



October 2009

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Who should read this release note?

This Centricity Practice Solution (CPS) 2006 Service Pack 5 (SP5) release note describes the changes included in the service pack and the installation process.

Before installing the service pack, read this release note carefully and ensure that you have a verified backup.

If you are the System Administrator...

Review system and pre-install requirements and installation instructions carefully and confirm that you have a verified complete backup.

You will need the following:

- Supervisor/admin privileges on your network file server
- Ability to set up and configure system security policies
- Ability to execute SQL queries
- Familiarity with SQL Server 2005 files, programs, data structures, and transaction architecture

If you are the CPS Manager...

Carefully review and consider how the changes in this service pack affect your practice setup and workflows. If you have questions about how these changes will affect your practice, contact Centricity Practice Services at 888.436.8491 option 2.

What's new in this service pack?


Service Pack 5 includes fundamental changes to the application architecture which reduce time-sensitive system lock-ups and exceptions and create a more stable application. Specific changes included in this service pack are summarized below:

Closing windows or switching windows

A coding change throughout the application significantly reduces error messages when you close application modules or switch to a different window.

Idle timeout

In Service Pack 5, the application hides all open practice management windows on an idle timeout or user log out. Users are able to return to their work within the application after they log back on. In previous versions, windows with unsaved changes would not close until the user saved the changes.

 If a user logs out or times out of the application before saving his or her changes and another user logs in, all changes from the previous user are lost.

Registration keyboard shortcuts

In the Registration module Columns window, users can use the **ALT + R** keyboard shortcut to remove a selected column from the list of displayed columns. If the column is a permanent column, a warning dialog appears to notify users that the column cannot be hidden. You can access the Columns window from the Registration module **Insurance**, **Appointments**, and **Contacts** tabs.

Transaction Distribution and remittance processing

A change to the application ensures the continuity of workflow for remittance processing and other tasks within Transaction Distribution. In previous versions, users working in Transaction Distribution may occasionally experience errors when toggling between Transaction Distribution and other modules, posting a remittance check, or reordering a transaction column set that contains the Residual field.

Daily appointment schedule

In Service Pack 5 users can drag and drop appointments to any available slot.

In previous versions of the application, users employing the drag-and-drop method of appointment scheduling on the Daily view may encounter overbooked appointments where the schedule displays an available appointment slot.

Skimming support

A coding change in this service pack eliminates window 'flickering' in the Administration module and does not lock up the system. Previously, some users may have experienced window flickering when searching for items in Administration, for example appointment types and allocation sets.

In addition, a coding change allows users to use the side scroll bar to scroll through a list of items in a 'Find' window. Previously, users were unable to use the scroll bars.

Accounts Receivable

A coding change in this service pack ensures that users are able to modify *In Progress* visits from within the Accounts Receivable module. In previous versions, users may be unable to modify a visit from within Accounts Receivable.

Support for single CPU configuration


To assist in debugging the application, this enhancement allows the client application to be configured to use a single CPU on hyper-threaded and multi-core workstations. To configure the application for a single CPU:

- 1 Go to the client install folder (for example, C:\Program Files\Centricity Practice Solution 2006\Client)
- 2 In the emr.ini file, in the [Logician Private] section, set UseMultipleCPU=0.
- 3 Save the file.
- 4 Start the CPS client and log into the application.
- 5 Open the Windows Task Manager.
- 6 From the **Processes** tab, search for and right-click the **CPOPM06.exe** process.
- 7 Select **Set Affinity**.

In the Processor Affinity window, verify that one CPU is checked.

Windows® Vista support


Beginning with Service Pack 4, Centricity Practice Solution is compatible with Vista.

 Read this section if you are not upgrading from Centricity Practice Solution Service Pack 4.

Support for Windows® Vista

Windows Vista Business Edition operating system is compatible with this service pack. Your workstation must meet the following system requirements in order to use Vista and Centricity Practice Solution on your workstation:

- Processor: Pentium4, 2 GHz or higher
- RAM: 4 GB
- Virtual memory/page file space: 1.5X physical RAM
- Disk space: 36 GB or larger hard disk
- Network: 100 Mbit (100Base-T) or higher network card. Gigabit (1000Base-T) preferred
- Network protocol: TCP/IP only
- Internet connection: High-speed connection recommended
- Modem: DSL/cable or other high-speed fax/modem

-  Vista Business Edition is the only compatible version of Microsoft Windows Vista for Centricity Practice Solution Service Pack 5.

Centricity Practice Solution is not supported on tablet PCs using the Vista operating system.

Before upgrading, verify that your current third-party applications and peripherals (such as scanners, cameras, and other hardware) are compatible with Vista.

Internet Explorer 7

Internet Explorer 7 is compatible with Service Pack 5.

Protected Mode is a new security feature of Internet Explorer 7 for Vista that prevents the installation of malicious software on users' computers through the Web sites users may visit. Protected mode is turned on by default in the Internet, intranet, and restricted sites zones, and an icon appears on the status bar to let you know that it is running. Protected mode may prevent some EDI plug-ins from processing approvals correctly. If you are using

Internet Explorer 7 with Vista, you must clear the Protected Mode checkbox before proceeding with the approval process:

- 1 In Internet Explorer, click on **Tools > Internet Options**.
- 2 Select the **Security** tab.
- 3 Clear the **Enable Protected Mode** (requires restarting Internet Explorer) option.

A Warning message displays to confirm your selection.

- 4 Click **OK**.
- 5 Click **OK** to close the Internet Options window.

Microsoft Word 2007

The Rich Text Format (RTF) of Word 2007 is larger, and significantly increases document file sizes. It also includes new tags that are not compatible with Centricity Practice Solution.

To prevent errors, GE removed the option for saving formatted text in the NotesLink Macro when importing transcriptions created in Word 2007. If you attempt to paste Word 2007 text into a Chart text field that includes RTF controls (such as chart notes, history views, text components, letter handouts, or document templates), you will be directed to copy the text to Wordpad first before pasting to the text field. You can use any text editor that does not contain Word 2007 RTF tags.

Integrated faxing in Vista

The application supports Biscom version 9.0.4.0100 for integrated prescription faxing. To use integrated faxing, you must install a Biscom Faxcom server on


your network and the Biscom fax client on your workstations. Installation instructions are included in the Biscom documentation.

Adding printers in Vista

When adding a printer in Vista, install the drivers by selecting a printer in Control Panel > Hardware and Sound > Printer and entering a valid directory or network path to the printer and drivers as needed.

Before you begin....

Before installing this service pack, please review the following checklist of system requirements, important pre-installation considerations, and steps to watch out for during the install to ensure a successful upgrade.

 Citrix Presentation Server 4.0 was fully tested with Centricity Practice Solution 2006. GE is not aware of any incompatibility issues with Citrix Presentation Server 4.5 Rollup 02.

 **Confirm upgrade paths**

Review the upgrade matrix below to determine whether or not you should upgrade to this service pack, and which other releases are available for you:

		Target Version					
		8.0.4	8.0.5	8.1.0	9.0.0	9.0.1	9.0.2
Current Version	8.0.4		Possible	Possible	Possible	Possible	Possible
	8.0.5			Avoid (1)	Avoid (1)	Avoid (1)	Recommend
	8.1.0				Avoid (2)	Possible	Recommend
	9.0.0					Possible	Recommend
	9.0.1						Recommend
	9.0.2						

(1) 8.0.5 has some changes not included in 8.1.0, 9.0.0, or 9.0.1

(2) 8.1.0 has some changes not included in 8.0.5 and 9.0.0

 **Confirm system hardware and software requirements**

Review all hardware and software requirements for your system and confirm that your system meets minimum requirements. See [“Appendix A: Hardware/software requirements for Centricity Practice Solution”](#) on page 42.

Critical hardware checks:

- Follow GE recommendations for database server RAM, disk arrays, and disk and database file layout. See [“Database server”](#) on page 42.

Critical software checks:

- **Windows Server 2000 not supported.** Windows 2000 Server is no longer supported for your database server operating system because it does not facilitate memory management requirements needed for Centricity Practice Solution on SQL Server 2005. For details, see [“Microsoft Windows 2000 Server and Small Business Server 2000 are no longer supported.”](#) on page 44.

☑ *Set required system settings for performance/uptime*

Before running the application the first time after install or update, you must set or confirm settings for several critical configurations on the database server to optimize Centricity Practice Solution performance and up time on Microsoft SQL Server 2005. Configurations include

- Adding the -g startup flag
- Using AWE to allocate memory and setting Max Server Memory to 1 GB less than total system memory
- Enabling Lock Pages in Memory OS security setting.
- Editing the boot.ini file to enable PAE.

For detailed instructions, see [“Configure SQL Server 2005 for performance / uptime”](#) on page 13.

☑ *Configure SQL Server to run the client on the server*

If you are running the client on the database server, you must also select (local) named pipes and TCP/IP protocol for remote connection when setting up SQL Server, otherwise you may see a named pipes error when you launch the application. See [“Configure SQL Server 2005 to run the client on the server”](#) on page 16.

☑ *Upgrading from Centricity PM: configure Application Logon*

If you installed SQL Server 2005 as a separate instance and plan to restore a backup of PM 2004 to this instance before upgrading to Centricity Practice Solution Service Pack 5, you must configure your PM Application Logon for SQL Server 2005. See [“Single-user Demo Database cannot be upgraded”](#) on page 19. This step is required to give SQL Server 2005 access to the current PM database for the upgrade and prevent client security issues on the client.

☑ *Review Active Directory changes for system impacts*

Take these steps before installing the service pack:


- **Check for invalid characters in Active Directory names.** To avoid authentication problems after upgrade/install, check for and modify invalid/unsupported characters in names in Active Directory containers, groups, and users. See [“Invalid/unsupported characters for Active Directory”](#) on page 12.

