



# Lytec MD Patient Records 11.2.1 System Requirements

## Database/Application Server

Specifications are based on a 5-user setup unless otherwise specified. The requirements are for the Practice Partner software only. If you decide to run additional services (DNS, Active Directory, Microsoft Office), you will need to add additional CPUs and/or RAM.

	Minimum	Recommended
<b>Processor</b>	Dual Quad Core 2.0 GHz or higher	Dual Quad Core 2.2 GHz or higher
<b>Ram</b>	16 GB	16 GB
<b>Operating System</b>	Windows Server 2012 - 64 Bit or higher	Windows Server 2016 Standard - 64 Bit
<b>Network Card (NIC)</b>	1 Gbps	

### Storage

	Minimum	Recommended
<b>C: Operating System Etc.</b>	60 GB free space	60 GB free space
<b>D: Data (SQL Database and Office Shares)</b>	250 GB Free Space	500GB Free Space
<b>P: For PPart</b>	750 GB Free Space	1TB GB Free Space

Specific drive letters are not required but recommended. A 4 disk RAID-10 Array is required for Data Volumes. The OS Volume may be RAID-1. When in doubt overestimate, it is easier to purchase hard drive space when you purchase your server than to add hard drives later.

Server Hard Drive Growth Planning:

<b>No Scanning</b>	<b>100 to 500 MB per full time physician per year</b>
<b>Moderate to Heavy Scanning</b>	1GB to 10 GB per full time physician per year
<b>Heavy to Extensive Scanning</b>	10 to 50 GB per full time physician per year

## Remote Desktop (Terminal) Server

**RemoteApp feature is not supported**

	Minimum	Recommended
<b>Processor</b>	Quad Core 2.5 GHz or higher*	Dual Quad Core 2.5 GHz or higher
<b>Ram</b>	16 GB*	16 GB
<b>Operating System</b>	Windows Server 2012 - 64 Bit or higher	Windows Server 2016 Standard - 64 bit
<b>Network Card (NIC)</b>	1 Gbps	

\*Supports 25 sessions of Lytec MD. For every 25 additional sessions, add 4 GB RAM and 2 more CPU Cores.

## Workstations

**Windows Home Editions are not supported**

	Minimum	Recommended
<b>Processor</b>	Quad Core 2.0 GHz	Quad Core 2.4 GHz or higher
<b>Ram</b>	8 GB	8 GB or higher
<b>Operating System</b>	Windows 10 Pro 64 bit	Windows 10 Pro 64 bit

<b>Storage</b>	8 GB Free on OS Drive	
<b>Network Card (NIC)</b>	100 Mbps	1 Gbps
<b>Resolution</b>	1024x768 (1200x800 for widescreen)	

## Network

- Wired 1 Gigabit network. Wireless is not supported for local installs of Lytec or Lytec MD. Windows Remote Desktop Services on a qualified RD Server is required if you will be using Lytec MD in a wireless environment.
- Teamed Network Cards are not supported.
- Each network adapter (on Server(s) and Clients) should have the Internet Protocol Version 6 check box cleared to avoid slowness in your application
- DNS/Active Directory must be functioning correctly so that permissions and hostname resolution work
- DNS should be on the same subnet as the Lytec MD servers
- End-to-end network round-trip time of 120 ms or less from user workstations
- Network (packet) loss of 1% or less from user workstations
- Available network capacity (upload AND download): 5 Mbps or greater per user
- Disable offline file caching
- Urls listed below must also be included in Trusted Sites
- Hardware-level firewall with allowances below

Program, Port, url	Protocol	Scope
Sqlservr.exe (variable location)	TCP	Domain and Private
50501-50508	TCP	Domain and Private
1433	TCP	Domain and Private
1434	TCP, UDP	Domain and Private
443	TCP	All
https://microservice.emds.com	https	
https://erx.emdscloud.com	https	
A port in the range 49000-50000 (if using Lytec Mobile App)	TCP	All

## Security and File System Settings

- Domain\Active Directory Environment Required
- User Account Control (UAC) and Data Execution Prevention (DEP) must be disabled and may require being turned off at the registry level during installation
- NTFS is required due to the necessity to set file permissions
  - Do not enable built-in NTFS compression on the ppart folder to avoid performance issues
- The Windows pagefile should be two times the amount of installed RAM

The Permissions below must be assigned to the indicated Directories by the site's IT Vendor. Applying the required permissions by Group Policy is recommended.

