

### Local Server Based System - Hardware and Software Specifications

Database Server					
Component / Number Of Users	1-10 Users	11-25 Users	26-50 Users	51-99 Users	100+ Users
Processor - Recommended	Quad-Core Xeon (4 cores, 1.6 GHz+)	Two Quad-Core Xeon (8 cores, 1.6 GHz+)	Two Quad-Core Xeon (8 cores, 2.26 GHz+)	Two Quad-Core Xeon (8 cores, 2.26 GHz+)	Four Quad-Core Xeon (16 cores, 2.26 GHz+)
Processor - Minimum	Dual-Core Xeon (2 cores, 1.6 GHz+)	Quad-Core Xeon (4 cores, 1.6 GHz+)	Quad-Core Xeon (4 cores, 1.6 GHz+)	Quad-Core Xeon (4 cores, 1.6 GHz+)	Quad-Core Xeon (4 cores, 1.6 GHz+)
Memory / RAM - Recommended	16 GB	32 GB	64 GB	64 - 128 GB	128 - 160 GB
Memory / RAM - Minimum	8 GB	16 GB	32 GB	64 GB	128 GB
Disk Configuration	RAID 1 or RAID 5				
Hard Drive - Total Storage	500 GB SCSI, 15K RPM (Should be capable of adding more storage)	1 TB SCSI, 15K RPM OR 1 TB SDD (Should be capable of adding more storage)	1.5 TB SDD (Should be capable of adding more storage)	2 TB SDD (Should be capable of adding more storage)	3 TB SDD (Should be capable of adding more storage)
Operating System	Windows® Server 2008, 2012, and 2016				
Sybase Anywhere Database License	1 license				
Network Card / Ports (1000Mbps)	2 NIC, 1 port each	2 NIC, 1 port each	2 NIC, 2 ports each	2 NIC, 2 ports each	2 NIC, 2 ports each
Backup Solution	Backup on external hard disk or tape. (Online / offsite backup is recommended.)				
Internet Connectivity	Broadband Internet connection required for online services.				
Router (Ports)	Ports Forwarding is required for ports 80 (EScripts), 443 and 8080 (Web Portal), 4430 (mRx), 4431 (Mobile Delivery) and 8088 (PIPS).				
Notes	What should not be run on the database server? DNS server, Domain Controller, Router, File and/or print server, Terminal Services/Citrix Services.				

\* Optional component

\*\* Standard requirement for internet service: Static IP, Latency: Minimum 50ms latency round trip ping packet. Packet Loss: Less than 1%.

Note: The following can contribute to system slowness: Firewall/Antivirus Software (even if virus scan is not running, it will scan each file that is downloaded and opened or scanned and saved.); Insufficient RAM Memory; Hard Drive Encryption; Multiple Network Switches; Slow Network/More traffic on network; Low Disk Space on system partition or working partition.

<b>Citrix / 2X / Terminal Server (For Multiple Locations)</b>					
<b>Component / Number Of Users</b>	<b>1-10 Remote Users</b>	<b>11-25 Remote Users</b>	<b>26-50 Remote Users</b>	<b>51-99 Remote Users</b>	<b>100+ Remote Users</b>
Processor - Recommended	Quad-Core Xeon (4 cores, 1.6 GHz+)	Two Quad-Core Xeon (8 cores, 1.6 GHz+)	Two Quad-Core Xeon (8 cores, 2.26 GHz+)	Two Quad-Core Xeon (8 cores, 2.26 GHz+)	Four Quad-Core Xeon (16 cores, 2.26 GHz+)
Processor - Minimum	Dual-Core Xeon (2 cores, 1.6 GHz+)	Quad-Core Xeon (4 cores, 1.6 GHz+)	Quad-Core Xeon (4 cores, 1.6 GHz+)	Quad-Core Xeon (4 cores, 1.6 GHz+)	Quad-Core Xeon (4 cores, 1.6 GHz+)
Memory / RAM - Recommended	16 GB	32 GB	64 GB	64 - 128 GB	128 - 160 GB
Memory / RAM - Minimum	8 GB	16 GB	32 GB	64 GB	128 GB
Disk Configuration	RAID 1 or RAID 5				
Hard Drive - Total Storage	500 GB SCSI, 15K RPM (Should be capable of adding more storage)	1 TB SCSI, 15K RPM OR 1 TB SDD (Should be capable of adding more storage)	1.5 TB SDD (Should be capable of adding more storage)	2 TB SDD (Should be capable of adding more storage)	3 TB SDD (Should be capable of adding more storage)
Operating System	Windows® Server 2008				
Sybase Anywhere Database License	1 license				
Network Card / Ports (1000Mbps)	2 NIC, 1 port each	2 NIC, 1 port each	2 NIC, 2 ports each	2 NIC, 2 ports each	2 NIC, 2 ports each
Backup Solution	Backup on external hard disk or tape. (Online / offsite backup is recommended.)				
Internet Connectivity	Broadband Internet connection with at least 30 MBPS Download /10 MBPS Upload Speed	Broadband Internet connection with at least 40 MBPS Download /20 MBPS Upload Speed	Broadband Internet connection with at least 60 MBPS Download /30 MBPS Upload Speed	Broadband Internet connection with at least 80 MBPS Download /40 MBPS Upload Speed	Broadband Internet connection with at least 100 MBPS Download /50 MBPS Upload Speed
Notes	What should not be run on the database server? DNS server, Domain Controller, Router, File and/or print server, Terminal Services/Citrix Services.				