- **Check for Active Directory Group Name mismatches.** To ensure that you can access all security groups after upgrade/install, check in Active Directory for groups where Group Name and Pre-Windows 2000 Group Name are different.

If you find groups with unmatched names, you must take some extra steps during the installation process to update group names automatically. See ["Update Active Directory Group Names" on page 28.](#)

!!! If you do not take these steps, you will need to reassign security permissions to these groups after the update.

JOBS.TXT users ONLY


 You must back up your JOBS.TXT file and the Source folder in your website before installing the service pack.

If you are using Windows 2003 on your server, you must verify that a MIME type exists before users log into the client after installing this update. This process is also described at <http://support.microsoft.com/kb/326965>.

- **Configuring a MIME Type**

Use the following steps to configure a MIME type.

 - a Open the IIS Manager: **Start > Control Panel > Administrative Tools > Internet Information Services (IIS) Manager.**
 - b Expand the local computer name in the left panel.
 - c Expand Web Sites, then Default Web Sites, and expand your website's folder.
 - d Right-click the Source folder and then click **Properties**. The Source Properties window opens.
 - e On the HTTP Headers tab, Click **MIME Types**.
 - f Click **New**. The MIME Type window displays.
 - g In the Extension field, enter *****.
 - h In the MIME Type field, type **application/octet-stream**.
 - i Click **OK** twice to close the MIME Types window.
 - j Click **Apply**, then **OK** on the Source Properties window to confirm the changes.
 - k You must restart the World Wide Web Publishing Service or wait for the worker process to recycle for the changes to take effect. In some cases, you may need to reboot the server.

 If you do not immediately see the new MIME type and do not want to shut down the server, use the `iisrest.exe` command-line utility to force a restart of the services alone. At a command line, type `iisreset / help` for more information.

■ **Removing application-specific files for previous service packs**

Edit the JOBS.TXT file to remove all jobs (lines) that push application-specific files from a previous version of the product, such as

- MLDEF.TXT files, for example, MLDEF1.TXT, ML2DEF.TXT, ML3DEF.TXT, and so on
- Client-side .DLL files, for example, MLINFORM.DLL

DO NOT remove custom lines that push 3rd-party files and custom clinical content and forms, including CCC forms.

!!! JOBS.TXT runs whenever users log into the application on the workstation. If you do not remove client-specific lines from JOBS.TXT, older files may be pushed to the new client that render it inoperable.

On Vista workstations, you must log in to the client by running Internet Explorer as an administrator before the JOBS.TXT runs. See [“Install the service pack to workstations” on page 26](#) for instructions for running Internet Explorer as an administrator.

 **During install/update take these critical installation steps**

- **Correct SQL instance names.** If your SQL Instance name includes a machine name such as “VSH-MIS06\SQL2005”, you must manually correct it wherever it displays in Server Setup during installation process. [“SQL Instance name with a forward slash is truncated in Server Setup” on page 40.](#)
- **Restart SQL Server following database installation** to ensure that MBCXP80.DLL is updated and loaded. In the database installation procedure, see [step 23 on page 23.](#)
- **Prevent OCX errors on workstations on first launch.** To avoid OCX registration errors on some workstations, either log onto the workstation with Administrator rights to launch the application for the first time or grant all users Administrator rights for the first day following installation. See [“OCX registration errors may occur on some workstations immediately after installing the service pack” on page 40.](#)

Before you install Service Pack 5...

Upgrading from EMR or early version of CPS 2006?

Save your EMR.ini custom settings

EMR.ini is overwritten when you apply the service pack to workstations. If you have integrated any third party applications (e.g. Biscom Faxing) back up or save a copy of the current EMR.ini file before applying the update. Then manually restore any custom settings to the file after the update. Make sure this file is updated on all affected workstations.

Complete all service orders before upgrading

Before applying this service pack, please confirm that all service orders created in the EMR application/Chart module have the status *Completed*. Orders In Process or Admin Hold states prior to the upgrade may generate new, separate visits after the upgrade occurs.

You can run an inquiry in Chart to find uncompleted orders. To have your IT staff find this data using a SQL query instead, see ["Find incomplete orders with a SQL query" on page 9](#).

Find incomplete orders with a Chart inquiry

1 Go to Chart > Desktop > Reports and select the Inquiries tab.

2 Run an inquiry using the following criteria:

Find Orders
Where Status
is
In Process

3 Click **Add** and combine with **OR**

Find Orders
Where Status
is
Admin Hold



To list only Services orders, add **Find orders where Type is Service**.

This filters for orders typically set to transfer to the Billing component.

4 View or print the Inquiry results and complete outstanding orders.

5 As you complete orders, re-run the inquiry to refresh the list of outstanding orders.

Find incomplete orders with a SQL query

Run the following SQL script and use the output (DTS to Excel for formatting) for your working list:

```
SELECT "vPatientProfile"."firstname", "vPatientProfile"."middlename",  
       "vPatientProfile"."lastname", "ORDERS"."STATUS", "ORDERS"."ORDERTYPE",
```

```

"ORDERS"."ORDERDATE", "ORDERS"."CODE", "ORDERS"."DESCRIPTION",
"ORDER_ENTRY_MODIFIERS"."CODE" AS "MODIFIERCODE",
"ORDER_ENTRY_MODIFIERS"."DESCRIPTION" AS "MODIFIERDESCRIPTION"

FROM {oj (((("dbo"."ORDERS" "ORDERS" INNER JOIN "dbo"."USRINFO"
"USRINFO" ON "ORDERS"."USRID"="USRINFO"."PVID") INNER JOIN
"dbo"."USRINFO" "USRINFO_1" ON
"ORDERS"."AUTHBYUSRID"="USRINFO_1"."PVID") LEFT OUTER JOIN
"dbo"."ORDER_ENTRY_MODIFIERS" "ORDER_ENTRY_MODIFIERS" ON
"ORDERS"."ORDERID"="ORDER_ENTRY_MODIFIERS"."ORDERID") INNER JOIN
"dbo"."vPatientProfile" "vPatientProfile" ON
"ORDERS"."PID"="vPatientProfile"."pid")}


WHERE "ORDERS"."XID" = 10000000000000000000 --CURRENT VALUE ONLY
WITHOUT AUDIT

AND "ORDERS"."STATUS" IN ('S','H') --IN PROCESS or ADMIN HOLD

--AND "ORDERS"."TYPE" = 'S' --UNCOMMENT THIS LINE TO FILTER ONLY FOR
SERVICE ORDERS IF DESIRED

ORDER BY "vPatientProfile"."lastname", "vPatientProfile"."pid",
"ORDERS"."ORDERID"


```

-
-  Uncomment the line that starts "--AND "ORDERS"."TYPE" = 'S' to add the Order Type of Service and only list Services orders. This filters for orders typically set to transfer to the Billing component.
-


Active Directory enhancements

With this update, Active Directory is modified to take advantage of improved directory services functionality and stability.

If you have more than 1000 users or groups in your Active Directory, GE recommends placing all Centricity Practice Solution users into a single organizational unit (OU) and configuring the application to use that OU for domain authentication. Adding the users to an OU optimizes performance when querying Active Directory for login and security. You can create additional OUs beneath the top-level OU for more grouping flexibility.

-
-  Make sure that the OU is configured at the root of the search path for optimal search performance.
-

An enhancement to the Reports, Administration, and ServerSetup pagesize property now retrieves and displays up to 30,000 rows when the application is authenticating users and user groups. If the Active Directory is larger than 30,000 user/groups, any results above 30,000 are truncated.

-
-  If a user is in multiple security groups, only the first instance of that user is displayed, which may reduce the overall number of users displayed to less than 30,000 users.
-

Previously, Active Directory returned a maximum of 1000 rows from any query. If the Active Directory contained more than 1000 groups or users, only the first 1000 users and 1000 groups were displayed.

For more information on setting up Active Directory, refer to the Microsoft documentation at <http://www.microsoft.com/windowsserver2003/technologies/directory/activedirectory/default.mspx>.

Setting up User/Group Security in Server Setup

These changes have the following impact on Server Setup Security option settings. Server, Domain, and Other Domain options are essentially unchanged, however, if your Other Domain and Organizational Unit specifications begin with *WinNT://* or *IIS://*, change them to a **domain** or **node name**. Domain names in the Domain, Other Domain, and Organizational Unit fields must have an Internet suffix (such as .com or .LOCAL). The syntax for organizational unit names is [Domain.suffix/Organizational Unit].

Enter an Organizational Unit Active Directory path as a series of directory nodes separated with a single forward slash character ('/'). The node sequence must start at the root domain node level (see sample screen below).

Authenticating across multiple domains

If logon credentials must be authenticated across multiple Active Directory domains, a two-way trust relationship is required between the domains, for example:

Trust is required–

- **Server authentication:** if client is on domain X and database server on domain Y, two-way trust is required between domains X and Y.

- **Domain authentication:** if client is on domain X, and domain server on domain Y, two-way trust is required between domains X and Y.

Trust is NOT required–

- **Server authentication:** if client is on domain X, and database server on domain X, trust is not required.
- **Domain authentication:** if client on domain X, and domain server on domain X, trust is not required.

Users who log in to workstations using a local account or another account not associated with a domain (or trusted domain) will be denied access to the application if domain-level security is enabled. For example, a user attempting to log in to the application from an uncontrolled home or personal PC will be denied access. Server-level security authentication scenarios remain unchanged from previous Centricity Practice Solution service packs and/or Practice Management 2004.

Using Organizational Unit for Security Source

The Organizational Unit option identifies the level within your Active Directory at which searches for users and groups begin. Searches for users or groups return only items located at or below the Organizational Unit you specify.

