

3M™ Health Data Management System Products

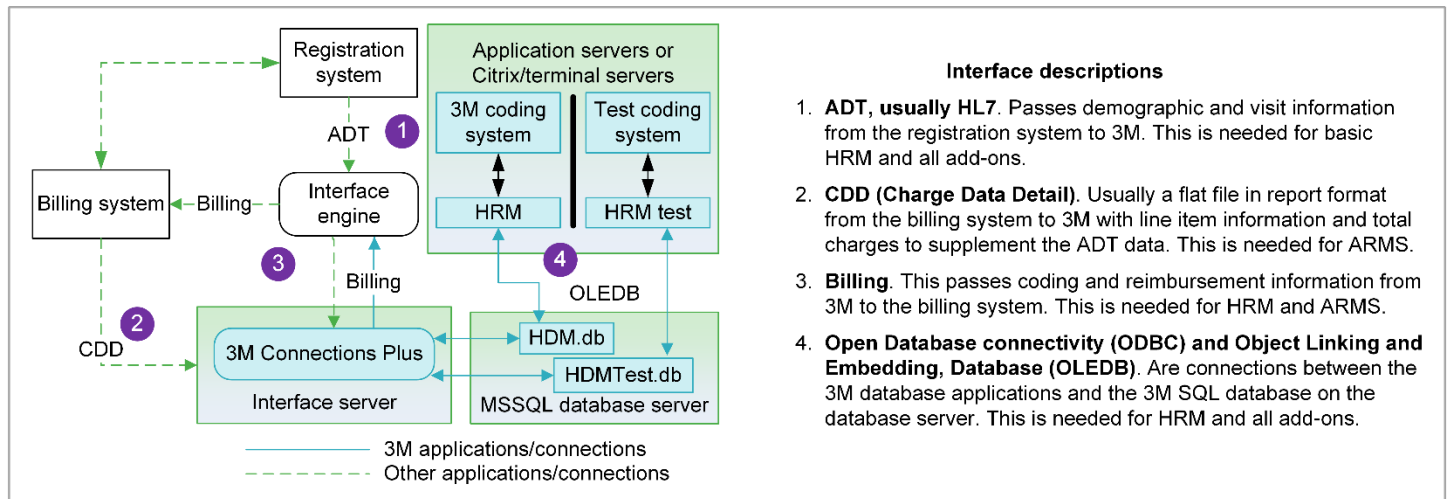
Including 3M™ Health Record Management Software (HRM), 3M™ Ambulatory Revenue Management Software (ARMS), all products combined with HRM, and 3M™ Clinical Documentation Improvement System (CDIS)

HARDWARE AND SOFTWARE SPECIFICATIONS

This document contains the requirements for all Microsoft® Windows®-based PCs running any of the 3M Health Data Management (HDM) System products. For networks, these are minimum requirements for a small system (two concurrent reporters, fewer than 170,000 annual discharges, nine or fewer concurrently active workstations). Systems that exceed these limits may need a multi-processor server to meet demands; 3M can help you determine the network requirements for a system with greater usage.

When determining the configuration requirements for your system, be sure to account for any other applications running on the same computer as your HDM products. If you wish to enhance your systems, 3M recommends additional RAM and a faster CPU.

Note: For Wide Area Networks or terminal servers, your 3M sales representative and IT professional can discuss options.



Requirements specific to certain products or systems

3M application server. The 3M application server can be one that hosts other file and print services. However, a dedicated application server is preferred.

Interface server. For security and reliability, the interface server must be dedicated to run only the 3M™ Connections Plus software. It also needs to be a server class computer with a server-tuned version of Microsoft Windows. It is configured as a 3M application client to access the database.

Database server. In a large environment, the 3M database can reside in a database server farm. The constraining performance factors are I/O, then RAM.

Remote or wireless access. For Windows-based remote or wireless users, a Microsoft terminal server (or cluster) or Citrix server is required; it can greatly improve the performance of low-bandwidth network connections.

