

2009

WinRecs Technical Guide

MED2020 Healthcare Software Inc 1/30/2009



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Contact MED2020

Should you have any questions regarding the content of this manual, please do not hesitate to contact MED2020 Client Services with the contact information below:

2025 Lanthier Drive Orleans, Ontario K4A 3V3

Tel: (613) 830-3761 Toll Free: (800) 461-2020 Fax: (613) 830-5992

Email: support@med2020.ca
Web: http://www.med2020.ca



About This Document

The information contained in this document focuses on the installation and maintenance of the MED2020 WinRecs suite of applications.

To learn more about using WinRecs please refer to the WinRecs User Guide, also available as a download from the MED2020 Client site, located at ftp://web.med2020.ca.

Document Conventions

Throughout this User Guide, text formatting is used to complement the information provided.

Function keys and key sequences are distinguished by large bold text.

Example: CTRL+M

References to modules, functions and other values as displayed on the screen are distinguished by italic text.

Example: WinRecs Application Menu

File names, paths and cross-references to other sections of the User Guide are distinguished by bold text.

Example: Introduction to the CPI Layout

Example: C:\temp\test.txt

Values to be typed are distinguished by the courier font.

Example: Type 01011920 in the field.

Important notes and hints are distinguished by text with a gray background.

Example:

NOTE: This is an important

note

Throughout this document, the WinRecs installation path is assumed to be **C:\Program Files\WinRecs 2**. If your site changed the path, please adjust the steps in this guide to suit your site's installation path.



Introduction

READ THIS SECTION BEFORE INSTALLING ANY SOFTWARE

This document was written for a moderately technical audience. This document assumes that the user shall understand fundamental concepts with respect to file, computer, server and network administration. This document will detail the proper procedures for installing a database server specific to a WinRecs installation. Administering computers, servers or networks other than instructions contained in this guide are outside the scope of this document and MED2020's support services. If the user is not familiar with basic computer, server and network administration, the user should seek professional assistance with the installation of a WinRecs database server, as MED2020 cannot be liable for catastrophic data loss. MED2020 does not undertake data backup or data recovery services under your site's standard support contract.

The information contained in this document is provided to assist with the WinRecs installation and post-installation server activities, such as basic database maintenance. Instructions are provided for Microsoft SQL Server 2000, Microsoft SQL Server MSDE, Microsoft SQL Server 2005 and Microsoft SQL Server 2005 Express environment. The version of the database software installed at your facility will determine which procedures are used when performing the database maintenance activities.

Microsoft SQL Server 2000 or Microsoft SQL Server 2005 are the commercial database server software packages, generally used by facilities with larger data repositories or those who must support a large number of simultaneous connections.

Enterprise Manager is installed when installing Microsoft SQL Server 2000. This administrative tool is rather extensive and for the purposes of this document, references to Enterprise Manager are limited to the tasks necessary to attach and detach WinRecs databases.

For facilities with limited data or computing requirements, the Microsoft SQL Server MSDE (2000) or Microsoft SQL Server 2005 Express can be used. This free database software, also provided by Microsoft, provides limited data storage and is ideal for smaller WinRecs installations. However, this version of the database software does not provide additional support applications such as the Enterprise Manager. If your environment has an installation of Enterprise Manager, you might be able to use it to connect to, and administer, your MSDE database(s) and/or server(s). This document assumes that Enterprise Manager is installed on the WinRecs database server.

In the event that your facility is not able to use the Enterprise Manager, MED2020 provides custom utilities that can be used to attach and detach your WinRecs databases. These custom utilities will be referenced in the relevant sections of this manual.

Alternatively, instructions are provided for using OSQL, a command-line application installed with both the commercial and free versions of the database server software that can be used to perform queries, updates and maintenance, such as attaching databases and performing backups.

For more information on maintaining Microsoft SQL Server database applications, it is recommended that you consult the Microsoft support web site or your product documentation.

Contact MED2020 Client Services for more assistance with any information contained in this document.



Technical Requirements

Acceptable server specifications are identified on a per-client basis. The following specifications are only used to provide a baseline for typical implementations.

Minimum Server Specifications for SQL 2000/2005

Pentium IV 2.4 GHz
2 GB RAM
20 GB hard disk for WinRecs Installation¹
100 Mbps Network connections
Microsoft SQL Server 2000 (Standard/Enterprise or MSDE with latest service packs applied)²
Microsoft SQL Server 2005 (Standard/Enterprise or Express with latest service packs applied)²
Windows 2000 Server, Windows 2003 Server with latest service packs applied
Internet access

NOTE: (1) The 20 GB hard disk required for the WinRecs installation must be a separate physical drive.

- (2) Sites with less than 250,000 abstracts with a maximum of five client workstations can use the free version of Microsoft SQL Server 2000 MSDE or Microsoft SQL Server 2005 express.
- (3) Sites operating under Windows Server 2008 must use SQL 2005
- (4) Windows Server 2008 is not officially supported by MED2020 at this time.

Minimum Workstation Specifications

Pentium IV 2.0 GHz
256 MB RAM
2 MB video card (800x600 @16-bit color)
17-inch monitor
Windows 2000, Windows XP Professional with latest service packs applied CD-Rom
2-4 GB available disk space
Internet Access

Software Requirements

The installation media provided to your facility contains the files and applications required to install WinRecs on your server(s) and full-client workstations. Alternately, the files can be obtained from the MED2020 client FTP site, located at ftp://web.med2020.ca.

The following components are required to successfully complete the installation of the MED2020 WinRecs application suite:



Windows 2000, XP Professional, Vista Business, Vista Enterprise, or Vista Ultimate ¹	A fully licensed version of the Windows Operating system is required for client workstation installations. The operating system must be stable before beginning the installation of the database and WinRecs components.
Windows Server 2000, Windows Server 2003, or Windows Server 2008	A fully licensed version of the Windows Operating system is required for server workstation installations. The operating system must be stable before beginning the installation of the database and WinRecs components.
Microsoft SQL Server 2000/2005 ¹	Required for the server installation. The free, scaled-down alternate version of <i>Microsoft SQL Server 2000 MSDE</i> is available for download at http://www.microsoft.com/downloads/details.aspx?FamilyID=413744d1-a0bc-479f-bafa-e4b278eb9147&DisplayLang=en . Microsoft SQL Server 2005 Express is available for download at http://www.microsoft.com/downloads/details.aspx?familyid=220549b5-0b07-4448-8848-dcc397514b41&displaylang=en .
WinRecs Database	MED2020 WinRecs/SQL database files. Unzip utility required (not supplied) to extract the database files from the archive (MED2020_Data.MDF and MED2020_Log.LDF).
MEDSQL2.EXE	Utility used to attach the WinRecs Database files and create the required WinRecs system account. For SQL 2000 MSDE, we must use this utility.
MEDSQL4.EXE	Utility used to attach the WinRecs Database files and create the required WinRecs system account. Required for SQL 2005 Express. Not for use with SQL 2000 MDSE
	Options configuration file that can be used to automate the installation of Microsoft SQL Server 2000 MSDE. When used, Microsoft SQL Server 2000 MSDE will be installed in C:\MSSQL with the following options:
WR_MSDE.ini	- Network connections enabled
(For MSDE installation only)	- Mixed Mode authentication
	- Preset SA Password
	NOTE: To change the SA password prior to installation, edit the corresponding field in WR_MSDE.ini.
INSTALL_MSDE.CMD (For MSDE installation only)	Used in conjunction with WR_MSDE.ini to perform an automated installation of Microsoft SQL Server 2000 MSDE.
Securitychange.exe	Used to correct the security settings of the SQL Server installation.
License Key	Please ensure you have your License Key. If you do have this call MED2020 during normal business hours to obtain it.

NOTE: (1) Your software license with MED2020 does not provide a commercial version of these software products. This is available from MED2020 as a separate license. Please contact sales@med2020.ca or call 1.800.461.2020 for more information and a quote.



Before You Begin...

Prior to beginning installation of WinRecs, please ensure that you have everything you need to complete the installation available to you. This is particularly important with respect to your license key. If you do not have this available to you, please contact MED2020 during normal business hours.

Prior to installing any software, please ensure that you have made backup copies of your sensitive data. Also please ensure that you have your backups readily available, and that you know the exact path to your databases. MED2020 cannot be held responsible for data loss, nor can MED2020 assist with data backup and recovery. Instructions for backup and recovery are outside the scope of this document.

Quick Start (Standalone/BI/HL7)

The steps below provide an overview of how to successfully install WinRecs. Each step is described in greater detail in the sections to follow.

1. Install Microsoft SQL Server 2000 the following settings:

Authentication Mode:	Select Mixed mode. Choose a strong SA password.	
Collation Settings:	Collation Designator:	Latin1_General
	Sort Order:	Accent Sensitive
Network Libraries:	Enable Named Pipes:	\\.\pipe\sql\query
	Enable TCP/IP Sockets:	1433

2. Extract the .mdf and .ldf files to the new folder, drive or server.

It is strongly recommended not to use a network share (presented SAN drives can be used), nor the same drive on which the operating system is installed. Doing so will adversely affect system performance and stability.

NOTE: Do not change the file names of the Database or Transaction Log files.

- Attach the WinRecs database using either the MEDSQL2 or MEDSQL4 utility.
- 4. Install additional WinRecs components
 - a. If a batch interface must be installed:
 - i. Attach the Batch Interface (refer to the corresponding section in this document),
 - After successfully logging in to the new WinRecs instance, proceed to configure the Batch In Module (refer to the custom instructions provided to your facility for more information on this process).
 - b. If a HL7 interface must be installed:
 - i. Install the HL7 Interface application_ (refer to the custom instructions provided to your facility for more information on this process),



- ii. Run the *HL7_Initialize* utility to configure the WRHL7 user name and password on the new server. Configure the HL7 Interface to point to the new database(s).
- iii. Configure the TCP/IP address and port information to be used for HL7 transactions.
- c. Install WinRecs and applicable service packs/patches on the new server. Contact MED2020 to obtain the most recent version, if required.
- d. Create the WR2 Reports folder and shared reporting folders and extract the contents of the archives to these folders.
- 5. Install WinRecs on client workstations.

A checklist is provided on the last page of this manual as a guideline to assist with the installation, and keep for your records. This information might be requested when contacting MED2020 Client Services for technical assistance.



Introduction to SQL Server 2000/2005

Prior to installing any software, please ensure that you have made backup copies of your sensitive data. Also please ensure that you have your backups readily available, and that you know the exact path to your databases. MED2020 cannot be held responsible for data loss, nor can MED2020 assist with data backup and recovery. Instructions for backup and recovery are outside the scope of this document.

Prior to installing Microsoft SQL 2000 ensure that you have fully read the following support documentation which is provided by Microsoft with the install of SQL Server 2000:

http://support.microsoft.com/support/servicepacks/sql/2000/sp3readme.asp?SD=gn&LN=en-us&gssnb=1http://www.microsoft.com/sql/prodinfo/previousversions/system-requirements.mspx

Additional documentation, trouble shooting tips and knowledge base articles can be located on the Microsoft support website. The use of the information located in this document is specific to installing a SQL Server 2000 instance for use with a WinRecs database.

Choosing a version of SQL Server

Before choosing a version of SQL Server to install, it is important to understand the differences and limitations of each variation.

SQL Server 2000 MSDE

SQL 2000 MSDE (Microsoft SQL Desktop Engine) is a reduced functionality version of SQL Server 2000. It was designed primarily as a desktop engine to operate applications that do not require server functionality and for users with smaller databases. As a result of this SQL MSDE 2000 does not make the best environment for a WinRecs server.

Pros	Cons
Absolutely free of charge	Databases are restricted to 2048 MB (2GB)
	in size
	Not engineered for server use
	MSDE 2000 is an end of life product, so
	support will be very limited
	Reduced performance when performing
	more than 5 queries



SQL Server 2000

SQL Server 2000 is a version of SQL Server that was designed to be used for a wide variety of purposes. Unlike the MSDE version, it does have a cost attached. It is worth noting that SQL 2000 is also an end of life product, and therefore is not available for purchase any longer.

Pros	Cons
Does not have the limitations of MSDE	End of life product, limited availability and
	support
	Cost

SQL Server 2005 Express

SQL Server 2005 Express was designed as the immediate successor to MSDE. SQL Server 2005 Express does have limitations, but retains it's free status.

Pros	Cons
Absolutely free of charge	Databases are limited to 4096 MB (4 GB) in
	size
Less limitations than MSDE	Only supports 1 CPU
Is designed for either a desktop or small	Only supports 1024 MB (1GB) of RAM
server	

SQL Server 2005

SQL Server 2005 is Microsoft's next release of SQL Server. It is faster, more reliable and more efficient than other edition.