For example, consider the following Active Directory structure:

Active Directory hierarchy	Security Source setting for Organizational Unit
Root Domain	When set at this level for Users , all UserNames are available (1,2,3,4,5). When set at this level for Groups , all GroupNames are available.
UserList1 <i>UserName1</i> <i>UserName2</i>	When set at this level for Users , only User Names 1 and 2 are available.
UserList2 <i>UserName3</i> <i>UserName4</i>	
GroupList1 <i>GroupName1</i> <i>GroupName2</i>	When set at this level for Groups , only GroupNames 1 and 2 are available.
GroupList2 <i>GroupName3</i> <i>GroupName4</i>	
<i>UserName5</i>	

Invalid/unsupported characters for Active Directory

The following characters should not be used in naming containers, groups, and users, or in passwords. These characters either have special meaning to the Active Directory search engine or are listed as unsupported. If you use these characters in naming, your Active Directory users and groups may not display or behave properly.

space	:	colon	(left parenthesis
,	,	comma	;	semicolon
+	+	plus sign		vertical bar
"	"	quotation mark	=	equal sign
'	'	apostrophe	*	asterisk
[[left bracket	?	question mark
]]	right bracket	@	at sign
#	#	pound sign	!	exclamation point
			>	greater than symbol
			&	ampersand
			~	tilde

Active Directory support no longer resides in MBCXP.DLL

Important!! The MBCXP library is shared for an instance of SQL 2005. Since this service pack changes MBCXP80.DLL to support enhancements to Active Directory, if your instance of SQL Server 2005 supports multiple CPS databases, you must upgrade ALL databases in the target instance to Service Pack 5 at the same time. Earlier versions will not be able to authenticate login credentials using the new MBCXP library.

Since Active Directory support no longer resides within the MBCXP.DLL, after you install this service pack you need not restart SQL Server after making security path option changes in Server Setup (while the CPS application is shut down). Changes are effective immediately when Server Setup quits.

However, if you change security path options while an instance of the application is running, you must restart that instance to make the changes effective.


Configure SQL Server 2005 for performance / uptime

The following configurations are required to optimize Centricity Practice Solution performance and up time on Microsoft SQL Server 2005. For best results, configure these settings before running the application for the first time.

!!! These configurations work together and are REQUIRED.

- **Follow GE recommendations for database server RAM, disk arrays, and disk and database file layout.** See ["Database server" on page 42](#).
- For security purposes, **DO NOT run the SQL Server instance on the same account as IIS.** Instead, SQL Server should log on as a dedicated administrator account (not the Local System account)
- **Add the -g startup flag.** See ["Add -g \(singledash\) startup flag" on page 14](#).
- **Use AWE to allocate memory and set Max Server Memory to 1 GB less than total system memory.** See ["Set AWE and Max Server Memory" on page 15](#).

- **Enable Lock Pages in Memory OS security setting.** See [“Enable Lock Pages in Memory option”](#) on page 15.
- **Edit the boot.ini file to enable PAE.** See [“Edit boot.ini file to enable PAE on a Windows 2003 server”](#) on page 16.

 **Running the client on the database server?** You must select (local) named pipes and TCP/IP protocol for remote connection when setting up SQL Server, otherwise you may see a named pipes error when you launch the application. See [“Configure SQL Server 2005 to run the client on the server”](#) on page 16.

Recommended and required configurations

Add -g (singledash) startup flag

Adding the -g startup flag specifies the amount of virtual address space that SQL Server will leave available for memory allocations within the SQL Server process.

- 1 Select **SQL Server 2005 Services**.
- 2 Right-click on the SQL Server instance and select **Properties**.
- 3 Select the **Advanced** tab.
- 4 Select **Startup Parameters** and scroll to the right to the end.
- 5 Enter one of the following with no space before or between the characters:


;-g512

or

;-g1024

If you use the **-g1024** setting, you must also use the /3GB switch as shown in [Edit boot.ini file to enable PAE on a Windows 2003 server](#).

- 6 Click **OK**.
- 7 Select the **Logon** tab.
- 8 Set SQL Server to log on as a dedicated Administrator account.

 This will require a restart of the SQL Server instance and agent. Complete other configurations before rebooting.

- 9 Stop the **mssqlserver** service and verify the startup parameters include the -g command line by opening the **ERRORLOG** file. The default **ERRORLOG** location is:

..\Program Files\Microsoft SQL Server\MSSQL.1\MSSQL\LOG\ERRORLOG

```
[timestamp] Server      Registry startup parameters:
[timestamp] Server      -d D:\Program Files\Microsoft SQL °\DATA\master.mdf
[timestamp] Server      -e D:\Program Files\Microsoft SQL °\LOG\ERRORLOG
[timestamp] Server      -l D:\Program Files\Microsoft SQL °\DATA\mastlog.ldf
[timestamp] Server      -g 1024
```

Set AWE and Max Server Memory

Address Windowing Extensions (AWE) allows programs to address more memory than the 4 GB that is available through standard 32-bit addressing. The range of memory in excess of 4 GB is exposed to the memory manager by Physical Address Extensions (PAE). See ["Edit boot.ini file to enable PAE on a Windows 2003 server" on page 16](#).

- 1 Right-click on the server name in Microsoft SQL Server Management Studio and select **Memory**.
- 2 Check **Use AWE to Allocate Memory**.
- 3 Set **Max Server Memory** to 1 GB less than total system memory.

Enable Lock Pages in Memory option

This option improves performance by preventing the operating system from swapping SQL Server memory pages to disk and allowing SQL Server to reduce its working set when the OS requires it to do so.

From the database server:

- 1 On the Start menu, select **Run**.
- 2 In the **Open** field, type **gpedit.msc**
- 3 On the Group Policy console, expand **Computer Configuration**, then expand **Windows Settings**.
- 4 Expand **Security Settings**, then expand **Local Policies**.
- 5 Select the **User Rights Assignment** folder. The policies display in the Details pane.
- 6 In the Details pane, double-click **Lock Pages in Memory**.
- 7 In the Local Security Policy Setting window, click **Add**.
- 8 In the **Select Users or Groups** window, add the user account that will run sqlservr.exe.

 Changes to these settings will require a restart of the SQL Server instance.

Edit boot.ini file to enable PAE on a Windows 2003 server

This setting enables Physical Address Extensions (PAE) to help your server take advantage of memory over 4 GB on a Windows 2003 server.

- 1 Click Start in the Windows task bar.
- 2 Right click on **My Computer** and select **Properties**.
- 3 Select the **Advanced** tab.
- 4 Click **Settings** for **Startup and Recovery**.
- 5 Click **Edit**. The **boot.ini** file is opened. Open the file in a text editor such as NotePad and add one of the following commands at the end of the operating systems configuration line used to boot and run SQL Server:

If you used the **-g512** command line, or if you have over 16GB of memory on your server:

/PAE

If you used the **-g1024** command line:

/3GB /PAE

Example:

```
[boot loader]
timeout=30
default=multi(0)disk(0)rdisk(0)partition(3)\WINDOWS
[operating systems]
multi(0)disk(0)rdisk(0)partition(3)\WINDOWS="Windows Server 2003, Enterprise" /noexecute=optout /fastdetect /3GB /PAE
```

- 6 Save the file.
- 7 Click **OK** on each open dialog box.
- 8 Reboot the server.

Configure SQL Server 2005 to run the client on the server

When the Centricity Practice Solution client application and SQL Server are installed on the same machine, SQL Server must use named pipes protocol to transfer data. This also applies to extended stored procedures.

The best practice is select (local) named pipes and TCP/IP protocol for remote connection when setting up SQL Server, otherwise you may see a Name Pipes error when you attempt to launch the application.

Configure Services and Connections

First configure surface area...

- 1 Open Microsoft SQL Server 2005 > Configuration Tools and select **SQL Server Surface Area Configuration**.

- 2 Under Configure Surface Area for Localhost, click **Surface Area Configuration for Services and Connections**.
- 3 In the component tree, expand SQL Server 2005, then under Database Engine, select **Remote Connections**. Options display in the pane to the right.
- 4 Select **Local and Remote Connections** and then select the sub-option **Using both TCP/IP and named pipes**.
- 5 Click **Apply**. A Connections Settings Change Alert warns you that changes to connection settings will not take affect until you restart the database engine service.
- 6 Click **OK** to close the dialog, then click **OK** on the Surface Area Configuration for Services and Connections window. The main Surface Area Configuration window returns.

Now configure features...


- 1 In the main Surface Area Configuration window, select **Surface Area Configuration for Features**.
- 2 In the component tree, expand MSSQLServer, then under Database Engine, select the following options and check the displayed option(s) to the right to enable.
 - Ad Hoc Remote Queries
 - CLR Integration
 - DAC
 - OLE Automation
 - Xp-cmdshell
- 3 Click **Apply**, then click **OK** on the Surface Area Configuration for Features window. The main Surface Area Configuration window returns.

Next, stop and start SQL Server 2005...

- 1 In the main Surface Area Configuration window, click **Surface Area Configuration for Services and Connections**.
- 2 In the component tree, expand MSSQLServer, then under Database Engine, select **Service**.
- 3 In the options pane to the right, click **Stop**. When the Start button appears, click **Start**.
- 4 Click **OK** and close the **Surface Area Configuration** window.

Upgrading PM 2004 customers: Configure Application Logon for SQL Server 2005

If you plan to restore a backup of the PM application to a new instance of SQL Server 2005 before upgrading to Centricity Practice Solution, you should update the Application Logon for the current database in SQL Management Studio.

 SQL Server uses the Application Logon user to access the Centricity Practice Solution database when launching the client application.