\* Optional component

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Server Hosting (Terminal Server)					
Component	Minimum Specifications			Recommended Specifications	
Processor	Quad-Core, (4 cores, 1.6 GHz+)			Two Quad-Core, (8 cores, 2.26 GHz+)	
Memory / RAM - Minimum	16 GB			16 GB	
Hard Drive - Total Storage	250 GB			500 GB	
Operating System	Windows® Server 2008			Windows® Server 2008	
Sybase Anywhere Database License	1 license				
Network Card / Ports (1000Mbps)	2 NIC, 1 port each				
Backup Solution	Backup on external hard disk or tape. (Online / offsite backup is recommended.)				
Internet Connectivity	<b>1-10 Remote Users</b>	<b>11-25 Remote Users</b>	<b>26-50 Remote Users</b>	<b>51-99 Remote Users</b>	<b>100+ Remote Users</b>
	Broadband Internet connection with at least 20 MBPS Download /10 MBPS Upload Speed	Broadband Internet connection with at least 40 MBPS Download /20 MBPS Upload Speed	Broadband Internet connection with at least 60 MBPS Download /30 MBPS Upload Speed	Broadband Internet connection with at least 80 MBPS Download /40 MBPS Upload Speed	Broadband Internet connection with at least 100 MBPS Download /50 MBPS Upload Speed
Notes	<b>8 RDP Users per Terminal Server</b>				

Web Server / Pharmacy Portal (Optional)		
Component	Minimum Specifications	Recommended Specifications
Processor	Quad-Core, (4 cores, 1.6 GHz+)	Two Quad-Core, (8 cores, 2.26 GHz+)
Memory / RAM - Minimum	8 GB	16 GB
Hard Drive - Total Storage	250 GB	500 GB
Operating System	Windows® Server 2008 or 2012	Windows® Server 2008 or 2012
Internet Connectivity	Broadband Internet connection with static IP address required for online services.	Broadband Internet connection with static IP address required for online services.
Router (Ports)	Ports Forwarding is required for ports 80 (EScripts), 443 and 8080 (Web Portal), 4430 (mRx), 4431 (Mobile Delivery) and 8088 (PIPS).	
Network Card / Ports (1000Mbps)	2 NIC, 1 port each	2 NIC, 1 port each
Notes	<b>IIS 8, Static external IP address and domain name and redirect/install SSL certificate at the web server for pharmacy domain.</b>	

\* Optional component

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Workstations	Workstations Desktop / Laptop / Tablet PC	High-Usage Workstations (Scanning and Front Desk, Triage)
Component	Minimum Specifications	Recommended Specifications
Processor	Intel®i5, 2.40 GHz+	Intel®i5, 2.70 GHz+
Memory / RAM - Minimum	4 GB	8 GB
Hard Drive - Total Storage	120 GB	250 GB
Operating System	Windows 7 Professional / Windows 8.1/ Windows 10 Professional	Windows 7 Professional / Windows 8.1/ Windows 10 Professional
Network Card	100 Mbps	100 Mbps

Infrastructure		
Component	Minimum Specifications	Recommended Specifications
Wired Network	100 Mbps Ethernet or higher	1000 Mbps Ethernet or higher

Peripherals	
Sybase Anywhere Database License	1 per concurrent user
Router	Secure encrypted connectivity (VPN) for communication between facilities is required using a VPN enabled router
Document Printer	PCL5 or higher compatible network printer (All-in-one devices should not be used for scanning but for printing only). Host-based printers will not work for Citrix/Terminal Server Environment.
Label Printer	Zebra ZT41042-T010000Z - NO CUTTER (for perforated labels), Zebra ZT41042-T210000Z - WITH CUTTER (for continuous label) and Zebra GX430 Series
Document Scanner	Fujitsu FI-6130, Brother ADS 2000 or any scanner with TWAIN compatible drivers. Network scanner not supported. (TSScan or RemoteScan is needed for Citrix/Terminal Server)
Barcode Scanner	Symbol LS2208 or LS9203
Receipt Printer	Bixolon SRP 350II Series (USB Type with Drawer Kickout Connector) or Bixolon SRP 350III Series (USB Type with Drawer Kickout Connector)
Signature Pad	Topaz Systems: For Local (TM-LBK750-HSB / TM-LBK766SE-HSB-R / TM-LBK57GC-HSB-R), For Citrix/Terminal (TM-LBK755-B-R). All type should have a credit card swiper attached to it.
Cash Drawer	MSCashDrawer CF-405 (must be receipt printer driven, check compatibility with Receipt Printer) or any Printer Driven Cash Drawer (check compatibility with Receipt Printer)
Fax Server	Cloud-Based Fax
Mobile Delivery Device	7" or 10.1" Tablets with Android OS 4.1 or higher (with 3G or 4G capability) or 10.1" Apple iPad with iOS (with 3G or 4G capability)
mRx	Android or iOS Smartphones

\* Optional component

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