Pros	Cons
No limitations	Cost
Less limitations than MSDE	
Is designed for either a desktop or small	
server	

NOTE: SQL Server 2000 is an end of life product. If you do not have license keys for SQL 2000, you will need to use SQL 2005 instead. Contact sales@med2020.ca for more information on SQL Server 2005 and to obtain a quote.



Installing Microsoft SQL Server 2000

Install Microsoft SQL Server 2000 SP3 to a separate physical drive. This is required to ensure that database performance is not adversely affected by the operating system.

If installing an older version of Microsoft SQL Server 2000, ensure that you update the installation to Service Pack 3/3a, using the supplied instructions later in this section.

Microsoft SQL Server 2000 must also be installed with the following options:

Authentication Mode	Select Mixed mode. Choose a strong SA password.
Collation Settings	Collation Designator: Latin1_General
	Sort Order: Accent Sensitive
Network Libraries	Enable Named Pipes: \\.\pipe\sql\query
	Enable TCP/IP Sockets: 1433

Click SQL Server 2000 Components





Click Install Database Server

Install Database Server

Install Database Server

Install Analysis Services

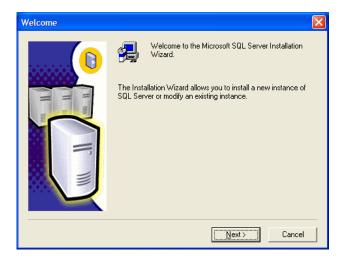
Install English Query

Back

Install English Query

Exit

Click Next



Select Local Computer and click Next



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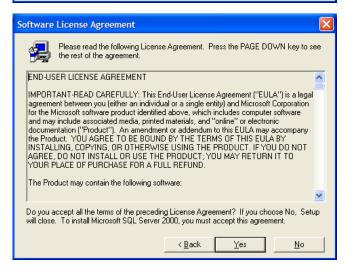
Select Create a new instance of SQL Server, or install Client Tools and click Next



Type the software licensee information in the Name and Company fields and click Next



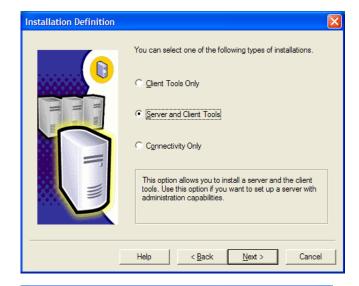
Click Yes to accept the terms of the license agreement



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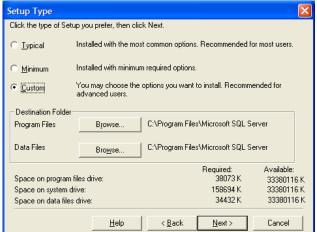
Select Server and Client Tools and click Next



Select Default and click Next



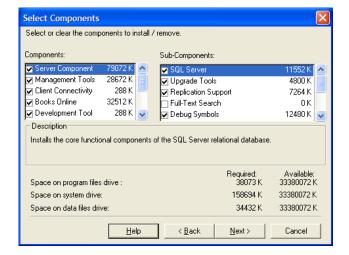
Select Custom
Click the Browse button next to Data Files and
specify the physical or SAN disk where the SQL
Data Files will be installed
Click Next



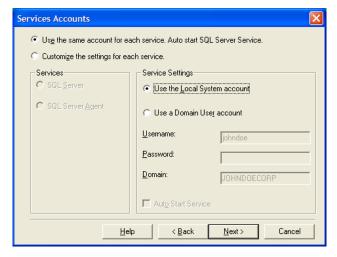
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Click Next to accept the default components to be installed

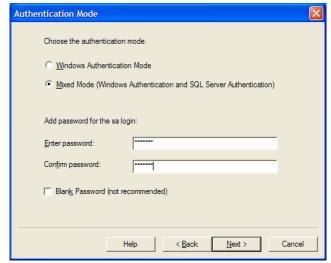


Select Use the same account for each service Select Use the Local System account Click Next



Select Mixed Mode (Windows Authentication and SQL Server Authentication)

Type and confirm the password that will be used for the SQL sa account then click Next



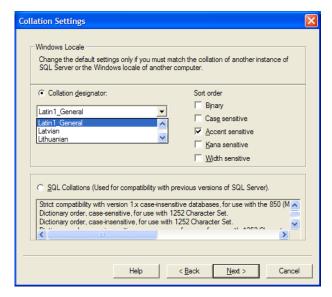
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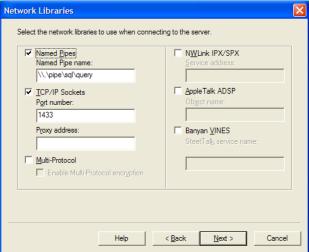


Select *Collation designator* and select *Latin1_General* from the drop-down list

Select Accent sensitive as the Sort order. Click Next

Keep the default settings (Named Pipes; TCP/IP sockets, port 1433). Click *Next*





NOTE: Latin1_General is mandatory to reduce unnecessary server overhead and improve performance and to eliminate conflicts when running database updates, etc. Please ensure that it is **NOT SQL Latin1_General**.



Click Next to copy the program files



During the installation, a progress bar is displayed



Once the program files have been installed, click Finish to complete the setup.



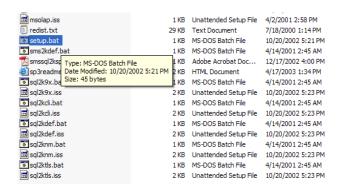


Installing Microsoft SQL Server 2000 Service Pack 3a

If required, proceed to install Service Pack 3a for Microsoft SQL Server 2000, which can be obtained directly from the Microsoft download site.

Extract the files from the downloaded executable.

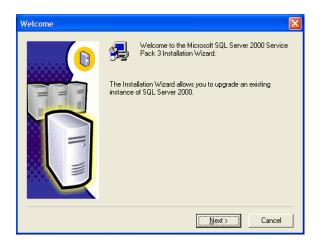
In the extracted files folder, locate and run setup.bat:



NOTE: File extensions can be displayed by performing the following steps:

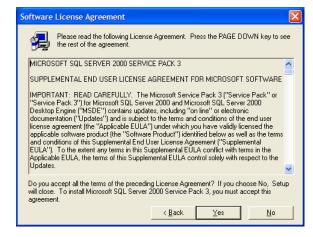
- From the Tools menu in the explorer window, select Folder Options
- Click the View tab
- Uncheck Hide file extensions for known file types
- Click OK

Click Next





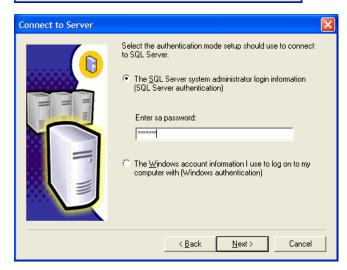
Click *Yes* to accept the terms of the license agreement



Click Next

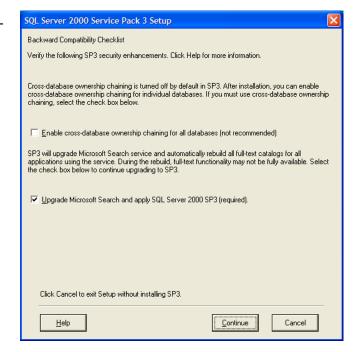


Select The SQL Server system administrator login information (SQL Server authentication) Type the SQL sa account password. Click Next

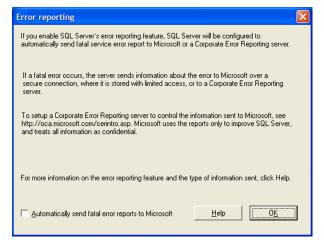




Select Upgrade Microsoft Search and apply SQL Server 2000 SP3 (required). Click Continue



Leave the box unchecked and Click OK

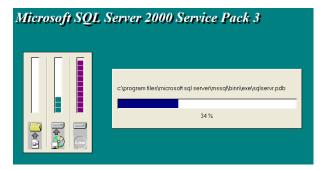




Click Next

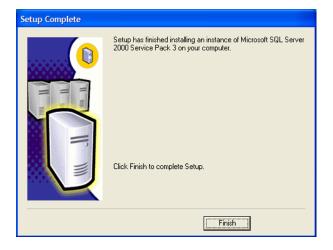


A progress bar is displayed during the installation process



You will be advised to back up your master, temp and MSDB databases.

Click *OK*, then click *Finish* in the Setup Complete window.





Installing Microsoft SQL Server 2000 MSDE

Microsoft SQL Server 2000 MSDE is a free database alternative for clients with low usage requirements and limited deployments. SQL Server 2005 is an excellent alternative to MSDE.

MED2020 has simplified the installation for WinRecs customers by providing an installation script and configuration file.

The settings used when performing an automated installation are:

	<u> </u>
Root folder	C:\ MSSQL.
	To install to a different drive, edit the TARGETDIR setting in
	the WR_MSDE.ini file.
Authentication Mode	Mixed Mode (SQL & Windows Authentication)
Network Connections	Connections from networked systems enabled.
Default SA Password	!MED2020WR!
	To change this password, edit the SAPWD in the
	WR_MSDE.ini file.

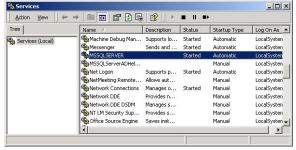
Complete the following steps to perform an automated installation of the Microsoft SQL Server 2000 MSDE:

- Run MSDE2000A.EXE and select the default path for the extracted files (C:\MSDEReIA).
- Copy WR_MSDE.ini and INSTALL_MSCD.cmd to C:\MSDERelA.
- From C:\MSDEReIA, run INSTALL_MSCD.cmd. A Windows command window will be displayed throughout the installation.
- When the command window automatically closes, the installation is complete. It is recommended that the system be rebooted to ensure that all applications and services start correctly.

NOTE: Be sure to keep your SQL server installation up to date with the most recent service packs. Consult the Microsoft support site for more information.

Post Database Installation

After installing the SQL Server software, reboot the server or open the Services utility (located in the Control Panel->Administrative Tools folder) to verify that SQL server is running.



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Introduction to SQL Server 2005

Prior to installing any software, please ensure that you have made backup copies of your sensitive data. Also please ensure that you have your backups readily available, and that you know the exact path to your databases. MED2020 cannot be held responsible for data loss, nor can MED2020 assist with data backup and recovery. Instructions for backup and recovery are outside the scope of this document.

Prior to installing Microsoft SQL 2005 ensure that you have fully read the following support documentation which is provided by Microsoft with the install of SQL Server 2005:

- 1. ReadmeSQL2005.htm
- 2. RequirementsSQL2005.htm

Additional documentation, trouble shooting tips and knowledge base articles can be located on the Microsoft support website. The use of the information located in this document is specific to installing a SQL Server 2005 instance for use with a WinRecs database.

Note: MED2020 strongly recommends that each client workstation have the SQL Server 2005 backwards compatibility msi (**SQLServer2005_BC.msi**) run on it in order to ensure that full functionality with WinRecs is enabled. This file is available from Microsoft. The file may also be downloaded from the MED2020 FTP Site. (ftp://web.med2020.ca/SQLServer2005_BC.msi) The process for pushing this file out by a network administrator is outside of the scope of this document.

Installation Procedures

Pre-install of Support Files and System Configuration Check

- 1. Insert CD and locate the setup.exe for the Microsoft SQL Server 2005 Standard install.
- 2. Initiate the install by double clicking on the setup.exe.

Prior to Microsoft SQL Server 2005 being installed the following are installed by the setup program:

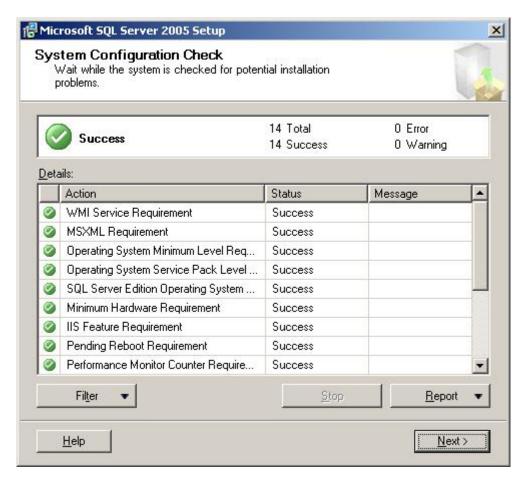
- 1. Microsoft SQL Native Client (if not already installed)
- 2. Microsoft SQL Server Setup Support Files



System Configuration Check

The next step in the installation procedure is a System Configuration Check which ensures the computer is ready to have Microsoft SQL Server 2005 installed. Once each of the fourteen checks has successfully run, click on Next and continue with the install. If any of the checks are not successful, exit out of the install and resolve the issues which the configuration check identified. Once the issues are fixed, restart the install.