- 1 From the Windows **Start** menu, select **Programs | Microsoft SQL Server 2005 | SQL Server Management Studio**. Click **Connect**.
- 2 Double-click **Security** to expand it and then select **Logins**.
- 3 Right-click on the **Logins** folder and select **New Login**.
- 4 On the Login - New > General screen, create a new user with the same name and credentials you used for the previous SQL Server Application Logon user.
- 5 For **Default Database**, select the database you plan to upgrade, and then click **OK**. The new user displays in the Logins list.
- 6 Double-click the new Application Logon user in the Logins list.
- 7 Click **User Mapping** in the left navigation list.
- 8 In the **Users Mapped to this Login** list, select the relevant database. The user name appears in the User column.
- 9 In the lower Database Role Membership list, check **dbo_owner** and click **OK**.
- 10 Exit **SQL Server Management Studio**. The Application Logon now has permissions needed to update the database. After upgrade you will return to SQL Server Management Studio for a final step. See step 11 below.
- 11 Upgrade the database to Centricity Practice Solution and Service Pack 5.

!!! To upgrade your PM database to Centricity Practice Solution, you must install from CD-ROM installation disks. You cannot upgrade by applying the service pack as described below. To obtain an upgrade kit, contact your GE representative or your value-added reseller.


For detailed upgrade instructions, see the Centricity Practice Solution product release notes and Server Setup online help accessible from the CD.

- 12 After upgrade, launch SQL Server Management Studio, double-click **Security** to expand it and then select **Logins**.
- 13 In the Logins list, double-click the **Application Logon name**.
- 14 On the Login Properties screen for the user, click **User Mapping** in the left panel.
- 15 In the Users Mapped to this Login list, check the relevant **Database** for this login.
- 16 In the Default Schema column for the listing, change **dbo_owner** to the **Application Logon name**, or click the ... button and enter the name in the Object field.

- 17 Click **OK** and exit SQL Server Management Studio. This updates the Application Logon user correcting any potential differences between dbo_owner in SQL Server 2000 and SQL Server 2005.

Single-user Demo Database cannot be upgraded

SQL Express is only supported as a platform for a single-user installation of the Demo Database. Databases hosted on SQL Express cannot be upgraded. You must create a new Demo Database after upgrading. If you used a Demo Database to create clinical content, export it as clinical kits prior to upgrade and then reimport the kits into your new Demo Database.

-
-  If you upgrade a database from CPS SP2, you may be prompted to reboot your client machine, which can occur if certain files are locked during the upgrade.
-

Download the service pack

-
- !!!** As a precaution, always back up the Centricity Practice Solution database before you download and apply a service pack.
-

Back up the Centricity Practice Solution database

- 1 From the Windows **Start** menu, select **Programs | Microsoft SQL Server 2005 | SQL Server Management Studio**. Click **Connect**.

The Object Explorer window displays.

- 2 Expand **SQL Server Agent**.

-
-  To expand **SQL Server Agent**, click the plus sign (+) next to it.
-

- 3 Under **SQL Server Agent**, click **Jobs**.

A list of jobs displays in the right pane.

- 4 Right-click on the backup job for your Centricity Practice Solution database.

Example: Backup Database - CPS.

- 5 Select **Start Job at Step**.

The Start Job window displays.

- 6 Click **Start**.


You will receive confirmation of success or failure of the backup within this Window.

- 7 Click **Close**.

- 8 Exit **SQL Server Management Studio**.

Download the service pack

- 1 Close the Centricity Practice Solution client on all computers.
- 2 On the server where Server Setup application is located, log in to Microsoft® Windows as the Administrator.
- 3 Launch **Server Setup**.
- 4 Select **Download Available Updates** and then click **Next**.
The Web site installation window displays the Centricity Practice Solution Web sites you have installed.
- 5 Select the Web site you want to update, then click **Next**.
The **Download Available Updates** window displays links to updates available for the selected web site.
- 6 Click the service pack release notes link to download the notes document (in Adobe PDF format) and review them.
- 7 Do one of the following:
 - To begin downloading the service pack, click the service pack link.
 - To return to the previous window, click **Back**.The Downloading Update window displays the product version number, download location, total file size, and download progress.

 The time to download a service pack varies depending on available network bandwidth. Slow progress does not mean that the program is not downloading. The installer window will reappear once the download is complete.

- 8 Do one of the following:
 - If the download is successful, the **Downloading Update** window displays "Completed" as the status. Go to step 9.
 - If the download is unsuccessful, the **Downloading Update** window displays "Download Failed. Operation Aborted" as the status. Go to step 10.
- 9 If the download is successful, click **OK** and then click **Exit**, then **Finish**.
 - Server Setup closes and re-opens. Proceed to the next section, "[Install the service pack on a server](#)" on page 21.
 - Click **Exit** to close Server Setup.
Server Setup closes and you can restart it when you are ready to apply the update.
- 10 If the download is unsuccessful, click **OK**, and then click **Cancel** to close the Downloading Update window. Do one of the following:
 - Click **Back** to return to the previous Server Setup window.
 - Click **Exit** to stop the download process.

- If multiple attempts to download fail, contact Centricity Practice Services at 888.436.8491 option 2.

Install the service pack on a server

Before applying the service pack, take the following steps:

Stop the MIK service

If you are running Millbrook Integration Kit (MIK), complete these steps before you install the service pack on your server(s):

- 1 Start **Server Setup**.
- 2 Select **Advanced Options**, then click **Next**.
- 3 Select **Millbrook Integration Kit Configuration**, then click **Next**.

!!! If your SQL Instance name includes a machine name such as "VSH-MIS06\SQL2005", manually add the end of the SQL instance name to the value in the Server Name field wherever it displays to avoid a connection error.

- 4 Select the server where MIK is installed.
- 5 Click **Stop**.

Back up your current MIK configurations

If you are running Millbrook Integration Kit (MIK), complete these steps before you install Service Pack 5 on your server(s):

- 1 Click **Start** then choose **Run**.
- 2 Type **regedit** and press **Enter**.

!!! Do not do this step on your own if you are unfamiliar with *regedit*. Get help from a qualified network/IT engineer.

- 3 Export the following keys to the Desktop as backup:
HKEY_LOCAL_MACHINE\SOFTWARE\AHC
HKEY_LOCAL_MACHINE\SOFTWARE\GE
HKEY_LOCAL_MACHINE\SOFTWARE\GE Healthcare
- 4 Close regedit.

Install the service pack on a server

!!! To avoid errors, once you have logged on to the database in Server Setup and reached the Licensing screen, you must stop IIS services before starting the service pack installation. You will restart services when upgrade is complete.

- 1 On the server Desktop, double-click the **CPS 2006 Launch** icon.

!!! DO NOT click the Desktop Server Setup icon. This may prevent MBCXP.DLL from being properly registered.

If CPS 2006 Launch is not on the Desktop, search for and double-click **launch.exe**. (Default location is at the root of the staging directory.)

- 2 On the launcher Welcome screen, select **Install/Update Server**, then click **Server Setup**. Server Setup opens.
- 3 In Server Setup, select **Apply Available Updates** then click **Next**.
The Web site installation location window displays the Centricity Practice Solution Web sites you have installed.
- 4 Select the Web site you want to update then click **Next**. The Update an Existing Web Installation window appears.
- 5 Click **Next**.
The Server Logon window opens.

!!! If your SQL Instance name includes a machine name such as "VSH-MIS06\SQL2005", manually add the end of the SQL instance name to the value in the Server Name field wherever it displays to avoid a connection error.

- 6 Enter your SQL Server administrative user name and password if necessary and click **Next**.
- 7 To begin the installation, click **Next**. The End User License Agreement window displays.
- 8 Accept the license agreement and click **Next**. The License Code window displays.
- 9 Leaving the Server Setup application open, go to **START > Control Panel > Administration Tools > Services**.
- 10 Select **IIS Admin Server** and click **Stop**.
- 11 Click **Yes** when prompted to shut down additional services.
- 12 Return to Server Setup and click **Next** on the License Code window and follow the instructions on the screen.

A window displays update progress. When the update is complete, the **Return** and **Exit** buttons display along with the message, "**Action completed!**"

- 13 Click **Return**. The Choose Setup Option to Perform window displays.
- 14 Select **Advanced Setup Options**, then click **Next**.
The Choose Advanced Option to Perform window displays.
- 15 Select **Utilities**, then click **Next**.
The Choose Paths window displays.
- 16 Click **Next**.
The Server Logon window displays.
- 17 Enter your SQL Server Administrative logon name and password, then click **Next**.
- 18 To update MBCXP do the following:
 - If your practice has only one database, skip to Step 17.
 - If you see several databases in the database selection window, select the latest database version (such as 8.0.144), then click **Next**.
- 19 Click **Update MBCXP**.
- 20 Click **Set User Defaults**.
- 21 Click **Exit** then click **Yes** in response to the confirmation message.
- 22 Close the **CPS 2006 Launch** window.
- 23 **IMPORTANT: Restart IIS and SQL Server.** When you have completed all steps for updating the server, go to **START > Control Panel > Administration Tools > Services** and do the following:
 - Right-click on **IIS Admin Server** and select **Restart** and then confirm. This restarts IIS services.
 - Right-click on **SQL Server (SQL2005)** and select **Restart** and when you are asked if you want all services started, click **Yes**.

This service pack replaces the shared stored procedure MBCXP.DLL as part of the enhanced integration with Active Directory. If you do not restart the SQL 2005 service, you may see an application error when attempting to login the application.
- 24 (JOBS.TXT users only) Restore the JOBS.TXT file and Web site Source folder to the Web site previously described on [page 7](#).

Using InSite 2.0

InSite 2.0 is a serviceability tool that permits the Centricity Practice Services team to provide remote support to the application server.

If you have a prior install of Centricity Practice Solution, you may already have InSite 2.0 installed on your server or DTS. Starting with Service Pack 4, InSite is no longer installed by the service pack.

