storage card Program Files > Maternity Plus Installer and install

- NetCFv35.wm.armv4i.cab 2.58 M 10/10/07
- Sqlce.dev.enu.ppc.wce5.armv4i.cab 110 K 10/02/07
- Sqlce.wce5.armv41.cab 1.65 M 10/02/07

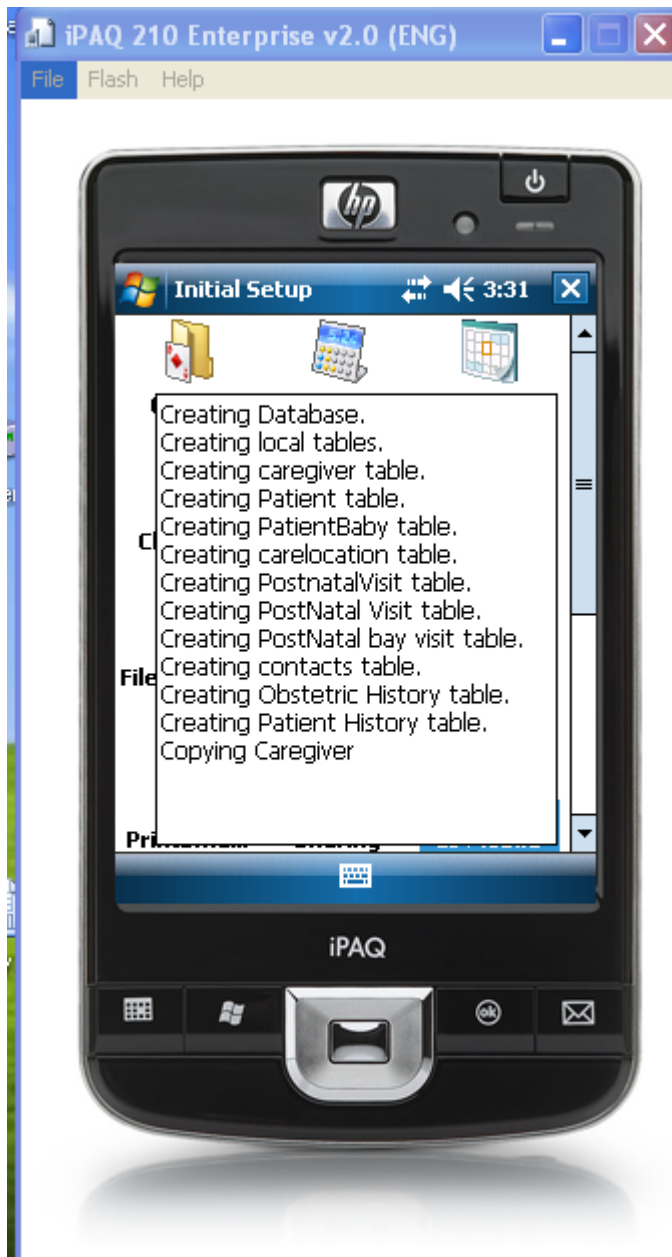
Manually create **My Device**\My Documents\Business\Solution directory on phone. Do NOT create this directory on the storage card!

Turn off mobile phone, and turn it on again.

Launch Maternity Plus Mobile. First time detects no MatMobile.sdf in My Documents\Business\Solution and creates – copying files from Maternity Plus (Create Database)

Delete this file manually if you want to re-run the installation!