- Security Levels
  - Full Control: Administrators, System, Network Service
  - Modify: Any and All Users or Security Groups who will run Practice Partner
- Paths
  - P:\ppart
  - C:\Program Files (x86)\McKesson\Practice Partner
  - C:\Program Files (x86)\Lytec 20xx
  - C:\ProgramData\Lytec

- C:\ProgramData\McKesson
- Sharing
  - The root level of P: must be Shared with full access to all of the Groups detailed above
  - The root level of P:\ must be added as a mapped drive on each Client PC using the same volume letter
  - Drive mapping via Group Policy must use 'Update' not 'Replace'
  - Both SMB1 and SMB2 must be enabled

## Anti-Virus

- The application folder (ppart) and client folders (C:\Program Files (x86)\McKesson\Practice Partner, C:\ProgramData\McKesson\ClientUpdatesStore) must be excluded from real-time/on-access scanning
- Scheduled scans should be run when users are not logged in
- Any anti-virus that does not allow for exclusions should not be installed. Trend Micro, CA eTrust, and Kaspersky are unapproved anti-virus solutions that may cause instability.

## Additional

The database platform included with Lytec MD is **Microsoft SQL Server** 2012 Standard. This version is supported on Windows Server 2016 and 2012. Any other SQL Server usage and the associated licensing is the client's responsibility.

**Printers:** TCP/IP-enabled, PCL5-compatible printers are recommended. Remote Desktop printing may require additional purchase and setup and the associated infrastructure must be supported by the client or the client's IT.

**Scanners** must include the necessary TWAIN driver software for use with the scanner. Direct scanning from the Zoom application requires a scanner attached directly to the Client PC. Scanning Software must output pdf format.

Dragon Naturally Speaking **Dictation** has limited functionality in a Remote Desktop Environment

## Integrated Faxing

CHS only supports Equisys' Zetafax solution for using Lytec MD integrated Faxing. Other solutions may be used but are not supported.

For small clinics, you can install a fax board on the application server or thin client server. For customers that do a large amount of faxing, CHS recommends a dedicated fax server.

Supported Fax Boards: Brooktrout TruFax Series, Brooktrout TR1034 Series

## Backup

Backup is never optional

CHS will only provide support on the CHS Cloud Backup regardless of any prior setup or assistance

It is recommended that you have backups stored in multiple locations including (but not limited to):

- Cloud backup
- External sources (NAS/External Drive etc)
- A local server

Factor expected data growth when choosing backup media size.

For reliability, the backup of the ppart directory requires all users to remain logged out, any items connecting to the ppart directory such as interfaces be closed, and the PMSI Services (Application Server, Data Server, Interoperability Service be stopped during a backup of your ppart directory.

Have a disaster recovery plan in place. Test the recovery plan periodically to make sure that in the event of a disaster, you can recover your data and be functional in the shortest amount of time possible. Restoration time will vary based on severity of disaster (i.e. Database restoration vs. complete server loss).

The following items must be backed up

- Lytec SQL Database (in a .bak format)
- RM Practice Data Folder (If Using Revenue Management)
- Lytec Forms, Custom Reports
- Lytec Mobile Superbill Files
- Lytec MD SQL Database (in a .bak format)
- PPART Directory Excluding the contents of the following folders:
  - PPART\Tempfrml\
  - PPART\Interface\Lytec\Demsch\Rcv\Archive\
  - PPART\Interface\Lytec\Demsch\Rcv\log\
  - PPART\Interface\Lytec\BillCode\Snd\log\
  - PPART\Interface\SureScripts\Input\Archive\
  - PPART\DumpFiles\
  - PPART\PatientEducation\
  - MRR COP99.\*, MRR COV99.\*, MRR ALT99.\*, MRR FRML99.\*, MRR COC99.\*

All specifications are subject to change without notice