Uninstall Insite 2.0

If you choose to uninstall InSite 2.0, you can uninstall the application without uninstalling Centricity Practice Solution by following these steps:

- 1 Click **Start > Control Panel**, and open **Add or Remove Programs**.
- 2 Select InSite 2.0.
- 3 Click **Uninstall**. The uninstall wizard launches, and will guide you through the uninstall process.

Install MIK Service Pack 5

!!! Only perform this procedure if you have the Millbrook Integration Kit (MIK). **DO NOT uninstall MIK.**

- 1 Navigate to the location of the MIK installer (default is **C:\CPS_2006_Staging\CPS_2006_MIK**) and double-click **setup.exe**.

This message displays:

```
This setup will perform an upgrade of CPS_2006_MIK. Do you want to continue?
```

- 2 Click **Yes**.

InstallShield will open and step you through the upgrade. Select all the defaults until you see **InstallShield Wizard Complete**.

- 3 Click **Finish**.

Install service pack on workstations

If you licensed the PM module only, skip to [“Install the service pack to workstations” on page 26](#).

If you licensed the Chart module and are using LinkLogic, update client workstations in the following order:

- 1 [“Update Data Transfer Station \(DTS\)” on page 25](#).
- 2 [“Update LinkLogic on the server” on page 26](#).
- 3 Update all other client workstations. See [“Install the service pack to workstations” on page 26](#).

!!! DO NOT update any client workstations until you have updated the Data Transfer Station (DTS) and updated LinkLogic.


Before beginning, back up your directories. If you have customized files in the LinkLogic Config\Standard directory, contact Centricity Practice Services at 888-436.8491 x2, before completing this section.

Update Data Transfer Station (DTS)


When you apply this service pack on a workstation, the files in the Client directory are overwritten, including the **emr.ini** file that contains your DTS configuration. Before you update the client on the DTS, you must back up this file to preserve the current DTS configuration so you can continue processing data transfers for lab results, transcriptions, and other documents without interruption.

Install the service pack to a DTS workstation

- 1 Stop the Data Transfer Station.
- 2 Navigate to the **Centricity Practice Solution/Client directory** and copy the **emr.ini** file to your Desktop.
- 3 Start Centricity Practice Solution on the workstation.
The Product Installer page displays.
- 4 Verify that your URL points to the correctly updated Web page.
- 5 Click the Update link (in red) for **CPS_2006_Client**.
The Installer will detect that an older version of the client application exists and ask you to uninstall it.
- 6 Click **Here** to uninstall. The removal process uninstalls the application.

 When you uninstall the client application, you do not see a progress indicator for the uninstallation. This does not mean that the program is not responding or terminated, however. DO NOT attempt to end this process.

- 7 When the uninstall process is complete, click **Here** to continue to the Client Setup page.
- 8 Click **Install** to download the installer. The installer window displays.

 The time to download a service pack varies depending on available network bandwidth. Slow progress does not mean that the program is not downloading. The installer window will reappear once the download is complete.

- 9 On the installer Welcome screen, click **Next**, and then click Next on all subsequent screens to accept default settings.
- 10 When the installation is complete, click **Here** to return to the Product Update page and close the window to exit.
- 11 When the client update on the DTS workstation is complete, copy the **emr.ini** file from the Desktop back to the client directory, overwriting the newly installed file.


- 12 Update **Active Directory Group Names** and **LinkLogic** (next sections) before restarting the workstation.

Update LinkLogic on the server

If you are using LinkLogic and Data Transfer Station (DTS) to exchange patient demographic and clinical data with external systems such as labs and transcription services, take the following steps on the machine where DTS is running. This will ensure that the service pack update is properly applied to the LinkLogic configuration.


- 1 Exit Data Transfer Station and confirm that it is not running on the workstation.
- 2 Navigate to the LinkLogic **Standard** folder (usually **C:\Program Files\Centricity Practice Solution 2006 \llogic\Config\Standard**).
- 3 Right-click on the **Standard** directory and select **Copy**.
- 4 Navigate to the remote LinkLogic **Config** directory on your database/Web server (such as **\\<Server_name>\llogic<Database_name>\ Config**).
- 5 Right-click on the **Config** directory and select **Paste**.
When asked if you want to replace the folder, click **Yes to All**.
- 6 On the DTS, navigate to the LinkLogic **Upgrade** folder (usually **C:\Program Files\Centricity Practice Solution 2006\llogic\Config\Upgrade**).
- 7 Right-click on the **Upgrade** directory and click **Copy**.
- 8 Navigate to the remote LinkLogic **Upgrade** directory on your database server (such as **\\<Server_name>\llogic<Database_name>\ Upgrade**).
- 9 Right-click on the **Upgrade** directory and click **Paste**.
When asked if you want to replace the folder, click **Yes to All**.
- 10 Restart Data Transfer Station.

Install the service pack to workstations

 When upgrading a client on the database/Web server, you may be required to reboot the machine during the upgrade process.

!!! Microsoft Vista users: if you have previously installed Service Pack 4 (build 245) on a Microsoft Vista workstation, you must first manually uninstall the existing Centricity Practice Solution application using Add/Remove Programs before upgrading to the latest version of Service Pack 5 on that workstation.


- 1 Start Centricity Practice Solution on a workstation. The Product Installer page displays.

 If you are installing the service pack on a Vista workstation, you must run the Internet Explorer application as an administrator.


- a Click **Start > All Programs**. The Programs menu displays.
- b Right-click the Internet Explorer shortcut and click **Run as Administrator**.
- c Type your user name and password in the User Account Control dialog and click **Submit**. The Internet Explorer application opens.

If you are an administrator, click **Allow** on the User Account Control dialog.

- 2 Verify that your URL points to the correctly updated Web page.
- 3 Click the Update link (in red) for **CPS_2006_Client**.
The Installer will detect that an older version of the client application exists and ask you to uninstall it.
- 4 Click **Here** to uninstall. The removal process uninstalls the application.

 When you uninstall the client application, you do not see a progress indicator for the uninstallation. This does not mean that the program is not responding or terminated, however. DO NOT attempt to end this process.

- 5 When the uninstall process is complete, click **Here** to continue to the Client Setup page.
- 6 Click **Install** to download the installer. The installer window displays.

 The time to download a service pack varies depending on available network bandwidth. Slow progress does not mean that the program is not downloading. The installer window will reappear once the download is complete.

- 7 On the installer Welcome screen, click **Next**, and then click **Next** on all subsequent screens to accept default settings.
- 8 When the installation is complete, click **Here** to return to the Product Update page and close the window to exit.
- 9 Do the following:
 - If you have Active Directory groups with mismatched Group Names, you must ["Update Active Directory Group Names" on page 28](#).
 - If your Active Directory group names all match, when installation is complete, restart **Centricity Practice Solution** on the workstation.

Update Active Directory Group Names

Take the following steps only if you have Active Directory Groups with Group Name and Pre-Windows 2000 Group Name that do not match.

!!! If you do not take these steps you will need to reassign security permissions to these groups after the update.

Update Active Directory Group Names

- 1 In Active Directory, create a user that is assigned to all groups where the group names do not match.
- 2 Log in once to the application as that user and then close the application. The SecurityGroup table is automatically populated with all groups associated with the user when you log in.
- 3 On the database server, open **Server Setup**.
- 4 Select **Advanced Setup Options** and then click **Next**.
- 5 Select **Utilities** and then click **Next**.
- 6 Confirm or enter the log file path and click **Next**. The setup directory path is not required.
- 7 On the Server Logon window, if necessary, enter the server name (including the optional SQL Server instance name if applicable), user name, and user password for the server where the Centricity Practice Solution database is located. Click **Next**.
- 8 On the Available Databases window, select the database to configure and click **Next**. If only one database is available, this window does not display.
- 9 On the Utilities window, click **Security**.
- 10 On the Security Options window, click **Finish**. This updates and synchronizes your security settings.

Configure DTS to run as a Windows service

Data Transfer Station (DTS) can be configured to run as a Windows Service. This allows the DTS administrator to start, stop, and check the status of the DTS from the Administrative Tools > Services control panel. If the DTS crashes, the new service restarts it automatically.


!!! You can only run one instance of DTS as a service per machine. GE recommends that you install each DTS instance to a separate qualified workstation or server.

To access this feature, you will configure an administration tool "XYNTService" that wraps the DTS in a layer controlled from Windows Administrative Tools or the Control Panel. This wrapper includes an executable and an .INI file that defines the parameters used to start and stop the application as a service.

 Running DTS as a Windows service differs in Vista environments.

Install the LinkLogicDTS service

- 1 Navigate to the Centricity Practice Solution\Client directory.
- 2 Double-click the **dts_install.cmd** file.

 If you are in a Vista environment, right-click the file and select **Run as administrator**. Click **Continue** at the User Access Control (UAC) dialog.

Configure the service to run under a user account

!!! DO NOT use this configuration on Windows Vista Operating System. You cannot set up the DTS console in Monitor mode on Vista. See [“Disable DTS UI interaction to the desktop in Vista”](#) below.

For processes created by the service to access a specific user's settings such as mapped network drives, you must configure the service to run under a user account.

- 1 On the Control Panel/Administration tools, click **Services**.
- 2 In the installed services list, double-click **LinkLogicDTS**.
- 3 In the Services Properties window, select the Log On tab.
- 4 Check **Local System Account** and **Allow service to interact with Desktop**.
- 5 Click **OK**.

Disable DTS UI interaction to the desktop in Vista

For Vista users, an administrator must disable all DTS user interface interactions to the desktop after installing the LinkLogicDTS Windows Service. After starting the LinkLogicDTS Windows Service, perform the following steps:

- 1 Click **Start > Control Panel | Administrative Tools > Services**.
- 2 Right-click the LinkLogicDTS service and select **Properties**.
- 3 Select the Log On tab and clear the check box that allows interaction with the desktop.