After ensuring that the server has passed the System Configuration Check, proceed with the install of Microsoft SQL Server 2005.



Click Next





Installing Microsoft SQL Server 2005

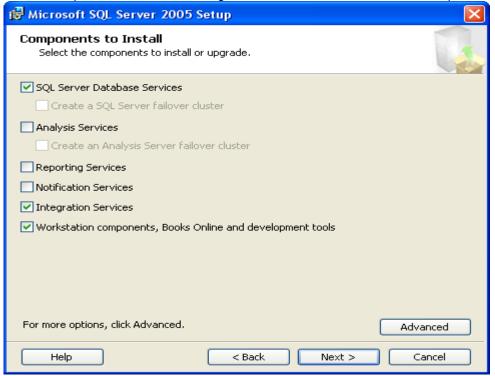
1. Enter a Name for the Microsoft SQL Server 2005, and the license string as provided by Microsoft. Entering the company name is optional.



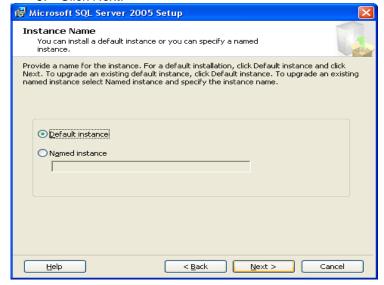
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2. At the 'Components to Install' screen check the 'SQL Server Database Services' checkbox. It is optional to check the 'Integration Services' and 'Workstation components' checkbox.



- 3. Click Next.
- 4. At the 'Instance Name' choose the 'Default instance' radio button.
- 5. Click Next.

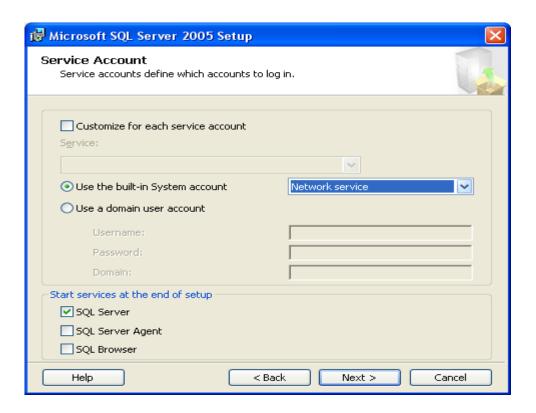


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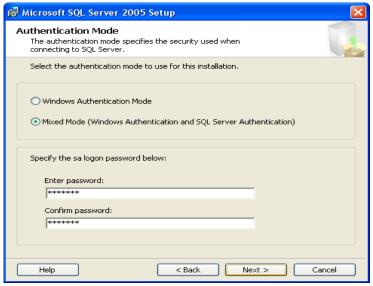
NOTE: For WinRecs to function correctly, ensure that you choose default instance.

- 6. At the 'Service Account' screen choose the 'Use the built-in System Account' radio button.
- 7. From the drop down list ensure that 'Network Service' is chosen
- 8. Choose the 'SQL Server' and 'SQL Browser' check boxes.
- 9. Click Next



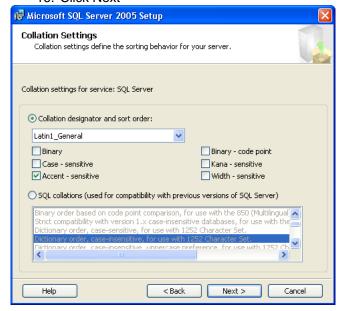


- 10. At the "Authentication Mode" screen choose the 'Mixed Mode' radio button.
- 11. Enter a password for the sa user. Note this password.
- 12. Click Next



NOTE: WinRecs requires a Mixed Mode environment to function correctly.

- 13. At the 'Collation Settings' screen choose the 'Collation designator and sort order' radio
- 14. From the drop down list choose 'Latin1_General'
- 15. Ensure the 'Accent sensitive' checkbox is checked and the other checkboxes are not checked.
- 16. Click Next



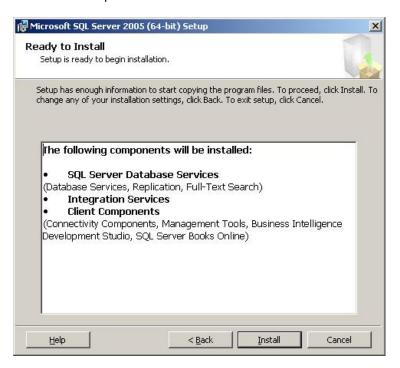
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IMPORTANT NOTE: It is imperative that Latin1_General is selected; do not use SQL Latin1_General, as performance will be severely degraded. Accent Sensitive must be selected.

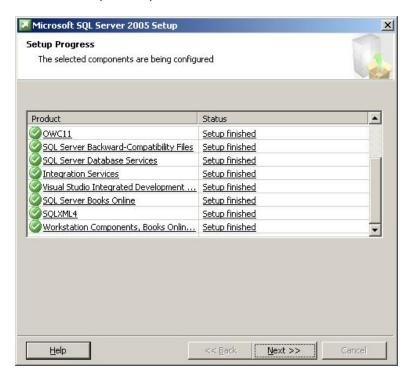
The next screen is the 'Error and Usage Report Settings' screen. Setting up these features is beyond the scope of this document. Refer to the Microsoft documentation for information regarding using these options.

17. On the 'Ready to Install' screen ensure that you have chosen the components you need to install and then proceed with the install.





18. Once the set up is complete click on the Next button.



Post Install

1. After install is complete click on the Surface Area Configuration link on the final screen.



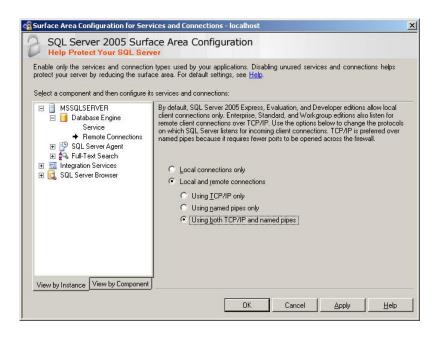
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2. When the Surface Area Configuration utility launches choose the Surface Area Configuration for Services and Connections link.



- 3. Expand the Database Engine Node
- 4. Click on Remote Connections.
- 5. Choose the 'Using both TCP/IP and Named Pipes' radio button.
- 6. Apply your changes and exit out of the Surface Area Configuration Utility.



7. Click Finish on the final install screen.

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- 8. Reboot the server.
- 9. After the server has rebooted ensure that the SQL Server Browser Service is running.

Windows Firewall Configuration

In order for the WinRecs Client as well as SQL Server to talk with one another they need to communicate over specific ports which need to be opened up within the Windows Firewall.

- 1. From the control panel open up the Windows Firewall
- 2. Choose the exceptions tab
- 3. Create entries for the following ports both TCP and UDP

1433

1434

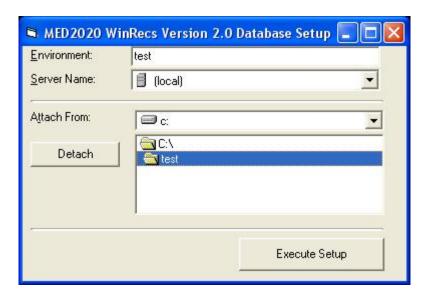
53



Attaching your WinRecs Database

Med2020 Software will supply you with a utility which will attach your WinRecs database to Microsoft SQL Server for you. Utility name is **Medsql4.exe**. This file can be obtained on the MED2020 FTP Site (ftp://web.med2020.ca). In doing so, all the security roles and permissions required will be configured for you.

- 1. Create folder to hold the database. MED2020 recommends that the SQL2005 server installation is finished before the folder is created.
- 2. Copy the WinRecs database to this folder.
- 3. Launch Medsql4.exe.
- 4. In the Environment box type in the name of the database as you want it to appear.
- 5. Choose the (local) option in the server drop down box. If you select to use the named instance(see Page 8), the server name will have slash(like "<Local Computer Name>\<Server Name>"). If you can't find the server name from the drop down list, you can type in the correct SQL2005 server name.
- 6. Browse to the folder where the .mdf is located (**Note:** Ensure that the .mdf file is **not** read only). As well, prior to running this utility the 'Users' group for the folder in which the database files are stored **must** have full access permissions otherwise attaching of the database will fail.
- 7. Press the 'Execute Setup' button.
- 8. If you are using an additional copy of the database as a testing or training environment, it is recommended that a separate, appropriately named folder be created for this purpose.





Introduction to SQL 2005 Express

Prior to installing any software, please ensure that you have made backup copies of your sensitive data. Also please ensure that you have your backups readily available, and that you know the exact path to your databases. MED2020 cannot be held responsible for data loss, nor can MED2020 assist with data backup and recovery. Instructions for backup and recovery are outside the scope of this document.

Prior to installing Microsoft SQL Server 2005 Express Edition ensure that you have installed Microsoft .NET Framework 2.0. This can be downloaded from the Microsoft website at this location: http://msdn2.microsoft.com/en-us/netframework/default.aspx

Documentation, trouble shooting tips and knowledge base articles can be located on the Microsoft support website. The use of the information located in this document is specific to installing a Microsoft SQL Server 2005 Express Edition instance for use with a WinRecs database.

Installation Procedures

1. Download the installation package from this location on the Microsoft website:

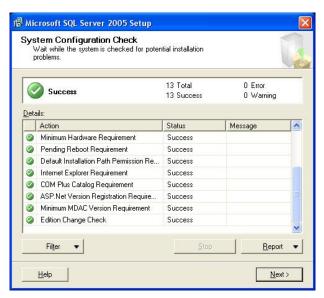
http://msdn2.microsoft.com/en-us/express/bb410792.aspx

- 2. Once you have downloaded the file launch the installation program SQLEXPR32.exe. After the files have been extracted you will be presented with the license agreement screen. Ensure to check the checkbox stating that you accept the terms and conditions and click next.
- 3. Click to install the required pre-requisites:
 - Microsoft SQL Native Client
 - Microsoft Server SQL 2005 Setup Support Files
- 4. Once these files have been successfully installed click on next to proceed with the install.

System Configuration Check

The next step in the installation procedure is a System Configuration Check which ensures the computer is ready to have Microsoft SQL Server 2005 Express Edition installed. Once each of the fourteen checks has successfully run, click on Next and continue with the install. If any of the checks are not successful, exit out of the install and resolve the issues which the configuration check identified. Once the issues are fixed, restart the install.



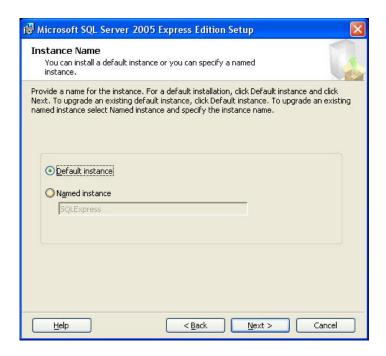


1. At the 'Feature Selection' screen expand the 'Client Components' node and select the 'Connectivity Components' option.





- 2. Click Next.
- 3. At the 'Instance Name' choose the 'Default instance' radio button.
- 4. Click Next.



NOTE: For WinRecs to function correctly, ensure that you choose default instance.



- 5. At the 'Service Account' screen choose the 'Use the built-in System Account' radio button.
- 6. From the drop down list ensure that 'Network Service' is chosen
- 7. Choose the 'SQL Server' and 'SQL Browser' check boxes.
- 8. Click Next



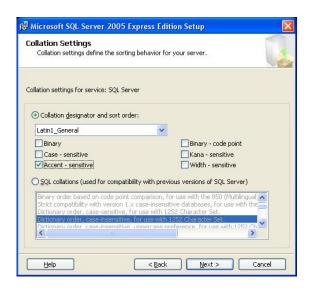
- 9. At the 'Authentication Mode' screen choose the 'Mixed Mode' radio button.
- 10. Enter a password for the sa user. Note this password.
- 11. Click Next



NOTE: WinRecs requires a Mixed Mode environment to function correctly.



