

Technical Requirements

Introduction

This document describes the required hardware and supporting software necessary to operate HomecareNet™. It outlines:

- Software Requirements
- Server Requirements
- Workstation Requirements
- Additional Requirements and Recommendation

Software Requirements

| Category | Software | Comments |
|------------------------------|---|---|
| Browser | Microsoft® Internet Explorer version 6.0 or above | Free. Must be on each workstation. |
| Forms | Adobe® Acrobat® Reader® version 6.0 or above | Available free from Adobe Systems, Inc. Must be on each workstation. |
| Connectivity | A firewall that provides VPN capability, over a broadband (T1, DSL, or cable) connection. | Microsoft-compatible firewall recommended. HAI also has experience with Checkpoint, Cisco, and Sonicwall. |
| Communications | Microsoft® Windows Remote Desktop | Included with Microsoft® Windows. Required on at least one workstation for remote connections. Assign a strong password. |
| Electronic Claims Submission | ZirMed for 837 electronic claims; DayTech's CE2000 for NCPDP claims | Optional. More information available at www.zirmed.com and www.daytechcorp.com . |

Server Requirements

Healthcare Automation recommends a configuration of two dedicated servers for other than very small installations.

- Server 1 (the SQL server) acts as the database server
- Server 2 (Application/Output server) acts as an Application Server, an Output Server, and a Web Server.
- Larger organizations (more than 150 users) may require more than two servers; responsibilities can be split among Application Server(s), Database Server(s), Output Server(s), and Web Server(s). Healthcare Automation will work with you on specific recommendations based on your organization's size.
- Server performance is generally enhanced if the operating system and installed components reside on a drive or drive array that is physically separate from the data storage location.
- Database Server performance is generally enhanced if SQL Server is installed on a dedicated server, and if the transaction file resides on a drive or drive array that is physically separate than the one housing the HomecareNet database container. HAI's recommended configuration for a database server is:
 - C: drive is a mirrored pair of SAS or SCSI drives (20 GB is adequate)
 - D: drive is a 4 or 5 drive array of SAS or SCSI drives, which hold the HomecareNet database container
 - E: drive is a single SAS or SCSI drive, on which transactions are recorded

| Application / Output Server | | |
|-----------------------------|--|--|
| Category | Recommended | Minimum |
| Operating System | Microsoft® Windows Server 2003 Std or Enterprise Edition (with latest Service Pack) Microsoft® Windows Server 2008 Std or Enterprise Edition (with latest Service Pack) 64-bit editions are supported. 32 bit Enterprise editions are preferred over 32 bit Std editions since they support memory beyond 4GB. Virtualization is also supported. | Microsoft® Windows 2003 Std (with latest Service Pack) |
| CPU | Quad Core or equivalent; SMP; 3GHz or faster | Core2 Duo or equivalent; SMP; 2.8 GHz |

| | | |
|------------------------|--|--|
| | processor | processor |
| RAM | 8+GB for 64 bit or Enterprise versions | 4 GB |
| Hard Disk | Drive array of 500 GB or greater RPM: 10K or faster A SAN or NAS with similar sustained through-put as a 10k rpm or faster drive array. | Drive array of 200 GB |
| Database Server | | |
| Category | Recommended | Minimum |
| Operating System | Microsoft® Windows Server 2003 Std or Enterprise Edition (with latest Service Pack) or Microsoft® Windows Server 2008 Std or Enterprise Edition (with latest Service Pack) 64-bit editions are also supported. 32 bit Enterprise editions are preferred over 32 bit Std editions since they support memory beyond 4GB. | Microsoft® Windows 2003 Std Server (with latest Service Pack) |
| Database | Recommended: Microsoft® SQL Server 2005 or 2008* Minimum: Microsoft® SQL Server 2000 | Licensed separately. SQL Server Analysis Services (included on CD) must also be installed in order to use HomecareNet Business Intelligence Solutions. * SQL Server 2008 must be run in 2005 Compatibility mode |
| CPU | Quad Core or equivalent; SMP; 3GHz or faster processor | Core2 Duo or equivalent; SMP; 2.8 GHz processor |
| RAM | 8+GB for 64 bit or Enterprise versions | 4 GB |
| Hard Disk | Drive array of 5 or more drives RPM: 10k or faster SAS or SCSI. A SAN or NAS with similar sustained through-put as a 10k rpm or faster drive array. | Drive array of 3 or more drives RPM: 10k or faster SAS or SCSI |

Workstation Requirements

| Category | Recommended | Minimum |
|------------------|---|---|
| Operating System | Microsoft® Windows XP Professional or Microsoft® Windows Vista (with latest Service Pack) | Microsoft® Windows 2000 Professional (with latest Service Pack) |
| CPU | Dual Core processor or better | Pentium 4 class processor or better |
| RAM | 2GB or greater | 2GB |
| Hard Disk Space | 60GB or greater | 40GB |

