System Specifications and Hardware Recommendations
For MedInformatix v7.6 Complete EHR

August 2016

Windows 10 Compatibility Statement
The MedInformatix client application is compatible with the recently released Windows 10. Testing began with early pre-release versions and completed after the official July 29th, 2015 release.

NOT COMPATIBLE: The Executive Dashboard is currently not compatible with Windows 10.

We are currently evaluating all additional modules for compatibility and will update this compatibility statement as needed.

A MedInformatix installation requires a workstation for each user who will access the system and a central server to store and process the data. A large installation may require more than one server. Microsoft SQL Server will manage the MedInformatix database, which is a software package that will run solely on the server machine. At least one backup storage device is needed to protect the data in case of system failure such as a network storage device, file share or tape drive. Printers also need to be available to print reports, forms and documents. The following topics will give a more detailed explanation of the equipment and software recommendations.

The hardware configurations listed below can be used as a guide to server and workstation requirements for MedInformatix Systems. This should be used as a guide only. The final configuration will depend upon the actual use of the system including tolerated down time in the event of hard drive or server failure.

MedInformatix officially supports Microsoft Windows 7/8/10 (see above statement regarding Windows 10), Microsoft Windows Server 2012 and Microsoft SQL Server 2012.

HARDWARE RECOMMENDATIONS

SERVERS

Each server is unique to its site. The specifications will vary greatly depending upon the environment, including virtual server environments. For instance, a site having 75 users may be able to function with a single well-designed and robust server whereas a site with 1000 users will always require multiple servers. If you have questions regarding a server that you already have, contact MedInformatix Support to determine whether or not it will be sufficient.

An installation requires at least one server computer that will store the centralized data and program files for the network. A server machine will provide two functions for the MedInformatix software. It will store the system files and thus act as a file server. It will also run a database management application that will manage the MedInformatix SQL database. A server that runs SQL database software is called a "database server". On a small site, a single server machine will handle both server functions. In larger sites, separate server machines will handle each function. MedInformatix currently recommends Dell servers for the technical support service, value and reliability.

Notes:

For a fail-safe environment in the event of a hard disk and or software failure, a RAID configuration is recommended.

Other methods of protection such as mirrored drives, SQL server replication, etc. can be installed. The user should review all options and implement accordingly.

For Database hard drive configuration assume 1 GB per Physician per year for systems using EMR and Practice Management

Plan for growth. Procure today systems that will sustain the business for tomorrow.

APPLICATION, SQL DATABASE & SQL REPORTING SERVERS: MINIMUM RECOMMENDATIONS FOR NEW HARDWARE PURCHASES

5- 25 Users
Single Server for Network Operating/Apps and SQL Server Database
O/S – Microsoft Windows Server®2012 SQL Database – Microsoft® SQL Server™ 2012 Processor – Intel® Xeon® Memory – 8 GB RAM Drives – 2 Hard Drives of 500 GB (RAID 1) OS Partition (Recommend: 40 GB) Data Partition Backup Device / Network Drive Backup / Others
25 - 50 Users

Qty 1 – Application Server – Operating System/Apps	**Qty 1 – SQL Database & Reporting Server**
O/S – Microsoft Windows Server®2012 Processor –Dual Intel® Xeon® Memory – 4 GB RAM Drives – 3 Hard Drives of 500 GB each (RAID 5) OS Partition (Recommend: 80 GB) Data Partition Backup Device / Network Drive Backup / Others	O/S – Microsoft Windows Server®2012 SQL Database – Microsoft® SQL Server™ 2012 Processor – Dual Intel® Xeon® Memory – 8 GB RAM Drives – 3 Hard Drives of 250 GB each for Database, Backups, Transaction Logs (RAID 5) OS Partition (Recommend: 40 GB) Data Partition