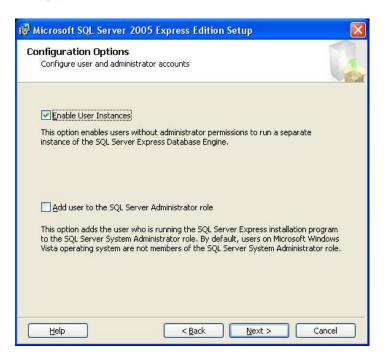
- 12. At the 'Collation Settings' screen choose the 'Collation designator and sort order' radio button.
- 13. From the drop down list choose 'Latin1_General'
- 14. Ensure the 'Accent sensitive' checkbox is checked and the other checkboxes are not checked.
- 15. Click Next



IMPORTANT NOTE: It is imperative that Latin1_General is selected; do not use SQL Latin1_General, as performance will be severely degraded. Accent Sensitive must be selected.



16. On the next screen ensure that the 'Enable User Instances' checkbox is checked and choose next.



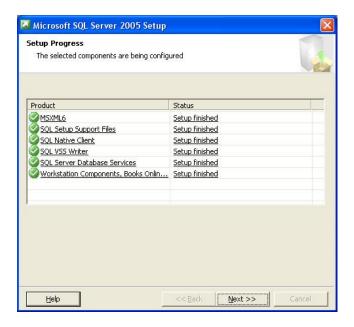
17. The next screen is the 'Error and Usage Report Settings' screen. Setting up these features is beyond the scope of this document. Refer to Microsoft documentation for information regarding using these options.

18. On the 'Ready to Install' screen ensure that you have chosen the components you need to install and then proceed with the install.





19. Once the set up is complete click on the Next button.

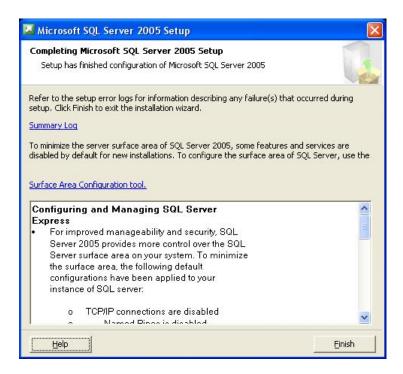


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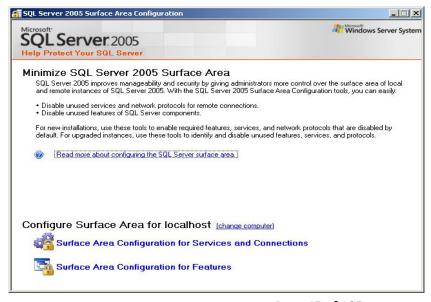


Post Install

After install is complete click on the Surface Area Configuration link on the final screen.



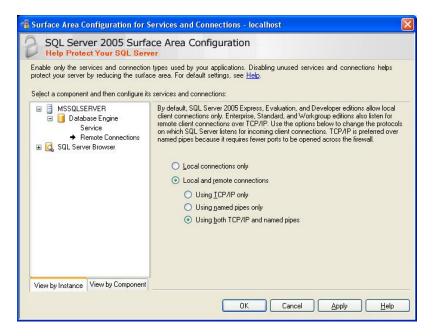
1. When the Surface Area Configuration utility launches choose the Surface Area Configuration for Services and Connections link.



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- 2. Expand the Database Engine Node
- 3. Click on Remote Connections.
- 4. Choose the 'Using both TCP/IP and Named Pipes' radio button.
- 5. Apply your changes and exit out of the Surface Area Configuration Utility.



6. Click Finish on the final install screen.



Installing SQL Server Management Studio Express

Download the SQL Sever Management Studio Express msi file (SQLServer2005_SSMSEE.msi) from the following location:

http://msdn2.microsoft.com/en-us/express/bb410792.aspx

Launch the file and choose all the defaults for installing the program. Click finish when the installation has completed.

Windows Firewall Configuration

In order for the WinRecs Client and SQL Server 2005 Express Edition to talk with one another they need to communicate over specific ports which need to be opened up within the Windows Firewall.

- 1. From the control panel open up the Windows Firewall
- 2. Choose the exceptions tab
- 3. Create entries for the following ports both TCP and UDP
 - 1433
 - 1434
 - 53

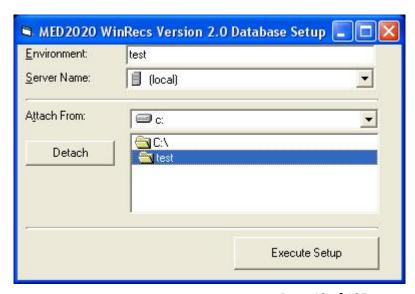


Attaching your WinRecs Database

Attaching your WinRecs Database Using Medsql4.exe

Med2020 will supply you with a utility which will attach your WinRecs database to Microsoft SQL Server 2005 Express Edition for you. Utility name is Medsql4.exe. **medsql4.exe** is located on our ftp server at ftp://web.med2020.ca. In so doing all the security roles and permissions required will be configured for you.

- 1. Create folder to hold the database. MED2020 recommends that the SQL2005 server installation is finished before the folder is created.
- 2. Copy the WinRecs database to this folder.
- 3. Launch Medsql4.exe.
- 4. In the Environment box type in the name of the database as you want it to appear.
- 5. Choose the (local) option in the server drop down box. If you select to use the named instance(see Page 8), the server name will have slash(like "<Local Computer Name>\<Server Name>"). If you can't find the server name from the drop down list, you can type in the correct SQL2005 server name.
- 6. Browse to the folder where the .mdf is located (**Note:** Ensure that the .mdf file is **not** read only). As well, prior to running this utility the 'Users' group for the folder in which the database files are stored **must** have full access permissions otherwise attaching of the database will fail.
- 7. Press the 'Execute Setup' button.

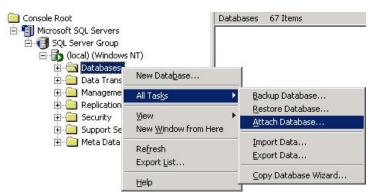


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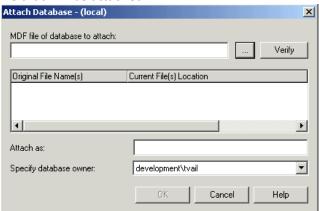


Attaching the WinRecs Database Using Enterprise Manager

Before proceeding with the following instructions, ensure that the WinRecs database file is available and has been extracted and copied to its permanent folder on the server. Once a database has been attached, it cannot be moved until the database is detached at which time the system will be unavailable. More details on detaching and moving databases are provided later on in this document. The following instructions can only be used if the WinRecs database has been previously installed on the database server, as it relies on the *MED2020Main* user account. For security reasons, the password for this account is not provided to customers. Should it be necessary to attach the WinRecs database to a new server, attach the database using the **MEDSQL4** utility, which creates the *MED2020Main* account In the examples to follow, the database file is **MED2020_DATA.MDF** and the database name is *MED2020*. Open Enterprise Manager. When Microsoft SQL Server 2000 is installed, a shortcut to Enterprise Manager is created in the *Programs->Microsoft SQL Server* folder, available from the Windows *Start button*. In the Enterprise Manager tree view, clicking on the \bigoplus icon expands the contents in the tree view. Expand the contents as follows: Console Root->Microsoft SQL Servers->SQL Server Group ->(local)-> Databases Right-click on *Databases*, and select *All Tasks->Attach Database...*

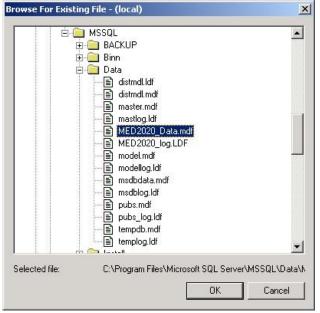


The *Attach Database* dialog is displayed. Click the browse button (ellipsis) to browse for the database file that will be attached



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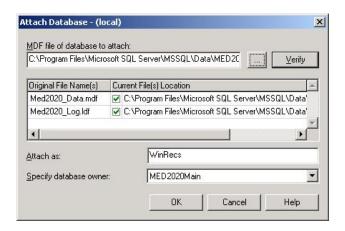


Locate the file in the Browse for Existing File dialog. Highlight the file and click the OK button.

The database and log files are now displayed. Note the location of the transaction log is determined by the properties of the database server and cannot be changed in this dialog. For more information on storing the transaction log on a different drive, consult the section entitled **Moving a WinRecs Database**, or attach the database using OSQL.

Specify the WinRecs database parameters as follows:

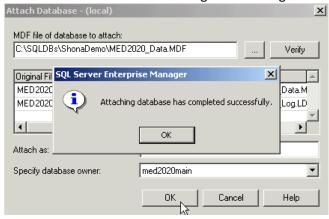
Attach as	Type WinRecs
Specify database owner	Select MED2020Main from the drop-down list. This account
	is used by the WinRecs application and must not be
	changed.



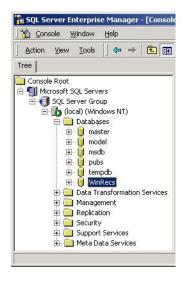
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Click the *OK* button to accept the settings; you will be notified if attaching the database is successful Click the *OK* button to acknowledge the message



Once the database has been successfully attached, it is displayed in the tree view under Databases





Attaching Your WinRecs Database Using OSQL

Before proceeding with the following instructions, ensure that the WinRecs database file is available and has been extracted and copied to its permanent folder on the server. Once a database has been attached, it cannot be moved until the database is detached at which time the system will be unavailable. More details on detaching and moving databases are provided later on in this document. The following instructions can only be used if the WinRecs database has been previously installed on the database server, as it relies on the *MED2020Main* user account. For security reasons, the password for this account is not provided to customers.

Should it be necessary to attach the WinRecs database to a new server, attach the database using the **MEDSQL2** utility, which creates the MED2020Main account

In the examples to follow, the database file is **MED2020_DATA.MDF**, the database name is MED2020 and the password is MED2020.

Connect to the SQL server

From a command line prompt on the server

Click Start->Run

Type cmd

Press **ENTER**

At the command line prompt, type

```
osql -U sa -P MED2020 -S localhost
```

If the connection is successful, the OSQL prompt will be displayed:

1>

Attach the WinRecs Database

Attaching Without a Transaction Log File

To attach a database using OSQL, the database name and path to the data file must be specified. If you do not have a log file, use the following commands:

```
1> EXEC sp_attach_db 'MED2020' @filename1='<path/file to mdf file>'
2> go
```

The command is successful if no error messages are returned. The log file will automatically be created.

Attaching With a Transaction Log File

If you do have a log file, use the following commands:

```
1> EXEC sp_attach_db 'MED2020' @filename1='<path/file to mdf
file>',@filename2='<path/file to ldf file>'
2> go
```

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The command is successful if no error messages are returned.

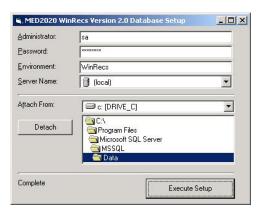
Changing the Database Owner

For WinRecs to function correctly, the MED2020Main account must be specified as the database owner. This account is automatically created for you after using the medsql2 utility.

To change the owner, use the following commands:

- 1> use WinRecs
- 2> exec sp_changedbowner MED2020Main
- 3> go

The command is successful if no error messages are returned.



The following parameters must be provided:

Administrator	Type sa	
Password	Type the sa password.	
Environment	Type a suitable name for your database. For example, WinRecs	
Server Name	Select (local) from the list	
Attach From	Use the drop-down and list boxes to select the folder where the database files are located.	

- Click Execute Setup. Once the databases are attached successfully, Complete will be displayed in the lower-left corner of the MED2020 WinRecs Version 2.0 Database Setup window.

NOTE: If any errors are encountered while trying to attach the database, please contact MED2020 Client Services for assistance before continuing further.



Installing WinRecs

Installing the WinRecs Application

The following instructions are to be used when installing WinRecs on both the server and client workstations.

- Install the latest version of WinRecs. This is available from the MED2020 Client FTP site at ftp://web.med2020.ca/WR2Update/. Accept the default options.
- When prompted, reboot the server/workstation.

NOTE: Close all applications before installing WinRecs.

If, during the installation, errors relating to self-registration errors are received, make a note of the affected files and then click *OK* to continue with the WinRecs 2.0 installation.

It might be necessary to reboot the server and/or client workstations after the installation to ensure that the installed support files function correctly.