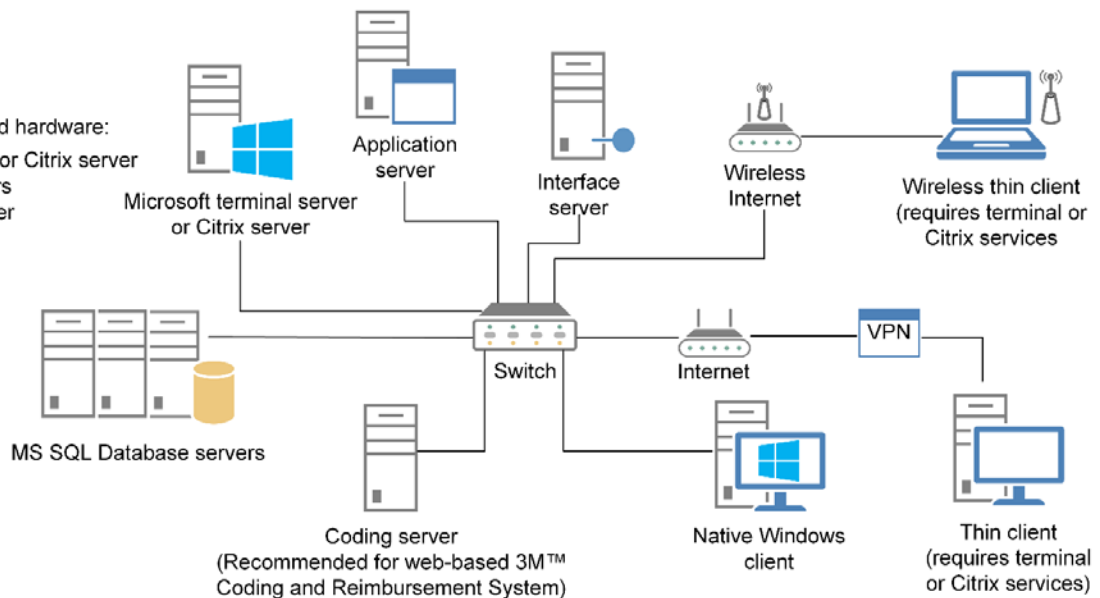
Additional considerations

- Functions and specifications are subject to change without notice. To ensure you have the latest recommendations, check with your 3M Account Representative before ordering hardware.
- If using Citrix or terminal services, you must install a licensed copy of Microsoft Word and Excel on the Citrix or terminal server.
- For installation and support of the HDM software, you must provide a way for 3M representatives to access your system at each location remotely using the Internet.
- 3M also recommends the following for each server:
 - Power protection, such as a UPS, that provides 15 minutes of backup power
 - Fault-tolerant critical components (network and disk controllers, power supplies, and fans)



Summary of required hardware:

- Terminal server or Citrix server
- Database servers
- Application server
- Coding server
- Interface server



Application, database, coding, and terminal servers	Interface server	Workstations
<p>CPU—Dual core††† 2.4GHz; 64-bit is recommended†</p> <p>RAM—16GB††</p> <p>Disk space—80GB†† free</p> <p>DVD-ROM drive</p> <p>Network interface cards—Ethernet 10Mbps required, 1Gbps cards recommended; all cards must have the latest drivers loaded</p> <p>Operating system—Windows Server 2012 R2 Standard, Foundation, Essentials, and Datacenter; Windows Server 2008 Standard, Enterprise, and Datacenter; 64-bit is recommended†</p> <p>Database software—Microsoft SQL Server 2008, 2012, or 2014; with Windows authentication</p> <p>Microsoft Office 2010 SP2, 2013, or 2016—Required (on terminal servers only) for using Microsoft Word forms and viewing reports as Excel spreadsheets</p> <p>Windows TCP/IP—Required for ARMS and interface workstations using realtime links</p> <p>Disk storage—RAID 5 required for data and RAID 1 (mirroring) for the primary boot and system partition</p> <p>Backup device—3M requires backup and restoration procedures for all system software, applications, and data</p> <p>Internet access—Internet Explorer 9.0 or higher with Internet access on a 1.5 Mbps (T1) line</p> <p>Additional requirements—Adobe® Reader® software; Microsoft .NET Framework 2.0 (required for the Coding and Reimbursement System) and .NET Framework 3.5 SP1; WinZip® software</p>	<p>CPU—2.4GHz†† 32-bit or 64-bit</p> <p>RAM—4GB††</p> <p>Disk space—80GB†† free</p> <p>DVD-ROM drive</p> <p>Display—SVGA 17-inch monitor and SVGA 1024x768 high color or 32-bit true color video card with 128MB RAM</p> <p>Network interface cards—Ethernet 10Mbps required, 1Gbps cards recommended; all cards must have the latest drivers loaded</p> <p>Operating system—Windows Server 2012 R2 Standard, Foundation, Essentials, and Datacenter; Windows Server 2008 Standard, Enterprise, and Datacenter; 64-bit is recommended†</p> <p>Database software—Microsoft SQL Client (included with Microsoft SQL Server)</p> <p>Windows TCP/IP—Required for ARMS and interface workstations using realtime links</p> <p>Backup device—3M requires backup and restoration procedures for all system software, applications, and data</p> <p>Internet access—Internet Explorer 9.0 or higher with Internet access on a 1.5 Mbps (T1) line</p> <p>Additional requirements—Adobe Reader software; WinZip® software</p>	<p>CPU—1.4GHz†† 32-bit or 64-bit</p> <p>RAM—4GB††</p> <p>Disk space—40GB†† free</p> <p>DVD-ROM drive</p> <p>Display—SVGA 17-inch monitor and SVGA 1024x768 high color or 32-bit true color video card with 128MB RAM</p> <p>Network interface cards—Ethernet 10Mbps required, 1Gbps cards recommended; all cards must have the latest drivers loaded</p> <p>Operating system—Windows 10* (32- or 64-bit), Windows 8 (32- or 64-bit, excluding Home editions), Windows 7**, Windows Vista®; 64 bit is recommended in all cases</p> <p>Database software—Native Windows clients require Microsoft SQL Client</p> <p>Microsoft Office 2010 SP2, 2013, or 2016—Required for using Microsoft Word forms and viewing reports as Excel spreadsheets (unless installed on a terminal server)</p> <p>Internet access—Internet Explorer 9.0 or higher with Internet access on a 1.5 Mbps (T1) line</p> <p>Printer—Windows compatible (at least one per network); 3M does not support printer redirection with HDM products</p> <p>Additional requirements—Adobe Reader software; Microsoft .NET Framework 2.0 (required for the Coding and Reimbursement System) and 3.5 SP1</p>

