System Specifications and Hardware Recommendations
For MedInformatix v7.6 and v7.7 Complete EHR

Updated: October 1, 2019

COMPATABILITY STATEMENTS

Windows Server 2019 and SQL Server 2019 Compatibility Statement

The MedInformatix v7.6 and v7.7 application servers are compatible with Windows Server 2019 and SQL Server 2019.

Windows Server 2016 and SQL Server 2016/2017 Compatibility Statement

The MedInformatix v7.6 and v7.7 application servers are compatible with Windows Server 2016 and SQL Server 2016/2017.

Windows 10 Compatibility Statement

The MedInformatix v7.6 and v7.7 client application is compatible with Windows 10. Testing began with early pre-release versions and completed after the official July 29th, 2015 release.

Windows 7 and Windows Server 2008 End-Of-Life Notification

Windows 7 and Windows Server 2008 reach end-of-life in January, 2020. At that time, Microsoft will stop shipping security fixes and these operating systems will be at greater breach risk than they are now. Additionally, this could negatively impact cybersecurity components for HIPAA compliance. Please plan accordingly if you are still using either of these operating systems.

SUMMARY

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 2012/2016 and Microsoft SQL Server 2012/2014/2016.

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.

- *Plan for your data conversion.* You may have many terabytes of documents and images to transfer from an old software.
- *Plan for growth.* Procure today systems that will sustain the business for tomorrow.
- *Explore available options.* There are many types of Windows-based servers, both physical and virtual, and on-premise or hosted. Our experts will talk with you and your IT team to determine the ideal configuration.

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®2016
SQL Database – Microsoft® SQL Server™ 2016 (SQL 2017 preferred)
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®2016 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®2016 SQL Database – Microsoft® SQL Server™ 2016 (SQL 2017 preferred) 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®2016 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®2016 SQL Database – Microsoft® SQL Server™ 2016 (SQL 2017 preferred) 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®2016 SQL Database – Microsoft® SQL Server™ 2016 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®2016 Processor – Dual Intel® Xeon® Memory – 16 GB RAM Drives – 2 Hard Drives of 146 GB each for OS (RAID 1) and 3 Hard Drives a of 500 GB each (RAID 5) Storage Additional – Direct Attached or Network Storage: 1TB Backup Device / Network Drive Backup / Others	O/S – Microsoft Windows Server®2016 SQL Database – Microsoft® SQL Server™ 2016 (SQL 2017 preferred) Processor – Dual Intel® Xeon® Memory – 32 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®2016 SQL Database – Microsoft® SQL Server™ 2016 (SQL 2017 preferred) 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®2016 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®2016 SQL Database – Microsoft SQL Server 2016 (SQL 2017 preferred) 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®2016 SQL Database – Microsoft® SQL Server™ 2016 (SQL 2017 preferred) 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 – Remote Desktop Server
O/S – Microsoft Windows Server®2016
Processor – Dual Intel® Xeon®
Memory – 8 GB RAM
Drives – 2 Hard Drives of 146 GB each (RAID 1)
OS Partition
Data Partition

There are other solutions for remote access, such has Citrix, VMWare, and Parallels.

WEB SERVER

MedInformatix recommends that customers who purchase MedInformatix Provider Portal or Patient Portal 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®2016
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 80211ac technologies for wireless network components provides ample connectivity performance for Tablet PCs, handheld devices, and all other wireless tools.

The CMS Quality Payment Program (QPP) and Meaningful Use (MU) 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 QPP/MU 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 11

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 10

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.

EHR users, particularly physicians and clinical staff, can 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
Display: 1280 x 800 or higher resolution
Wireless Protocol: 802.11ac
O/S & Software: Windows 10

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.

ANTI-VIRUS / ANTI-MALWARE / FIREWALL

While MedInformatix does not endorse a specific anti-virus / anti-malware / firewall product, we do strongly recommend that all MedInformatix servers be protected against the array of Internet-based attacks prevalent today. This includes brute-force remote access, phishing attempts, ransomware, and all other forms of malware. It is also important that you do not create or maintain a folder share of the root \MEDINFO on your application server to reduce exposure to PHI and your MedInformatix configuration files. Every environment is different, so contact MedInformatix Support if you have questions about how to apply your security products to the MedInformatix EHR.