Ensure the Regional Settings on the server and workstations is mm/dd/yyyy

Configuring WinRecs Reports

- Download a list of available WinRecs reports from the MED2020 Client FTP site located at: <u>ftp://web.med2020.ca/WR2Reports/WinRecs%20Pre-Designed%20Report%20Library.xls.</u>
 This file also contains important instructions pertaining to the Chart Deficiency and Chart Locator modules, as well as Batch Interfaces.
- Identify the available reports and download them from the Client FTP site at: <u>ftp://web.med2020.ca/WR2Reports</u>.
- Copy the downloaded reports to **C:\Program Files\WinRecs2\Reporting** on the WinRecs server (create this folder if it does not exist).
- If you have purchased Business Object's Crystal Reports software, please ensure that the software is installed on client workstations where reports will be created and modified. This must be done prior to receiving on-site training from MED2020 Health Care Software Inc. staff.

NOTE: Crystal Reports is not required to run WinRecs reports.

Testing the WinRecs Installation

- Start WinRecs from the shortcut created on the desktop or by launching C:\Program Files\WinRecs2\WR_WinRecs.exe.
- Log in to WinRecs using administrator credentials.

The following credentials can be used for new installations:

•		
Username	Admin	
Password	Admin	
Server	Specify the server name on which the database was installed	
Database	Specify the database name selected when attaching the WinRecs database.	



NOTE: For existing installations, the username and password parameters might have been changed from the system defaults.

Installing and Updating the HL7 Interface

- 1) Install WinRecs2HL7 on the WinRecs server.
- 2) Run the Setup program and follow the instructions. By default this will create a WinRecs2HL7 folder under **C:\Program Files**. Or click Browse if you wish to place the folder elsewhere. The WinRecs2HL7.exe will reside in this folder. To run the WinRecs2HL7.exe, click Start Programs WinRecs2HL7.
- 3) The first time the WinRecs2HL7 is run, you must supply the following data:
 - Choose the proper WinRecs SQL Server.
 - Choose the proper WinRecs Database 1, i.e., use the TEST environment for testing.
 - Enter an unused Port Number higher than 2000.
 - Select Yes if Begin and End Block characters are used, otherwise select No.
- 4) Click Test Connection.
- 5) Click OK upon successful connection test. Otherwise, repeat from Step 3.
- 6) Click Save to save the settings.
- 7) Click Continue.
- 8) The WinRecs2HL7 should indicate Listening on the Status Bar (lower left corner).

The Main screen:

This screen displays every transaction that comes across from the ADT including errors and warnings of data. This information is saved to the database and in a log file with filename WRHL7_yyyymmdd.LOG, e.g., WRHL7_20050101.LOG. The log files reside in the folder **C:\Program Files\WinRecs2HL7\LogData**. They should be reviewed daily to ensure all HL7 Events and data elements are coming across properly. They also need to be deleted manually on a regular basis; otherwise, the LogData folder will occupy much memory.

Stopping WinRecs HL7:

- 1) Stop data transmission from the ADT.
- 2) Click File Exit.

Changing the Configurations:

- 1) Stop data transmission from the ADT.
- 2) Click Option Configuration.

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- 3) Choose the proper WinRecs SQL Server.
- 4) Choose the proper WinRecs Database.
- 5) Enter an unused Port Number higher than 2000.
- 6) Select Yes if Begin and End Block characters are used, otherwise No.
- 7) If hospital purchased this option of printing reports, otherwise leave blank:
 - Click Add to add a list of destination printers and number of copies until all printers are included.
- 8) Click Test Connection. If errors, repeat Step 3 to Step 7 and ensure all data are correct.
- 9) Click Save to keep the changes.
- 10) Click Continue.
- 11) The WinRecs2HL7 should be in Listen mode.
- 12) Start data transmission from ADT.

Changing Font:

- 1) Click Edit Font.
- 2) Choose Font.
- 3) Click OK.
- 4) The selected Font will be applied starting with the next transaction.



Running HL7 as a Service

IMPORTANT: This article contains information about editing the registry. Before you edit the registry, make sure you understand how to restore it if a problem occurs. For information on how to do this, view the "Restoring the Registry" or the "Restoring a Registry Key" online Help topics in Registry Editor.

The Windows NT Resource Kit provides two utilities that allow you to create a Windows NT user-defined service for Windows NT applications and some 16-bit applications (but not for batch files).

Instrsrv.exe installs and removes system services from Windows NT and Srvany.exe allows any Windows NT application to run as a service.

To create a Windows NT user-defined service, perform the following steps:

1. At a MS-DOS command prompt(running CMD.EXE), type the following command:

path\INSTSRV.EXE My Service path\SRVANY.EXE

where *path* is the drive and directory of the Windows NT Resource Kit (i.e., C:\RESKIT) and *My* Service is the name of the service you are creating.

Example:

C:\Program Files\Windows Resource Kits\Tools\Instsrv.exe Winrecs2HI7 C:\Program Files\Windows Resource Kits\Tools\Srvany.exe

NOTE: To verify that the service was created correctly, check the registry to verify that the ImagePath value under

HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Services\service name

is set to point to SRVANY.EXE. If this is not set correctly, the service will stop shortly after it starts and return an Event ID 7000 "The *service name* failed to start."

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WinRecs Server Installation & Maintenance Guide

MED2020
Health Care Software Inc.

WARNING: Using Registry Editor incorrectly can cause serious problems that may require you to reinstall your operating system. Microsoft cannot guarantee that problems resulting from the incorrect use of Registry Editor can be solved. Use Registry Editor at your own risk.

For information about how to edit the registry, view the "Changing Keys And Values" online Help topic or the "Add and Delete Information in the Registry" and "Edit Registry Data" online Help topics in Registry Editor.

NOTE: You should back up the registry before you edit it.

2. Run Registry Editor (Regedt32.exe) and locate the following subkey:

HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Services\<My Service>

3. From the Edit menu, click Add Key. Type the following and click OK:

Key Name: Parameters

Class: <leave blank>

4. Select the Parameters key.

5. From the Edit menu, click Add Value. Type the following and click OK:

Value Name: Application

Data Type: REG_SZ

String: <path>\<application.ext>

where <path>\<application.ext> is the drive and full path to the application executable including the extension (i.e., C:\Program Files\WinRecsHL7\WinRecs2HL7.exe)

6. Close Registry Editor.

By default, a newly created service it configured to run Automatically when the system is restarted. To change this setting to Manual, run the Services applet from Control Panel and change the Startup value to Manual. A service set to Manual can be started in one of several ways:

- From the Services applet in Control Panel



- From a MS-DOS command prompt, type the following:

NET START < My Service >

- Use the Sc.exe utility from the Resource Kit. Type the following from a MS-DOS command prompt:

<path>\Sc.exe start <My Service>

where <path> is the drive and directory of the Windows NT Resource Kit (i.e., C:\Reskit).

For more information on installing and removing a user-defined service, please see the Srvany.wri document provided with the Windows NT Resource Kit utilities (i.e., C:\Reskit\Srvany.wri). This document can also be found on the Windows NT Resource Kit CD in the Common\Config directory.

APPLIES TO

- Microsoft Windows 2000 Server
- Microsoft Windows 2000 Advanced Server
- Microsoft Windows 2000 Professional Edition
- Microsoft Windows NT Workstation 3.51
- Microsoft Windows NT Workstation 4.0 Developer Edition
- Microsoft Windows NT Server 3.51
- Microsoft Windows NT Server 4.0 Standard Edition

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<u>Download SrvAny</u> from Microsoft as part of the Windows Server Resource Toolkit (12 MB).SrvAny and its installer "InstSrv" are applications provided by Microsoft. SrvAny allows Windows applications to run as a service.

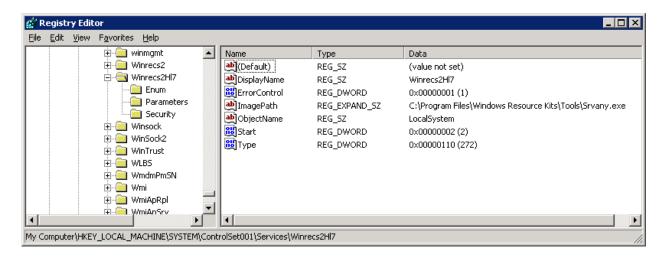
Easily adapted instructions are included with the program in the file SRVANY. WRI

This is how it looks in the registry after you run the SrvAny installer command line:

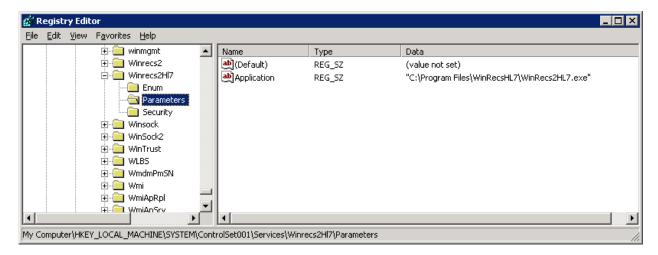
Page 59 of 105



"C:\Program Files\Windows Resource Kits\Tools\Instsrv.exe" Winrecs2HI7 "C:\Program Files\Windows Resource Kits\Tools\Srvany.exe"



Now you need to add a "Parameter" key with a value called "Application". It contains the path to your executable. For example, this can be the application that uses the





Attaching the Batch In Database

Using Enterprise Manager

Attach the Batch In database the same was as attaching the WinRecs database, except for the files and file names to be used. Refer to the process outlined in the **Using Enterprise Manager** section of **Attaching the WinRecs Database**. During the process, be sure to attach the Batch In database files and not the WinRecs database files.

Using OSQL

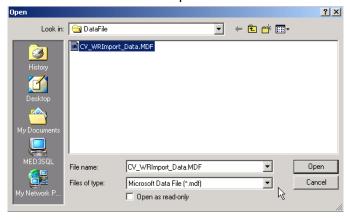
Attach the Batch In database the same was as attaching the WinRecs database, except for the files and file names to be used. Refer to the process outlined in the **Using OSQL** section of **Attaching the WinRecs Database**, During the process, be sure to attach the Batch In database files and not the WinRecs database files.

Using the BIClient Utility

The Batch In Interface uses a separate database, which must be attached to the WinRecs database server before the Batch In module can be configured and used. MED2020 supplies a custom utility to assist with attaching the database.

Before proceeding, a copy of the **BIClient.exe** utility and **CV_WRImport_Data.mdf** files are required. These are supplied to you by MED2020. Contact MED2020 Client Services for more assistance in acquiring these files.

- Run BlClient.exe on the server
- Click the elipsis to browse for the database file to be attached





- Once selected, click Open
- Click Next



• Select the folder to where the database will be copied. Click on the elipsis to browse for the file. Once selected, click *Next*





Type the name for the database and click Next

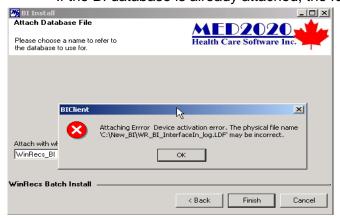


• Click OK to acknowledge that the database was successfully attached.



Troubleshooting

If the BI database is already attached, the following error is displayed:



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 If the database file has already been attached and you want to copy to another location, there will be errors. Once a database file is attached, standard file operations cannot be performed.

Configuring the Batch In Interface Selecting the Batch In Database

WinRecs must be configured before the Batch Interface can be used,

- Launch WinRecs and log in using an administrator account
- Open *Utilities->Incoming Batch Interface* from the *WinRecs Application Menu* or the *Modules* menu. When this is first run, an error will be displayed.
- Click **OK** to acknowledge the error.
- In the WinRecs Batch Interface window, select Settings from the Tools menu
- From the drop-down list, select the Batch In database that was previously attached and click **OK**

NOTE: Before the BI Interface can be used, the BI configuration screen must be closed and reopened after the initial configuration and when the settings are changed.

Checking Date Range Conflicts

Before running the Batch In interface, it is also recommended that the system be checked for date range conflicts.

NOTE: The BI Date Range Errors.rpt must exist in the WinRecs reporting folder (**C:\Program** Files\WinRecs2\reporting)

• In the WinRecs Batch Interface window, select Date Range Conflicts from the Tools menu

WinRecs will check for date range conflicts and display a Crystal Report. If conflicts exist, proceed to *Lookup Maintenance* to clean up the tables where conflicts exist.

NOTE: The report is specific to the Incoming Batch Interface, and does not apply to the NACRS 10 Error Import function.



Server Maintenance

Re-Indexing the Database

Purpose: This document will provide step-by-step instruction on how to set up a re-indexing job on your WinRecs client server.

IMPORTANT NOTE: Currently it is not possible to Re-Index a database without SQL Management Studio or Enterprise Manager. For sites still using SQL 2000 MSDE, it is a good idea to consider upgrading to SQL 2005 Express, which properly supports this functionality.