50 -100 User		
Qty 1 – Application Server	**Qty 1 – SQL Database Server**	**Qty 1 – Reporting Server ***
O/S – Microsoft Windows Server®2012 Processor – Dual Intel Xeon® Memory – 8 GB RAM Drives –2 Hard Drives of 146 GB each for OS (RAID 1) and 3 Hard Drives a of 600GB each for Application Data and Resources (RAID 5) Backup Device / Network Drive Backup / Others	O/S – Microsoft Windows Server®2012 SQL Database – Microsoft® SQL Server™ 2012 Processor – Dual Intel Xeon® Memory – 16 GB of RAM Drives – 2 Hard Drives of 146 GB each for OS (RAID 1) and 3 Hard Drives a of 600GB each for Database, Backups, Transaction Logs (RAID 5)	O/S – Microsoft Windows Server®2012 SQL Database – Microsoft® SQL Server™ 2012 SQL Server Analysis Services (SSAS) Installed SQL Server Integration Services (SSIS) Installed Processor – Dual Intel Xeon® Memory – 16 GB of RAM Drives –3 Hard Drives a of 300 GB (RAID 5) OS Partition (Recommend: 40 GB) Data Partition * Required for MedInformatix Executive Dashboard utilization
100 - 150 Users		
Qty 1 – Application Server	**Qty 1 – SQL Database Server**	**Qty 1 – Reporting Server ***
O/S – Microsoft Windows Server®2012 Processor – Dual Intel® Xeon® Memory – 16 GB RAM Drives – 2 Hard Drives of 146 GB each for OS (RAID 1) and 3	O/S – Microsoft Windows Server®2012 SQL Database – Microsoft® SQL Server™ 2012 Processor – Dual Intel® Xeon® Memory – 32 GB of RAM	O/S – Microsoft Windows Server®2012 SQL Database – Microsoft® SQL Server™ 2012

Hard Drives a of 500 GB each (RAID 5) Storage Additional – Direct Attached or Network Storage: 1TB Backup Device / Network Drive Backup / Others	Drives – 2 Hard Drives of 146 GB each for OS (RAID 1) and 3 Hard Drives a of 600GB each for Database, Backups, Transaction Logs (RAID 5)	SQL Server Analysis Services (SSAS) Installed SQL Server Integration Services (SSIS) Installed Processor – Dual Intel® Xeon® Memory – 16 GB of RAM Drives –3 Hard Drives a of 300GB (RAID 5) OS Partition (Recommend: 40 GB) Data Partition * Required for MedInformatix Executive Dashboard utilization
150+ Users		
Qty 1 – Application Server	**Qty 1 – SQL Database Server**	**Qty 1 – Reporting Server***
O/S – O/S – Microsoft Windows Server®2012 Processor – Dual Intel® Xeon® Memory – 16 GB RAM Drives – 2 Hard Drives of 146 GB each for OS (RAID 1) and 4 Hard Drives a of 1TB each (RAID 10) Storage Additional – Direct Attached or Network Storage: 2TB Backup Device / Network Drive Backup / Others	O/S – Microsoft Windows Server®2012 SQL Database – Microsoft SQL Server 2012 Processor – Dual Intel® Xeon® Memory – 64 GB of RAM Drives – 2 Hard Drives of 146 GB each for OS swap and 4 Hard Drives a of 600GB each for Database, Backups, Transaction Logs (RAID 10)	O/S – Microsoft Windows Server®2012 SQL Database – Microsoft® SQL Server™ 2012 SQL Server Analysis Services (SSAS) Installed SQL Server Integration Services (SSIS) Installed Processor – Dual Intel® Xeon® Memory – 16 GB of RAM Drives –3 Hard Drives a of 600GB (RAID 5) * Required for MedInformatix Executive Dashboard utilization

OTHER SERVERS

REMOTE DESKTOP SERVICES

Microsoft suggests using Remote Desktop Services for remote sites or other situations where bandwidth is limited. Based on the number of remote users accessing your applications, you should to calculate the number of terminal servers that you need to load balance your traffic.