Start/stop the LinkLogicDTS service

The LinkLogicDTS service starts automatically by default when you reboot the computer. You can also start and stop the service from the Control Panel or Administrative Tools using the Services option.

Disable LinkLogic/DTS startup dialogs

To facilitate auto-restart of the Data Transfer Station, a new option on the LinkLogic > Defaults screen in Setup > Settings > LinkLogic disables all LinkLogic/DTS dialogs at startup, including user logon/password and a variety of error messages and warnings.

LinkLogic > Defaults

Network location of LinkLogic folder: E:\SOLUTION 2006\CLIENT\LLOGIC ...

Prefix characters for export file names: LL Counter: 0

Prefix characters for exception file names: LL Counter: 2

Interrupt DTS when Activity Log has more than 50000 messages.

Export no more than 4000 patients per export file.

Automatically archive 'Save' folder

Automatically remove error entries from the Activity Log
Remove entries after 30 days.

Automatically remove warning and note entries from the Activity Log
Remove entries after 7 days.

Automatically Queue Jobs
Queue jobs every: 30 seconds minutes hours

DTS Monitor threshold: 5 seconds minutes hours

Disable all LinkLogic / DTS startup dialogs

This option is unchecked by default. If you are running the LinkLogicDTS service, check this option to permit the DTS to restart automatically without user intervention. However, if the DTS cannot restart successfully, temporarily uncheck this option so you can see an error or warning that may be preventing restart.

- When configured for fully automatic restart, the DTS will restart in the event of a crash, but not a hang. If the DTS process is active but stops processing, resulting in a "process hang", you must stop it manually in the Windows Task Manager, or by using the stop service feature in the Windows Services control panel.

Uninstall the LinkLogicDTS service

- 1 Stop the LinkLogicDTS service.
- 2 Navigate to the EMR client installation directory.

3 Double-click the **dts_uninstall.cmd** file.

If you are in a Vista environment, right-click the file and select **Run as administrator**. Click **Continue** at the User Access Control (UAC) dialog.

Change the LinkLogicDTS service

The default settings for the service do not need to be changed for most implementations. The following path and process settings can be changed if necessary.

Edit working path directory

When you set up DTS to run as a service you might need to edit the XYNTService.ini file on the DTS workstation. You will find the XYNTService executable files in the Centricity Practice Solution folder on the DTS workstation, where the **ml3dts.exe** file is installed. In addition to the **XYNTService.exe** file, you will also find the **XYNTService.INI** associated configuration file in the Centricity Practice Solution\Client folder.


These are the default settings of the XYNTService.INI file:

[Settings]


```
ServiceName=LinkLogicDTS  
CheckProcessSeconds = 30
```

[Process0]


```
CommandLine=C:\Program Files\Centricity Practice  
Solution\Client\ml3dts.exe -u "http://localhost <dbname>" Instance=1
```

 This is the default path. If your install path is different, you must modify this value. To prevent DTS from displaying the Login/Password dialog, make sure you use the "-u" switch for auto-restart mode.

```
WorkingDir= C:\Program Files\Centricity Practice  
Solution\Client  
PauseStart= 1000  
PauseEnd= 1000  
UserInterface = Yes
```

 Vista users must change the `UserInterface` value from Yes to No.

```
Restart = Yes
```

 For additional information about these parameters, see the Centricity Practice Solution online help.

Change process settings

- 1 To set how often the service checks the DTS, change the CheckProcessSeconds value. Default is 30 seconds.
- 2 For PauseStart, set how long the service waits after starting the current process (and before starting the next process). Default is 1000 milliseconds.

This is useful when the next process depends on the previous process. For example, the second process has to "connect" to the first process in such a way that it does not run until the first process is finished with initialization.
- 3 For PauseEnd, set how long the service waits before it terminates the process it started. This gives the process a chance to clean up and shut itself down. Default is 1000 milliseconds.
- 4 To display the DTS user interface, set **UserInterface** to **Yes**.

!!! On Microsoft Windows Vista operating system, set **UserInterface** to **No**.

- 5 Confirm that Restart is set to Yes. This tells the service to restart the DTS in the event of a crash.

Known issues in this service pack

Custom zoom levels for report previews

An improvement opportunity detected in Centricity Practice Solution 2006 Service Pack 3 (8.0.3) was reported as resolved in Service Pack 4. The issue was actually resolved in Centricity Practice Solution v 9. The issue involves setting custom zoom levels when previewing reports.

Workaround: None. Use one of the preset zoom levels.

Reports module occasionally displays a blue box over the controls

Starting with CPS 2006, when the application is skinned, a blue box occasionally displays over the Forward and Back buttons in the **Reports** module. The buttons are still active; they simply have a skin over them that hides them from view.

Workaround 1: Click the blue box and the button functions correctly. This typically also removes the blue skin.

Workaround 2: Turn off skinning:

- 1 In the Windows Explorer, go to C:\Program Files\Centricity Practice Solution 2006\Client.
- 2 Right-click on the emr.ini file and select **Open with**.
- 3 Select Notepad and click **OK**.
- 4 Under [Logician Private], add the following line:

DOSKINNING=0.

- 5 Save and close the file.

Allocation sets do not automatically repopulate after reactivating insurance carriers

On the Insurance tab in Registration, clicking the check box to deactivate an insurance carrier for a patient removes the carrier's default allocation set from the Allocation Set field, but reactivating the carrier does not repopulate the allocation set field.

Workaround: After reactivating the insurance carrier, click the binoculars button beside the Allocation Set field to select an allocation set.


Dialog box color schemes may differ between XP and Vista operating systems

Because some dialog boxes are generated directly from the operating system, the look and feel of those dialogs may be different between Windows XP and Vista environments.

Workaround: Not applicable. The application functionality is not affected.

Error when using the Webcam button in Vista

In Vista, User Account Control (UAC) prevents the Centricity Practice Solution from importing images via the Webcam button.

 Make sure that you are using a Vista-compatible webcam before using any of the following workarounds.

Workaround 1: You can turn off User Account Control (UAC) for each user who must use a webcam. Turning off UAC must be performed by an administrator.

- 1 Click **Start > Control Panel | User Accounts > User Accounts**.
- 2 Click **Turn User Account Control on or off**.
A dialog displays, asking you to confirm the action.
- 3 Click **Continue**. The Turn on User Account Control (UAC) to make your computer more secure window appears.
- 4 Clear the **Use User Account Control (UAC) to help protect your computer** option.
- 5 Click **OK**. A dialog displays, asking you to restart your computer.
- 6 Click **Restart Now** to immediately restart your computer, or **Restart Later** to continue working without restarting.

Workaround 2: For webcams that can also function as digital cameras, you can use the Camera button instead of the Webcam button to capture images in Centricity Practice Solution. Refer to your camera's documentation or manufacturer to determine whether your webcam will also function as a digital camera.


Workaround 3: You can capture images outside of Centricity Practice Solution, and import the images using the File or Clipboard button on the Acquire Photo window.

Default website URL not visible in the CPS 2006 client installer in Vista

During installation in Vista, the default website that you are using to install Centricity Practice Solution is not visible on the Enter Your website page in the CPS_2006_Installshield wizard.

Workaround: Perform the following steps to view the default website. You must perform these steps for each workstation.

- 1 Launch Internet Explorer on the Vista client workstation.
- 2 Select **Tools > Internet Options** from the menu.
- 3 Select the Security tab.
- 4 Select the Trusted Sites zone and click **Sites**.
- 5 Enter the URL for the default CPS website in the Add this website to the zone field and click **Add**.

 Make sure that the **Require server verification...** option is not checked.

- 6 Click **Close**.
- 7 Click **OK** on the Internet Options window.

When you launch the application, you may receive message windows, asking if the ActiveX control is trusted. Click **Yes** if this message appears.

Uninstall or Modify Centricity Practice Solution in Vista

To uninstall or modify the Centricity Practice Solution application, you must run the setup wizard as an administrator.

Workaround 1: You can run the setup file as an administrator in a single session:

- 1 Click **Start > All Programs > Centricity Practice Solution 2006**.
- 2 Right-click **CPS 2006 Setup**.
- 3 Select **Run as administrator**.

Workaround 2: You can set the setup file to permanently run in administrator mode:

- 1 Click **Start > All Programs > Centricity Practice Solution 2006**.
- 2 Right-click **CPS 2006 Setup**.
- 3 Click **Properties**.

- 4 On the Compatibility tab, select **Run this program as an administrator** in the Privilege Level area.
- 5 Click **OK**.

Workaround 3: Use the Add/Remove Programs function to uninstall or modify the application. Add/Remove Programs automatically assigns administrator privileges to the setup wizard.

Incorrect instance of Microsoft Word displays for reports in Vista

If you have more than one instance of Microsoft Word open in Vista, opening a Chart report from Centricity Practice Solution may not trigger the correct instance of Word to become the active window.

Workaround: Close all instances of Word prior to opening a Chart report.

Insert Symbol window only displays controls correctly when opened from Chart > Options > Preferences

The Insert Symbol window does not display the radio buttons or the action buttons when you access the Preferences window from Options > Preferences | Patient Charts > Quick Text > Insert Symbols button in any module other than Chart.

Workaround 1: Enter the search criteria in the Find Symbol field and press Enter. The window will display the search results and allow you to double-click the desired symbol.

Workaround 2: Access the Insert Symbol window via Chart module > Options > Preferences | Patient Charts > Quick Text > Insert Symbols button.