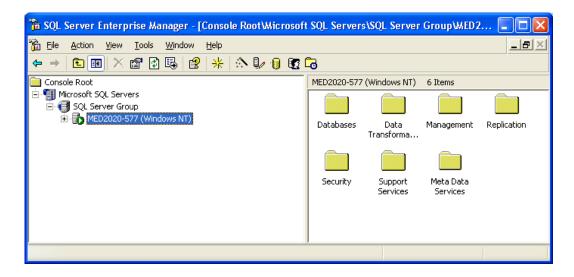
Re-indexing the WinRecs database is recommended on a periodic basis, with the following guidelines:

Databases < 5 GB in size	Re-index once per week
Databases 5 – 10 GB in size	Re-index twice per week
Databases > 10 GB in size	Re-index every other day

Regular re-indexing will greatly assist in the performance of the SQL database.

Step 1

Click Start → All Programs → Microsoft SQL Server → Enterprise Manager



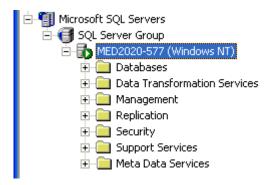
Page 65 of 105



Step 2

From the **SQL Server Group**, identify the server you want to set the job on.

Click + sign beside server name to expand list



Step 3

Select the **Management** option.

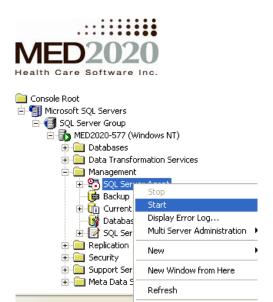
Click + sign beside Management to expand list.

If the SQL Server Agent is not running it will have a red square in a white circle



3.1

To start the SQL Server Agent, right-click SQL Server Agent and select 'Start'



3.2

Your SQL Server Agent will now look like this

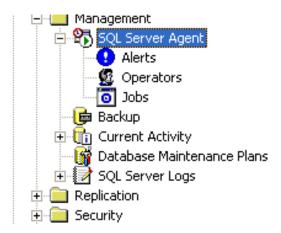
Properties



Step 4

Now that your SQL Server Agent is running,

Click the + sign beside SQL Server Agent to expand list to show Agent options

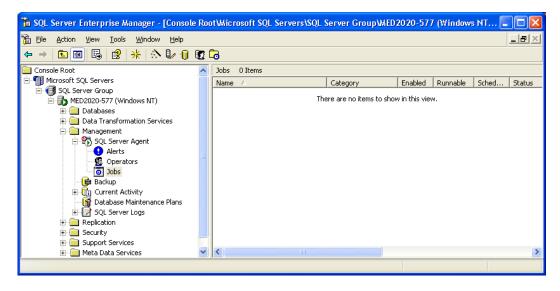


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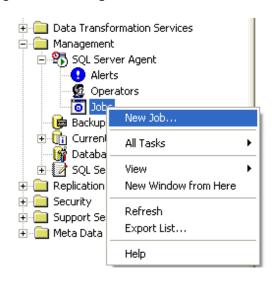
Step 5

Double-click **Jobs** to display all the jobs on the right that are currently setup.



Step 6

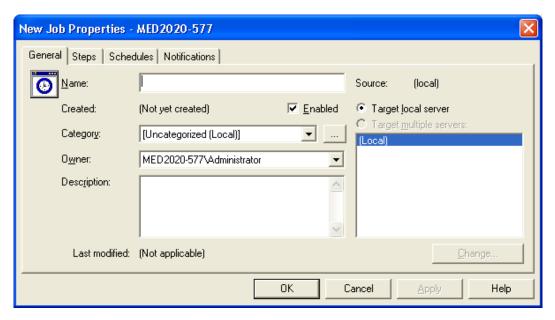
Highlight Jobs, then right-click and from the menu select New Job



Step 7

A New Job Properties Window is displayed with the General tab selected





Step 8

- **8.1** Name the new Job. In this example, we call it "Re-Index".
 - **8.2** For the **Category**, select **Database Maintenance**
 - 8.3 Ensure Owner is set to MED2020Main

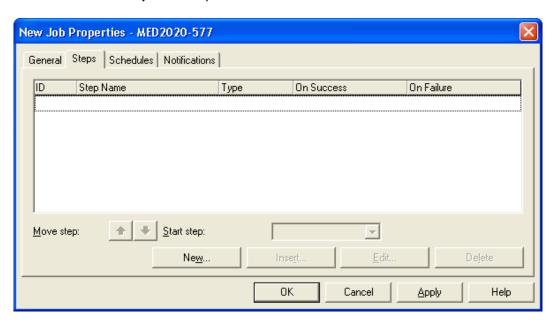


Step 9

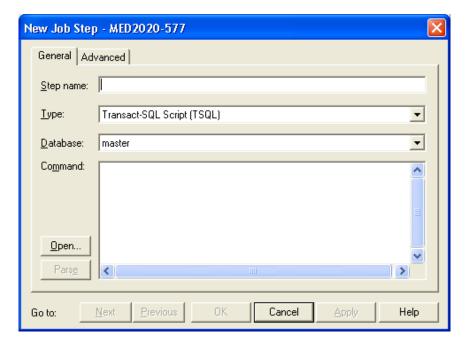
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Select the **Steps** tab to open this view.



9.1 Click 'New' button to open up the New Job Step window

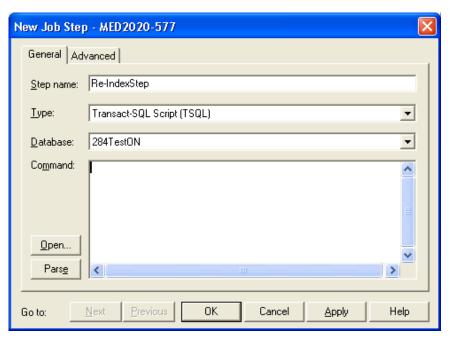


9.2 Change the Step name, Type and Database

In the example below, the **step** has been named 'Re-IndexStep'; **Type must be Transact-SQL Script (TSQL)**, and the Database can be chosen for the specific db you want this job to apply to.

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9.3 Enter Command line

In the Command window, enter the following text exactly:

exec M_NewIndexFind

GO

exec M_IndexCleanupNew

GO





9.4 Click the **Parse** button to check the syntax.

If syntax is correct, the 'Parse Succeeded' window will display. If syntax is incorrect, you will see a syntax error message and the command must be corrected before proceeding.

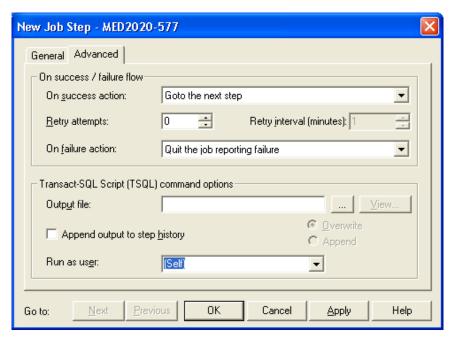




9.5 Click **Advanced** tab in the **New Job Step** window

Ensure that "Run as user:" is set to "(Self)"



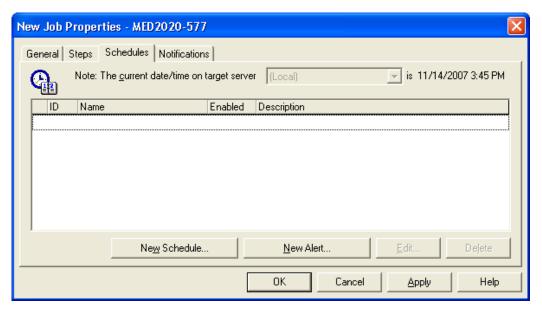


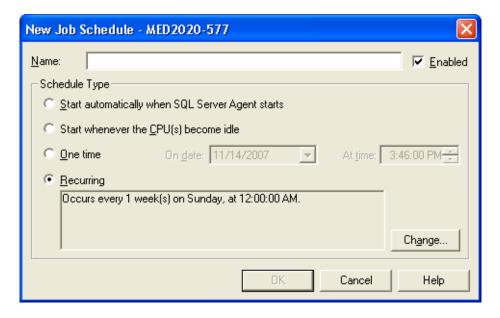
9.6 Click **Apply** button and then **OK** to go back to the **New Job Properties** main screen



Step 10 Click Schedules tab, then click New Schedule.







- **10.1** Name the schedule based on your organization's naming conventions
- **10.2** Select the scheduling option you prefer
- **10.3** Refer to the recommended frequencies grid in the Purpose section of this document to determine the frequency with which the job should be executed.

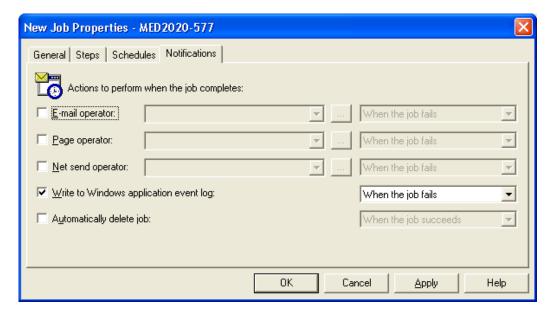
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10.4 Once your scheduling option is entered, click **OK** to return to the **New Job Properties** window

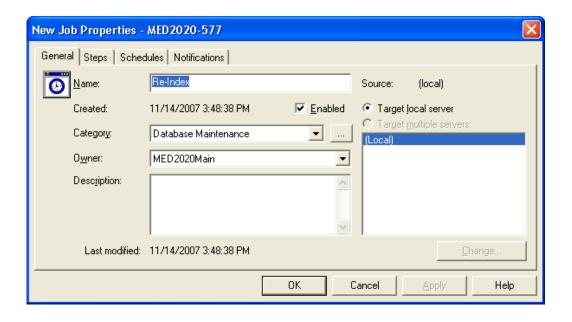


Step 11If you wish to set up notification for the job, select the **Notifications** tab.

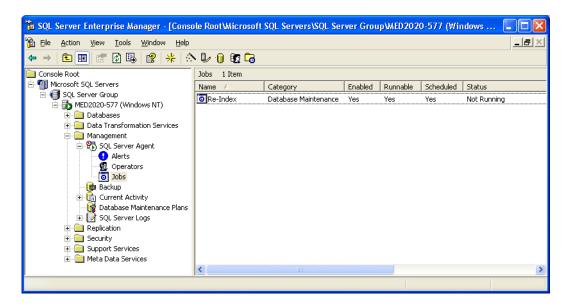


- **11.1** By default, the job writes to the Windows application event log. Additional options are available but fall outside of the scope of this document.
- **11.2** Click **General** tab and click **Apply** button to add this job. Click **OK** to leave the New Job Properties window.





Step 12
You should now see a new job called Re-Index

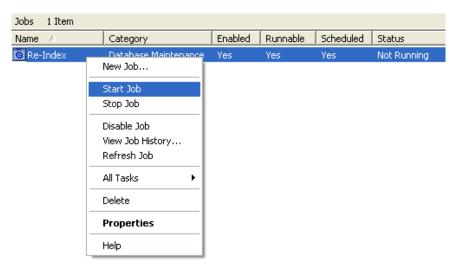


Highlight the Re-Index job and right-click for options, or double-click to open up Job setting window.

You can select **Start Job** at any time to initiate the re-indexing of your database immediately.

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WinRecs Maintenance

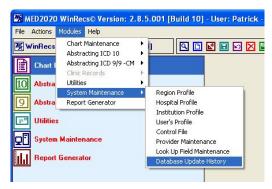
Patches, updates and service releases are intermittently made available to WinRecs customers to resolve critical issues, implement enhancements to the application or update important edits, such as those supplied by the Canadian Institute for Health Information (CIHI). While MED2020 attempts to minimize the number, frequency and complexity of these updates, it is necessary to ensure WinRecs functions within the required parameters as mandated by provincial and federal regulations

Additionally, while MED2020 strives to ensure that all updates are problem-free, certain difficulties might be encountered during the update process.

WRU Updates

WinRecs patches, supplied as WRU files, run SQL scripts to update database stored procedures and/or tables and tables. To install MED2020-supplied database patches:

- Log in to WinRecs
- Select Database Update History from the Modules->System Maintenance menu

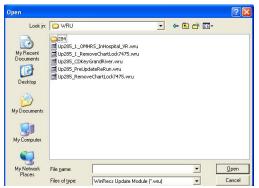


- Click Run Database Update at the bottom-right of the screen



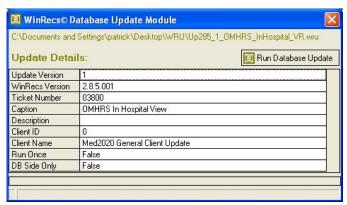
- Search for the patch (.wru) file and once selected, click Open





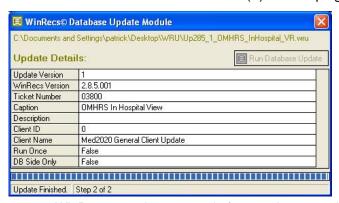
The patch information will be displayed.