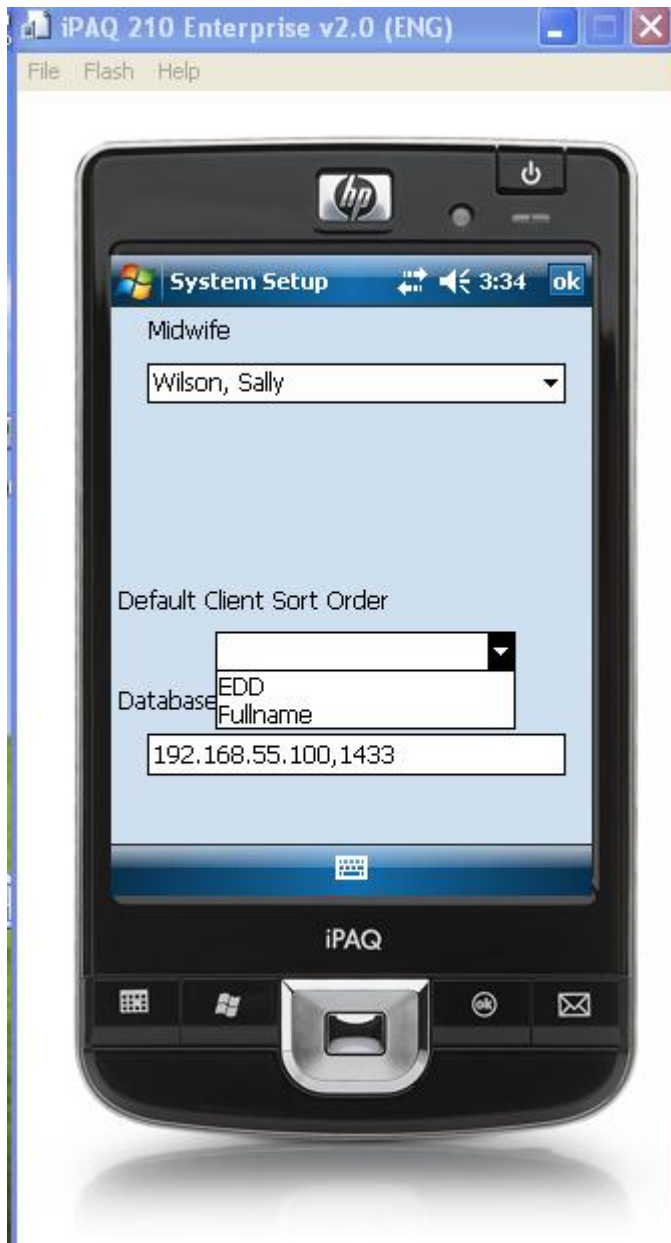
Remember to click 'settings' and set up the caregiver etc. when prompted.



There is a 20 second delay (approx) between Creating Patient History table and Copying Caregiver.

Close and relaunch Maternity Plus Mobile application as instructed.

On Main Menu – click Settings at the bottom left hand corner and select Caregiver and set Sort Option (FullName). Click Exit icon to load current patient details.



Once the Transfer Complete message displays – you can use the Maternity Plus Mobile application. The Main menu is listed below:



Use **Sync** (bottom right hand corner) – **Sync Now** to exchange data with PC.

NB TytnII Active Sync known issue with connection – resolve using Bluetooth connection.

## Anaesthesia Plus

### Special Considerations

Requires the installation of msflxgrd.ocx and mscomctl.ocx ActiveX Controls.

## Support Services Plus

### Special Considerations

Requires the installation of two additional databases, *SPLHealthRef* and *SPLPostCode*. Refer to the Server Installation steps.

## Upgrades

### New Versions

Periodically Solutions Plus releases updates for your system. These updates include enhancements and resolve any known issues. You will be notified by your Solutions Plus account manager when new versions of your software are available.

The latest version of your software can be downloaded from

<http://www.solutionsplus.co.nz/secure/xxx/xxx.html>

XXX represents the 3 letter code assigned to the system you are installing as follows:

MAT: Maternity Plus  
SGN: Surgery Plus  
GYN: Gynaecology Plus  
ANE: Anaesthesia Plus  
SSP: Support Services Plus

You will be advised of a user name and password.

Upgrades are cumulative. You do not need to run the upgrade every time you receive a new build, you only need to run the last build you have received. The system is capable of upgrading from any (supported) release/build to any future release/build. For example to upgrade from 6.12.1 to 6.12.34 you only need to install 6.12.34. i.e You do not have to install 6.12.2 first, then 6.12.2 then 6.12.3 etc. until you reach 6.12.34.

### Software Key

Solutions Plus requires clients to upgrade their software to the latest production release at a frequency of no less than 18 months. This mandatory requirement ensures that all clients are on recent production releases of their application(s). This is important to ensure clients have current functionality with respect to interfaces with national systems, government legislation, and so forth. When clients upgrade to the latest release they enable Solutions Plus to provide the highest quality support for the least cost to our clients.

If your software is not updated within an 18 month period you are prompted when opening your application to upgrade your software key. This prompt will appear each time you start your application for a month after its first appearance. You should contact

Solutions Plus for a software key update or a new release as soon as this message appears.

If the prompt is ignored for a month, then the next month a message will also start to appear at the opening of each function in the application. The prompt will continue for a further month. If the message continues to be ignored (that is, you do not contact Solutions Plus for a software key update or a new release of software), then you will not be able to access the system from the end of this second month. Your access to the software can be immediately restored at any time by obtaining a software key from Solutions Plus.

This final stage of locking users out of an application is intended to prevent unauthorised use of the software. This can only happen if prompts and messages are ignored for more than 2 months. Licenced users can easily and quickly obtain a software key update to allow continued use of the system.

## **Troubleshooting**

ODBC Failed errors when upgrading– This usually means the person running the upgrade does not have permissions to modify the backend

Error No 2501 when opening your application. Possibly caused by incompatibility problems under Windows 7 when MS Access 2007 is loaded on the same PC as MS Access 2003. Remove Access 2007 if practical. This may be fixed by a Service patch at some stage.