Printer drivers using COM may cause application crashes

Some manufacturers' printer drivers that use COM have a known issue that prevents the correct shut-down of the driver. Before Service Pack 3, this caused the Centricity application to hang when using an affected printer driver. Starting with Service Pack 3, a change was introduced in the Centricity application to prevent the affected printer drivers from causing this problem by performing the print function from within a separate process, allowing the COM components to shut down without error. This coding change significantly reduces the rate of incidence for this issue in the application. The affected CPS modules are Billing, Accounts Receivable, Visits, and Balance Forward. The coding change was tested on the following printer drivers:

- HP Deskjet 3840 Series
- HP 1300 PCL 6
- Canon MP 160
- HP P2015 PCL 5e (non post script)
- HP Universal Printing PCL 5

Address link maintained in the Internet Explorer when using Get Financial Information, Get Financial History, or Get Patient History

When using Get Financial Information, Get Financial History, and Get Patient History in Registration, the link to the address is maintained in the user's Internet Explorer cache folder. Financial pages remain visible within the browser history list and must be removed manually.


To remove the pages:

- 1 Open Internet Explorer.
- 2 Select View > Explorer Bar > History from the menu.
- 3 In the Today folder, navigate to the folder containing your historical CPS pages.
- 4 Right-click the pages you want to delete, and select Delete.

The saved pages no longer appear in the history list.

Workaround 1: Change your Internet Explorer settings so that recently accessed sites are not saved in the history on computers that are shared publicly. To change your settings:

- 1 Open Internet Explorer.
- 2 Select Tools > Internet Options from the menu.
- 3 In the History area, change the Days to keep pages in history option to 0. Alternatively, click Clear History to immediately clear your history file.

 If you do not change your Days to keep pages in history option to 0, you will need to clear your history each time you use Internet Explorer if you want to remove your viewed pages from the history file.

- 4 Click **OK**.

Workaround 2: You can limit the users' ability to access these pages by removing them from the security settings in the Administration component.

- 1 In Administration, navigate to System > User/Location Setup > Security | Main Menu > Registration > View Financial-Patient.
- 2 Change the security option as needed for the desired users.

MIK IDispatch error #19 received on creation of an external vendor outbound only interface

Configuring MIK to send A04 and A08 messages out of CPS without an inbound transaction path causes an error each time you save or update a patient. The errors are placed in the MIK.log file, and no HL7 files are placed in the specified folder for your newly-created or updated patient.

Workaround:

- 1 Add a false or dummy inbound path for the charges.

- 2 Stop the MIK Service, and click Next to advance through all ServerSetup screens.
- 3 Restart the MIK Service, clicking Next to advance through all the ServerSetup screens.
- 4 Remove the dummy inbound path you created.
- 5 Stop the MIK Service, and click Next to advance through all ServerSetup screens.
- 6 Restart the MIK Service, clicking Next to advance through all the ServerSetup screens.

Windows Server 2003 MS KB941569 creates an "Invalid User Name or Password" error

Workstations that download the Windows Server 2003 MS KB941569 update display an "Invalid User Name or Password" when you launch Centricity Practice Solution.

Workaround 1: The workaround may involve two issues:

- 1 Click Start, and open the Control Panel.
- 2 Double-click Add/Remove Programs.
- 3 Remove the Windows Security KB entries in the following order (must have "Show Updates" checked to see this entry to remove):
 - KB941568
 - KB942615 (forces restart)
 - KB942840 (forces restart)
 - KB941569

Workaround 2: If the issue persists, and if there are Application Event Viewer messages such as:

EVENT TYPE: ERROR


EVENT SOURCE: USERENV

EVENT CATEGORY: NONE


EVENT ID: 1030

DESCRIPTION: WINDOWS CANNOT QUERY FOR THE LIST OF GROUP POLICY OBJECTS. A MESSAGE THAT DESCRIBES THE REASON FOR THIS WAS PREVIOUSLY LOGGED BY THE POLICY ENGINE. FOR MORE INFORMATION, SEE HELP AND SUPPORT CENTER AT [HTTP://SUPPORT.MICROSOFT.COM](http://support.microsoft.com)

- 1 Click **Start > Run**.
- 2 Type `regedit` in the field, and click **OK**. The Registry Editor appears.
- 3 Add the following registry key per MSKB 842804.

 Only IT staff should edit the Windows registry.

- 4 Locate HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Windows NT\Current Version\Winlogon.
 - 5 Add the WaitForNetwork entry, if it is missing. To add the entry, perform the following steps:
 - a Right-click the Winlogon subkey.
 - b Select New.
 - c Click Dword Value.
 - d In the Value name box, type WaitForNetwork.
 - e Right-click WaitForNetwork, then click Modify.
-

 In the Edit DWORD Value dialog box, in the Value Data box, type 1, and then click OK.

- f Close the Registry Editor.

Query limitations prevent accurate display of problem codes

In Chart, if you enter problem code search criteria out of order, all the pertinent search results will not display.

Workaround: Enter search criteria for finding problem codes in the following order to receive the correct information:

- Active Diagnosis Contains [*search criteria*]
- Problem Type
- Active Diagnosis does not contain [*search criteria*]

Invalid date evaluation not occurring for all methods of saving

Several fields in Registration do not respond with the verification message when you enter an incorrect date until you click the X to close Registration, then choose Yes on the Save dialog. The fields are:

- Additional tab / Authorizations Section / Release Pt Info Date
- Additional tab / Authorizations Section / Privacy Policy Date
- Additional tab / Authorizations Section / Benefit Assignment Date
- Financial tab / First Visit

Workaround: None. Double-check the entered dates before saving and closing Registration.

Mouse scroll option not working in Encounter Types

You cannot use the mouse in Encounter types.

Workaround: Drag the slider bar in the right side to view the data.

MIK errors when processing incoming ADT messages

When the MIK receives an ADT message, an error message is generated within the log file that states "The Parameter is Incorrect" due to the new requirement that the PID-4 segment be populated with a value. Most external systems will not be sending this information to the CPS application, and thus it cannot be a required field by the MIK.

Administrator user causes performance degradation in Citrix Presentation Server 4.0

When using Citrix Presentation Server 4.0 to host the CPS 2006 application, CPS 2006 application performance is negatively effected when an Administrator logs on to the server. Soon after an administrator logs on to the machine, the CPS application performance becomes degrades to the point that the server must be restarted.

Workaround: Create an administrator-equivalent account to perform system administration tasks. The administrator account should not be used; it should be renamed and password restricted as a security best practice.

Registration tab accelerator indicators do not display

Registration tabs do not display the following indicators for accelerators (underlined letters) so users can see which key strokes to use. All other indicators are appear in the application interface.

For this Registration tab...	Use these key strokes...
Payment Plan	Alt + P
Guarantor	Alt + G
Additional	Alt + I
Insurance	Alt + U
Contacts	Alt + S
	Note: Save is Ctrl + S
Appointments	Alt + T
Financial	Alt + C
Payment Plan	Alt + L

OCX registration errors may occur on some workstations immediately after installing the service pack

A small number of workstations may experience a problem registering OCX controls following installation. Some users may see this error the first time they launch the application after the update:



Workaround: To prevent this error, do the following:

- Log onto the workstation with Administrator rights to launch the application for the first time
- Grant all users Administrator rights for the first day following installation.

Faxing prescriptions in not supported in the state of Ohio

While it is possible to fax prescriptions in Ohio using the correct prescription form, the state pharmacy board requires two-factor authentication to ensure Rx authenticity. Two-factor authentication provided by biometrics integration is not currently supported in Centricity Practice Solution.

SQL Instance name with a forward slash is truncated in Server Setup

If your SQL Instance name includes a machine name such as "VSH-MIS06\SQL2005", the Server Name value in Server Setup application displays only the machine name, and you will receive a connection error if it is not corrected manually.

Workaround: Manually add the end of the SQL instance name to Server Name fields where prompted to avoid the connection error message.

Unsupported characters cause errors, warnings and claim rejections

The following characters are not supported by SQL Server and should not be used in the fields detailed below. They will generate application errors or warnings or result in claim rejection by payers.

.	period	*	asterisk
,	comma	#	pound sign
:	colon	\	back slash
;	semicolon	/	forward slash
-	hyphen	&	ampersand
!	exclamation point		

DO NOT use these characters in these fields:

In this module....	Do not use unsupported characters in these fields...
Administration / Edit Insurance Carriers	ListName, Address1, Address2, City, Zip
Administration / Edit Company	ListName, Address1, Address2, City
Administration / Edit Facility	Address1, Address2, City
Administration / Edit Facility	ListName
Administration / Edit Referring Provider	Prefix, First, Middle, Last, Suffix, ListName, Address1, Address2, City
Administration / Edit Resource	ListName, First, Middle, Last, Suffix
Administration / Edit Responsible Provider	First, Middle, Last, Suffix, ListName, Address1, Address2, City
Registration / Patient Tab	Patient ID, Title, First, Middle, Last, Suffix, Address1, Address2, City, Zip
Registration / Guarantor Tab	Title, First, Middle, Last, Suffix, Address1, Address2, City, Zip
Registration / Insurance Tab	Insured ID, Group ID

Advanced printing window displays incorrectly when printing reports

Some users may experience difficulties in reading the Advanced Print Options window when printing reports. The page format and number of copies fields may display incorrectly.

Workaround: Before opening the Advanced Print Options window, turn off skinning by pressing **Ctrl + Alt + J**.

Access product updates, documentation, and services

To download service packs, KnowledgeBase updates, or factory observation terms, go to <http://centricitypractice.gehealthcare.com>. On the Web site, you will also find release publications, Support contact information, and links to training and the Centricity Practice users' group.

Sign up for email announcements

To receive e-mail announcements of new service packs, product alerts, maintenance reminders, tips and tricks, subscribe to the Centricity Practice Services mailing list. All GE customers can receive this free Listserv. To sign up, send e-mail to centricitypmservices@ge.com. Include your name, your company name, address, and phone number in the body of the message.