Click Run Database Update to begin the installation



The progress bar will display the status of the installation. Once completed, *Update Finished* is displayed in the status bar.

- Click the Windows close control (X) at the top right to exit from the smaller screen



- WinRecs must be restarted after running an update
- Click OK to close WinRecs





Changes to the database have been applied. The WinRecs client will be updated (if applicable) during the next login.

EXE Updates

WinRecs hot fixes, and cumulative and service releases differ from database patches in the following ways:

The updates are installed outside of WinRecs,

The updates apply application updates to the WinRecs installation.

IMPORTANT NOTE: <u>Do not</u> make any attempt to <u>install</u> this type of update <u>to a workstation</u>. This update is a server-side update and must be done only on the database server.

As with database patches, it is only necessary to install these once. Application updates are automatically applied to the WinRecs client workstations when users log in.

Extract the archive contents (executable and bin folder) to a temporary location, using the preferred unzip utility (such as WinZip).

Run the executable

NOTE: Do not move or remove the contents of the archive once they have been extracted.

Specify the database server and database using the drop-down boxes and then click **Update**.



The progress bar displays the status of the update in two stages:

- i. The first displays the status of database updates
- ii. The second status bar displays the status of application update.

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Once finished, click Exit to close the update program.



Service Releases

WinRecs upgrades often contain previous cumulative releases and hot-fixes for the current version and are supplied as compressed archive (zip) files. It is important to read the release notes, as they will tell you if there are any prerequisites to the service release. Upgrades must be applied locally on the database server from the local hard disk to ensure that network interruptions do not interfere with the process.

Before continuing, ensure that:

All WinRecs users are logged out;

If an HL7 interface is installed, that all transactions are paused and the HL7 application is shut down;

The sa password for the SQL database is known;

A full, recent backup of the WinRecs database is available.

Installing the Update

Obtain the WinRecs update from the MED2020 Support site at ftp://web.med2020.ca.

Extract the archive contents to a temporary folder on the WinRecs database server.

The **wrupdate** application and an install directory will be created.





install wrupdate.exe

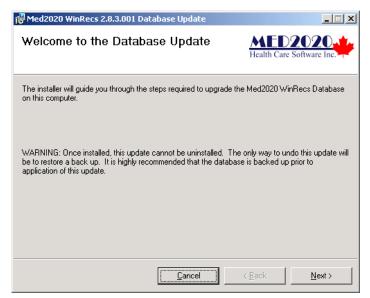
If either of these files is missing, do not proceed with the installation and contact MED2020 Client Services for more assistance.

NOTE: Do not alter the files or file structure after extracting the aforementioned files and folders.

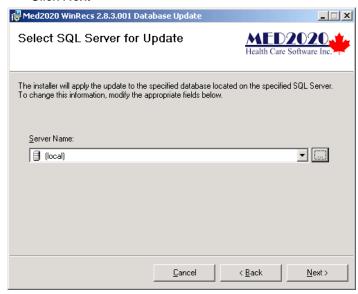
Run the wrupdate application to begin the upgrade process.

Click Next





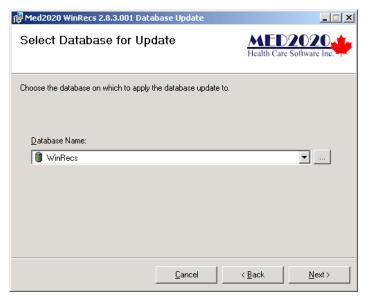
Click on the elipsis to select the Server Name
Select the database server from the list and click OK
Click Next



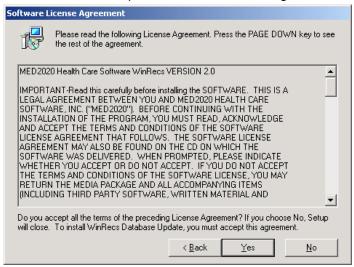
NOTE: In certain situations, the installer might require the password for the SQL sa account. Supply the password as required. If the password is unknown, do not attempt to proceed with the installation.

Select the *Database Name* from the drop-down list Click *Next*





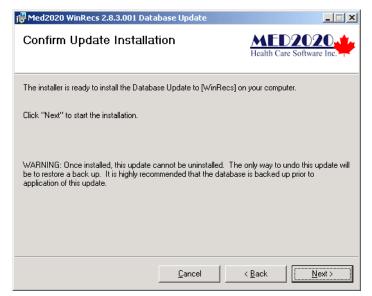
Click Yes to accept the Software License Agreement



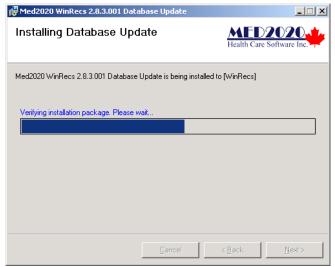
Click *Next* to confirm the update installation

NOTE: The installation cannot be cancelled after this step

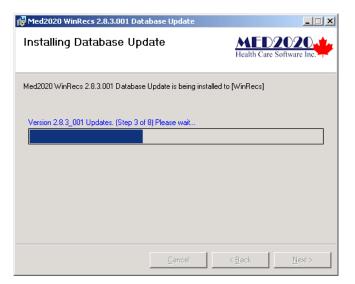




A series of dialog boxes will be displayed to confirm the status of the upgrade:

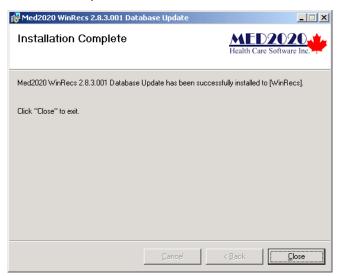






NOTE: During the upgrade, the installation may be unresponsive. This is normal.

Once completed, click Close to finish the installation



Troubleshooting

Database Errors

During the installation process, the dbresults.xml error log file is automatically created in the folder where the wrupdate application is located.



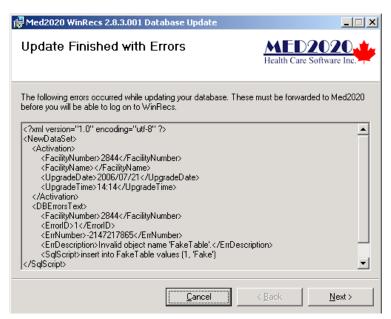
dberrors.xml

This file will always be created, and does not imply that errors were encountered.

Should there be errors during the installation, the following screen will be displayed:

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If this occurs, do not use WinRecs without first consulting MED2020 Client Services, who will require a copy of the **dbresults.xml** file.

Missing Files or Folders

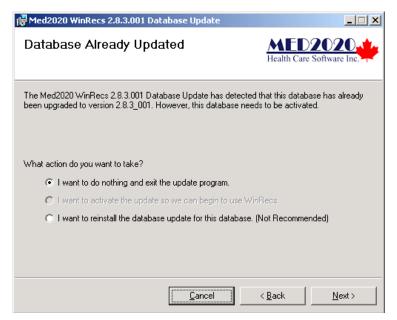
If required files or folders are missing when installing the update, a *Critical Error Occurred* dialog, similar to the following, will be displayed:



Re-running the Update

The following dialog will be displayed if the update has already been installed:





It is not recommended to reinstall the update without having previously consulted with MED2020 Client Services.



Server Maintenance

Using the Security Change Utility

The following utility can be used to test the availability of the database server, and correct the authentication model in the event the database server was not configured, at installation time, to use Mixed-mode (both Windows and SQL) authentication.



To make changes to the authentication method of the SQL Server installation, complete the fields in the Security Change utility as follows:

To test using the SQL Server administrator account

Uncheck Windows Authentication

In the first text box, type the SQL administrator account (typically sa)

In the second text box, type the password to the administrator account provided above

Click Test Connection

To test using the Windows administrator account

Select Windows Authentication

In the first text box, type the account name of a user with local administrator priviledges. For domain accounts, type the domain\username.

In the second text box, type the password to the administrator account provided above Click *Test Connection*

A notification dialog will be displayed to confirm if a connection was successfully made.

To change the authentication mode

Select Windows or SQL Server Authentication Click Change Authentication Mode



Starting and Stopping SQL Server

Using SQL Service Manager

The Service Manager utility (installed by default to C:\Program Files\Microsoft SQL Server\MSSQL\BINN\sqlagent.exe) is used to visually identify the status of the SQL Server. After installing SQL Server, a shortcut should be in the Start Up folder (Start->Programs->Startup), which launches this utility every time the server is restarted.

When running, the Service Manager icon is displayed in the tray:



This utility can be used to control the state of the SQL server.

Double-click on the icon in the task bar to open the SQL Server Service Manager window

Be sure the correct server and service (SQL Server) are selected in the respective drop-down lists Click the Start/Continue, or Stop buttons to start and stop the SQL Server, accordingly



NOTE: Do not stop the service while client workstations or HL7 interface applications are running.

Using Services (Administrative Tools)

Open the Windows Services shortcut: Start->Settings->Control Panel->Administrative Tools->Services

Locate MSSQLSERVER in the services list. The status is displayed in the Status column.

To start or stop the SQL Server service, double-click the entry and click the **Start** or **Stop** button, accordingly.

NOTE: Do not stop the service while client workstations or HL7 interface applications are running.

Detaching the WinRecs Database

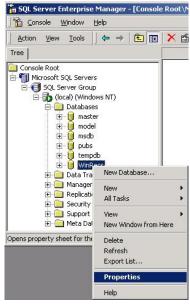
The following steps are used to successfully detach the WinRecs database.

NOTE: All WinRecs users in your facility must not be using the WinRecs application when these steps are performed. Otherwise, data might be lost.

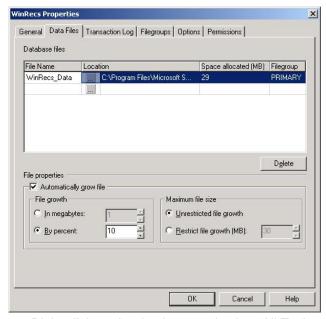


Using Enterprise Manager

Before detaching the database, verify the location of the data file that will be used in the post-detach activities:

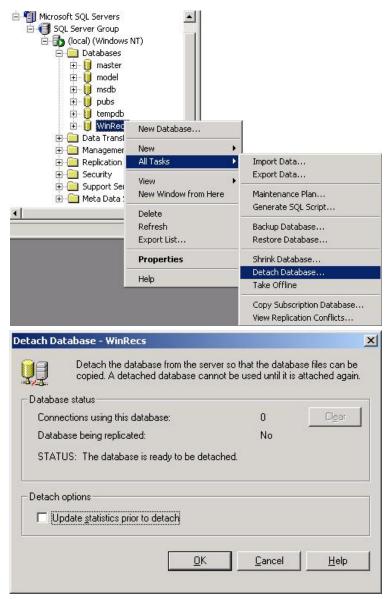


Right-click on the database and select *Properties* Click the *Data* tab



Right-click on the database and select All Tasks->Detatch Database...

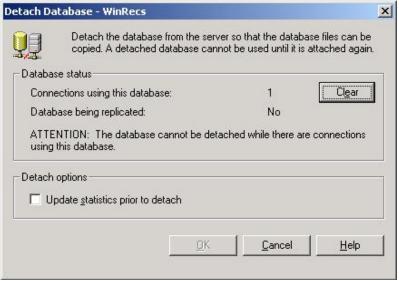




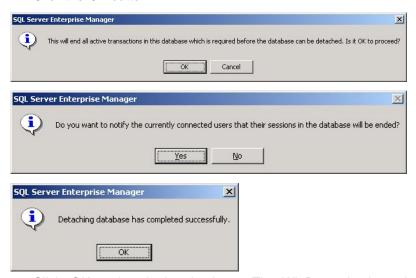
Click *OK* to detach the database. The WinRecs database has been attached and is no longer displayed in the tree view.

The *Database Status* section of the Detach Database window identifies if users are still connected to the WinRecs server:





Click the *Clear* button Click the *OK* button



Click *OK* to detach the database. The WinRecs database has been attached and is no longer displayed in the tree view.