† 32-bit operating systems can be accommodated. Contact a 3M Client Support Services representative to learn more.

†† Actual requirements vary by product and system configuration. Contact a 3M representative for an analysis based on current and future usage.

††† Quad core is recommended for high load systems.

* HDM v5.0.2 and previous are not compatible with Windows 10.

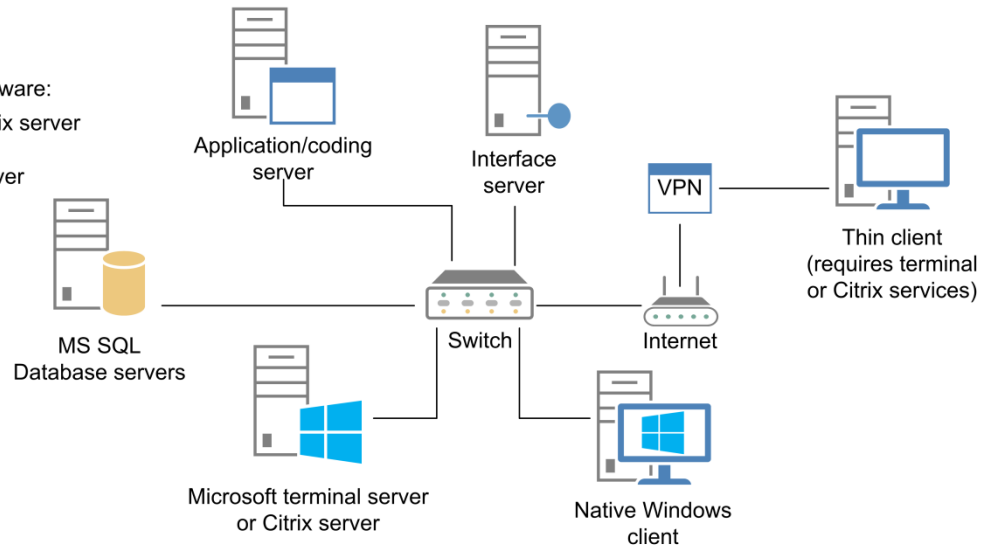
** If you are installing a new McKesson CareEnhance Review Manager Version 10 system in a Windows 7 environment, please contact McKesson customer support for the manual correction that is required for folder naming.

Additional configuration examples

Following are some additional examples of how you might configure your system.

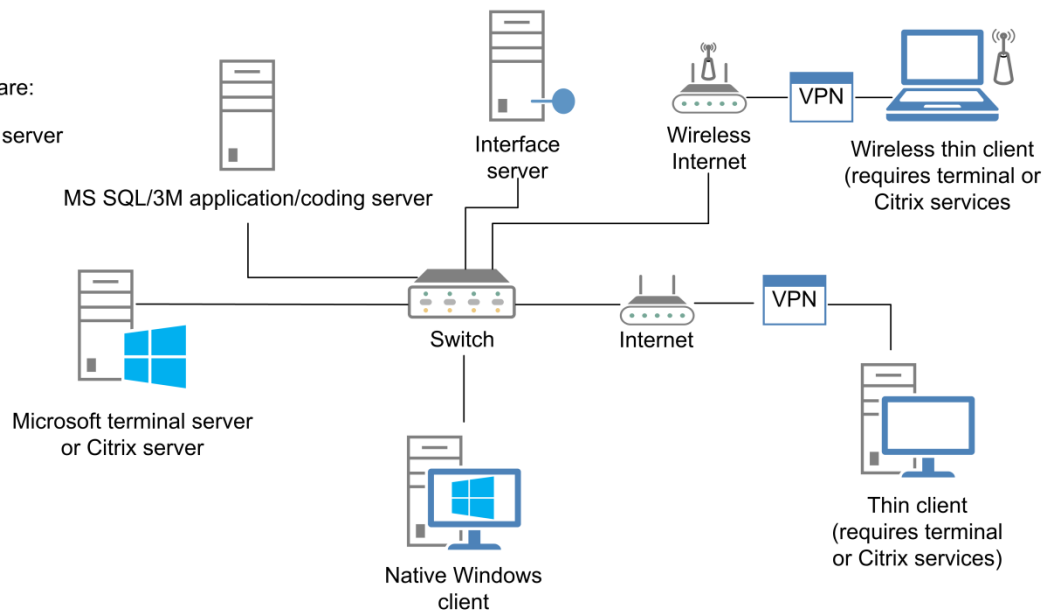
Summary of required hardware:

- Terminal server or Citrix server
- Database servers
- Application/coding server
- Interface server



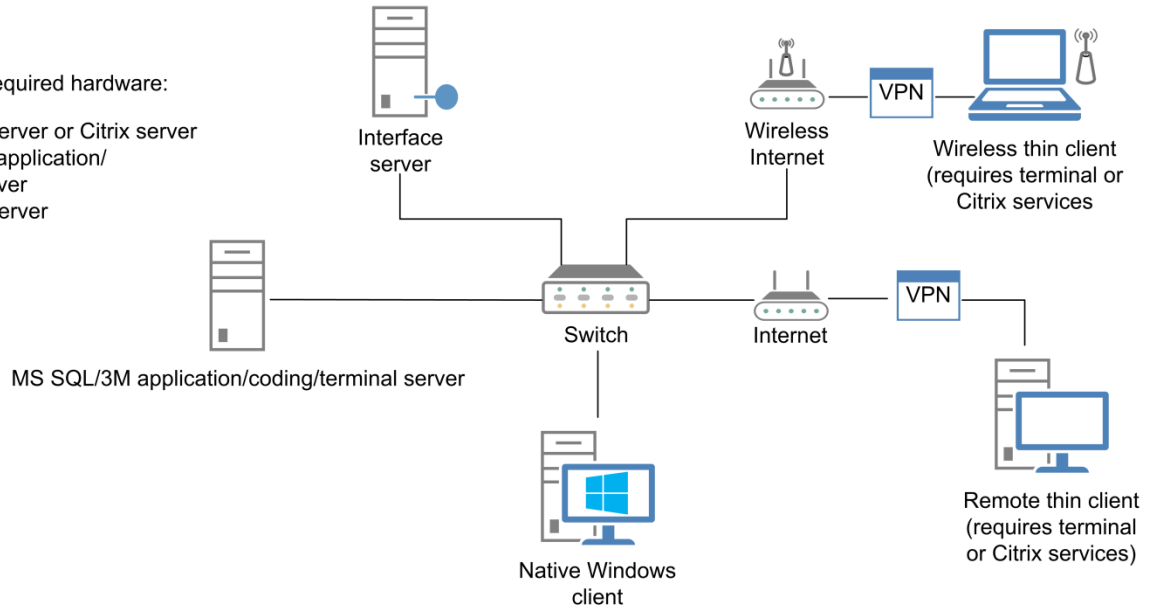
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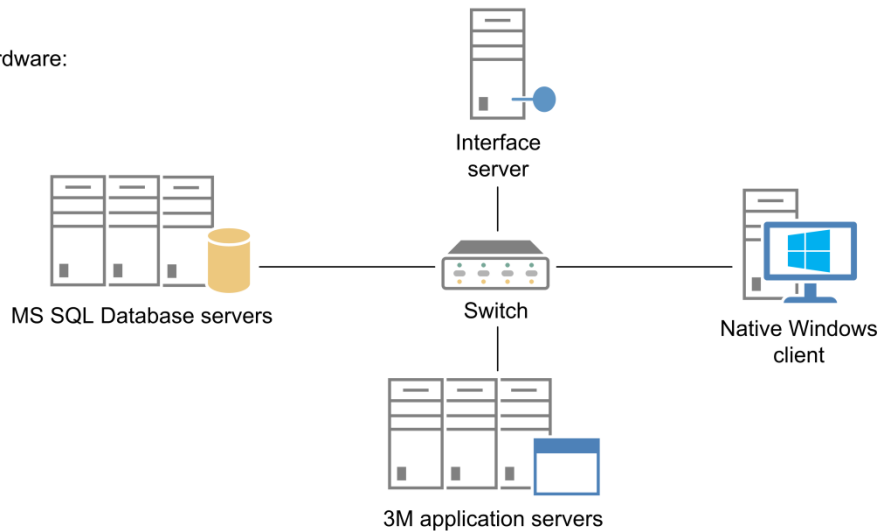
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Summary of required hardware:

- Database servers
- Application servers
- Interface server



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