HomecareNet Mobile Laptop Requirements

HomecareNet Mobile can be deployed on a Laptop (or desktop) using a PDA device emulator. This type of deployment also allows for the DUR – Drug Utilization Review feature.

| Category | Recommended | Minimum |
|------------------|---|--|
| Operating System | Microsoft® Windows XP Professional (with latest Service Pack) | Same |
| CPU | Core2 Duo or equivalent 2.0 GHz or faster | Core2 Duo or equivalent 1.0 GHz or faster |
| RAM | 2GB | Same |
| Screen | Touch-Screen if Signature capture is required. | Same |
| Hard Disk Space | 60 GB or greater | Same |

HomecareNet Mobile Host Requirements

One Host box support 10 concurrent syncs from mobile devices; plan to have one Host box for every 30-50 HomecareNet Mobile device users.

| Category | Recommended | Minimum |
|------------------------------|---|---|
| Operating System | Microsoft® Windows Server 2003 Std or Enterprise Edition (with latest Service Pack) or Microsoft® Windows Server 2008 Std or Enterprise Edition (with latest Service Pack) Virtualization is also supported. | Microsoft® Windows Server 2003 Std (with latest Service Pack) |
| CPU | Quad Core or equivalent; SMP; 3GHz or faster processor | Core2 Duo or equivalent 2.8GHz or better |
| RAM | 3GB or greater | 2GB |
| Hard Disk Space | 500GB or greater Drive array containing 4 or more drives which are 10k rpm or faster. A SAN or NAS with similar sustained through-put as a 10k rpm or faster drive array. | 200GB Drive array with 10k rpm or faster drives. Note: Synchronization speed is directly related to how fast files can be created on the sync-host's hard disk. To achieve acceptable sync speed a fast disk sub-system is required. |
| Proximity to Database Server | Optimum performance is achieved when the Mobile Host server is physically close to the Database Server. 1GB or faster Ethernet connections between the Database Server and the Mobile Host server is desired. | |
| Virtualization | If deploying the Mobile Host in a virtual environment, that environment should be equivalent to a quad core processor running at 2.5 GHz or a Dual Core running at 3 GHz. | |

Additional Requirements and Recommendations

| Category | Requirement | Comments |
|--------------------------------|---|--|
| High-Speed Internet Connection | Strongly recommended. T1, DSL, or cable modem connection | For access to resources on the Internet and remote access by Healthcare Automation's Customer Support Center. |
| Reports | Crystal Reports or Jasper | Recommended for custom report writing. Available off the shelf. |
| Printers | Most output is designed for printing on any PCL-compatible laser printer. | Selected forms can be printed on a dot matrix printer that supports Epson emulation. |
| Thermal Label Printers | Datamax M-Class and/or E-Class thermal printers | For printing of Pharmacy labels. HAI recommends that you purchase a minimum of two printers, including one printer for each label size that you regularly use. For pricing, contact: Rick O'Bryan, Bar Code Direct, Inc. 781-878-5260, www.barcodedirect.com rick.obryan@barcodedirect.com |
| E-mail | Required for the primary support contact. | Must be able to accept attachments of up to 4MB. |
| Network Attached Backup | Required. Must be able to backup the database even when it is active. | Backup must be accompanied by an agent capable or working with the database (e.g., Veritas, BackupExec, CA's ARCserv) |
| Drug Database | Medi-Span Master Drug Database (MDDDB)® | Shipped with HomecareNet; annual fees invoiced by Healthcare Automation |
| PDA's, Laptops, or Tablets | Optional, for field clinicians using HomecareNet Mobile Clinician. | See HomecareNet Mobile Device Recommendations for recommended devices and more detailed requirements. |
| Bar Code Scanner | Optional, for inventory management in the warehouse. Any keyboard wedge scanner that attaches between the keyboard and computer and is capable of reading linear bar codes. | For pricing, contact: Rick O'Bryan, Bar Code Direct, Inc. 781-878-5260, www.barcodedirect.com rick.obryan@barcodedirect.com |
| Wireless Bar Code Scanner | Optional, for drivers using HomecareNet Mobile Deliveries. Must run the Windows Mobile operating system, v5 or higher, and must include a touch screen and a key pad. | See HomecareNet Mobile Deliveries Device Recommendations for recommended devices and more detailed requirements. |
| Mobile Bluetooth Printer | Optional, for drivers using HomecareNet Mobile Deliveries. | See HomecareNet Mobile Deliveries Device Recommendations for recommended devices and more detailed requirements. |
| Document Scanner | Optional, for WebScan Pro users. | Must be able to scan to a network folder, use TWAIN or ISIS drivers, scan at 300x300 DPI Recommended but not required: <ul style="list-style-type: none"> • 50 Sheet Automatic Document Feeder Tray • Minimum speed of approx. 20 sheets/minute |