Using OSQL

Connect to the MSDE server

From a command line prompt on the server

Click Start->Run

Type cmd

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Press ENTER

At the command line prompt, type

```
osql -U sa -P MED2020 -S localhost
```

If the connection is successful, the OSQL prompt will be displayed:

1>

Detach the WinRecs Database

The database must be detached before a copy can be made and sent to MED2020 Client Services for troubleshooting.

```
1> EXEC sp_detach_db 'MED2020'
```

The command is successful if no error messages are returned.

Using the MEDSQL2 Utility

Download medsql2.exe from the MED2020 client support site at ftp://web.med2020.ca to the server.

Run medsql2.exe

Complete the fields as follows:

Administrator	Type sa			
Password	Type the password for the SQL sa account			
Environment	Type the name of the database as it is to be attached			
Server Name	Select the database server from the drop-down list.			
Attach From	Ensure that the folder selected is where the LDF and MDF files are located.			



Click Detach.

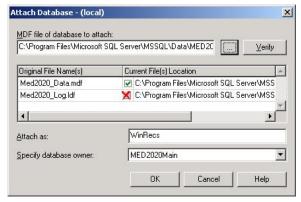
Moving the Transaction Log to a different drive

The size and growth of the transaction log can often impede the availability and performance of the WinRecs database. In such situations, it is recommended to move the transaction log to a different physical location.



- Identify the location and physical file name of the transaction log.
- Detach the database.
- Relocate the transaction log (ldf) file to the new location
- Begin the process to attach the database file as previously instructed.
- In Enterprise Manager, reattach the database.

The Attach Database window will reflect that the log file cannot be found



- Click the file location entry in the window and type in the correct path and file name
- Click on the red X
- The Current File Location for the transaction log should now be registered correctly.

Complete the remaining steps to attach the database.

Advanced Database Management

The following sections details steps that might assist facilities when the WinRecs database is low on disk space.

Shrinking The Log File

Using Enterprise Manager

From within Enterprise Manager, expand the following sections in the tree view to reveal the WinRecs database in the list:

Microsoft SQL Servers->SQL Server Group->(local)->Databases

Navigate to the WinRecs database.

Right-click on the database and select All Tasks->Shrink Database...

Click the Files button

In the Database file drop-down list, select the log file

Select Compress pages and then truncate free space from the file

Uncheck AutoShrink

Click OK

Using OSQL

Connect to the MSDE server

From a command line prompt on the server

Click Start->Run

Page 94 of 105



type cmd

Press **ENTER**

At the command line prompt, type

```
osql -U sa -P MED2020 -S localhost
```

If the connection is successful, the osql prompt will be displayed:

1 >

Identify the log file name

```
1> use tempdb
2> go
```

The command is successful if no error messages are returned.

```
1> sp_helpfile
2> qo
```

The command is successful if no error messages are returned and

The name column will display the logical name for the transaction logs. In the example above, the logical name for the *tempdb* database is *templog*.

To backup the log file

```
1> backup log tempdb with truncate_only
2> go
```

The command is successful if no error messages are returned.

To shrink the log file

```
1> dbcc shrinkfile('templog',truncateonly)
2> qo
```

The command is successful if no error messages are returned.

Setting Recovery Model

The recovery model determines to what extent databases can be recovered in the event of failure. By default, all SQL databases are configured with a Full recovery model.

For customers who are consistently running out of disk space and cannot relocate the transaction log to an alternate drive, the recovery model can be changed to *Simple* which will reduce the amount of disk space that the transaction logs will consume.

Using Enterprise Manager

From within Enterprise Manager, expand the following sections in the tree view to reveal the WinRecs database in the list:

Microsoft SQL Servers->SQL Server Group->(local)->Databases

Navigate to the WinRecs database.

Right-click on the database and select Properties

Click the Options tab

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In the *Recovery: Model* drop-down list, select the recovery model. The following table can be used to determine the most appropriate method:

Bulk-Logged	The BULK_LOGGED recovery model has fewer recovery options than the FULL model, but it doesn't have as severe a performance hit on bulk operations. It uses less log space on certain bulk operations because it records only the operations' results. With this model, however, you can't restore to a specific mark in the database, nor can you restore just parts of the database.
Full	The FULL recovery model gives you the most recovery flexibility. It's the default recovery option for new databases. This model allows you to restore just part of a database or do a complete recovery. Assuming the transactions logs haven't been damaged, you can also recover up to the last committed transaction prior to a failure. This method uses the most transaction log space of all the recovery models and it causes a slight hit to SQL Server performance.
Simple	The SIMPLE recovery model is the easiest of the three to implement and it uses the least amount of storage space. However, recovery is limited to when the database was last backed up.

Once the recovery model has been selected, click OK.

Using OSQL

Connect to the MSDE server

From a command line prompt on the server

Click Start->Run

type cmd

Press **ENTER**

At the command line prompt, type:

```
osql -U sa -P MED2020 -S localhost
```

If the connection is successful, the osql prompt will be displayed:

1>

To change the recovery model to simple for the WinRecs database

```
1> ALTER DATABASE WINRECS SET RECOVERY SIMPLE
```

2> go

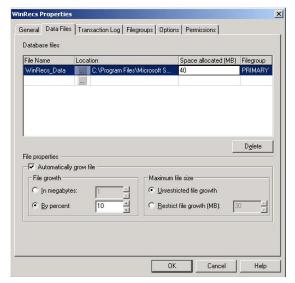
The command is successful if no error messages are returned.

Sizing the Database

Properly sizing the database avoids the additional overhead associated with growing data files. Limiting the amount of physical database growth will help prevent the fragmentation of data files,.

As a baseline, it is recommended to set the data file to either 25% larger than the actual storage requirements, or to 40 MB.





Backing up the Databases

It is recommended to use SQL Server to backup databases as the data files are locked when attached. Only select tools are able to back up open data files. Additionally, SQL Server faster at creating database backups than other software solutions.

This method also ensures that, in the event of a network backup failure, a local backup is available.

Creating a Maintenance Plan in Enterprise Manager

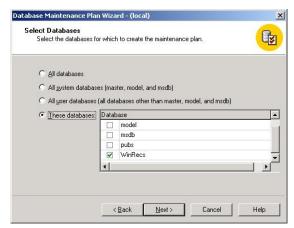
In Enterprise Manager expand the tree to the Management options:

Microsoft SQL Servers->SQL Server Group->(local)->Management

Right-click on Database Maintenance plans and select New Maintenance Plan...

Click Next

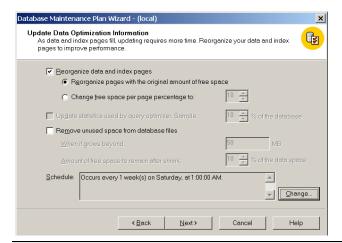
Select the database(s) for which to create the maintenance plan:



Click Next

Select Reorganize data and index pages

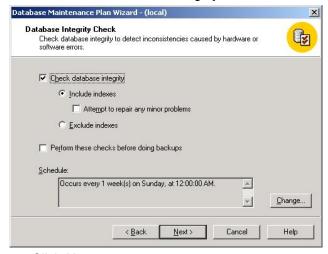




NOTE: When used weekly, your tables will run at optimum efficiency.

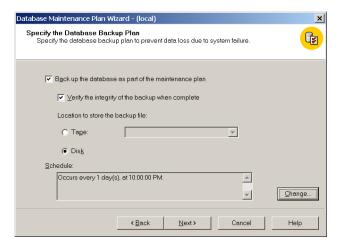
Click Next

Select Check database integrity



Click Next
Select Backup and verify



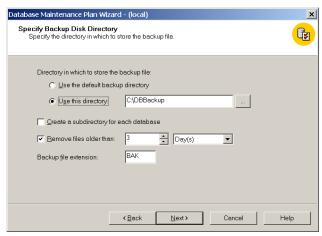


When the maintenance plan is run, the data file will be backed up to disk.

Click Next

Specify the folder to which the backup file will be written.

Specify other backup options as might be required.

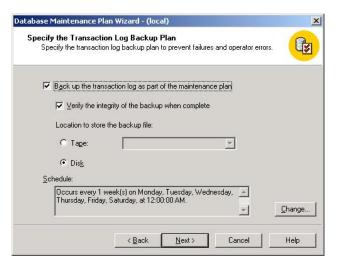


Click Next

Select Back up the transaction log as part of the maintenance plan

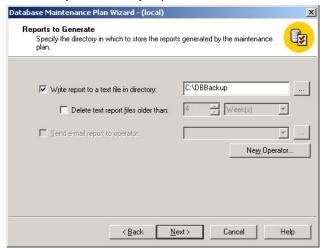
Select Verify the integrity of the backup when complete





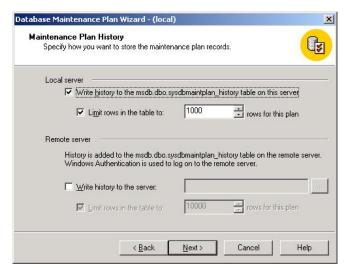
Click Next

Identify if an activity report will be created



Click Next

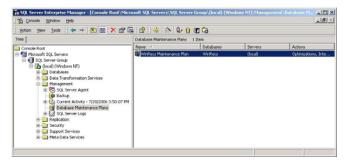




Click *Finish* to close the maintenance plan wizard.



The maintenance plan is now displayed in the *Management->Database Maintenance Plans* folder of Enterprise Manager



NOTE: Be sure to verify the maintenance jobs by running them at least once prior to establishing a routine schedule as part of your recovery process.



Using OSQL

The following script can be used as a guideline to perform a backup of the WinRecs database using OSQL:

```
osql -S localhost -U sa -P password -Q " BACKUP DATABASE WINRECS TO DISK = ' c: backups \setminus winrecs \ db.bak' ' "
```

Substitute the italicized values above with those relevant to your particular MSDE installation, according to the guidelines provided below:

localhost	Database server (localhost = this server)
sa	SQL user with backup privileges
password	Password for the sa account
WINRECS	Name of the WinRecs database
c:\backups\winrecs_db.bak	Path and file name of the backup file to be written

Restoring a Database Backup

During the restore, the specified database must not be in use. Any data in the specified database is replaced by the restored data.

Using Enterprise Manager

Using OSQL

The following script can be used as a guideline to perform a full restore from backup using OSQL:

```
osql -S localhost -U sa -P password -Q " RESTORE DATABASE WINRECS FROM DISK = ' c:\backups\winrecs\_db.bak ' "
```

Substitute the italicized values above with those relevant to your particular MSDE installation, according to the guidelines provided below:

localhost	Database server (localhost = this server)
sa	SQL user with backup privileges
password	Password for the sa account
WINRECS	Name of the WinRecs database
c:\backups\winrecs_db.bak	Path and file name of the backup file to be restored

NOTE: Using this command will overwrite all existing data.

For information on how to perform partial restores, consult the Microsoft support site.

Shutting Down the WinRecs Server

It is recommended that the following steps be performed to successfully shutdown the WinRecs server.

Note that the users in your facility must not be using WinRecs when these steps are performed. Otherwise, data might be lost.



- Advised all WinRecs client workstations to disconnect and discontinue use of the WinRecs system until the maintenance is complete.
- If an HL7 interface is installed:
 - o Stop the ADT interface that feeds messages to the WinRecs HL7 interface.
 - Stop the WinRecs HL7 interface
- It is now safe to shut down the WinRecs Server, or perform other system maintenance tasks.

Relocating/Cloning WinRecs to Another Server

- Prepare the current server by performing the steps in the section entitled Shutting Down WinRecs. **Do not reboot the server**.
- Detach the WinRecs and/or Batch-In database(s) that will be moved to a new folder, drive or server.
- Archive (create a zip file of) the Database (.mdf) and Transaction Log (.ldf) files.

NOTE: Do not change the file names of the Database or Transaction Log files.

- Archive, copy and relocate the WR2 Reports folder and/or any shared reports folders used by WinRecs client workstations.
- Proceed with the installation of the new server as usual.



Appendices



Server Con	iguration		Software Configuration
Server Configuration			Operating System:
Server Name:			SQL Version:
Server IP:			
Total Memory: Disk Space:			Crystal Reports 🗖 Version:
ызк эра	.e.		
Database			
Server Name:			sa password:
SQL Software/Version:			Recovery Mode:
Data Path/File:			Memory Allocated:
Log Path	/File:		
Total spa	ace available on dis	k/SAN volume:	
WinRecs			
	Varsiani		
	Version:		
CD-Key:	Installation Folder		
	eports folder(s):	•	
	_		
HL7	Ц	Version:	TCP Port:
Batch-In		Version:	
Batch-O	ut 🔲	Version:	
Notes			
Notes			