Appendix A: Hardware/software requirements for Centricity Practice Solution

Hardware/software requirements for Centricity Practice Solution

These are summary requirements for Centricity Practice Solution. The following detailed resources are available on your documentation CD and on the Centricity Practice Solution Services Web site at

<http://centricitypractice.gehealthcare.com>:


- To calculate disk space and RAM requirements for your environment, use *Calculating Hardware Requirements for Centricity Practice Solution* (spreadsheet application)
- For detailed specifications and an overview of product features and options that impact software and hardware planning, see *System Requirements for Centricity Practice Solution*
- For detailed requirements and recommendations for WTS/Citrix environments, see *Planning and installing Centricity Practice Solution in WTS/Citrix Environments*.

Your GE Representative or Reseller can assist you in selecting the best equipment configuration.

Database server

Processor - recommended

- **Up to 25 users** - Single Intel Xeon DC (Dual Core), 2.8GHz or faster, 2MB L2 cache, 800MHz FSB or equivalent
- **26 to 125 users** - Dual Xeon DC (Dual Core), 2.8 GHz or faster, 2MB L2 cache, 800 MHz FSB or equivalent
- **126-250 users** - Quad Intel Xeon DC (Dual Core) 2.8 GHz or faster, 2MB L2 cache, 800 MHz FSB or equivalent

 Intel Core 2 dual processors should run at 2Ghz or faster, Intel Quad core processors should run at 1.86 GHZ or faster.

RAM and disk space - recommended minimum

- **Up to 25 users** - 4GB
Mirrored SCSI hard disk (RAID 1).
- **26 to 125 users** - 8GB
Hardware RAID disk arrays (RAID 1+ 0 - disk mirroring with striping). See *Calculating Hardware Requirements for Centricity Practice Solution* to determine number of disks.

- **126 to 250 users** - 16GB
See recommendations for 26 - 125 users.

☛ Requirements vary considerably depending on the size and complexity of your implementation. To calculate actual disk space and RAM requirements for your environment, use *Calculating Hardware Requirements for Centricity Practice Solution* (spreadsheet application available on your documentation CD).

Disk and database file layout

- Locate database log files on a mirrored disk set.
- Locate all other database files on a separate RAID 1+0 disk set. At least 2 spindles per 5 users, minimum 4 disks.
- For >125 users locate tempdb on its own RAID 1+0 disk set.
- Allow one tempdb data file per processor. Set tempdb data files to 100 MB with 10% autogrowth in size.
- Wherever possible, locate these files on separate drives:
 - transaction log
 - tempdb data files
 - windows page file
 - SQLServr.exe

☛ It is better to have many smaller spindles than a few large ones.

Other hardware requirements

- **Network interface card** - 32-bit or higher 100Base-T (100Mbit) or higher. In large environments, high-speed full-Gbit switch with multi-Gbit back plane recommended.
- **Display** - Color SVGA, minimum 1024 x 768 - Small Fonts, High Color (16-bit, 65536 colors) or better
- **UPS** - (uninterruptible power supply) minimum 15 minutes emergency full load backup power
- **CD-ROM** - 20x-speed or faster
- **Modem** - 56K baud or faster fax/modem
- **Tape drive** - for backups or backup system from another server with access to the application server
- **Printers** - mid-range laser printer required for some reports. Some low-end printers do not have a large enough printable area. Dot-matrix printers may be required for printing forms with carbons.

Required software

- **Operating system:** Microsoft Windows Server 2003, Standard or Enterprise Edition, R2, (32-bit ONLY, SP1 or later required)

Note: If you are running on Microsoft Windows Small Business Server 2003, you must upgrade to SQL Server 2005.

!!! Microsoft Windows 2000 Server and Small Business Server 2000 are no longer supported.

After working closely with Microsoft on product performance issues, GE has determined that SQL 2005 interoperability with Windows 2000 Server does not facilitate memory management requirements needed for Centricity Practice Solution. Because the -g1024 switch is not interpreted on Windows 2000 Server, systems running on that operating system will experience CLR cycling (performance degradation and DB disconnects).

With this service pack, the Server Setup application will warn you if it detects that your database is running on Windows 2000 Server. GE strongly recommends that you upgrade to Windows Server 2003 or higher prior to the next service pack to take advantage of memory management features that support Centricity Practice Solution on SQL Server 2005.

-
- **Browser:** Internet Explorer (IE) 6.0, SP1 (if client is installed on server)
 - **Web server** additional requirements:
 - Internet Information Services (IIS) v6.0
 - Microsoft.NET Framework 1.1, SP1
 - **Production database engine:**
 - Microsoft SQL Server 2005 Standard Edition, SP1 or later
 - Microsoft SQL Server 2005 Workgroup Edition, SP1 or later
 - Microsoft SQL Server 2005 Enterprise Edition, SP1 or later
 - **Single-user demo database engine:** Microsoft SQL Express
- This version only supports a single-user demo database installed on a laptop or PC. Not for use in production or for networked training.

!!! Not for use in production. Database support and maintenance features required in Centricity Practice Solution are not included.

Client workstation / MIK / Data Transfer Station

Required hardware

See “[Windows® Vista support](#)” on page 3 for Microsoft Vista Business Edition hardware requirements

Processor - Pentium III, 1 GHz or higher

RAM - 1GB

Hard disk - Client: 36 GB or more; DTS/MIK: 76 GB or larger hard disk (excluding LLOGIC directory)

Network interface card - 32-bit or higher 100Base-T (100Mbit) or higher

Display - Color SVGA, minimum 1024 x 768 - Small Fonts, High Color (16-bit, 65536 colors) or better

Video card - only clients running Schedule module with schedule displaying more than 8 resources. Required video graphics card with 128 MB RAM.

Monitor - 15" - 17"

UPS - (uninterruptible power supply) minimum 5 minutes emergency full load backup power

CD-ROM - 20x-speed or faster

Image capture devices - GE supports any twain-compliant digital video device, digital camera, or scanner that plugs into a USB port

Modem - 56K baud or faster fax/modem (for filing electronic insurance claims from workstations)

Tape drive - for backups or backup system from another server with access to the application server

Printers - Laser printer required for most reports, dot-matrix printer required for forms using carbons.

Required software

- **Workstation**
 - Windows Vista Business Edition
 - Windows 2000 Professional SP4 (32-bit ONLY)
 - Windows XP Professional SP2 (32-bit ONLY)
 - Windows XP Tablet PC Edition 2004 (SP2 or later) or Windows XP Tablet PC Edition 2005
- **Data Transfer Station (clinical data exchange)**
 - Windows 2000 Professional SP4 (32-bit ONLY)
 - Microsoft Windows XP Professional SP2 (32-bit ONLY)

- Microsoft Windows 2000 Server SP4 or Windows Server 2003 (SP1 or later, 32-bit ONLY)
- **MIK Workstation (billing/insurance data exchange)**
 - Windows XP Professional (SP2 or later) (32-bit ONLY) or Windows 2003 Server (32-bit ONLY)


Other client software

- Internet Explorer (IE) 6.0, SP1 (also required on servers where client is installed)
- Microsoft .NET Framework 1.1, SP1 (required for database communications and installed if not present on the workstation)

WTS/Citrix server

Required hardware

- **10-20 users (10 per processor)** - Minimum - Dual Intel Xeon DC, 2.8 GHz or higher, 2 MB L2 cache, 800 MHz FSB.

 Intel Core 2 dual processors should run at 2GHz or faster, Intel Quad core processors should run at 1.86 GHz or faster.

- **RAM** - Varies - see *Planning and installing Centricity Practice Solution in WTS/Citrix Environment* for recommended calculations and variables.
- **Disk space** - For Microsoft® Windows 2000 Server/ Server 2003 Terminal Services with Citrix Presentation Server 4.0:
 - 1.2 GB for the operating system
 - + 600 MB for Centricity Practice Solution
 - + Page file size (2x application server RAM)

This assumes that Centricity Practice Solution and the page file reside on the same disk drive as the application server operating system.

Required software

- **Server operating system:**
 - Microsoft Windows 2000 Server, SP4 (with Terminal Services) (32-bit ONLY) with Citrix® Presentation® Server 4.0 (required)

!!! When Windows 2000 Terminal Server is used as a platform, RDP thin clients will not meet minimum display requirements and color ergonomics might be impacted.

- Microsoft Windows Server 2003, Enterprise Edition, SP1 (with Terminal Services) (32-bit ONLY) with or without Citrix Presentation Server 4.0

- **Other software**

- Internet Explorer (IE) 6.0, SP1
- Microsoft .NET Framework 1.1, SP1
- Microsoft Data Access Components (MDAC) 2.8 (on Windows 2000)

- **WTS/Citrix clients**

- Citrix® ICA® Client (Win32): v9.100.36280 or higher configured for 1024x768 High Color (16-bit, 65536 colors) or greater display resolution
- Microsoft® RDP client: v5.2 or higher (with Windows Server 2003 and higher)
- Thin client: any ICA / RDP compliant device

Unsupported operating systems

The following operating systems are NOT compatible with Centricity Practice Solution:

- Windows Vista Starter, Windows Vista Home Basic, Windows Vista Home Premium, Windows Vista Enterprise, Windows Vista Ultimate
- Windows NT Workstation, 9x, ME, or XP Home Edition
- Windows 2000 Server (except as noted for WTS/Citrix server on [page 46](#))
- Windows Server 2003 Web Edition or Windows NT 4.0 Server
- Small Business Server 2000
- Any 64-bit editions of Microsoft Windows operating systems
- Microsoft SQL Server 2005 Development Edition
- Microsoft SQL Express. This version only supports Centricity Practice Solution single-user evaluation demo database.