Qty 1 – Terminal Server
O/S – Microsoft Windows Server®2012
Processor – Dual Intel® Xeon®
Memory – 8 GB RAM
Drives – 2 Hard Drives of 146 GB each (RAID 1)
OS Partition
Data Partition

WEB SERVER

MedInformatix recommends the client who purchases MedInformatix Provider Portal or Patient Portal module(s) have a dedicated web server separate from the application and database servers. The general specifications for a web server are:

O/S – Microsoft Windows Server®2012
Processor – Dual Intel® Xeon®
Memory – 8 GB of RAM
Drives – 2 Hard Drives of 146 GB each (RAID 1)
OS Partition
Data Partition

FAX SERVER

Please refer to selected fax server vendor's standard specifications.

NETWORK & INTERNET CONNECTIVITY

Microsoft and MedInformatix recommend maximizing network hardware to optimize server and workstation performance. Therein, gigabit network cards, routers, and switches provide seamless network and SQL application connectivity. In addition, utilizing wireless-N technologies for wireless network components provides ample connectivity performance for Tablet PCs, handheld devices, and all other wireless tools.

Meaningful Use Stage I & II requirements include several external upload and download protocols from 3rd party Internet services. Thus, it is imperative that Internet connectivity is maximized, and if possible, that the upload speed matches the download speed. While MedInformatix cannot recommend a specific bandwidth, when you are evaluating bandwidth needs, it is important to consider the number of Internet-connected devices, the number of software applications in use that require outside connectivity and the specific requirements of the Meaningful Use measures selected.

WORKSTATIONS

Each user who will access the MedInformatix system will need a workstation. While workstation configurations will vary according to each user's needs and duties, the following can be used as a general guideline for end-user utilization of the MedInformatix system.

Minimum Requirements

Processor: Single Processor – Intel Pentium 4
Memory: 1GB RAM
Hard Drive: 80 GB
Display: 1280 x 800 or higher resolution
O/S & Software
Microsoft Windows 7 Professional
Internet Explorer 7 or higher
Adobe Acrobat Reader
Microsoft .Net Framework 3.5, .Net Framework 3.5 SP1 and .Net Framework 4.0

Recommended Specifications

Processor: Single Processor – Intel Core i5 or better
Memory: 4 GB RAM
Hard Drive: 80 GB
Display: 1280 x 800 or higher resolution
Note: Use of Enhanced Appointment Search Wizard requires 1920 x 1080 in either a single wide-screen monitor or dual-monitor configuration
O/S & Software
Microsoft Windows 7 Professional
Internet Explorer 10
Microsoft Office Word 2010
Microsoft Office Excel 2010
Adobe Acrobat Reader
Microsoft .Net Framework 3.5, .Net Framework 3.5 SP1 and .Net Framework 4.0

MOBILE DEVICES

With the growing utilization of mobile devices to perform work tasks, MedInformatix users should consider carefully which device best suits their daily responsibilities, conforms to system requirements, and is reasonable within the IT budget and expertise. MedInformatix does not currently support using Smartphone technology for application utilization. Tablets running Android, iOS, or non-Professional versions of Windows Mobile operating systems require third party apps to establish remote connectivity. Direct connectivity via these devices is not currently available.

MOBILE DEVICES (CONT.)

EHR users, particularly physicians and clinical staff, benefit greatly from the mobility that a tablet PC provides. Systems running Windows 7 Professional or later allow

MedInformatix users to fully utilize the application while taking their work with them from room to room.

RECOMMENDED SPECIFICATIONS
Processor: Intel® Core™ i5 or better
Memory: 2GB RAM
Hard Drive: 64 GB
Wireless Card: Intel® Centrino Advanced-N dual band
O/S & Software
Windows 8 Professional
Internet Explorer 10
Adobe Acrobat Reader X

REMOTE ACCESS

The Customer will provide the MedInformatix Implementation Project and Support Team appropriate remote access to the system for installation, updates and customer support. Remote access using Microsoft Remote Desktop client via Cisco VPN or Microsoft VPN is recommended. If access is not available or configured using the specified connection types, this will result in a delay in the implementation timeline and support responsiveness.